



PAT June, 2022; 18(1): 8-18 ISSN: 0794-5213

Online copy available at www.patnsukjournal.net/currentissue

Publication of Nasarawa State University, Keffi



META-ANALYSIS OF LOW PERFORMANCE OF BROILER MARKET IN ABAK LOCAL GOVERNMENT AREA, AKWA IBOM STATE, NIGERIA

*¹Helen Bassey Inyang, Emem Bassey Inyang² and Happiness Sunday Effiong³

¹Department of Agricultural Economics and Extension, National Open University of Nigeria, Kaduna, Kaduna State

²Department of Agricultural Extension and Development Studies University of Uyo, Akwa Ibom State

³Department of Animal Science and Fisheries, National Open University of Nigeria, Kaduna, Kaduna State

*Corresponding Author's e-mail: hinyang@noun.edu.ng Phone: 08163759075

Abstract

This study evaluated the factors influencing broiler market subsector performance in Abak Local Government Area, Akwa Ibom State. The socio-economic characteristics of broiler producers were also evaluated. An *expo facto* research design based on descriptive survey research type was adopted. A convenience sampling technique was used to select a sample size of 150 broiler farmers and questionnaires were used to generate data that were subjected to both descriptive statistics and the inferential statistics. The findings revealed that the average age of the broiler producers was 45 years as male dominated the sector. About 98% were literate and majority were married (68.7%). Majority (92.0%) of the households had not more than 5 members. The producers were multi-income livelihood oriented. Fourteen factors influencing broiler market performance were identified, 5 factors affected more than 90 percent of the broiler producers. Majority (57%) of the population affirmed that the factors affecting broiler market performance ranged from 70 to 100%. However, factor analysis revealed that there were three major significant dimensions of the factors as follows price variation to support uncleared stock over extended period; high demand on its flexible value chain and it is economically rewarding even at start up stage.

Keywords: Analysis, livestock, constraints, business, determinants

Introduction

Livestock rearing is a significant aspect of agriculture which has transcended from the subsistence notion to a commercial intent for income earnings by farmers. The commercial livestock is sustained by the economics of demand and supply (market forces) within the context of rapid population growth, increased demand for food and dietary needs per capita income increase of a region. When demand surpasses supply, price hike for livestock products across market become eminent, then prompting or encouraging investments in the livestock industries. Poultry has been one of the most fascinating dimensions or perspective of livestock rearing due to its short business gestation window and investment returns. Hence, setting the pace for income generation forecasting cycle for farmers, as rapid population growth and the anticipated demand signals a ready market for the commodity. Poultry production remains a profitable business enterprise despite raising cost of production (Aboki *et al.*, 2013; Ohajinya *et al.*, 2013), probably giving rise to more commercial poultry market entrant, characterized by the used of hybrid birds for fast growth/meat production, and broiler breed is often the most preferred. With the absence of market restrictions or barriers to agricultural production (poultry), national or domestic self-sufficiency is assumed or would have been achieved. Rather, an estimated 25,000 MT per annum shortfall in output was reported (Rotschild 2002).

Market performance of poultry in developing countries is adjudging to be poor due to its informal state and poorly developed market (Branckaert and Gueye 1999). Its performance cannot be isolated from the business environment which determines the mechanism for market participation

(market structure). The participation depends on adaptive attributes of the farmer or producer in the market for his business longevity which, could be influenced by some factors: socio or economic, the marketing structure, structure of performance of marketing, challenges associated with the market, the determinants of poultry (broiler), the cost and returns of the market etc., especially under a perfect competitive market which is a feature of poultry market. In Nigeria, the business environment is favourable to agro-allied ventures, due to the government quest in developing the agricultural sector of the economy. Policies have been formulated to stimulate the sector such as: Zero duty on agricultural machinery; Tax holidays for processing agro-processed industry; Export incentives for manufacturers in the agro-sector; Food import prohibition to encourage local production (NIPC, 2014).

This suggested that market environment or structure for agricultural produce is less of entry encumbrances, which allows for massive entry into the poultry market. The culmination into rapid expansion of the industry which has been observed in recent years has been the most capitalized or commercialized subsector of the economy (USDA 2013; Adene and Oguntade 2006). This portends or suggests a perfect competitive market structure, with its antecedent of large numbers of producers and consumers, supplying and demanding of homogeneous product (broiler). Also, with the assumptions of voluntary entry and exit, perfect knowledge of the market information and perfect mobility of factors of production. Sustenance of production under such market structure will depend on the marketing orientation and attitude of the producer. Therefore, the effective utilization of the marketing systems is imperative to producers and marketing performance.

The supply of poultry product is influenced or determined by the number of farmers participating in the market, while the participation decision is a function of certain constraining factors within a specific region. Although there are several of these factors, Kerbaga (2010) identified the most prominent factors that influence poultry marketing to include sex of household head, family size, total number of birds kept, feed supplementation and purpose of bird keeping. Similarly, (Tarekegn and Yosefe 2017) highlighted that the education of household head, household size, number of poultry herd, frequency of extension contact, type of poultry has a positive marginal effects on the decision of smallholder farmers to participate in poultry marketing except, distance to nearest market which may produce a negative marginal effect.

Marketing is the income harvesting phase of broiler value chain, but earning profitable income determines the longevity of broiler business. However, identifying the cost component in broiler marketing process is imperative or critical in determining profit. Market cost in broiler marketing may include handling (packing and unpacking cost, loading and unloading cost), transportation cost, production loss, storage cost, processing cost, capital cost, commission and other unofficial payments. Various models can be deployed to analyse the performance of broiler marketing such as net returns, marketing margin and economic efficiency. Net returns model captures the total return and total cost as separate components, the difference between total returns and total cost reveals the nature of net returns that could be either positive or negative. Market margin is a measure of the percentage of price that is paid by the consumer, it can be calculated by deducting the supply price from the selling price then dividing by selling price and multiply by 100 to capture the percentage value. The economic efficiency can be calculated according to Odii and Obih (2002) by dividing total revenue by total cost and if the ratio is greater than one implies that it is efficient but if less than one it is considered inefficient.

Scholars have noted low profitability and cost price squeeze (Ebong and Enyenihi 2015) as a major challenge in the study area, despite the facts that the surrounding business environs looks promising and supportive. There seems to be some generic challenges leading to the subsisting

low market performance in Abak Local Government Area, which has been a major poultry production hub in Akwa Ibom State. A close examination of broiler chicken producers in Abak Local Government Area reveals that the broiler chicken producers are involved in raising day old broiler chicken and majority are complaining of low profit margin (Ebong and Enyenihi 2015). This is contrary to the general expectation within the context of increasing demand for protein food in adjoining towns. Further investigation appears that the farmers relatively have low or no knowledge and control over the viability and profitability of the poultry business. Of-course profit making is the driving motivation of any business enterprise with a constrain profit margin due to increasing cost of production and the decline in sales as result of price hike. As price hike seems to threaten market dynamics. With the array of challenges affecting the production distribution system of poultry sector, the poultry birds' market is experiencing array of challenges that are influencing the market structure and performance. Typically, cost-price squeeze was observed by Ebong and Enyenihi (2015) revealing that producers are caught by poor economic returns in poultry investment in Akwa Ibom State. The poor marginal returns due to competitive nature of poultry production and marketing has exerted pressure on the structure and its performance in Akwa Ibom State. Based on the challenges influencing poultry market structure and performance, this study seeks to analyse the factors affecting the broiler marketing performance in Abak Local Government Area, Akwa Ibom State. This paper specifically identified the socio-economic characteristics of broiler producers and did components and incidence analysis of factors influencing performances of broiler market, assessed the severity of factors influence on performance of broiler market (SFIPBM) and ascertained the significant underlying dimensions of factors influencing performance of broiler market.

Methodology

The *expo facto* research design was adopted because the study had no intension to manipulate any of the study's variables. The survey was carried out in Abak Local Government Area of Akwa Ibom State, Nigeria, which is located between latitude 4⁰ 59'N and 7⁰47'E. The study area covers a total of 190 square kilometers. According to NPC (2006) census figure, the Local Government Area recorded a population of about 139,090 which is projected to 1,489,966 in 2021. The predominant occupation of the people is farming where the major land use pattern is rain fed tree and food crop cultivation, including oil palm and livestock rearing. Farmers also raise livestock e.g. sheep, poultry, rabbit, grass cutters and pigs (swine). The study population consisted of all the broiler producers in Abak Local Government Area. Based on the list of poultry farmers obtained from major livestock feed dealers in Abak Local Government Area, convenience sampling technique was adopted to consider the entire identified farmers as the sample size since the farmers were within of the reach of the researcher. Thus, a sample size of 150 broiler producers was used for the study. Primary data were used for the study and were collected with a structured questionnaire whose content comprised of open and closed-ended questions. Descriptive statistics such as: frequency counts, arithmetic mean, percentages, tables were used to analysed the objectives while incidence index analysis, composite index and factor analyse were used to analysed factors influencing the performance of broiler marketing in the study area.

Results and Discussion

The socio-economic characteristics of the respondents that were considered comprised of the following: sex, age, and marital status, level of education attained, household size, occupation and income as shown in table 1. The distribution of respondents by sex revealed that 67.3 % were

males while 32.7% were females. This indicated a dominance of male folks in the broiler production. And it is also believed that men showed more drive to enhance a greater opportunity in terms of income earning capacity for their family than women who are more overwhelmed with domestic activities. The distribution of respondents by age revealed that the average age of the broiler producers was about 45 years, while the minimum and maximum, age were 25 and 64 years, respectively. This indicated that producers were on their economically active age to support their household responsibilities. It was also observed that producers within the age range of 35-44 years were predominance in the business sector, they constituted over 37.3% of the entire respondents. This result has some implications on enhancing household socio-economic wellbeing. The first implication is the ability of young families to go for extra source of income to cater for their family's basic needs was enhanced. Secondly, since most of them were still in their reproductive and economically active ages the farm products (broiler birds) would supplement their protein food intake.

The distribution of respondents based on educational attainment, revealed that the educational level of the producers was relatively high. About 98% had one form of formal education or the other. This suggests that poultry sector is dominated by the literate and enlightened farmers. This conforms to a priori expectation that the more an individual is educated, the more likely he would accept and participate in technically oriented development adoption. This agrees with the findings of Nwaru (2004) and Imoh (2006) who noted that education and training produce labour force that is mobilized, more skilled, amenable to risk taking and adaptable to the needs of changing economy. The distribution of respondents based on marital status revealed that majority of the poultry farmers were married 69% and were therefore responsible for taking adequate decision on household businesses while 31% were single.

The distribution of respondents based on household size revealed that majority of the respondents (92.0%) represented households of not more than 5 members. The mean household size was estimated at 3 persons, indicating that the household size is relatively too small within the African context. The predominant of relatively smaller size of households appears to be a reflection of the relatively young age range distribution of most of the respondents which is characterized by small number of family size composition. The distribution of respondents based on years of experience depicted that majority of respondents (51%) had less than 5 years of experience, 28% had between 5 – 10 years of experience, 18% had between 11- 15 years of experience while only 3% of the respondents had between 16 - 20 years of experience. The average poultry farming experience in the study area was 7 years. It was also observed that as number of years of experience of broiler farming increases, the number of farmers decreases. This may not be far from the market cost in broiler marketing as it not exclusive of the high cost of production, which reduces profit margin. At a long run, the breakeven cast ratio might not serve as motivation factor amidst other production risk factors thus, resulting in mass entry and withdrawal (Ebong and Enyenihi, 2015; Inyang *et al.*, 2022).

Analysis of occupational status of the poultry farmers revealed that they were not primarily engaged in poultry farming and were multi-livelihood oriented. Majority of the poultry farmers (44%) were involved in trading/other businesses as their major occupation while 21% were civil servant. The distribution of respondents based on estimated monthly income of the beneficiaries revealed that majority of the respondents (78.0%) earned income that does not exit ₦45,000.00 monthly from their non-farm operations, 15% of the respondents were within the income range of ₦45,0001 – ₦ 90,000 while only 7% of the respondents were within the income range of 90,001 – 135,000. The mean income of the respondents was ₦35,700.00 per month which implies that

most of the farmers were subsistence farmers who engaged in farming and non-agro-enterprises only to meet their family needs.

Table 1: Distribution of Broilers Farmer According to Socio-Economic Characteristics

Item	Socioeconomic Characteristics	Frequency	Percent	Average
1	Sex			
	Male	101	67.3	
	Female	49	32.7	
2	Age Range			
	25 – 34	22	14.7	45 years
	35 – 44	56	37.3	
	45 – 54	47	31.3	
	55 – 64	25	16.7	
3	Educational Qualification			
	Non-Formal Education	2	1.3	
	Primary School	27	18.0	
	Secondary School	45	30.0	
	NCE/OND	24	16.0	
	HND	36	24.0	
	B.Sc	16	10.7	
4	Family Size			
	0 – 5	138	92.0	3 persons
	6 – 10	12	8.0	
5	Marital Status			
	Single	37	24.7	
	Married	103	68.7	
	Once Married Divorced	10	6.7	
6	Years of Experience			
	1 – 4	77	51.3	7 years
	5 – 10	42	28.0	
	11 – 15	27	18.0	
	16 – 20	4	2.7	
7	Other Occupation			
	Crop Farming	24	16.0	
	Trading/Business	66	44.0	
	ICT	1	.7	
	Carpentry	1	.7	
	Hair Dressing	4	2.7	
	Fish Farming	2	1.3	
	Piggery	11	7.3	
	Public Servant (Civil Servant)	31	20.7	
	Barbing	10	6.7	
8	Monthly Non-Farm Income			
	Less Than 45000	117	78.0	₦35,700.50
	45001 – 90000	22	14.7	
	90001 – 135000	11	7.3	

This subsection assessed the responses on the perceived factors that influenced performance of broiler market based on 14 statements as shown in table 2. Incidence index and relative rank order positioning were used to evaluate the magnitude of the situation in the study area. The pattern of incidence index across the 14 factor statements revealed four categories of magnitude among these statements represented as superscripts lettered, a to d, in decreasing order of its intensity and the relative ranking of the statements conveyed the spread of the factor situations across the population

of poultry producers in the study area. The result revealed that the first five factors spread across the experiences of more than 90% of the respondents as shown in item 2, item 7, item 6, item 8 and item 11, representing 1st, 2nd, 3rd, 4th and 5th rank, respectively. Based on the results, conveying the birds to the market is very cumbersome and time wasting, appears very challenging and undesirable, the clearing of their stock from the farms through strategic indirect marketing approach become quite popular among the producers. Besides, another set of factors that influences broiler marketing were affirmed by at least 50% of the respondents as shown in item 4, item 10, item 14, item 12 and item 13, representing 10th, 11th, 12th, 13th, and 14th rank, respectively. With these findings, the producers have moaned the lack of daily market and the cost of conveying the birds for sales aside the high cost of production. Interestingly, marketing is given some drive when processing of the chicken is added as a value for less stress consumption. From the above mentioned categorization of the factors, categories “a” to “c” appeared to be the most widespread drivers of low performance, even though more than half of the producer admitted the factors under category “d”, what is deducible is the dynamics of timely distribution of the produce to maximize profitability. These set of factors are still prevalent in the study area. These provides insights to reasons behind the cost return squeeze (Ebong and Enyenihi, 2015) and characteristics mass entry and exit in the poultry business market (Ekanem and Inyang, 2014; Udofot and Inyang, 2017). The development of strategic post-production market will be quite inevitable (FAO, 2015)

Table 2: Distribution of Broiler Farmers According to Components and Incidence of Factors Influencing Performances of Broiler Marketing

S/N	Factors That Influence Performance of Marketing	Strongly Disagree	Disagree	Agree	Strongly Agree	II and RROP
1	I sell more birds in the market than from my farms	3.3	8.7	6.0	82.0	^b 0.880 6 th
2	Conveying the birds to the market is very cumbersome and time wasting	2.7	0.7	71.3	25.3	^a 0.966 1 st
3	I travel long distance to the market	2.0	10.7	48.0	39.3	^b 0.873 7 th
4	There is no daily market	33.3	7.3	46.7	12.7	^d 0.594 10 th
5	I make use of the internet to increased sales	34.0	4.7	42.7	18.7	^c 0.614 9 th
6	I prefer selling to middlemen than to retailers	3.3	3.3	6.0	87.3	^a 0.933 3 rd
7	Selling to middlemen clears my stock faster	6.0	0.0	6.0	88.0	^a 0.940 2 nd
8	I used the services of agents to improve my sales	5.3	2.0	24.0	68.7	^a 0.927 4 th
9	The agent fee or commission affect my profit margin	4.0	26.7	52.0	17.3	^c 0.693 8 th
10	I incur more cost when conveying the birds to market	33.3	7.3	24.0	35.3	^d 0.593 11 th
11	Training from extension service agent help in improving my sales	4.0	5.3	10.0	80.7	^a 0.907 5 th
12	High cost of production impacted on my selling price, causing decline in demand	42.0	1.3	32.0	24.7	^d 0.567 13 th
13	There is more demand for processed chicken than live chickens	43.3	1.3	36.7	18.7	^d 0.554 14 th
14	Sales of processed chicken is more profitable the live chicken	38.7	2.7	34.7	24.0	^d 0.587 12 th

Note: N=150, II means Incidence Index, RROP means Relative Rank Order Positioning; superscript “a – d” denote decreasing magnitude of the incidence across the population.

The performance of broiler marketing could be induced by several sources such as: socio-economic background, socio-psychological and environmental factors might influence broiler market orientation, (Kirui 2014; Inyang et al., 2022) and these observed factors create differences in magnitude of array of elements of broiler market performance (James et al, 2021). As shown in table 3, each component was experienced by producers and aggregately these factors exert variability in severity on the producer involvement in the broiler market. Primarily, assessing the performance of broiler market demanded ascertaining the index of perceived factors that influence performance of broiler market of each respondent. This provided the basis for computation across the area based on the composite index procedure.

As shown in table 3, the distribution pattern of severity of factors that influence performance of broiler market index was analysed using the broadly categorized three ranges of low, average and high. The frequency and percentage results were considered. The respondents were distributed across the three categories alongside their respective factors that influence performance of broiler market index. Quite a negligible percentage of the study population (about 1%) were in the low category with index range of 0.00 - 0.3999, this signified that only 1% of the respondents agreed that these factors influence broiler market performance in the range of 0 to 39.9% and 43% of the respondents were in the average category with index range of 0.4 to 0.699, which implies that about 43% of the farmers perceived that these factors influence broiler market performance in the range of 40 to 69.9%. While 57 % of the population affirmed that these factors affect the broiler market performance by the range of 70 to 100%. The result pattern suggests that the current broiler market performance can be enhanced if the peculiar factors are resolved for higher returns on investment and operational longevity of poultry business in the region.

The spread of severity of the impairments to performance of broiler market mirrors earlier studies on the broiler market in the region (Ebong and Enyenihi, 2015). These challenges appear to span across the length of value chain (Kerbagha 2010; Aboki et al., 2013). Branchaert and Gueye (1999) observed that poultry market structure and performance were not well developed and this probably explain the massive effects across the producer’s community.

Table 3: Severity of Factors That Influences Performances of Broiler Market

EFIPBM index range	EFIPBM index range interpretation	Frequency	Percent
0.00 - 0.3999	Low	1	0.7
0.4 - 0.6999	Average	64	42.7
0.7 0 1.00	High	85	56.6
Total		150	100.0

Following the array of incidences of affirmation of the factors influencing the broiler market performance, it became expedient to evaluate the prominent factors that influence performance of broiler marketing. Despite the over whelming influence of factors affecting broiler poultry business, the resiliency and tenacity that the broiler producers display required that scientific mapping of the major significant can serve as evidences for future intervention planning to enhance the market structure and performance in the area. The qualitative assessment identified 14 factors that influence performance of broiler market. The measurement instrument was first subjected to KMO and Bartlett’s Test to check for the tenability and suitability of the measurement and to confirm the appropriateness of the data for the exploratory factor analysis as shown in table 4. The

result shows that the degree of freedom (df) was 91 while the Significance difference (Sig) stood at 0.000. The results justified that the arrays of mapped factor were sufficiently adequate to explain the situations that influence performances of broiler market in the Abak local government area.

Table 4: Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.799
Bartlett's Test of Sphericity	Approx. Chi-Square	1883.135
	Df	91
	Sig.	0.000

Dealing with the array of factors that influence performance of broiler market poses a huge task in seeking solutions that can provide clear policy direction towards improving the prevalent condition affecting robust broiler market. The primary focus was aimed at identifying the minimum number of factors influencing performance of broiler market, that would account for the maximum portion of the variance of the original items, the principal component analysis was selected to reduce the number of factors following the criteria of the Eigen value was greater than 1, and cumulative percentage of variance explained being greater than 50%. Based on these criteria, 3 factors were extracted as shown in table 5 and explain 73.04% of variance. Furthermore, the high communality extraction index (CEI) in column 2, indicates evidence of overall significance of the solution, that is, the communality provides strong variance among the variables in the analysis (Kinnear and Gray, 1997). Based on the sample size, the criterion for the significance of factor loading for the extracted common factors was stipulated to be greater than the absolute value of 0.5 suggested by Hair *et al* (1998). Communality was also examined in order to assess how much variance of each item was accounted for by the extracted factors and to shed more light into possible elimination of items (given the lack of accepted guidelines, a cut-off value of 0.4 was used).

The solution presented in table 5 leads to the following conclusions that: all the statements met the communality criterion and the loadings associated with most of the underlying dimensions of the items were on average above the 0.4 specified criterions. The factor analytic procedure resulted in three major underlying dimensions of factors that influence the performances of broiler market, as shown in table 5. Factor 1 item loadings suggests price variation to support uncleared stock over extended period, Factor 2 item loadings suggest high demand on its flexible value chain and factor 3 item loading suggests it is economically rewarding even at start up stage.

The major underlying dimensions serve as proof of evidence towards planning, management, and evaluation of the envisaged strategic improvement of the performance of broiler market. The improvement can be in part or concurrently across the 3 identified underlying dimensions if actions are designed to enhance the broiler market performance. The item factor loadings on the respective three significant underlying factors provide insights on the actionable change that can induce positive variation in the performance of broiler market. The actionable change is depicted by the likelihood magnitude as indicated by corresponding percentage of variance. A greater effect could be experienced if all the significant underlying factors are systematically programmed for holistic improvement of the broiler market performance and the present broiler market performance could likely be improved by 73.05%.

Table 5: Showing Underlying Dimensions of Factors That Influence Performances of Broiler Market.

	Rotated Component Matrix ^a			
	CEI	Fac 1	Fac 2	Fac 3
Conveying the birds to the market is very cumbersome and time wasting	0.517	0.558		
I travel long distance to the market	0.610	-0.599		
There is no daily market	0.832	0.899		
I make used of the internet to increase sales	0.817	0.904		
I incur more cost when conveying the birds to the market	0.663	0.757		
High cost of production impacted on my selling price, causing a decline in demand	0.875	0.928		
there is more demand for processed chicken than live chicken	0.925	0.940		
sales of processed chicken are more profitable than live chicken	0.848	0.900		
I sell more birds in the market than from my farm	0.633		.703	
training from extension service agent help in improving my sales	0.489		0.693	
I prefer selling to middlemen than retailers	0.697		0.823	
selling to middlemen clears my stock faster	0.832		0.905	
I used the services of agents to improve my sales	0.794		0.886	
the agent fee or commission affect my profit margin	0.695			0.819
Diagnostic Statistics				
Eigen values		5.488	3.589	1.149
% of Variance		39.201	25.638	8.209
Cumulative %		39.201	64.839	73.048

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 4 iterations.

Conclusion

Based on the findings, it could be resolved that the broiler producers were predominantly of young adults who apparently displayed energetic, economically active, and venturesome qualities required for production processes. Despite their dynamic characters, the broiler market subsector has been plagued with array of factors that affect its performance in the area. Five of these factors were ranked highest in order of their incidence Item 2, Item 7, Item 6, Item 8 and Item 11, representing 1st, 2nd, 3rd, 4th and 5th rank respectively. On a composite level of severity of factors that influence broiler market performance, about 43% of the producers perceived that these factors influence broiler market performance in the range of 40 to 69.9% while about 57 % of the population affirmed that these factors affect the broiler market performance by the range of 70 to 100%. Besides, the results of factor analysis revealed the three major significant dimensions of the factors affecting broiler market performance as follows: Factor 1: Price variation to support uncleared stock over extended period, Factor 2: High demand on its flexible value chain and Factor 3: It is economically rewarding even at start up stage. The result pattern concluded that the current broiler market performance can be enhanced if the peculiar factors are resolved in the study areas for higher returns on investment and operational longevity of poultry business in the region. Based on the findings of this study, it is suggestive that the broiler producers in Abak need to give valuable attention to specific marketing strategy as it affects broiler marketing performance. In

absence foreign induced changes in local broiler market system, the broiler producers should improve their marketing strategies and there is a strong need for the government to formulate intervention policy that should enhance market performance that will enable broiler producers to maximize market efficiency.

References

- Aboki, EA, Jongur, AU, and Onu, JI 2013, 'Productivity and Technical Efficiency of Family Poultry Production in Kurmi local Government Area of Taraba State, Nigeria' *Journal of Agricultural and Sustainability*, 4(1):52-66.
- Adene, DF and Oguntade, AE 2006, *The structure and importance of the commercial and village-based poultry systems in Nigeria*, F.A.O
- Branckaert, R and Gueye, E 1999, 'FAO's Programme for Support to Family Poultry Production. In Poultry as a Tool in Eradicating and Promotion of Gender Equality', Proceedings of a Workshop, <http://www.husdyr.kvl.dk/html/php/tune99/24-Branckaert.htm>.
- Ebong, VO and Enyenihi, EA 2015, 'Analysis of Cost-Price Squeeze in Broiler Production Enterprise in Uyo Agricultural Zone of Akwa Ibom State', *Nigeria. European Journal of Business and Management*, 7:16-22.
- Ekanem, JT and EB Inyang 2014, Record-Keeping Effectiveness Evaluation among Small Holders Peri-Urban and Rural Poultry Entrepreneurs. *International Journal of Entrepreneurial Studies*, 6(2):27-39
- FAO 2015, "Voluntary guidelines for securing sustainable small-scale fisheries in the context of food security and poverty eradication". Food and Agriculture Organization of the United Nations. Rome. Retrieved from <http://www.fao.org/documents/card/en/c/21360061-9b18-42ac-8d78-8a1a7311aef7/>
- Hair, JF, Anderson. RE, Tatham. RL and Black. WC 1998. *Multivariate Data Analysis (5th Edition)*, Upper Saddle River, N. J. Prentice – Hall International Inc.
- Imoh, AN and Essien, MU 2006, 'Improved Cassava Varieties among Small-scale Farmers in Ikot Ekpene Agricultural Zone. Akwa Ibom State, Nigeria', *Journal of Agricultural Extension Global Approached to extension Practice*, 2(2):41-50.
- Inyang, EB, Inyang, HB and Akpan, BJ 2022, 'Strategic Programming Indicators for Stimulation of Poultry Feed Market in Rural and Peri-urban Based Economy in Akwa Ibom State', *Nigerian Journal of Agriculture, Food and Environment (NJAFE)*, 8(1): 41-51.
- James, H., Mustapha, SB, Adamu, A, Gadzama, and Janada, JG 2021, 'Socio-Economics Factors Influencing Poultry Farmers' Accessibility to Credit in Maiduguri Metropolis, Borno State, Nigeria'. *Journal of Agricultural Economics, Environment and Social Sciences*. 7(1):76-88.
- Kerbaga, AZ 2010, Analysis of Poultry Market Chain, The Case of Dale and Alaba Special woreda of SNNPRS, Ethiopia, Thesis, Haramaya University, Ethiopia.
- Kirui, K 2014, 'Factor influencing performance of poultry farming projects in Bureti Sub County, Kericho, Kenya', MA thesis, University of Nairobi.
- Kinney, TC and Gay, CD 1997, *SPSS for Windows: Make Simple (2nd edition)*, Hove, England, Psychology Press.
- NIPC, 2014. *Agriculture. The New Agricultural Policy*. Nigerian Investment Promotion Commission www.nipc.gov.ng/opportunities.html [accessed July 20, 2014].
- NPC 2006, *National Population Commission*, Abuja, Nigeria
- Nwaru, JC. 2004, 'Determinants of Farm and off Farm Incomes and Savings of Food Crop Farmers in Imo State, Nigeria: Implications for Poverty Alleviation', *The Nigeria Agricultural Journal*, 36:26-42.

- Odi, M and Obih, U 2000, 'Optimizing cassava marketing margin and efficiency for agricultural development in the 21th century', *Proceedings of a National Conference in Honour of Professor Martin O. Ijere*, Federal university of Agriculture Umudike, Abia State Nigeria, 24th- 26thAugust, 1999, pp.46-49.
- Ohajinya, DO, Mgbada, JU, Onu, PN, Enyia, CO, Henri-Ukoha, A, Ben-Chendo, N.G and Godson-Ibeji. CC 2013, 'Technical and Economic Efficiencies in Poultry Production in Imo State, Nigeria', *American Journal of Experimental Agriculture*, 3:927-938.
- Rotschild, J 2002, 'Nigeria Poultry and Products Update', *Gain Report #N12025*.
- Tarekegn, K and Yosefe, K 2017, 'Determinants of Poultry Market Participation Decisions; The Case of Producers in Kaffa and Bench Majji Zones Southern Ethiope', *Journal of Economics and Sustainable Development*. 8(3):23-29
- Udofot, P.O. and E.B. Inyang (2017) Exploring Entrepreneurship Intension Aptitude along Gender Lines among Business Decision Students in Nigeria. *International Journal of Social, Behavioural, Educational, Economic, Business and Industrial Engineering (USA)* 11 (7):1582-1586.
- United States Department of Agriculture (USDA) 2013. *International Egg and Poultry Review*, 16(44):1-3.