

# Assessment of Cost and Returns of Poultry Farming in Kuje Area Council of Federal Capital Territory, Nigeria

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Received: 01/08/2024 | Accepted: 14/08/2024 | Published: 01/09/2024

**Abstract:** *This research examined the Cost and Return Analysis on Poultry farming in Kuje, Area Council Abuja. The study essentially made use of primary data. Data were collected from three (3) wards of Kuje Area Council that are majorly involved in Poultry farming. Namely Chukuku, Chibiri and Kiyi with the help of Agricultural Development Project (ADP) and total of 50 respondents were randomly selected. The data were obtained through a well-structured questionnaire. The study examine the specific objective of this study which include: determine the costs and returns of poultry farming in the study area and to determine the profitability of poultry farming in study area. And the data collected base on these objectives were analyzed using Gross margin, gross margin ratio, Net farm income return on investment, and (constraint) mean and standard deviation. The result of the costs and returns analysis revealed that Gross Margin was N604,110.00, Net farm income 240,886.00, Return of investment 29.77 and Gross margin ratio 57.53, The study revealed the return on investment were 29.77 was realized per unit on broiler production, which shows that there is profitability in production of broilers in the study area. While some constraints associated with poultry farming was identified as poor management, disease outbreak, high cost of feed, improper vaccination and inadequate input supply. This study recommend that, new innovation and technology that targets increased production of broiler farmers, provision of adequate extension services should be intensified to address training of broiler farmers so as to reduce improper vaccination and inadequate input supply, lastly government agencies should simplified access to credit and grants to existing and prospective broiler farmers.*

**Keywords:** Cost, Production, Poultry, Profitability, FCT.

## Cite this article:

Joshua, T. J., Alabi, O. O., Peter, D., Yahaya, N., Oguiche, C. J., (2024). Assessment of Cost and Returns of Poultry Farming in Kuje Area Council of Federal Capital Territory, Nigeria. *World Journal of Multidisciplinary Studies*, 1(1), 22-25.

## 1.0 Introduction

Broilers are simply chicken raised for meat and its production is the process of rearing broiler birds for meat, a key measure of performance being the feed conversion ratio (FCR). According to Mgbakor and Nzeadachie (2013) broiler production of the poultry enterprise has great potentials for increasing protein supply in Nigeria, because of their fast growth rates and prolificacy, which can be adapted under a wide range of marginal climatic conditions and can generally be combined conveniently with other farm enterprises and/or occupation, with mutual benefits to the farmer. The importance of broiler is further noted by Ezeano and Ohaemesi (2020) to include: offers high productiveness, fast growth rate, short generation interval and unparalleled competence in nutrient transformation to high quality animal protein. In spite of these laudable attributes of the industry, it is still faced with the following according to Ike and Ugwumba (2011): poor reproductive performance, poor growth rates, diseases, mortality, predation and low level of literacy among farmers, as well as poor market for the product in small holder broiler production. The Nigerian's broiler resources consist of about 104,247,960 birds (NBS, 2020), representing about 48.72 percent of the total livestock production in the country, which indicates the place of broiler sub sector in the livestock industry. Broiler as a subsector of

the agriculture sector, has become popular industry for the small holders that have great contribution to the economy of the country. The subsector was particularly important in improving the employment opportunity and annual food production in Nigeria. Aniekan, Udoro and Ediomi, (2020).

Study by Ameh, Suleiman and Danwanka (2016) shows that about 14% of the Nigerian population are engaged in broiler production, mostly on subsistence and small or medium sized farms. A good number of the stock of the broiler resource in Nigeria as in most part of Africa is under commercial production for meat, raised under the intensive and semi-intensive husbandry (Emokaro & Eweka, 2016). In spite of this shift, Omolayo (2018) maintained that the output level still remains low compared to the input committed and the broiler products are grossly inadequate because the supply is lower than the demand.

The challenges of poultry in Nigeria cannot be over emphasized, these challenges has slowed down the rate of production in the industry. High rate of disease and pest attack as a major challenge in poultry production was reported by Ajala *et al.*, (2007) and Aromolaran *et al.*, (2013). Lack of technical knowledge was also reported by Olaniyi *et al.*, (2008), and Aromolaran *et al.* (2013). Anosike *et al.*, (2015) reported that most farmers do not have an idea of the farms that hatch the chicks they buy, as they buy from

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road side hawkker. (Adeyemo and Onikoye (2012) report that inadequate poultry extension services are one of the major challenges faced by poultry farmers.

Inadequate access to high cost of veterinary services, Hence the maintenance of record help the farmer to determine the process of retrogressing nature of the farm. Besides, it helps in making future project, planning and programing in poultry industry. Most farmers either as a result of illiteracy, training or other wish are unable to keep records. The result is the most extension officers are unable to help them out of their problems due to lack of information. Therefore this study is aimed at the cost and profitability of poultry farming in Kuje Area Council of Federal Capital Territory, Nigeria.

## 2.0 METHOD AND MATERIALS

### 2.1 The Study Area

The study was carried out in Kuje area council; Kuje is located at latitude 8.87953 and longitude 7.22756 local government of federal capital Territory (FCT), Nigeria. The area is characterizing d by two seasons, wet season and dry seasons. The dry seasons last 5-6 months from October to march with ani-modal peak of of rainfall in August; the rainy period lasts for 6 months from April to September. Kuje area council has an average temperature of 27<sup>0</sup>c. The Area under study is Chukuku, Chibiri and Kiyi under kuje area council.

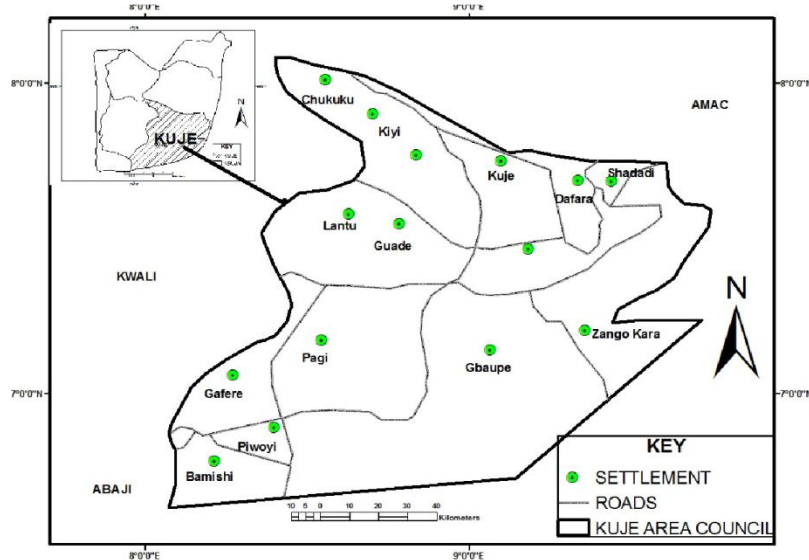


Figure 1: Showing the map of Kuja Area Council.

Source: Google Earth Map (2022)

### 2.2 Method of Data Collection

The source of data collection was cross sectional data collection. The cross sectional data was obtained using at least 50 well-structured questionnaires. The data to be collected was on family size, age of producers, level of Educations Output of poultry farming, Constraint associated with poultry farming, profitability of poultry farming in the study area.

### 2.3 Sampling Techniques and Sampling Size

Kuje area council was selected purposively because of the predominance of poultry farmers in the area. The poultry farmers in Chukuku, Chibiri and Kiyi was sampled from the list of poultry farmers obtained from agricultural development project (ADP). A total of 50 poultry farmers was randomly selected and used for the study.

### 2.4. Data Analysis

Descriptive Statistics was used to analyze the data. This involves use of the percentages, and frequency distribution to analyze data collected.

#### 2.4.1 Gross Margin

- i. Gross Margin (GM)

$$GM = GR - TVC$$

- ii. Net Farm Income (NFI)

$$NFI = TR - TVC - TFC$$

Where, GM = Gross Margin,

GR= Gross Revenue

TCV= Total Variable Product,

TR= Total Revenue

TVC= Total Variable Cost

TFC= Total Fixed Cost

## 2.4.2 Financial Analysis

Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability. Typically, financial analysis is used to analyze whether an entity is stable, solvent, liquid, or profitable enough to warrant a monetary investment

$$\text{GrossMarginRatio} = \frac{\text{Total} - \text{cost of Goods sold}}{\text{Total Revenue}}$$

$$\text{NetProfitmargin} = \frac{\text{Revenue} - \text{Cost}}{\text{Revenue}} \quad \text{ROI} = \frac{\text{Net Return on investment}}{\text{Cost of investment}} \times 100\%$$

## 4.0 Results and Discussion

### 4.1 Cost and Returns Analysis of Broiler Production

The result from Table below revealed that the total cost spent on broiler production is ₦809,114.00. The result further revealed that the total variable and fixed costs were ₦91,132.00 and ₦445,890.00 respectively. In terms of returns the result revealed that the gross margin was ₦604,110.00 was realized from the sale of average broiler production in kuje Area Council. Broiler production in kuje metropolis was profitable, as further confirmed by rate of return to investment; where ₦29.77 was realized from every ₦1 invested on broiler production, with a net farm income of ₦240,886.00 and the total revenue realized was ₦1,050,000.000. Ume . (2016) Thus the broiler production was highly profitable.

**Table 4.1: Cost and Returns Analysis of Broiler Production in the Study Area**

Items	Number	UnitPrices	Amount
<b>Revenue(A)</b>	<b>300.00</b>	<b>3,500.00</b>	<b>1,050,000.00</b>
<b>Variablecosts(B)</b>			
<b>InputsCosts</b>			
<b>CostofChicks(Number)</b>	310.15	284.20	88,144.00
<b>CostofFeeds(Kg)</b>	15.09	6,522.00	98,394.00
<b>CostofMedicine(VaccineandMultiVitamins)(Litre)</b>	10.59	10,298.00	109,092.00
<b>CostofWater(Litre)</b>	1,182.56	50.00	59,128.00
<b>TotalInputCost</b>			<b>354,758.00</b>
<b>LabourCosts</b>			
<b>Transportation(Number)</b>	3.79	486.05	1,840.00
<b>SupervisionandMaintenance</b>			3,440.00
<b>Marketing</b>			7,616.00
<b>FeedingofBirds</b>			1,820.00
<b>PenPreparation</b>			76,416.00
<b>TotalLabourCost</b>			<b>91,132.00</b>
<b>TotalVariableCost</b>			<b>445,890.00</b>
<b>FixedCosts(C)</b>			
<b>CostsConstructionofPen</b>			345,484.00
<b>Equipment</b>			17,740.00
<b>TotalFixedCost</b>			<b>363,224.00</b>
<b>TotalCost(B+C)</b>			<b>809,114.00</b>
<b>GrossMargin</b>			<b>604,110.00</b>
<b>NetFarmIncome</b>			<b>240,886.00</b>
<b>GrossMarginRatio(GMR)</b>			<b>57.53</b>
<b>ReturnonInvestment(ROI)</b>			<b>29.77</b>

Source: Author Field work (2023).

## 5.0 Conclusion and Recommendation

Based on the findings of this study, it can be concluded that broiler production is profitable enterprise in Kuje Area council, if the problems highlighted in the study area were properly taken care of, there is ample chance for improvement of broiler production in the study area.

Based on the finding of the study, the following recommendations are proffer:

- i. The study recommend that farmers should belong to agricultural cooperative so that it will be easier for them to access agricultural finance or loan and easy accessibility to poultry input.
- ii. That government and policy maker should make policies that will make soft loan available for the farmers.
- iii. New innovation and technology that targets increased production of broiler with an adequate extension agent shall be encouraged.
- iv. Government should make provision for adequate input supply and create policies to stabilize cost of feeds

## References

1. Adeyemo and Onikoye (2012) report that inadequate poultry extension services are one of the major challenges faced by poultry farmers.
2. Ameh, B. O., Suleiman, M., & Danwanka, H. (2016). Economic analysis of broiler production in Lokoja Local Government of Kogi State, Nigeria. In *Proceedings of the conference of the National Association of Agricultural Economists held at FUT Owerri*.
3. Aniekan, J. A., Udoro, J. U., & Ediom, U. A. (2020). Comparative cost and return of broiler and layer birds in a risky environment: a case of Akwa Ibom State, Nigeria. *Proceedings of Nigeria Agricultural Economist Association (NAEE)*.
4. Emokaro, C. O., & Eweka, K. I. (2015). A comparative analysis of profitability of broiler production systems in urban areas of Edo State, Nigeria. *Journal of Applied Sciences and Environmental Management*, 19(4), 627-631.
5. Ezeano, C. I., & Ohaemesi, C. F. (2020). Comparative analysis on profitability of Broiler and Turkey production in Anambra State, Nigeria. *Int J Sci Res*, 9, 511-5.
6. Ngozi, M. M., & Chinonso, E. N. (2013). Economic analysis of broiler production (A case study of Orumba South LGA of Anambra State, Nigeria). *American-Eurasian Journal of Agronomy*, 6(2), 25-31.
7. National population commission, 2006. Census enumeration survey N. P. C. Abuja, Nigeria. 2, 6-8. Nigeria.
8. National Bureau of Statistics. N.B.S., 2020. Livestock Production Report in Nigeria 2020. NBS annual report, Abuja.
9. Olorunwa, O. J. (2018). Economic analysis of broiler production in Lagos State poultry estate, Nigeria. *Journal of Investment and Management*, 7(1), 35-44.