Analysis of Profit and its Drivers in Broiler Production in Anambra State Nigeria.

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ABSTRACT

Broiler production over the years has seen movement of people in and out of the industry which has continued to interfere with forces of demand and supply. Increasing profit within the broiler industry require a good knowledge of the industry as well as being at home with factors capable of raising every naira invested in the industry which will serve as a yardstick for continuity in the industry. The study analysis of profit and its determinants in Anambra state employed the use of multistage purposive and simple random sampling technique to select 370 broiler farmers. The structured questionnaire administered to 370 broiler farmers used budgetary techniques and multiple regression analysis to ascertain the profit made as well as the factors that are significantly determined the profits realized in broiler production. The study revealed a profit of N3,647,503.36 with profitability value of 30.8% and return on investment (ROI) of 1.57, indicating that the farmers make N1.57 for every N1 invested in broiler production. The study further revealed that the coefficients of cost of day-old chick (DOC), feed cost and drug expenditure are all positive and significant at a 1% probability level. The study concludes that although there is profit in broiler production there still exist opportunities for improving on their current level of production. The study recommends cost management intervention and more training to farmers to enhance profit.

Keywords: Broiler production, Profit, Determinants, return on investment and regression.

INTRODUCTION

Poultry sector is a key sub-sector in Nigerian Livestock industry (Umar, Luka, Alu and Peter, 2022). Offiah, Umebali, Isibor, Ugbajah and Nwankwo (2024), opined that the practice of farming which includes broiler production, still remain the pillar of the Nigerian economy for growth and development especially in rural communities. The sector as at year 2020, contributes to achieving food sufficiency and economic growth, accounting for approximately 25% of the agricultural GDP in Nigeria (Netherlands Enterprise Agency, 2020). Broilers (*Gallus gallus domesticus*) are birds kept specifically for meat production and remarkable for ready market as there are no cultural barriers and also its use for various social activities. Its production has high economic values, employment generation with little expertise required in rearing and a high market value. More so, the broiler component of the poultry sub-sector has a resource which accounts for 48.72% of the Nigerian livestock production (NBS,2020). According to Rabirou, kolapo and Abisoye (2022), the

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sector remains the most commercialized of the country's livestock production in Nigeria. According to Baruwa, Tijani and Alami (2018), in comparison, broiler kept for 6 weeks (42 days) are ready for market while layers that have been reared for 18 weeks would start producing eggs which can last for 12 to 18 months laying period. Thus, broilers have earned their place in the Nigerian market as very rich alternatives to beef and are profitable as a business venture. Apart from being one of the major source of protein in the country, broiler production has also been recognized as one of the quickest ways for a rapid generation of income. Profitability is one of the determining factors for growth of any enterprise this is because it is the hub around which business flourishes. Thus, when farmers operate on higher profit margin it creates room for expansion and encourages more investment and commitment in the sector. And according to Ettah, Ettah and Ukwuaba (2018), the growth of a business can only be successfully appraised by studying the profitability of the business

Ahmad (2018), observed that the activities of smugglers have greatly affected the performance of the broiler sector, which exposes it to an unfair' competition from imported frozen meat. To prevent a total collapse of the industry by protecting local farmers, the federal government of Nigeria introduced broiler anchor borrowers' schemes (CBN, 2016). This according to (Adeyonu *et. al.*, 2021; Olorunwa, 2018; Osuji, 2019), has not yielded any desired results as the industry is still plagued by various constraints such as high cost of feed, inadequate finance, poor infrastructure, competition with illegal importation among others. This has seen steady movement of people in and out of the broiler industry. Omolayo (2018), noted that there has been low supply of broiler products relative to its high demand which can be attributed to low returns on investment and poor resource management. However in bid to reduce unemployment, the number of farmers in broiler production is growing by the day but the cost of buying a matured bird from the market is too expensive and ironically the producers are worse off as it is evident in the continual movement of producers in and out of the business. There is a need to see if broiler production is profitable

There have been advocates for healthy animal protein and broiler production happen to be one of the produced animal based proteins known as "white meat" which is rich in nutrients and has minimal cholesterol. Also it is worthy to note that broiler production is considered as one of the most secured animal farming source of income for the developing communities due to the fact that it requires little space, yet the output is massive. Chiekezie et.al (2022) concluded that broiler production is a very viable venture in south east Nigeria, and consequently if the production processes are technically and resourcefully managed, it is capable of yielding a reasonable net return over time to any poultry farmer. Though there have been some sincere efforts to increase the consumption of broiler through encouraging local production of broiler in general, price of chicken is still very high which has made it less affordable for the common man.

Statement of the problem

In recent times, commercialized broiler production is being practiced on most farms both as main source of livelihood and side business venture, but the profitability of such venture is still questionable, this is because the cost of mature birds in the market is alarming and the producers are still in constant complain on their profit margin and discontinuity in the business is often noticed. Increasing profit within the broiler industry require a good knowledge of the industry as well as being at home with factors capable of raising every naira invested in the industry which will serve as a yardstick for continuity in the industry. This study will investigate the cost and returns to broiler production to know why the broilers produced locally are not affordable for the consumers.

Despite the huge economic advantage in broiler production and various efforts to promote broiler production, increase the output of broiler meat and also the need to provide at least a protein meal per day, broiler production in Anambra state is not yet on the global market map for broiler meat production. This study concentrated on profit and its determinants in broiler production in Anambra state in order to observe the going on and the ways to intervene and improve profit in the area.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Objectives of the study

The broad objective of the study is to analyze the profit and its determinants in broiler production in Anambra state, Nigeria. Specially, the objectives are to

1. describe the demographic characteristics of the broiler production.
2. determine the cost and return in broiler production.
3. analyze the factors influencing profit in broiler production

METHODOLOGY:

The study was carried out in Anambra state Nigeria which is located in the South-eastern region of Nigeria with its administrative headquarter in Awka. The state is sub-divided into four agricultural zones namely: Onitsha zone, Aguata zone, Awka zone and Anambra zone to aid planning and rural development. The state according to NPC (2006) report is bounded by Delta State on the West, Imo State and Rivers State on the South, Enugu State on the East, and Kogi State on the North. The state is located between Latitude $6^{o}\ 45^{1}$ and $5^{0}44^{1}$N and Longitude $6^{o}36^{1}$ and $7^{0}20^{1}$E with a total land area of four thousand, eight hundred and forty-four square kilometres (4,844 km2), and a population density of about eight hundred and sixty persons per square kilometres (860/Km^2). The major livestock reared in the area are chicken (meat and egg) sheep, goat, pig and little Muturu cattle population. (ADP, 2018)

The study population comprises 359 broiler farmers who registered with Anambra Development Programme as at December 2022 who rear birds from as low as 200 to as high as 500 birds within a production cycle. The Taro Yamane sample size determination in Otabor and Obahiagbon in offiah et.al (2024) was used to derive the sample size for the study. Multi-stage sampling procedure was employed in the selection of the population for the study. Stage 1 involved obtaining the sample population from the list of the registered broiler farmers from the study area. Taro Yamane sample size determination is stated as:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{4698}{1 + 4698(0.05)^2} = \frac{4698}{1 + 4698\ (0.0025)}$$

n= 368.6 which is approximated to 370

In the second stage, the study adopted Kumaison formula (1997) for sample size distribution which is stated as:

$$ith = \frac{ni}{N} * n$$

Table.1: Distribution of poultry farmers in the Agricultural zones of Anambra state.

Agricultural Zone	LGAs	Headquarters	No of poultry farmers
Onitsha	Onitsha North, Onitsha South, Ogbaru, Idemili South, Idemili North, Ihiala Ekwusigo	Onitsha	2035
Anambra	Anambra East, Anambra West, Oyi	Ayamelum	107
Aguata	Nnewi North, Nnewi South, Orumba South, Orumba North	Aguata	1263

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Awka	Awka North, Awka South, Dunukofia, Njikoka, Anaocha	Amawbia	1293

Therefore;

For Onitsha agricultural zone:

$$\text{ith} = \frac{2035}{4698} * 370 = 160.2 \simeq 160$$

Anambra agricultural zone:

$$\text{ith} = \frac{107}{4698} * 370 = 8.4 \simeq 8$$

Aguata agricultural zone:

$$\text{ith} = \frac{1263}{4698} * 370 = 99.5 \simeq 100$$

Awka agricultural zone:

$$\text{ith} = \frac{1293}{4698} * 370 = 101.8 \simeq 102$$

Table 2: Sample representation of poultry farmers for the study

Sn	Agricultural zones	No of Farmers	Sample size
1	Onitsha	2035	160
2	Ayamelum	107	8
3	Aguata	1263	100
4	Amawbia	1293	102
Total	4	4698	370

Finally stage 3 involved purposive selection of minimum of 5 poultry farmers from each of the selected town in local government areas for the study depending on the number of poultry farmers in the area.

Method of data Analysis and Model specification

Data for the study were collected using structured questionnaire that was factored into the Kobo collect Android software. Primary data collected were analyzed using both descriptive statistics such table, means and percentages; and inferential using budgetary techniques and multiple regression analysis.

Budgetary techniques:

The methods are mathematically given as:

1. i. Gross Margin = Total Revenue – Total Variable Cost
2. ii. Net Farm Income = Total Revenue – Total Cost
3. iii. Net return investment: Net Farm Income / Total Cost
4. Gross Ratio: Total cost / Total Revenue

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

5. Profitability Index (PI): Net Farm Income / Total Revenue

Multiple Regression Analysis

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13})$

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + \beta_{13}X_{13} + e)$

Where:

Y = Profit (naira)

f = function

X_1 = cost of day-old (naira)

X_2 = cost of feed

X_3 = cost of vaccination (naira) educational qualification (years)

X_4 = cost of labor (mandays)

X_5 = sex (dummy female =1, male =2)

X_6 = marital status (dummy) stock size

X_7 = age (number)

X_8 = educational qualification (number of years)

X_9 = experience (years in production)

X_{10} = household size (number)

X_{11}= number of pens (number)

X_{12}= access to credit (yes=1, no=2)

X_{13}= training (number in a year)

β_0 = intercept

$\beta_1 \ldots \beta_6$ = parameter to be estimated

e = random error term

RESULTS AND DISCUSSIONS

Demographic characteristics of broiler farmers in Anambra State

The findings on demographic characteristics of the broiler farmers in the study are presented in figures and Table 2 below. The data visualization of the variables is discussed as:

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ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Table 2 below. The data visualization of the variables is discussed as:

Sex: the study observed that more than half (50.1%) of the sampled broiler farmers are female, while the rest 40.9% are male. This finding implies that women involved in broiler rearing in the study area are more in number than men. This will help to promote gender inclusiveness in the sector. In many developing countries, women are often the primary caregivers and household managers, by participating in broiler production, women can earn an income, which can significantly contribute to the household economy (Onyeneke *et al.*, 2020).

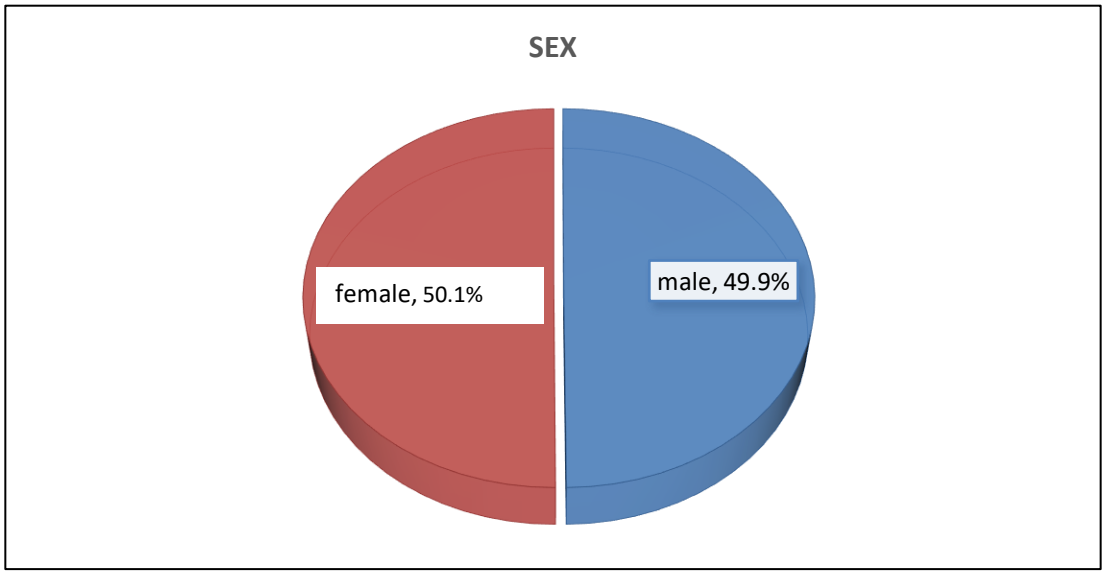

Figure 1: Sex description of the farmers

Marital status: Figure 2 shows that married farmers (40.0%) dominated broiler farming in Anambra State, this observation is followed by the 19.2% that are separated from their partner. 18.7% and 16.2% are widows/widowers and single farmers respectively. This is an indication that the study is well distributed to accommodate people of different marital categories. The fact that married people are more involved in the enterprise brings the finding in agreement with the work of Omolayo (2018), who noted that married people dominated broiler production in Nigeria.

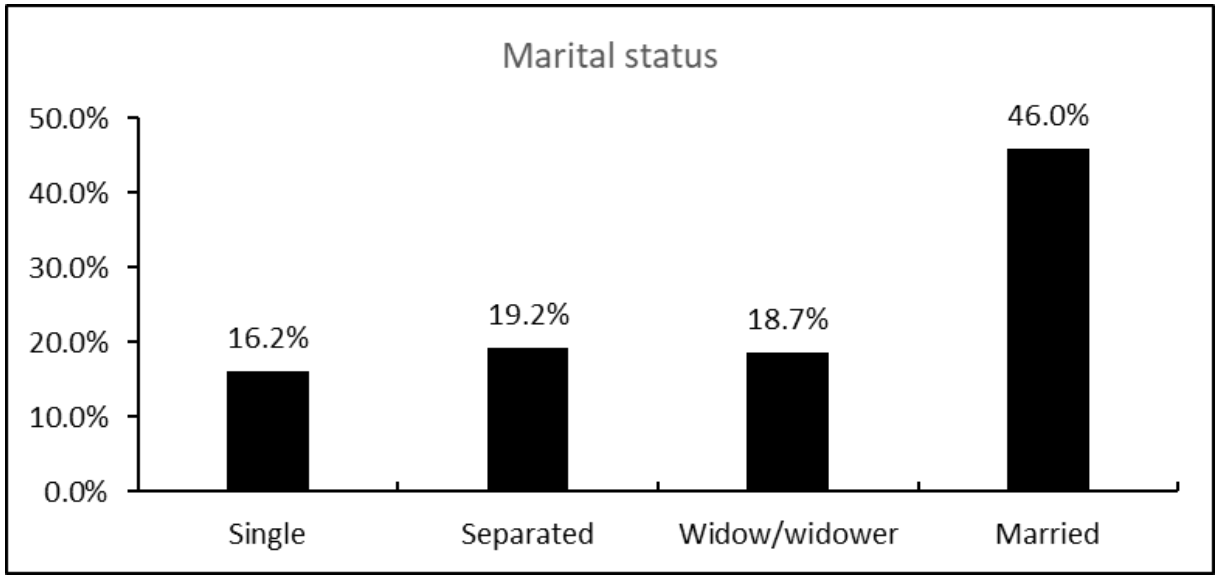

Figure 2: Marital status description of the farmers

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Veterinary services: from the result it was found that the majority (55.4%) of the farmers involved in broiler farming have access to veterinary services, whereas the rest 44.6% responded with no access. Veterinary services play a critical role in broiler farming. The roles encompass economic, health, welfare, and even global public health considerations (Hafez, and Attia, 2020). Broilers are susceptible to various diseases which can devastate entire flocks. However, Veterinarians are needed to diagnose, treat, and give recommendations on management and disease prevention guidelines (Lebeer *et al.*, 2018).

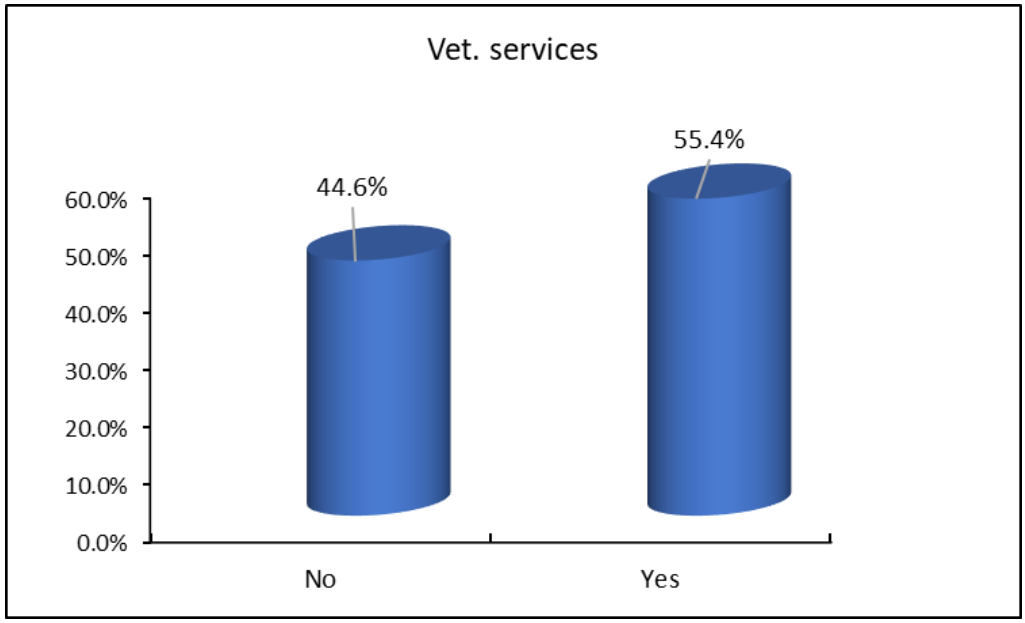

Figure 3: Access to a veterinary service description of the farmers

Cooperative membership: one interesting observation revealed in the study is the fact that an equal number (50.0%) of broiler farmers involved in the study are either a member of a cooperative society or not. This association will help the farmers to enjoy the principle of bulk purchase to reduce the cost incurred in production. During cooperative meetings, it is expected that the farmers will network to share knowledge on effective broiler management and to address some of the issues confronting them in the enterprise. However, Chiekezie et.el (2020), observed that about 57% of farmers belong to cooperative while the other 43% were non members, this shows farmers are now seeing the importance of being a cooperative member.

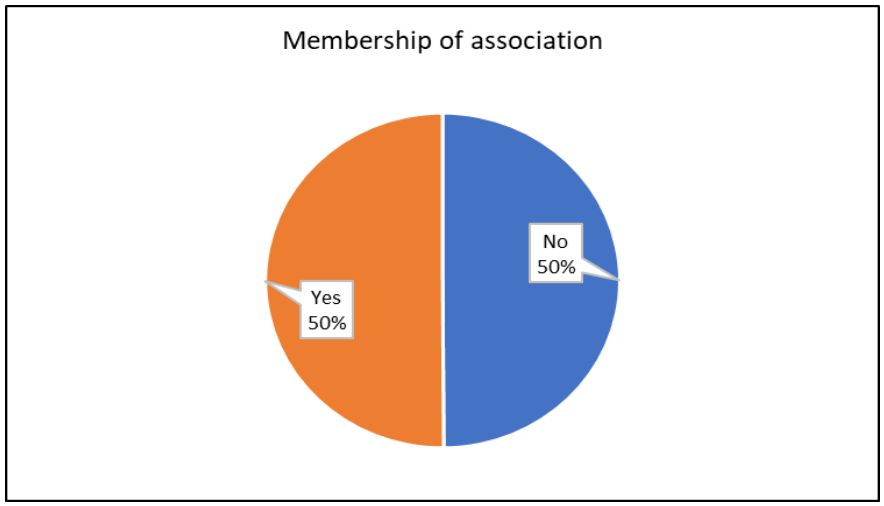

Figure 4: Cooperative membership description of the farmers

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Access to credit: the farmer's access to credit was x-rayed by the researcher, figure 5 shows the visualized score which revealed that 51.5% of the people involved with broiler rearing had access to credit, while the remaining 48.5% do not have access to credit. Adewale *et al.* (2022) noted that credit plays an indispensable role in the agricultural sector, granting farmers access to it can provide the needed funds to help broiler producers begin their operations.

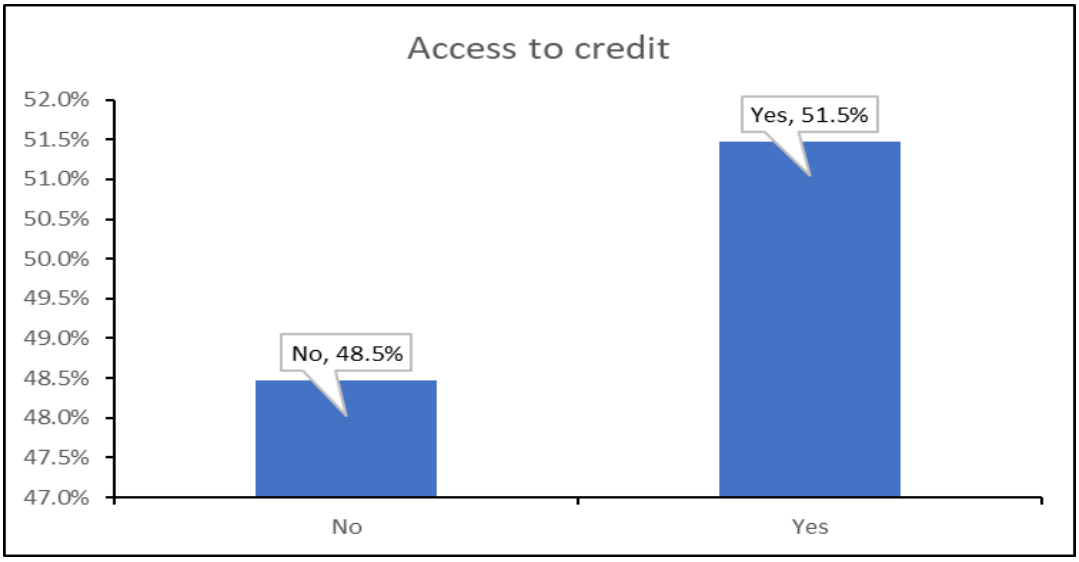

Figure 5: Access to credit

Age: The age distribution of the farmers is detailed in Table 2. The study revealed that the majority (32.9%) of farmers engaged in the enterprise are aged 41 to 50 years. Following this, 24.5% are under the age of 31. Additionally, 21.4% fall within the age bracket of 31 to 40 years, while 21.2% are between 51 years and above. The average age of the farmers is calculated to be 39.36 years. This average suggests a significant involvement of younger farmers in broiler production in the area. The standard deviation is 10.71, a relatively high value, indicating a diverse age distribution among the respondents. The involvement of younger farmers in the enterprise offers several advantages. This conforms to Ndubueze-ogaraku and Anya (2023) who found majority of the farmers to be between 40 to 49 years. This indicates that they are still youths and can actively engage in any strenuous activity needed in the production.

Level of education: The distribution of farmers based on their educational level, as detailed in Table 3, shows that the majority (42.3%) of the farmers completed secondary school. This is further supported by an average schooling duration of 12.0 years, of the remaining respondents, 20.1% completed primary school, 17.5% obtained a tertiary certificate, 16.7% achieved a post-graduate degree, and 3.3% did not attend any formal schooling. Given these statistics, the educational level of the farmers seems adequate for them to grasp the principles of sustainable broiler production. Chiekezie et.al (2022) found that majority of the broilers farmers in the study area attended secondary school, thus they can read and write and easily adopt innovation.

Production experience: The experience of farmers in broiler production is also detailed in Table 3. The data reveals that a significant portion (37.0%) of these farmers has been engaged in the business for 16 to 20 years. Additionally, 22.0% have been in the sector for 6 to 10 years, and 20.3% more than 20 years. Another 17.5% have dedicated 11 to 15 years, while the remaining 3.1% have been involved for 1 to 5 years. With an average experience of 15.5 years, it is evident that many farmers have dedicated substantial time to the business, equipping themselves with a deep understanding of the intricacies and challenges of broiler production. Such experience invariably prepares farmers to better navigate the enterprise. This aligns with

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Chiekezie et al. (2021) who reported 62% of the respondents having 16-20 years experience in poultry production.

Household size: The study revealed that majority (47.9%) of the respondents have a household size of 6 to 10 people, while the remaining 28.1%, and 24.0% have less than 6 people, and 11 to 15 people respectively. The average household size was 8 people and this is large enough to supply cheap family labour. This conforms to Ndubeze –ogarak and Anya (2023) who found that about 67% of the broiler farmers had household size between 6 and 10 person and made the opinion that the large household size of the broiler processors shows that they have big family responsibilities which also make them involved in non-broiler income earning activities to meet up with their family needs.

Table 2: Description of the demographic characteristics of broiler farmers (n = 359)

Variables	**Frequency**	**Percentages**	**Mean**	**Std. dev.**
Age (years):				
20 – 30	88	24.5		
31 – 40	77	21.4	39.36	10.71
41 – 50	118	32.9		
51 – 60	76	21.2		
Level of education:				
No formal education (0)	12	3.3		
Primary (1 – 6 years)	72	20.1		
Secondary (7 – 12 years)	152	42.3	12.0	7.75
Tertiary (13 – 17 years)	63	17.5		
Post-Graduate (above 17 years)	60	16.7		
Production experience:				
1 – 5 years	11	3.1		
6 – 10 years	79	22		
11 – 15 years	63	17.5	15.5	6.31
16 – 20 years	133	37		
21 Years and above	73	20.3		
Household size:				
Less than 6 persons	101	28.1		
6 – 10 persons	172	47.9	8.05	4.303
11 – 15 person	86	24		
Hired labour:				
2 – 4 man-day	167	46.5	4.55	2.322
5 – 8 man-day	192	53.5		
Number of pens:				
1 – 4 pen	122	34		
5 – 8 pen	163	45.4	5.97	2.498
Above 8 pens	74	20.6		
Training				
Nil	48	13.4		
1 – 3 times	180	50.1	2.64	1.683

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

above 3 times	131	36.5		

Source: Field Survey, 2023.

Hired labour: Often, the demands of broiler production can become overwhelming, necessitating the employment of external labour. As illustrated in Table 4.1, over half (53.5%) of the farmers hire labour for 5 to 8 man-days, while the remaining 46.5% require labour for 2 to 4 man-days. On average, the farmers hired labour for 5 man-days. These results indicate a combination of both family and hired labour among the study participants.

Number of pens: The number of pens a farmer owns in broiler production can reflect the size of their farm. The study revealed that 45.4% of farmers own 5 to 8 pens, 34.0% have 1 to 4 pens, and 20.6% possess more than 8 pens. On average, a farmer has 6 pens. These figures suggest that broiler production in the region remains primarily small-scale.

Training: To enhance their enterprise capabilities for sustainable broiler production, farmers actively participate in entrepreneurship skill development aimed at more productive and efficient broiler farming. The study revealed that a significant proportion (50.1%) of the farmers attended 1 to 3 trainings per year, while 36.5% participated in more than 3 trainings. Interestingly, only 13.4% had not pursued any training to further their production skills. On average, the farmers undertook training 3 times, indicating a proactive approach to skill development and a commitment to improving their managerial expertise.

The Profitability of Broiler Production

In Table 3, the profitability of broiler production is detailed. The study found that the revenue from the sales of matured broilers and poultry manure amounted to N5,966,036.03. This revenue is determined by the quantity sold and the unit price of the broiler. Regarding operating costs, the study indicated that N1,837,774.67, or 79.3% of the total cost, was spent on variable production costs. Additionally, the fixed costs was N480,758.00, making up 20.7% of the total production cost, bringing the overall cost to N2,318,532.67. In terms of profit margin, a margin of N4,128,261.36 was identified. The study revealed a profitability value of 30.8%. This suggests that farmers in the sector are competitive, with their profit margins covering 30.8% of their operating costs. Furthermore, a positive profitability score indicates that farmers can reinvest their profits for potential growth. This finding is in agreement with the study of Umar et al. (2022) who found that broiler production was profitable in their study.

Furthermore, the net return from the broiler enterprise is N3,647,503.36, while the return on investment (ROI) is 1.57, this indicates that the farmers make N1.57 for every N1 investment. Broiler production enterprise has proven to be a profitable business in the study area as was reported by many scholars in their different studies (Chiekezie et.al 2022; Ndubeze-ogaraku et al 2023).

Table 3: The Profitability of broiler production.

Items	**Quantity**	**Unit price**	**Amount**	**Percentage**
Sales revenue: Mature broiler	995	5906	5,878,429.34	
Organic manure	175	500	87,606.69	
Total			**5,966,036.03**	

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

Operating cost: DOC	1053	375.43	395,207.28	
Starter Feed (25kg/bag)	42	8983.09	380,863.08	
Finisher Feed (25kg/bag)	133	6923.87	919,598.19	
Labour (man-day)	31	2754.29	86,546.07	
Wood shaving			7,782.04	
Drugs and vaccination			13,117.16	
(Litres)	56	429.67	24,224.05	
Transportation			2,948.55	
Other cost			7,488.25	
Total			**1,837,774.67**	**79.3**
Fixed cost:				
Dep. on pen	3	110827.29	338,341.20	
Dep. on Borehole	1	119,539	62,599.83	
Dep. on Wheelbarrow	3	1606.56	4,797.30	
Dep. on Rake	4	237.82	848.61	
Dep. on Shovel	3	402.02	1,153.42	
Dep. on Stove	3	588.39	1,725.83	
Dep. on Drinker	116	254.13	29,451.19	
Dep. on Feeder	116	361.04	41,840.62	
Total			**480,758.00**	**20.7**
Total cost (TC)			**2,318,532.67**	
Profit			4,128,261.36	
Net returns			3,647,503.36	
Profitability index			0.308	
Return on investment			1.57	

Source: Field survey, 2023.

Relationship between the farm and farmer Factors and the Profit in Broiler Production

Recall the findings presented in Table 3, which indicate that broiler production is profitable. The study further analyzed the relationship between the profit margin and the selected variables using ordinary least square regression. Due to the inclusion of a larger set of variables in this analysis, the Adjusted R^2 was utilized instead of the standard R^2. The Adjusted R^2 value of 0.930 signifies that the institutional characteristics of the farmers account for 93.0% of the variation in their profit margin. The remaining 7.0% unexplained variation can be attributed to external factors. These metrics suggest that the farmers' management processes are effective.

The F-statistics value of 358.86*** is highly significant at a 1% probability level, implying that at least one of the managerial variables has a significant influence on the profit margin.

The coefficients for the cost of a day-old chick (DOC), feed cost, and drug expenditure are all positive and significant at a 1% probability level. This means a unit increase in these variables will enhance the profit margin by N2.373 (DOC), N1.802 (feed), and N51.986 (drug), respectively. Even with these increased

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume IX Issue III March 2024

costs, the farmers adjust the selling price of the broiler when it reaches market weight. Among these, drugs have the most substantial impact on the profit margin, followed by DOC and feed. This observation aligns with the findings of Umar *et. al.* (2022), who also highlighted the significant influence of drug and costs on profit at 1% levels.

Interestingly, the coefficient related to marital status is positive and significant at a 1% probability level, indicating that for every additional married respondent in the study, the profit margin would increase by N120,309.374, this could be because marriage comes with responsibility which brings about the best of hard-work in every individual. Moreover, both experience and training aimed at enhancing production capacity show positive significance at a 10% probability level. This suggests that a unit increase in the years of farmers' experience and the number of entrepreneurship training attended will boost the profit margin by N6693.165 (for experience) and N32317.578 (for training), respectively. Training plays a crucial role in equipping farmers with the skills and knowledge they need to effectively manage and expand their businesses. This specific observation is consistent with the research by Chiekezie et al (2021), who identified a positive relationship between profit and experience.

Table 4: Relationship between the farm and farmer factors and the profit of broiler production

Variables	Coefficients	Standard Error	t-Stat
Intercept	-207667.471	252990.795	-0.82
Stock size	2.373	0.291	8.15***
Feeds	1.802	0.094	19.24***
Drugs/vaccination	51.986	5.674	9.16***
Light management	27.942	21.037	1.33
Sex	-7243.924	60075.941	-0.12
Marital status	120309.374	26693.702	4.51***
Age	2545.002	2241.858	1.14
Education	3850.927	3877.484	0.99
Experience	6693.165	3960.962	1.99*
Household size	3142.741	6986.166	0.45
Number of pens	17161.951	11935.998	1.44
Access to credit	-161411.046	60411.365	-2.67
Training	32317.578	17738.315	1.98*
Cooperative membership	-7933.122	59792.752	-0.13
Adjusted R^2	0.930		
F-stat.	358.86***		
Obs.	359		

Source: Field survey, 2023. *, **, *** Significant @ 10%, 5%, and 1% respectively.

CONCLUSION

This comprehensive study on profit and its determinants in broiler farming in Anambra State paints a detailed picture of the sector's current profit and return on investment status, as well as the factors that are contributing to profit in broiler production. Although there is profit in broiler production in the area, the net return on investment and profitability index is not encouraging. All the farmers were making varying profit rates and return on every naira invested but the profit is not a sustainable one, as the cost on variable items

especially feed is enormous. The study observed some factors that are positively and significantly contributing to profit to include stocks size, feed , drugs, marital status, experience and training implying that broiler farmers can increase their profit if they can properly manage these factors, then more return on investment is possible in broiler production. Thus, the study emphasized that there is potential for significant growth and development in Anambra's broiler production industry.

RECOMMENDATION

1. Cost Management: Interventions to manage the high cost of feed and other inputs can be pivotal in improving the profitability and sustainability of broiler production; thus proper management activities will curb the incidence of pest and diseases which pose great threat to the farmers
2. Farmers should be given more training on how to manage their input relative to output given the positive relationship between training and profitability, more structured training programs should be introduced.
3. Infrastructure Development: Addressing challenges like market infrastructure can lead to better profitability in broiler farming where government can intervene in situations of glut so as to reduce the forces of demand and supply which affects price.

REFERENCE

1. Adewale, A.T., Lawal, O.A., Aberu, F. &Toriola A.K. (2022). Effect of Credit to Farmers and Agricultural Productivity in Nigeria. East Asian Journal of Multidisciplinary Research (EAJMR), 1(3): 377-388.
2. Baruwa, O.I, Adesuyi AZ (2018) Managing Farm Risk: Issues and Strategies in Small Scale Poultry Farmers in Osun State, Nigeria. J Fisheries Livest Prod 6: (3)278: 283. doi: 10.4172/2332-2608.
3. Chiekezie, N. R., Nwankwo, E. C. & Ozor, Maurice U. (2022) Analysis of Small Scale Broiler Poultry Production in South East Nigeria, West Africa, International Journal of Animal and Livestock Production Research, 6(1), 1-16.
4. Chiekezie N. R., Ozor M. U. & Isibor C. A. (2021). Economic analysis of layers poultry production in Anambra State, Nigeria. International Journal of Agricultural Policy and Research .9 (5), 129-137.
5. Ettah, O. I, Ettah, Goddy I., Ukwuaba, I. C. (2018). Analysis of Profitability in Maize Production in Obubra Local Government Area of Cross River State, Nigeria. International Journal of Interdisciplinary Research and Innovations. 6 (1),
6. Ezeano, C. I. and Ohaemesi, C. F (2018) Comparative Analysis on Profitability of Broiler and Turkey Production in Anambra State, Nigeria . International Journal of Science and Research.9(2) 512-515
7. Hafez, H.M. and Attia, Y.A. (2020). Challenges to the Poultry Industry: Current Perspectives and Strategic Future After the COVID-19 Outbreak. Front. Vet. Sci. 7:516. doi: 10.3389/fvets.2020.00516
8. Lebeer, S., Bron, P.A., Marco, M.L., Van Pijkeren, J.P., O'Connell-Motherway and M., Hill, C., (2018). Identification of probiotic effector molecules: present state and future perspectives. Curropin Biotechnol. (2018) 49:217–23. doi: 10.1016/j.copbio.2017.10.007.
9. Netherlands Enterprise Agency(2020), poultry sector study guide. Ministry of foreign affairs. Sustainable Agriculture, Innovative international. https://www.rvo.nl/sites/default/files/2020/10/Poultry-Sector-Study-Nigeria.pdf 28pages. accessed on december 18th 2022. contributors; Mackenzie N. Masaki, NABC Ivo van der Lee, NABC Hilde Duns, NABC Francis Toromade, PremierAgri Dr. Oduntan Ayo, Amo Group
10. Ndubueze-Ogaraku M. E. and Anya K. U (2023). Profitability and Technical Efficiency of Broiler Processing in Rivers State, Nigeria. Asian Journal of Economics, Finance and Management. 5, (1), 323-331.
11. National Population Commission of Nigeria (2006). Population and Housing Census of the Federal Republic of Nigeria: National and State Population and Housing Tables – Priority Tables Vol.1. Abuja

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12. NBS (2020). Livestock Production Report in Nigeria 2020. NBS annual report, Abuja National Population Commission. (2006). Human population figures of census in Nigeria.
13. Offiah E.O, Umebali E.E, Isibor C.A, Ugbajah M.O and Nwankwo E.C (2024). Determinants of Technical efficiency in Broiler production in Anambra State, Nigeria. International journal of novel research and development(IJNRD). 9(2): 22-30.
14. Omolayo, J. O. (2018). Economic Analysis of Broiler Production in Lagos State Poultry Estate, Nigeria. Journal of Investment and Management 2018; 7(1), 35-44.
15. Onyeneke, R. U., Emenekwe, C. C., Chidiebere-Mark, N. M., Munonye, J. O., Aligbe, J. O., Kanu, C., Izuogu, C. U., Njoku, C. L., Uwazie, U. I., Uwadoka, C. O., & Azuamairo, G. C. (2020). Impact of Poultry Farmers' Participation in Modern Food Retail Markets on Household Dietary Diversity: Lessons from Southeast Nigeria Animals : an open access journal from MDPI, 10(4), 611. https://doi.org/10.3390/ani10040611.
16. Rabirou K, Kolapo A. and Abisoye L. (2022) Competitiveness of broiler production in Nigeria: A policy analysis matrix approach. https://www.researchgate.net/publication/.
17. Umar, H.S., Luka, E.G., Alu, E.S. And Peter, E. (2022) Analysis of Profitability and Technical Efficiency of Broiler Production in North-Central, Nigeria**.** FUDMA Journal of Agriculture and Agricultural Technology 8 (1)56-63.