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## RESEARCH ARTICLE

### MARKET STRUCTURE, CONDUCT AND PERFORMANCE OF CHICKEN MARKETING IN BIRNINKEBBI LOCAL GOVERNMENT AREA OF KEBBI STATE, NIGERIA

**\*Buhari, A. K., Gindi A. A. and Adamu, A. J.**

Department of Agricultural Economics and Extension, Faculty of Agriculture, Kebbi State University of Science and Technology, Aleiro

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#### ABSTRACT

The purpose of this study was to analyze the chicken marketing in BirninKebbi Local Government Area. The specific objectives include describing the socioeconomic characteristics of chicken traders, estimation of the market structure, conduct and performance of chicken marketing. To address the aforementioned objectives, econometric models were employed. Alternative marketing channels and their systematic linkages and relative importance in the flow of birds and egg from the point of production to the end users were identified and mapped. Whole sellers and retailers played crucial roles in the sample markets in the transaction of chicken from producers to consumers. Strong oligopolistic behavior is observed in the study area due to the short and inconsistent supply of chicken that inhibits new entrants to engage in the business. Chicken trading in Birninkebbi and Ambusa also shows modest oligopolistic behavior due to the involvement of whole sellers who transport their chicken from villages to the sample markets that comparatively demands high capital and information than the makera and gulumbe chicken market places. Business support services such as credit, extension, input provision and information access in the production and marketing of village poultry are poorly developed or almost nonexistent in the study area. The village poultry subsector provides ample opportunities for smallholder farmers since it utilizes resources that are abundant in rural areas and the anticipated rising price and demand in domestic and international markets. The subsector was also constrained by various challenges. According to the market survey, traders face lack of capital, short and inconsistent supply and, poor information and infrastructure development such as diseases storage, and transportation facilities. Despite the numerous challenges the subsector still remains profitable business for the rural poor.

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## INTRODUCTION

Increases in poultry consumption have been particularly dramatic and widespread, while changes in beef, pork, and dairy demand vary with cultural differences between countries. Future meat demand is expected to grow at roughly equivalent rates in different developing countries, with very large absolute increases in demand in China leading to large imports (Andrew, 2008). The price of agricultural products particularly livestock products is rising both in domestic as well as international markets due to rising income in newly emerging developing nations and high population growth. Livestock products have very high income elasticity's, and demand increases rapidly with rising income as countries shift from lower to middle income economies. This has led to a 'livestock revolution' in developing counties (Delgado, 1999).

**\*Corresponding author: Buhari, A. K.,**

Department of Agricultural Economics and Extension, Faculty of Agriculture, Kebbi State University of Science and Technology, Aleiro.

High value agricultural products, of which livestock products form an important part, cover a range of goods whose attributes are driven primarily by demand and by the manner and cost of production ([www.britanniaencyclopedia.com](http://www.britanniaencyclopedia.com)) Due to demand, markets for traditionally processed, informal and raw products continue to predominate in most developing countries, even while demand for higher quality increases at the higher market end (Gebremedhin, 2007 and Delgado, 1999), projected that per capita consumption of livestock products will increase by about 50 percent from 1993 to 2020, with most of the increases attributed to developing countries, as a result of population growth, urbanization, and rising incomes. Therefore, improving access to markets of poor smallholder livestock producers can help them benefit from the rapidly growing demand for livestock products. The International Livestock Research Institute (ILRI) and its partners have identified that encouraging market participation of smallholder livestock producers is a major pathway for getting rural people out of poverty and improving their food

security, as livestock contribute to the livelihoods of more than two-thirds of the world's rural poor (Holloway, 2002).

### Statement of the Problem

In every business enterprise, it is always said that the production is not ended until the goods have reached the final consumer. This clearly underscores the fact that merely producing poultry birds and the other products is simply not enough because marketing is needed to make the cycle complete (Alemu Yami, 1997). Marketing here simply means finding out what customers want and supplying it effectively at a profit (Alemu Yami, 1997). Marketing systems play a decisive role in vibrant economies as mechanisms for both exchange (necessary for specialization and hence leads to higher economic growth) functions and the proper coordination of the exchange (through price signals) which reflect and shape producer and consumer incentives in supply and demand interaction. If small scale domestic producers are to take advantage of the projected domestic demand growth, then marketing systems in the supply chains linking producers to consumers must be able to support low cost production and timely delivery of the products ([www.britanniaencyclopedia.com](http://www.britanniaencyclopedia.com)).

### Objectives of the Research

The specific objectives are:

- i. describe the socioeconomic characteristics of chicken marketers in BirninKebbi Local Government
- ii. determine the structure, conduct and performance of chicken marketing in BirninKebbi Local Government
- iii. find the market channels in the study areain BirninKebbi Local Government
- iv. identify the problems militating against affective marketing in the study area

## MATERIALS AND METHODS

### The Study Area

The study was carried out in BirninKebbi Local Government Area of Kebbi State. BirninKebbi Local Government is located in North-Western Nigeria. It is the capital city of Kebbi State and headquarters of the Gwandu Emirate. As of 2007 the city has an estimated population of 313,660 ([www.npc.com](http://www.npc.com)). It is located within longitude 12° 27' 14" North, 4° 11' 51" East of the equator ([www.britanniaencyclopedia.com](http://www.britanniaencyclopedia.com)). Majority of the people are peasant farmers living in the rural areas along river banks, hinterlands and farming crops. Farming generally is of subsistence type, mostly done through the traditional methods, although mechanized farming getting momentum by the day. The crops cultivated are mainly grains, cereals and legumes such as, Maize, sorghum, millet, rice, beans, potatoes, vegetables and fruits. Fishing, poultry and animal husbandry are also widely practiced, ([www.britanniaencyclopedia.com](http://www.britanniaencyclopedia.com)) Other trades of the people include; blacksmithing, wood carving, as commercial ventures that are practiced all year round, when compared to farming, which is locally seasonal, except for the large number of fadama farming which is year round. Birninkebbi local government climate is characterized by three season; dry, wet, and hamattan. Rainfall begins in April and ends in October with its heaviest spell in July and August, while hamattan, a weather characterized by cold-dry

winds begins November and ends February, hence the season picks up from March to June. The temperature averages is 14-30°C during dry season and 27-41°C during rainy season (Anom 2000). Rainfall is 550mm-650mm per annum (Anom, 2000).

### Sampling Technique and Sample Size

The survey will be employed in four district markets. The district markets include Birninkebbi district, Makera, Gulumbe, and Ambursa district markets. Four sample markets are selected using simple random sampling method among the available markets. The marketing information were randomly collected from the selected 30 producers, 30 consumers and 30 market participants (traders) in chickens marketing respectively, making a total of 120 respondents.

### Methods Data Collection

Both primary and secondary data were used; the primary data were collected using a design questionnaire and the secondary data using journals, Internet Communication Technology (ICT), and library.

### Analytical Techniques

The data collected from the respondents were analyzed using GINI coefficient.

### Specification of Model

**Gini-Coefficient:** Gini-coefficient is a very convenient shorthand summary measure of concentration. It is done based on Lorenz curve and is obtained, by calculating the ratio of the area between the diagonal and the Lorenz curve divided by the total area of the half square in which the curve lies. It is this ratio that is known as the Gini-Concentration ratio or more simply as the Gini coefficient, named after the Italian statistician who first formulated it in 1912.

Alternatively, Gini-Coefficient is computed using the formula: Where:

$$\sum_{i=1}^n (T_i - T_{i-1})(F_i - F_{i-1}) \quad i = 1, 2, 3 \dots n$$

G= Gini-coefficient

T<sub>i</sub>-T<sub>i-1</sub>= cumulative proportion of traders

F<sub>i</sub>+F<sub>i-1</sub>= cumulative proportion of the product handled by traders

n = number of traders (Bhuyan, 2003).

Gini-Coefficients are aggregate inequality measures and can vary anywhere from zero (perfect equality) to one (perfect inequality). In actual fact, the Gini-Coefficient with highly unequal distributions typically lies between 0.50 and 0.70, while with relatively equitable distributions it is on the order of 0.20 to 0.35.

## RESULTS AND DISCUSSION

**Market Structure of the Chicken Marketing:** The Gini coefficient was used to determine the market structure of the chicken marketing. The market structure analysis for

wholesalers and retailers reveals a Gini coefficient of 0.59 in Table 1. Since the coefficients are closer to one, the concentration of the market is relatively high indicating the existence of inefficiency in the market structure. The research further revealed that access to information was limited as traders had inadequate information about the availability of Chicken Little information regarding pricing. Also, price discrimination prevailed in the market as chicken were sold at different prices to different consumers at various parts of the market due to inadequate information by consumers, even though there exist free entry and exit in the market.

Almost 100% of the sample traders agreed that the purchasing price of chicken is entirely dependent on demand and supply of chicken in the market day. All sample traders also confirm that the purchasing price of chicken cannot be clearly identified until the final transaction took place. The selling price of chicken is set by a combination of buyers, negotiation and also demand and supply balance of birds in the market. Provision of better price than others and use of strong negotiation word power and varies combination of these two strategies are applied by most chicken traders to attract buyers and sellers.

**Table 1. Market Structure of the Chicken Marketing**

| Annual sales N          | Number         | Proportion (X) | Cum Prop | Annual sales N | Proportion of cum. Total sales (Y) | XY   |
|-------------------------|----------------|----------------|----------|----------------|------------------------------------|------|
| Retailers/whole sellers |                |                |          |                |                                    |      |
| <10,000                 | 18             | 0.45           | 0.45     | 155013         | 0.17                               | 0.07 |
| 10,000-30,000           | 13             | 0.32           | 0.77     | 278088         | 0.40                               | 0.23 |
| >30,000                 | 9              | 0.22           | 0.99     | 464100         | 0.52                               | 0.11 |
| Total=                  | 40             |                |          | 891201         |                                    |      |
| GC= 1- $\sum$ XY        | GC=1-0.41=0.59 |                |          |                |                                    |      |

Sources: Field Survey, 2015.

**Table 2. Buying, Selling and Pricing Strategy of Chicken Traders in Sample Markets**

| Marketing strategy                             | Marketing behavior of Traders | Market place (Study area) | %    |
|--|-------------------------------|---------------------------|------|
| Who set the purchase Price of chicken in 2000? | Buyer                         | 3                         | 7.5  |
|  | Seller                        | 37                        | 92.5 |
| How is the purchase price Set?                 | Demand & supply               | 38                        | 95   |
|  | Negotiation                   | 2                         | 5    |
| Time of purchasing price of chicken set        | At the time of Purchase       | 40                        | 100  |
| Who decide your chicken Selling price?         | Buyers                        | 0                         | 0    |
|  | Negotiation                   | 40                        | 100  |
| How is your chicken Selling price set?         | Demand and supply             | 37                        | 92.5 |
|  | Negotiation                   | 3                         | 7.5  |
| How do you attract your Suppliers?             | Provide better price          | 34                        | 85   |
|  | Negotiation power             | 6                         | 15   |
| How do you attract your Buyers?                | Provide better price          | 29                        | 72.5 |
|  | Negotiation power             | 5                         | 12.5 |
|  | Better price & negotiation    | 6                         | 15   |
| Type of payment                                | Cash                          | 40                        | 100  |
|  | Credit                        | 0                         | 0    |

Sources: Field Survey, 2015.

**Table 3. Marketing Cost of Chicken Marketing System**

| Cost items                 | Frequency | Traders category Retailer/Whole seller/chicken in Naira | Total per 2 market day |
|----------------------------|-----------|---|------------------------|
| Transportation Cost        | 40        | 5   | 400                    |
| Storage loss Cost          | 40        | 4   | 320                    |
| Loading and unloading cost | 40        | 5   | 400                    |
| Water and feed cost        | 40        | 250   | 500                    |

Sources: Field Survey, 2015.

**Conduct of Traders in Chicken Marketing System:** Market conduct refers to the exchange practice and pricing behavior of the marketing firms that make up the industry to examine the influence of the existing market structure on the market conduct and the bargaining power of marketing actors in the marketing system. Here in this analysis the market conduct of firms in the subsector have been analyzed using information like selling and buying behaviors and price setting strategy of sample traders have been analyzed. Furthermore type of exchange used, supply, demand, and price trend forecast, information and quality specification, timing and means of exchange and response to the anticipated changing environment. According to the result obtained from the market survey presented in Table 2, about 92.5% of the respondent replied that the purchasing price of bird is set by sellers in the sample markets.

All sample respondents transact their chicken on cash payment bases in all sample markets (100%) at the time of transaction.

### Performance of Poultry Marketing System

#### Marketing Costs of Traders

The marketing cost of chicken trading is presented in Table 3. In chicken trading the highest average marketing cost of various traders is registered by labor cost in all categories of traders that is 5 naira/chicken. The next highest average marketing cost in chicken trading is attributed to storage lost cost that is 4 naira/chicken. The storage cost is due to diseases, predation and theft in the course of the storage period. Feed and water cost, loading and unloading cost, transportation costs are worthwhile to be mentioned as they have significant

contribution to the transaction cost involved in chicken trading, farmers and whole sellers incur the highest marketing cost in bird trading business accounting 190 and 600 per chicken both exotic and local chicken respectively. Higher marketing cost by actors in marketing channels reduces the relative competence of the marketing channel in the market chain.

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