

ANALYSIS OF COORDINATION MECHANISMS AMONG SPECIALIZED AFRICAN CHICKEN MARKETS IN KORHOGO: IMPLICATIONS FOR MARKET EFFICIENCY AND LIVELIHOODS OF PRODUCERS



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| Received April 03, 2023 | Accepted April 05, 2023 | Published May 12, 2023 | ID Article | Tangologo-Ref9-5-16ajiras030523 |

ABSTRACT

Background: The Poro region, known for its traditional Senoufo initiation practices, plays an important role in mediating local culture and modernity in Korhogo, its capital city. The rapid population growth of Korhogo, predominantly composed of the Senoufo people, has led to increased demand for African chickens not only for food, but also to preserve tradition. These chickens are sold at a specialized market known as the "chicken market." **Objective:** This research aims to understand how the marketing of African chickens is organized in Korhogo to meet the food, economic, and social needs of the population. **Methods:** This study surveyed 45 individuals, including 30 chicken traders, 10 pluckers, and 5 others involved in the chicken trade. It focuses on the economic aspects of marketing African chickens, including costs, participants, market flows, and related activities. **Results:** Results show that the marketing of African chickens in Korhogo is an informal system involving different actors, and consumption is influenced by traditional ceremonies, festivities, and mystical practices. The sale of poultry generates significant income for some households, but the value chain in the sector is incomplete due to the presence of other activities such as plucking and sale of feed. The study suggests that coordinating chicken marketing systems, based on the theory of contracts, could serve as a socio-economic development strategy and a tool for poverty reduction in Côte d'Ivoire. **Key words:** value chain, contract, bicycle chicken, Poro region.

1. INTRODUCTION

Poultry production plays a crucial role in the animal production system of Côte d'Ivoire. As of 2007, the poultry population in the country was estimated to be around 33 million head, including 23.5 million family poultry, 6.4 million broiler chickens from semi-industrial farms, and 2.3 million semi-industrial layers, according to the Ministry of Animal Production and Fisheries Resources [1]. It is estimated that 70% of the poultry population comes from the family sector, while 30% comes from the modern sector for the production of white meat and eggs [2]. African chickens, also known as traditional, local, or bicycle chickens, are a significant part of family poultry production and contribute to meeting the demand for animal protein and the basic financial needs of producers and traders. Additionally, cultural practices such as hosting guests, weddings, baptisms, celebrations, and initiation into Poro also drive the production and marketing of African chickens.

In the Savannah region, a pilot geo-census conducted during the vaccination of poultry against avian flu in 2007 revealed that 76.43% of all family chickens were bicycles [2]. Korhogo, the capital of this region and the largest city with a population of 286,071 according to the 2014 General Census of Population and Housing (RGPH), has a significant demand for African chickens due to its demographic mass. These chickens are heavily commercialized in an informal system on a specialized market called the "small chicken market" in the Soba district. Therefore, this study aims to analyze the strategies implemented by actors in the poultry sector for the supply and marketing of bicycle chickens in Korhogo to meet the food, economic, and social needs of the population

2. METHODOLOGY

The purpose of this study is to analyze the system and twin activities of the marketing of African chickens in the city of Korhogo. The methodological approach adopted consisted initially of bibliographic research through the collection of all available information on the sector. Subsequently, using the technique of random sampling, a survey was carried out among 30 chicken traders in the country, 10 pluckers and 5 other persons engaged in other activities in this trade. A total of 45 people were surveyed in the specialized bicycle chicken market located on Figure 1. The present work extends these studies by providing economic information on the marketing of African chickens, including costs, actors, flows and daughter activities. The work therefore consists of analyzing the market and the marketing system for the country's chicken in the city of Korhogo, the main hub of Senoufo culture. Specifically, it involves identifying the supply system, characterizing the various sales outlets and traders of domestic chicken, describing the practices that underlie the interest in purchasing chickens, and analyzing the profitability of the marketing activity of African chickens in the city of Korhogo. To achieve this, direct observation and interviews were conducted.

2.1 Direct observation

The market that specializes in the sale of chickens, called the "chicken market" in the Soba district, was visited. The large market and the markets in the Sinistré Kôkô and Haoussabougou districts were also checked on. These observations made it possible to identify the points of sale of African chickens and to collect data on the level of development of the markets, the distribution network and the activities of the chicken sales.

2.2 Interviews

Semi-structured interviews were conducted with traders, pluckers and actors of other chicken sales activities. These interviews focused on:

- The absence of traders at the other markets of the city except for the specialized market in the Soba district,
- Determining the places of origin of the chickens in the country,
- Identifying agents of African chicken trade and the value chain of the sector,
- The race over buying African chickens at a high cost according to color.
- Determining customer affluence periods.

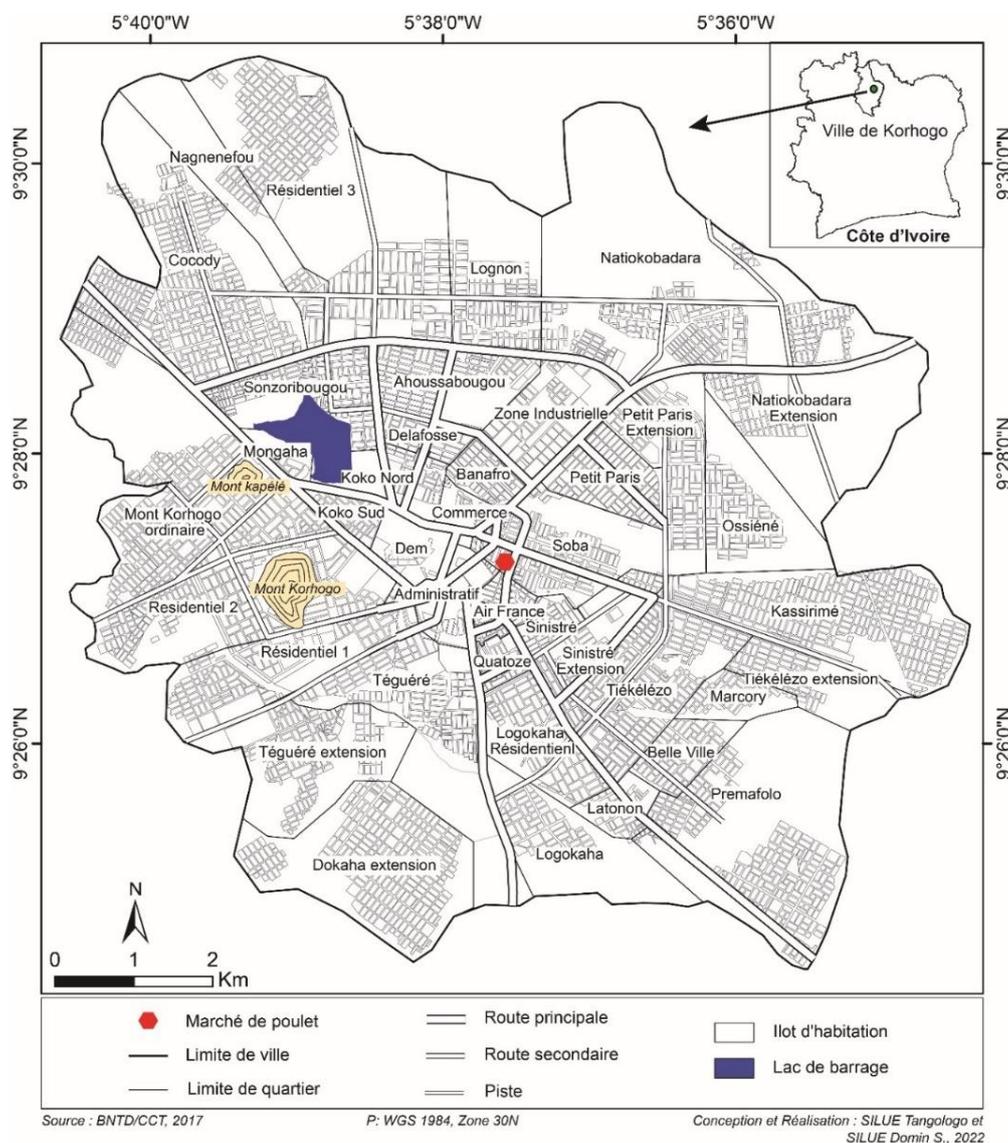


Figure1: The figure presents the location of the market specialized in the sale of African bicycle chickens in the city of Korhogo.

In order to conduct the necessary investigations for the establishment of a value chain around the marketing of chickens in general, we used a theoretical approach.

2.3 Theoretical approach

In order to create or improve the value chain as regards chickens, it would be suitable to transcribe their marketing into the theory of contracts [3]. Contracts allow economic agents to coordinate their plans, cooperate and exchange. Contractual relations can be of the cooperative or non-cooperative type. In our study, the first relationship concerns marketing cooperatives and poultry farmers. In order to acquire the supplies needed for urban markets, they must rely on the contract/production factors [4]. In this form of coordination, the marketing cooperatives must assist the poultry farmers to improve their rearing conditions (purchase of chicks, feed and care). This contract puts upstream the activities related to the marketing of chickens, i.e. the breeding of chickens, the production of chicken feed, veterinary care, egg production, etc. The second relationship involves marketing cooperatives and consumers [5]. Here the contract codifies the relationship between two people who have an interest in collaborating but who also seek maximum profit from the collaboration. This form of coordination highlights the contract/product specificity [4]. In this case, the co-contracting agents agree on the nature, quality, space, and concrete time of delivery. This marketing relationship concerns, downstream, the slaughtering, plucking, cutting, conservation, sale of sacrificial ingredients, sale of eggs...etc.

3. RESULTS

3.1 Socioeconomic Characteristics of African Chicken Sellers

The study reveals a lack of organization among all traders in the market. Nevertheless, they are classified into two categories. Those who are in cooperatives, known as the key players in the market, who make selling domestic chickens, hybrid chickens and broilers their profession. This cooperative, known as the Cooperative Society of Poultry Traders of Korhogo, remains unknown to some players due to a lack of organization and real functioning. It has 300 registered members and only about 20 active members. He said that there is no contract/production factor because this type of contract puts two cooperatives in contact with each other: the producers' and the traders'. There are also 40% of individuals who come to sell their chickens themselves by occupying the roads that border the market.

The sellers of bicycle chickens are mostly men (98%) and are in the age group of 30 to 65 years. They are of the Senoufo ethnic group, the indigenous people of the locality, and originate for the most part from the Poro region. Nevertheless, 8% of them are Malians and Burkinabés. The main motivation for engaging in this activity is the fight against unemployment. A significant number of traders (85%) got into the business because they inherited it from a parent. The results also showed that most of the respondents were Muslims (62%), 24% were Christians and 14% were animists. They are all unanimous that religion is not an obstacle to the practice of poro, which they consider to be the culture of the Senoufo people. The majority of traders have an average experience of 25 years with a low level of education (78% illiterate and literate).

3.2 Types of poultry sold at the specialized African chicken market

Different types of poultry are sold at the specialized chicken market in Korhogo. In order of importance (quantity sold), these are African chickens, guinea fowl, ducks, partridges, turkeys and pigeons as shown in Figure 2.



Figure 2: The figure shows the different types of poultry on the Soba specialty market.

Figure 2 shows some types of bicycle chickens, guinea fowl and pigeons. Private sellers use the cages to display the chickens for sale. This means of display also facilitates the transport of the poultry from home to the place of sale and back. In contrast, the traders who belong to the cooperative have larger cages, made of wood and fixed under a shed in the market. Under this shed, there are 250 wooden cages of 1.5 m². The latter pay taxes to the town hall according to the number of occupied cages corresponding to the number of places.

3.2.1 Unit prices: The unit prices of bicycle chickens depend on several parameters:

- The age of the chicken (chick, pre-laying hen, laying hen, crowing rooster),
- The type of chicken (hen or rooster),
- The health condition of the chicken,
- The breed of chicken (white, red, black, variegated),
- The weight of the chicken,
- The number of chickens purchased,
- The relationship with the customer.
- The purchase price of the chicken with the breeder or the intermediary.

Of all these parameters, the breed as shown in Figure 3 is the first criterion for setting the price. The price of a rooster (white, red, black) varies from 5000 FCFA to 9000 FCFA depending on the other parameters. The price of bicycle chickens with variegated plumage (not homogeneous) varies from 1500 FCFA to 5000 FCFA.



Figure 3: The figure shows the type of bicycle chickens according to plumage color.

There was also a very high price differential of 700 FCFA between the prices charged by traders in the city of Korhogo and the prices offered in the region at weekly markets. An average net gain of 500 FCFA was estimated per unit of chicken sold. Prices for African chickens are based on the utility of the chicken.

3.2.2 The Socio-Cultural Importance of Bicycle Chickens: Bicycle chickens in a predominantly ritualistic city are of capital importance. Depending on the shape and color of the plumage, a subject may be intended for sacrifice, offering, initiation, consumption or for the reception of a guest. Indeed, known for their attachment to their habits and customs, bicycle chickens are at the heart of the rites of the Senufo people in many ways.

From the outset, for the initiation of young people in the sacred grove (place of initiation), each ethnic subgroup has its own types of bicycle chickens recommended for different phases of initiation in Poro. In this city, where everyone wants to embrace their culture in order to have a reputation in life, a generation of initiates can reach 50 people for an initiation period of 7 years. It is common to ask for three chickens/candidate for initiation depending on the ceremony and the sacred wood. This makes a total of 150 chickens that they usually buy in the specialized market of Soba. Knowing that in the city of Korhogo there are 15 sacred-woods and therefore 2250 chickens to look for. It is easy to deduce the high demand for African chickens in this city. Secondly, the worship of fetishes or individual gods remains the daily life of some senoufos. In search of protection or for the smooth running of their activities, some people worship protective fetishes, luck fetishes or fetishes that destroy their neighbors through spells. Finally, for sacrifices that they give to another person to bless them. These offerings are often accompanied by a few symbolic ingredients (local beans, cola, millet, sorghum, calabash, canary?) The sale of these ingredients encourages the proliferation of activities in the vicinity of the market, suggesting a certain coordination of African chicken marketing activities.

3.2.3 Socio-Economic Importance : African chicken farming is a financially profitable activity despite its low productivity due to its value chain Figure 4, which needs to be organized and improved. The sale of chickens and eggs is almost a net profit since the use of inputs in this activity is low. Traditional poultry farming is thus a means of capital accumulation and a source of job creation, which we call the daughter activities or value chain of bicycle chicken marketing.

3.3 Other Activities Connected to Bicycle Chicken Marketing : The sale of bicycle chickens in this market has given rise to several activities. Indeed, the chicken market, which always welcomes a large number of people, was soon swallowed up by certain commercial activities mentioned in the figure below.

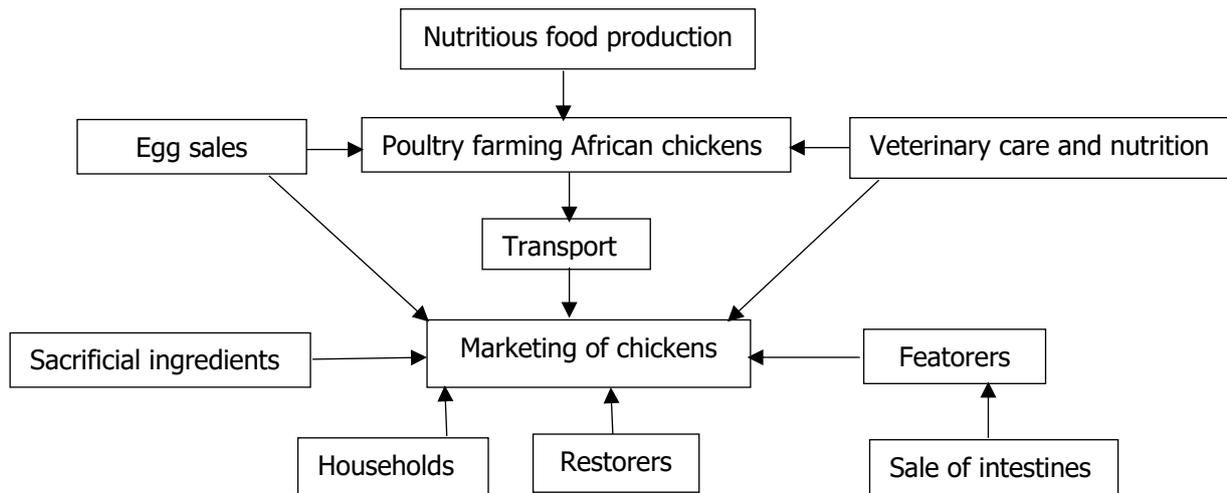


Figure 4: The figure shows the daughter activities of chicken marketing at the Soba specialty market.

Upstream of the marketing of chickens is the production of the food needed for poultry farming and then the transport to the specialized market. Feeding is neither rational nor regular, and transport is the responsibility of the trader and in rare cases the poultry farmer. According to the Cabinet Vétérinaire (Veterinary Office) Saint Joseph de Korhogo (CVSJK), several diseases affect this type of breeding. The most important diseases are Newcastle, Gumboro, Mycoplasma, and infectious bronchitis. These diseases cause high mortality, in 2/3 of the cases before the age of twelve months. These traditional breeds are therefore not very productive, but some farmers are beginning to take an interest in veterinary care to reduce these diseases and improve the profitability of bicycle chicken farming.

Downstream, there are various associated activities that accompany poultry purchases. These include plucking, the sale of eggs and poultry feed, sacrificial ingredients, and catering. The trade of sacrificial ingredients includes the sale of millet, sorghum, local beans, cowries, baskets, gourds, canaries, cardboard boxes for packaging, and especially colas.



Figure 5: The figure shows the sale of sacrificial objects on the market specialized in the sale of African chickens.

In addition, we have pluckers. There are 45 of them in this market. This activity does not require any capital or qualification. From the age of eight, the skill of plucking is learned within the family unit in the Senoufo area. All that is required is a relationship with a salesperson who may require your services at the request of customers who wish to have their chickens plucked. In this chicken marketing and selling activity, there are children between 12 and 17 years old, who are generally school dropouts. However, young people between 18 and 35 years old (80%) dominate this activity. The pluckers who have a good relationship with their peers and have been in the business for a long time, pluck more than 100 chickens a day. Plucking fees vary between 150 FCFA and 200 FCFA per chicken, depending on the number of chickens and the relationship between the plucker and the client. The latter have daily earnings that vary between 12,000 FCFA and 27,000 FCFA. They affirm that thanks to this activity they are able to support their families, send their children to school, and some are able to build their own homes. Nevertheless, the bicycle chickens that are the subject of our study are in the minority on the tables of the pluckers. Broilers sent by restaurant owners represent 80% of the turnover of this activity, followed by cattle and other animals (10%) and guinea fowl (5%).



Figure 5: The figure shows the pluckers operating in the market specialized in the sale of African chickens.

The images in Figure 5 show young people, benefiting from the presence of this market, plucking chickens that are largely purchased at this site. This is one of the most important daughter activities of the chicken market. The livestock, poultry and many other animals are well maintained by the pluckers for the satisfaction of their customers because very fast. All these activities are practiced in a total disorder where the strongest dominate the market. There is no contract as a basis for the activity that binds the actors. Each actor is looking for the maximum profit. If the seller calls upon a plucker, it is because the latter is quick in plucking and most often accepts the price proposed by the former. If you are advised a seller of sacrificial objects, it is because there is a family link or the price can be revised downwards compared to the intervention of the adviser. Here it will be wise to highlight the contract/specificity of the products [4]. In this case, the co-contracting agents agree on the nature, quality, space, as well as the concrete time of delivery. It is on this condition that the actors will improve the quality of the service by forming a cooperative.

4. DISCUSSION

The discussion will focus on the salient points of our analysis, namely the valuation of local poultry, contract theory and economic opportunities, and the constraints of traditional poultry farming. The valuation of poultry farming and the marketing of local chicken remain insufficient compared to broilers. For example, in the market studied, which specializes in the sale of African chickens, broilers are sold three times more. The poultry sector, especially the sale of broilers, is increasingly attractive and better structured in West Africa, where Senegal, the leader of the area with more than 62,000 tons of poultry produced in 2016, and Côte d'Ivoire, nearly 47,000 tons, are the locomotive. Meanwhile, Morocco, with 681,000 tons, has already established itself as a model [7]. To increase production of bicycle chickens, the Ministry of Animal Resources and Fisheries of Côte d'Ivoire has implemented a project called "One Woman One Rooster 10 Hens". From 2015 to 2018, 1500 women and 200 men have benefited from this project according to the minister at the opening of the 7th edition of the National Days of Ivorian Poultry, called "JNA 2018", on Wednesday, October 24, 2018, in Abidjan. However, the main driver of this increase is above all consumption. In Côte d'Ivoire, for example, the consumption of poultry per capita and per year has increased from 0.43 Kg in 2006 to 1.99 Kg in 2015, according to the Ivorian Poultry Interprofession (Ipravi). An average still far from international standards, as the World Bank points out that in 2016 [8]. an African consumed an average of 3.3 Kg of poultry in a year when a Frenchman ate 28 Kg, and the world average is 14 Kg. To enhance the value of the country's chicken, it is necessary to think about its value chain, the contracts between poultry farmers, traders, and consumers.

Contracts allow economic agents to coordinate their plans, cooperate, and exchange. Contractual relations can be of the cooperative or non-cooperative type [3]. The results reveal that the actors did not enter into contracts with their suppliers. The main reasons cited were a lack of knowledge of the contract, irregularity of suppliers, and the disorganization of the cooperative. The relationships maintained between the different actors are more of a social, parental, and friendly nature. In the absence of a contract, some actors have developed subsidiary activities related to the marketing of poultry (plucking, sale of eggs and poultry feed, sacrificial ingredients, catering, etc.). This finding was made by Babo (2006) and Silué et al., (2019) [9,6]. in Bouaké where economic opportunities such as the Bouaké wholesale market and the increase in the population of this city have encouraged some young people, former migrants, to develop new production activities: market

gardening, lowland rice growing, cashew growing, groundnuts, etc. These have proved to be more profitable than traditional activities. These activities have proven to be more lucrative than agricultural laborer contracts in the forest zone. Upstream, traditional poultry farming faces food and health constraints [10]. This limits its marketing and, by extension, its contribution to local development. Poultry feed is essentially made up of residual feed available at the concession level [11]. The feed consists of greens, insects, grains,

5. CONCLUSION

In conclusion, this research has shed light on the marketing system for African chickens in Korhogo, particularly with regards to the unique social, parental, and friendly relationships between actors that make it possible. The findings suggest that traditional poultry farming and marketing can be an effective means of fighting poverty and can also be financially profitable. However, in order to fully realize the potential of this sector, it is important to support it within the context of sustainable development. This can be achieved through state-led programs aimed at promoting and marketing the sector, as well as through the development of a value chain that includes real aid for farmers and complementary activities such as slaughtering, cutting, and packaging of chickens. Such measures can contribute to the promotion of economic growth, poverty reduction, and food security in Korhogo and beyond.

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How to cite this article: Tangologo Silué. ANALYSIS OF COORDINATION MECHANISMS AMONG SPECIALIZED AFRICAN CHICKEN MARKETS IN KORHOGO: IMPLICATIONS FOR MARKET EFFICIENCY AND LIVELIHOODS OF PRODUCERS. *Am. J. innov. res. appl. sci.* 2023; 16(5): 274-279.

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