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ECONOMICS OF DAY OLD BROILER MARKETING IN IBADAN METROPOLIS OYO STATE, NIGERIA

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ABSTRACT

This study performed an economics of day old broilers marketing in Ibadan, Oyo State. Specifically the study described the socio-economic characteristics of day old broiler marketers, identified the market structure of day old broilers, estimated the cost and returns of day old broiler marketing and ascertains the challenges militating against the marketing of day old broiler in the study area. The population of this study was day old broiler marketers in Ibadan metropolis, Oyo state. Multi stage sampling technique was used to select 60 respondents for this study. Questionnaire was used to elicit information from the respondents. Both descriptive and inferential statistics such as frequency, percentage and mean were used to realize the objectives of the study, gross margin analysis was used to analyze the profitability and regression was used to realize the hypothesis. Results from the findings revealed that (50.0%) of the respondents were between 20-40 years of age, majority (78.0%) of the respondents were females, 88.3% of the respondents were married, most (65.0%) had secondary education, majority (85.0%) of the respondents had household size of between 1-5 persons, 35.0% had 6-10 years of marketing experience, majority (80.0%) were traders, majority (91.7%) were member of cooperative, most (68.3%) of had access to extension. Furthermore, 40.0% bought their chicks from Obasanjo farms, 40.0% of revealed that seasonality determined the price of day old chicks, all (100%) revealed that there was traders union, all (100%) belong to traders union, most (66.7%) had been the members of the union for 1-10 years, 61.7% benefited from having access to information. Day old broiler chicks' marketing was profitable with the gross margin of ₦482, 902. Inadequate finance (mean=2.75), problem of unlicensed traders (mean=2.73) and diseases outbreak (mean=2.48) were the constraints faced by day old chicks marketers. The results of the hypothesis revealed that sex and access to extension services were significantly related to profitability of day old broiler marketing in the study area. It concluded that majority of the most of the respondents bought their day old chicks from Obasanjo farms and the price is determined by seasonality. More so there are traders' unions guiding their marketing activities. It is recommended that since day old broiler marketing is profitable in the study area, youths are encouraged to venture into the business as a means to reduce unemployment.

Key Words: day old broilers, marketing, economics.

1.0 INTRODUCTION

Poultry generally refers to all domestic birds raised by man for the production of eggs, meat and other benefits for human consumption. The domestic birds include fowl, ducks, turkeys, guinea fowl and geese. The poultry industry serves as a source of employment and a source of income to many people. It provides quick turn over on capital to investors (Atarah, 2005). Brannius (2007), however, there are reports that the interest of people in the industry and the effort of the government are gradually waning, due to prevalence of diseases and poor marketing strategies which are regarded major constraints in the industry.

The "day-old chick" (DOC) is the newly-hatched chick (*Gallus gallus*). "One-day old chick" can actually last longer than 24 hours. Day old chick has the potential to become a broiler chicken, a layer or

breeder. Given this versatility, the quality of day old chicks (DOCs) matters immensely to poultry businesses (Dominic, 2012).

In a competitive economy, agricultural development cannot occur without improved marketing. This is because agricultural marketing is concerned with all economic activities involved in the production and distribution of agricultural goods (Odi and Obih, 2000). In Nigeria, the huge costs involved in the marketing of day old poultry have drastically reduced the margin realizable from the enterprise. Considerable improvement in day old poultry production has been made by the application of modern techniques. However, there have been significant failures within developing countries to understand the inter-relationship between day old poultry production and day old poultry marketing,

since efficient marketing stimulate production (Odi and Obih, 2000).

Day old broilers are good viable avenue to revenue to the nation. The mature one is also a significant source of protein and it plays several key roles in the nutrition and economic life of many people in the developing world. But unfortunately the marketing of day old broiler, if situation is not rectified, more serious problem might develop in spite of substantial qualitative and advancements in different sectors of the poultry industry, the industry will continue to face numerous challenges on a global basis some of these challenges are presented here (Dominic, 2012). Socio-economic factor is also a major problem. It includes broiler farmer incapacity to produce, limited input, poor transportation and delivery system and poor marketing system (Olatunji and Abesogun, 2012). Similarly feed cost and continuous efforts to get a better understanding of available alternative feed ingredients. As of right now, feed cost is probably one of the most serious challenges for the industry (Adewole, 2012). Disease outbreak and implementation of biosecurity programmes, although the extent and also type of disease outbreaks can vary in different parts of the world (Agah and Norollahi, 2008). In addition, disease of metabolic origin including as cities and skeletal disorder are of importance as well. Issues surrounding inclusion of antibiotics in poultry feed and also the use of alternatives to antibiotic growth promotes safety of poultry products for human consumption. Poultry welfare related issues such as banning the use of conventional cages at layer farms and other issues related to water in term of both quality and quantity (Riber, 2014). Based on the above, the broad objective of this study was to estimate the economics of day old broilers marketing in Ibadan metropolis, Oyo State. Specifically to:

- i. describe the socio-economic characteristics of day old broiler marketers in the study area,
- ii. identify the market structure of day old broilers in the study area
- iii. determine the costs and returns of day old broiler marketing in the study area,
- iv. ascertain the challenges militating against the marketing of day old broiler in the study area

1.2 Hypothesis of the Study

The socio-economic characteristics of day old broiler marketers do not affect their profitability in the study area.

2.0 METHODOLOGY

2.1 Description of the Area

The study was carried out in Ibadan Metropolis. Ibadan is an ancient town in the south western part of Nigeria and actually the largest in West Africa. It is the capital of Oyo State and is located along the transitional forest zone of southern Nigeria and Guinea savannah of the middle belt. It lies approximately on latitude 7N and longitude 4E. It

has a population of 2,550,593 (Nigeria Poulation Census, 2006). The population growth is said to have shifted gradually to the lesser city with a growth of 4.7% per annum between 1991 and 2006. It has an average rainfall of between 1250mm and 1800mm. The temperature range is between 27C and 32C with relatively humidity of 74.55%. Ibadan was founded in about 1800, since then the population has been growing tremendously. The greater numbers of people living in Ibadan city are traders and civil servants. Ibadan Metropolis comprises of some notable market (such as, Ring road, Obasanjo, Challenge, Oluyole market) where day old broiler are marketed in wholesales and retails.

2.3 Sampling Procedure and Sampling Size.

A multi-stage sampling technique was employed in selecting the respondent for the study. The first stage involved purposive selection of three (3) major markets namely (Obasanjo, Oluyole and Ringroad market) out of 10 day old broiler markets in Ibadan metropolis based on the intensity and existence of day old broiler marketers in these markets. At the second stage, simple random sampling technique was used to select marketers at 10% proportionate to the population. Thus, sixty (60) day old broiler marketers were selected as sample size.

2.4 Sources and method of data collection.

Primary data was used for the study. The primary data was obtained through the use of well-structured interview schedules.

2.5 Data Analysis

Data was analyzed using both descriptive and inferential statistics. Descriptive statistics such as mean, frequency and percentage were used to achieve objectives i ii and objective iii was analyzed using gross margin analysis while the Hypothesis was analyzed using regression.

2.5.1 Ordinary Least Square Multiple Regression Analysis

Ordinary least square multiple regression was used to analyze the socio economic characteristics of the respondent on their level of profitability.

The empirical model for the ordinary least square multiple regression specified as follows:

$C = f(X_1, X_2, X_3, X_4, X_5, X_6) \dots \dots \dots$ implicit form.....(i)

Where $C = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7$ + explicit form.....(2)

Where C = Total marketing profit and is derived from gross margin

Where:

C = Profit of Day Old Broiler Marketing (Naira)

X1 = Sex (male = 1, Female = 2);

X2 = Age (in years);

X3 = Religion (dummy)

X4 = Marital Status (dummy)

X5 = Level of Education (years in school)

X6 = Years of Day Old Broiler Marketing Experience

X7 = Household Size (No. of person).

2.5.2 Gross Margin

Gross Margin Analysis will be used to determine the profit of day old broiler marketing in Ibadan Metropolis.

$$GM = TR - TMVC$$

Where:

GM - Gross Margin

TR - Total Revenue

TMVC - Total Marketing Variable Cost

3.0 RESULTS AND DISCUSSION

3.1 Socio economic characteristics of the respondents

Age

Table 1 showed that 50.0% of the respondents were between 20-40 years of age, also 45.0% of the respondents were between 41-60 years of age, while only few (5.0) of the respondents were above 60 years of age. The mean age was 34 years. This implies that the respondents in the study area youth who are capable to execute the tedious activities associated with broiler day old chicks marketing. According to Nwabueze (2010), there are variations in the age distribution of chick's marketers in Oyo State with marketers in the age range of 31 – 40 years dominating at 54.8%

Sex

Tables 1 showed that majority (78.0%) of the respondents were females while 21.7% of the respondents were males. This implies that majority of the respondents in the study area were females. This may be due to the fact that broiler marketing does not involve high man power and women in the study area carried out marketing activities. Eze *et al.* (2010) reported that in Oyo State married women constituted the majority of agricultural produce marketers with 79.2%

Marital status

Table 1 showed that majority (88.3%) of the respondents were married, 10.0% of the respondents were single, while only few (1.7%) of the respondents were widowed. This is an implication that majority of the respondent in the study area were married, being married attract responsibilities and this encourages the respondents to work hard to feed their families.

Educational status

Table 1 showed that most (65.0%) of the respondents have secondary education, 33.3% of the respondents have tertiary education, while 1.7% of the respondents have primary education. This implies that most of the respondents in the study area were educated and this might help them in adopt innovation on marketing of their product such as internet marketing among others

Household size

Table 1 showed that majority (85.0%) of the respondents had household size of between 1-5 persons, while 15.0% of the respondents had between 6-10 . The mean household size was 5 persons. This implies that majority of the respondents had fairly average household size. This is an indication that household or family member can be used as labour in marketing old day old chicks.

Market experience

Table 1 shows further that 35.0% of the respondents had between 6-10 years of experience, 26.7% of the respondents had 11-15 years of experience, 13.3% of the respondents had above 21 years of experience, 13.3% of the respondents were had 1-5 years of experience, 11.7% of the respondents had 16-20 years of experience. The mean marketing experience was 8 years. This implies that the respondents in the study area had reasonable years of experience and this experience might help them in combating the constraints associated with broiler day old chicks marketing. This therefore agrees with Afful, (2017) who affirms that the more the number of years a marketer engage in a business, the better he will be equipped in exploring the business opportunities due to business tactics and networking he would have developed over the years.

Secondary occupation

Table 3.1 showed that majority (80.0%) of the respondents of the respondents were traders, 8.3% of the respondents were self employed, 8.3% of the respondents were farmers, 3.3% of the respondents were civil servants. This indicates that majority of the respondents secondary occupation was trading, this implies that respondents had trading as primary occupation and also had it secondary occupation in the study area

Member of cooperative

Tables 3.1 showed that majority (91.7%) of the respondents were member of cooperative, while 8.3% of the respondents were non-members of cooperative. This implies that majority of the respondents in the study area were members of cooperative and being a cooperative members might have access to credit facilities.

Access to extension

Table 3.1 showed that most (68.3%) of the respondents had access to extension, while 31.7% of the respondents have no Access to extension. This implies that most of the respondents in the study area have access to extension and this might expose them to marketing strategies to increases their profit.

Table 3.1: Socio economic characteristics of the respondents

Variable	Frequency	Percentage	Mean
Age			
20-40	30	50.0	34
41-60	27	45.0	
61 and above	3	5.0	
Sex			
Male	13	21.7	
Female	47	78.3	
Marital status			
Married	53	88.3	
Single	6	10.0	
Widowed	1	1.7	
Educational status			
Primary	1	1.7	
Secondary	39	65.0	
Tertiary	20	33.3	
Household size			
1-5	51	85.0	5
6-10	9	15.0	
Marketing experience			
1-5	8	13.3	8
6-10	21	35.0	
11-15	16	26.7	
16-20	7	11.7	
21 and above	8	13.3	
Secondary occupation			
Farming	5	8.3	
Trading	48	80.0	
Civil servant	2	3.3	
Self employed	5	8.3	
Member of cooperative			
Yes	55	91.7	
No	5	8.3	
Access to extension services			
Yes	19	31.7	
No	41	68.3	

Source: Field survey, 2022

Market structure of day old broiler

Sources of day old chicks?

Table 2 showed that 40.0% of the respondents bought their chicks from Obasanjo farms while 30.0% bought their chicks from Zartech and Chi farms. This implies that more marketers patronize Obasanjo farms in buying their chicks and this might be due to the fact Obasanjo chicks are diseases resistance and cheap.

Price determinant for day old chicks

Results in Table 2 showed that 40.0% of the respondents revealed that seasonality determined the price of day old chicks, 23.3% revealed that price from hatchery and breed were the price determinants while 21.7% showed that quality was the price determinants. This implies that seasonality was the major price determinants and that broiler day old chicks tends to cost when approaching festive period such as Christmas, Easter, New year, Eid-ul-fitr e.t.c

Existence of day old broiler traders' Union in the market

Results of the study revealed that all (100%) of the respondents reported that there is traders union. This implies that the entire respondents showed that traders union was available in the study area. This implies that broiler day old chicks marketing has a union who control the affairs of the marketers and also had rules and regulation guiding the marketers

Membership of trader's union

Results revealed that all (100%) of the respondents belonged to traders union. This implies that all of the respondents belong to trade union and this might be due to the fact that broiler day old chicks association is very important to all the marketers who may want to start selling day old chicks

For how long have you been a member?

Results in Table.2 revealed that most (66.7%) of the respondents had been the members of the union for 1-10 years, 25.0% had been members of the

union for 11-20 years while 8.3% had been the members of the union for about 21 years and above. This mean years of membership was 8 years. This implies that respondents had been the members of the traders union for long period of time and this might give them more experience needed in day old chicks marketing

In what ways does your membership benefit your day old business?

Results in Table 3.2 revealed that most (61.7%) of the respondents benefited from having access to information, 26.7% benefited from biosecurity while 11.7% benefited from price regulation. This implies that most of the respondents benefited from timely information about dos and don'ts associated with broiler day old chicks

Table 3.2: Market structure of day old broiler

Variables	Frequency	Percentage	Mean
From where did you buy your chicks			
Zartech	18	30.0	
Chi farms	18	30.0	
Obasanjo	24	40.0	
Price determinant for day old chicks			
Quality	13	21.7	
Seasonality	24	40.0	
Price from hatchery	9	23.3	
Breed	14	23.3	
Do you have day old broiler traders Union in market			
Yes	60	100.0	
No	0	0.0	
Are you a member			
Yes	60	100.0	
No	0	0.0	
for how long have you been a member			
1-10	40	66.7	8
11-20	15	25.0	
21 and above	5	8.3	
In what ways does your membership benefit your day old business?			
Information	37	61.7	
Price regulation	7	11.7	
Bio-security	16	26.7	

Source: Field survey, 2022

Costs and Returns in day old broiler marketing

Table 3 shows the total variable cost, total cost incurred and total returns of the respondents in poultry egg production in the study area. The Table indicates that ₦1,077,119 was total variable cost and ₦1,560,021 was obtained as revenue (which was quantity of day old broiler chicks sold multiplied by their selling price). The profit as proxied with gross margin made by the respondent was ₦482, 902

$$GM = TR - TVC$$

$$TR = ₦1,560,021$$

$$GM = ₦1,560,021 - ₦1,077,119 = ₦482, 902$$

Since gross margin (₦482, 902) is positive, therefore day old broiler chicks marketing is profitable in the study area and this might be due to the fact broiler chicks are highly demanded for production in Nigeria.

Table 3.3: Cost and returns of day old broiler marketing

Variables	Average cost (₦)
Numbers of broiler chicks bought	979, 040
Cost of feeds	4,593
Cost of labour	18,013
Cost of carton	22,671
Cost of transportation	49,043
Cost of insecticide	3,305
Cost of vaccination	454
Total Variable Cost	1,077,119
Total revenue	1,560,021

Source: Field survey, 2022

3.4 Constraints to day-old broiler marketing

Results in Table 4 showed the constraints to broiler day old marketing. The results revealed that inadequate finance (mean=2.75) had the highest mean and was ranked first, closely followed problem of unlicensed traders (mean=2.73), diseases outbreak (mean=2.48), inadequate market (mean=2.37) and inadequate storage facilities (mean=2.25) were ranked second, third, fourth and fifth respectively. Furthermore, low labour availability (mean=2.08), inadequate extension services (mean=2.05), pest and diseases (mean=2.05) had the least mean and were ranked tenth and eleventh respectively.

Respondents rated inadequate finance, unlicensed traders and disease outbreak as the most important problem. This could be the reason why marketers

could not acquire the necessary inputs especially fixed inputs for large scale production which attracts higher profit and efficiency. Supporting this assertion, Liu (2006), in his work found that day old chicks marketing was highly influenced by financial constraints.

As regards diseases (Adewole, 2012) reported that diseases outbreak remains one of the major threats to boosting poultry production in Nigeria. The major poultry diseases are the Newcastle disease, Avian Influenza, Avian pox, Infectious Bursal Disease, Colisepticemia, Coccidiosis and worm infestation (Usman and Diarra, 2008) with, Newcastle Disease being the most recognized by poultry farmers (Adene and Oguntade, 2006).

Table 3.4: Constraints to day-old broiler marketing

Constraints	Very severe	Severe	Not severe	Mean	Rank
Inadequate Finance	45(75.0)	15(25.0)	0(0.0)	2.75	1
Problem of unlicensed trader	45(75.0)	14(23.3)	1(1.7)	2.73	2
Disease outbreak	32(53.3)	25(41.7)	3(5.0)	2.48	3
Inadequate market	24(40.0)	34(56.7)	2(3.3)	2.37	4
Theft	18(30.0)	39(65.0)	3(5.0)	2.25	6
Pest and Disease	17(28.3)	29(48.3)	14(23.3)	2.05	11
Low labour availability	13(21.7)	39(65.0)	8(13.3)	2.08	10
Poor breed supply	18(30.0)	34(56.7)	8(13.3)	2.17	8
Poor infrastructure	20(33.3)	30(50.0)	10(16.7)	2.17	8
Inadequate extension service	16(26.7)	31(51.7)	13(21.7)	2.05	11
Inadequate of storage facilities	21(35.0)	33(55.0)	6(10.0)	2.25	5
Poor quality of day old chicks	27(45.0)	30(50.0)	3(5.0)	2.40	4

Source: Field survey, 2022

Figures in parentheses are in percentage

Regression analysis showing the effect of socio economic characteristics of the respondents on the profitability of broiler day old chick marketing

This section determines the effect of socio economic characteristics of the respondents on the profitability of broiler day old marketing in the study area. This was achieved by using multiple regression analysis and the hypothesis tested at 5% significant level. The results are presented in Table 3.5.

The adjuster R^2 is 0.631, which means that 63.1% of the variation in profitability of day old chick is caused by the socio economic characteristics of the respondents.

Age: Table 5 reveals that age of the farmers had positive coefficient value (205736.635) implying that there is a direct effect on the profitability of broiler day old chick marketing and showed no significant effect ($p=0.638$) on the profitability of broiler day old chick marketing

Sex: Table 5 reveals that sex had negative coefficient value (-1.187) implying that there is an inverse effect on the profitability of broiler day old chick marketing

and showed significant effect ($p=0.021$) on the profitability of broiler day old chick marketing.

Marital status: Table 3.5 revealed that marital status had negative coefficient value (-243085.410) implying that there is an inverse effect on the of oil palm processing and showed significant effect ($p=0.616$) on the profitability of broiler day old chick marketing

Educational status: Table 4.5 revealed that educational status had negative coefficient value (-275887.280) implying that there is an inverse effect on the profitability of broiler day old chick marketing and showed significant effect ($p=0.465$) on the profitability of broiler day old chick marketing.

Main occupation: Table 3.5 revealed that main occupation had negative coefficient value (-389846.422) implying that there is an inverse effect on the profitability of broiler day old chick marketing and showed significant effect ($p=0.273$) on the profitability of broiler day old chick marketing.

Marketing experience: Table 3.5 revealed that marketing experience of the farmers had positive coefficient value (11416.207) implying that there

is a direct effect on the profitability of broiler day old chick marketing and showed no significant effect (p=0.756) on the profitability of broiler day old chick marketing

Secondary occupation: Table 3.5 revealed that secondary occupation of the farmers had positive coefficient value (25056.040) implying that there is a direct effect on the profitability of broiler day old chick marketing and showed no significant effect (p=0.948) on the profitability of broiler day old chick marketing

Member of cooperative: Table 3.5 revealed that member of cooperative of the farmers had positive

coefficient value (391207.929) implying that there is a direct effect on the profitability of broiler day old chick marketing and showed no significant effect (p=0.631) on the profitability of broiler day old chick marketing

Access to extension services: Table 3.5 revealed that access to extension services of the farmers had positive coefficient value (205736.635) implying that there is a direct effect on the profitability of broiler day old chick marketing and showed significant effect (p=0.048) on the profitability of broiler day old chick marketing

Table 3.5: Regression analysis showing the effect of socio economic characteristics of the respondents on the profitability of broiler day old marketing

Variables	B	Std error	T	P-value	Decision
Constant	7.040	2.279	3.089	0.003	Significant
Age	205736.635	434182.695	0.474	0.638	Not significant
Sex	-1.187	498037.589	-2.383	0.021	Significant
Marital status	-243085.410	480955.809	-0.505	0.616	Not significant
Educational status	-275887.280	374234.096	-0.737	0.465	Not significant
Household size	-307262.837	156158.956	-1.968	0.055	Not significant
Main occupation	-389846.422	351727.343	-1.108	0.273	Not significant
Marketing experience	11416.207	36475.542	0.313	0.756	Not significant
Secondary occupation	25056.040	384575.475	0.065	0.948	Not significant
Member of cooperative	391207.929	809642.138	0.483	0.631	Not significant
Access to extension services	-800044.431	394996.230	-2.025	0.048	Significant
Adjusted R ²	0.631				
F	1.663				
P-value	0.001				

Figures in parentheses are in percentage

4.0 CONCLUSION AND RECOMMENDATIONS

4.2 Conclusion

From the findings of this study it concluded that majority of the respondents are educated married who have average of 34 years, they have trading as their secondary occupation and have average marketing experience of 8 years. It is further concluded that majority of the most of the respondents bought their day old chicks from Obasanjo farms and the price are determined by seasonality. More so they are traders union guiding their marketing activities, all of the respondents were members of the union, they have average 8 years of membership and they benefited information from the union. Profit realized from day old broiler marketing was (₦482, 902). It is also concluded that the constraints faced by the respondents were inadequate, problem of unlicensed traders and diseases outbreak. it finally concluded that there is significant relationship between the socio economic characteristics of the respondents and the

profitability of day old broiler marketing in the study area

4.3 Recommendations

1. Financial institution should provide loan with little or no collateral to the marketers since inadequacy of finance is recorded in the study area
2. Marketers association should lay down strict rules and regulations to curb the activities unlicensed traders
3. Since day old broiler marketing is profitable in the study area, youths are encouraged to venture in to the business as means to reduce unemployment.

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