

Analysis of Veterinary Participation among Broiler Poultry Farmers: A Case of Veterinary and Non Veterinary Service Patronizing Farmers

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Abstract

The result of a probit model analysis to measure determinants of veterinary participation among broiler poultry farmers showed that education, extension contact, membership of cooperatives and income from other sources were factors that encouraged continued patronage by broiler poultry farmers of veterinary services in managing the health and associated challenges of their poultry farms. The income the patronizing poultry farmers made from their farm was significantly different from that of the non-patronizing farmers probably because those who did not patronize veterinary services may have had output that never met the consumers' satisfaction nor made them make profit; they probably managed to break-even. It is therefore recommended that heightened enlightenment campaign on the benefits of veterinary activities be undertaken in the study area for the health of the animal and mankind. It is highly discouraged that continued broiler production and poultry products for the market be done without health certification of what is consumed at household level given the level of information explosion so far have witnessed at not only the state but also at the national level. It is time to put the search light on what animal producers are doing to ensure they are in tandem with expected quality of meat intake by household in meeting with global or international standards.

Keywords: Income, broiler, poultry, veterinary, non-veterinary, farmers

Introduction

Biological, cultural, social and economic factors greatly influence animal health management and high mortality has always been associated with poor feeding, housing and health control measures. However, livestock production management practices vary according to the group of livestock in question. Management activities carried out by the farmers are general sanitation, usage of diagnostic laboratory, proper disposal of carcass etc. and also these must be done with prevention and control of diseases in mind. In Nigeria, it was reported that as a result of the devastating outcome of livestock disease, animal protein output had not been able to meet up with the national demand (Adesehinwa, 1992).

The prevention and control of animal disease is a frequent reoccurring problem at all national and international levels which usually brings about direct action being taken by veterinary services. According to Majiyayagbe and Lamide (1997), the loss of livestock in Nigeria exist at much higher rate than in the developed countries and at times such production losses range between 30 and 40% which could be estimated at a minimum of 200million naira per annum at 1981 price. Given that there has not been any known veterinary policy backed with proper extension dissemination and pursuance of compliance by broiler poultry farmers, the situation in the urban as well as rural areas could have become worse off with the passage of time. In order to prevent this trend, veterinary activities currently being practiced by some farmers in Nigeria should be strengthened. These veterinary activities make the farmers to be able to prevent and control livestock diseases. This study was aimed at making the farmer recognize the need for veterinary activities and to stimulate the improvement of health quality of the nation's animals including product and veterinary biologics. Thus, the objective of this study was to examine the veterinary activities of poultry farmers in Abia State. This was accomplished by examining the awareness of poultry farmers of veterinary services and the factors that determine veterinary patronage

Methodology

Data of primary origin were collected by the use of well structured pre-tested questionnaire administered to 60 poultry farmers. The Probit model was used to analyze data for the study. The veterinary service participation by broiler poultry farmers was measured as a discrete choice variable proxy as a dummy (yes/no). The implicit form of the model is as follows:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9)$ where Y = veterinary participation index measured as a dummy, X_1 = Stock size in number of birds, X_2 = Household size in number of persons, X_3 = Education in years, X_4 = Extension in number of contacts, X_5 = Cooperative as a dummy variable, X_6 = Income from poultry farming in naira, X_7 = Experience in years, X_8 = Drug in naira and X_9 = Mortality in number of deaths.

The T – test statistical model was used to investigate difference in income among veterinary service

and non-veterinary service patronizing farmers.

The coefficients obtained on the probit estimation or results serve to provide a sense of direction of the effects of the covariates on veterinary participation by broiler poultry farmers and could not have measured the magnitude of impact analysis. This was patterned according to Abira and Sireeranhan (2012). However, the income derived by farmers who patronized veterinary services for broiler poultry production was compared with that of those who did not to determine the significance between the two categories of farmers.

Results and Discussion

Awareness of Veterinary Services

Table 1 shows the frequency distribution of respondents according to veterinary awareness. Results show that a greater percentage of the broiler poultry farmers were aware of veterinary activities in the State though not all of such farmers patronized them. It was only about 23 percentage of the farmers claimed ignorant of veterinary activities in the study area.

Table 1: Distribution of Poultry farmers according to veterinary awareness

Veterinary awareness	Frequency	Percentage
Aware	45	76.27
Not aware	14	23.73
Total	60	100.00

Source: Field data, 2010

Experience in broiler poultry farming

Table 2 shows the frequency distribution of respondents according to experience in livestock farming. The greatest percentage of the farmers had experience of about 10 years or less (78.33%) while 8.33% had been in poultry farming for over sixteen years but none has been into broiler enterprise above twenty years. Broiler poultry production does not have an age-long history in the study area unlike the crop farming. This also has policy implication for the growth and development of poultry sub-sector in the area. If there is no conscious effort by government to come up with policies to sustain growth and development, for instance, the interest among the broiler poultry farmers may dwindle given any exigencies and vagaries of seasons.

Table 2: Distribution of Poultry farmers according to their experience in livestock enterprise

Livestock experience	Frequency	Percentage
1 – 5	15	25.00
6– 10	32	53.33
11 – 15	8	13.33
16 – 20	5	8.33
Total	60	100

Source: Field Survey, 2010

Management System Practiced

Table 3 shows the frequency distribution of the respondents according to the management system practised. Intensive system is the major practice among farmers (85%) while barely 15% only raise their broiler poultry by semi-intensive system. It thus implies that there is a growing technology potential for broiler enterprise in the study area, requiring policies for continued growth.

Table 3: Distribution of Poultry farmers according to management systems

Management systems	Frequency	Percentage
Intensive	51	85.00
Semi intensive	9	15.000
Total	60	100.00

Source: Field data, 2010

Determinants of Veterinary Service Participation

Table 4 shows the probit estimates of determinants of veterinary service participation among broiler poultry farmers. The explanatory power of the factors as value of the pseudo R squared was significant. The prob > Chi² represented by X² was also highly significant at 1% indicating goodness of fit. Generally, it means that in terms of consistency between the dependent variable and the explanatory variables, the model seems to have behaved well.

Table 4: Probit Estimates of Determinants of Veterinary Participation among Broiler Poultry Farmers in Abia State

Variable	Coefficient	Std error	T value
Constant	-2.17.000	1.514	1.433
Stock size	0.000	0.001	-0.602
Household size	0.011	0.145	-0.002
Education	0.395	0.223	1.771*
Extension	2.638	0.907	2.908**
Cooperative	-1.616	0.718	-2.249*
Income	0.021	0.012	-1.726*
Experience	0.074	0.064	1.152
Drugs	0.186	0.071	2.624**
Mortality	0.107	0.029	3.689***

Source: Field Data, 2010 *, ** and ***are significant at 10%, 5% and 1% respectively

The coefficient for education was positive and significant at 10% level of probability. Education is expected to affect broiler poultry farming in the farmer's ability to ration his resources more efficient given the array of knowledge available to the farmer. Thus the broiler poultry farmers who were educated are by apriori expectation more aware of veterinary services in the area than the uneducated farmers and this would enable them to access and interpret information better than the non-educated. Taiwo (1999) and Nwaru (2001) had noted that education and training are of utmost importance in order to enhance farmers' capability to adopt and accept technological innovation. The educated farmer will be less risk avert in exploring opportunities to boost the farm business

The coefficient for extension contact was positive and significant at 1% level of probability indicating that those who had access extension services were better of veterinary services. This is expected since with extension service the farmers would aware of technologies available.

The coefficient for membership of cooperative societies was negative and significant at 10% level of probability. This implies that those who were members of cooperative societies and aware of veterinary services were not as efficient as expected. This most probably presupposes that those who belong to such organizations and probably had access to loans could have either misappropriated the fund raised from Cooperative membership or that the Cooperatives were not conscious to the plight of their members. Cooperative involvement should target developing the value chain for broiler producers who are members of the cooperatives.

The coefficient for income was positive and significant at 10% levels of probability indicating that the farmers who made more income were able to take advantage of veterinary services than those with limited income.

The coefficient for drugs was also positive and significantly related to veterinary awareness at 5% level of probability. This is also in agreement with a priori expectation. High level of risk due to various diseases is sometimes a grave problem to poultry production therefore drug usage and sometimes its inclusion in their ration has been advocated by Effiong (2005) to be necessary for the improvement and performance of livestock sub-sector. Broiler farmers who go through all the vaccination requirements and have access to drugs to deal with any disease of broilers are expected to enjoy reduced or minimal mortality unlike broiler poultry farmers who pay no attention to vaccination nor spend money on drugs.

Comparative Analysis of Income between Veterinary Patronage Farmers and Non-Veterinary Patronage

Table 5 shows the t test of income between farmers who patronize veterinary services and non veterinary patronage farmers for poultry.

Table 5: Two Sample Test, Income from between Veterinary and Non-veterinary Services Patronizing Farmers

Variable	Mean	Standard error	Standard deviation	T-ratio
Income for non patronizing farmers (N)	155, 000.00	28254.79	89349.5	
Income for patronizing farmers (N)	601, 428.60	279955.5	181431.9	2.5866**
Combined (N)	515, 576.90	226990.5	163685.2	
Difference	-4464286	251700.71	92082.4	

Source: Field data, 2010

The t-value was highly significant at 1% level of probability implying that there is a significant difference between the income for the broiler poultry farmers who patronize veterinary services and the farmers who did not. Result show that veterinary services patronizing farmers make more income than their non-veterinary service counterparts.

Conclusion

The study examined the veterinary activities of poultry farmers in Abia State. Socio-economic characteristics of the farmers were determined and analyzed using descriptive statistics. Factors that determined veterinary patronage were determined; veterinary awareness of the farmers and the effect of veterinary participation by broiler poultry farmers on various factors were also examined. Income of farmers who patronize veterinary services and non-veterinary patronage were compared and found to be significant.

Determinants of factors that determine veterinary participation was measured using probit regression model. Income from farmers who patronize veterinary services and those farmers who do not were also compared using T-test statistical model.

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