



Assessment of Uptake of Poultry-Based Risk Insurance Policy by Poultry Farmers in Ondo State, Nigeria

Adewale Abidemi Aremu

Agricultural and Resource Economics Department
Federal University of Technology Akure, FUTA, Ondo, Nigeria
aaremuwale@gmail.com

Taiwo Timothy Amos

Agricultural and Resource Economics Department
Federal University of Technology Akure, FUTA, Ondo, Nigeria
ttamos@futa.edu.ng

Abstract – This study assessed the uptake or adoption of the poultry-based risk insurance policy by poultry farmers in Ondo State, Nigeria. Ondo State was selected due to the number of the population of poultry farmers and the viable organization of the farmers into an association named Poultry Association of Nigeria (PAN). The specific objectives of this research were to describe the socio-economic characteristics of the poultry farmers in the study area; examine the level of awareness among poultry farmers in Ondo State, regarding the poultry-based risk insurance policy.; assess the factors influencing the decision of poultry farmers in Ondo State to adopt or reject the poultry-based risk insurance policy; evaluate the perceived benefits and challenges associated with the uptake of the poultry-based risk insurance policy among poultry farmers in Ondo State; and, explore the perceptions and attitudes of poultry farmers in Ondo State towards risk management and insurance practices in the poultry industry. Through the organized association, primary data were randomly collected from 120 registered farmers in six Local Government Areas across the three senatorial districts (2 LGAs each) of the State. Additionally, to buttress some of the objectives, data were collected from six insurance companies offering poultry insurance policy and four agricultural credit lending financial institutions present in Ondo State. Well structured questionnaires were administered to the respondents using interview method. Data collected were analyzed using descriptive statistics and probit regression model. Empirical results revealed that a majority of respondents (76.7%) considered insurance to be important for their poultry business. However, only 23.3% of respondents reported having farm insurance. The results of the Probit regression analysis suggest that years of experience and awareness have a significant impact on the likelihood of being insured, while other factors such as age, education, household size, income, and affordability do not show statistically significant associations with insurance uptake.

The mean age of the respondents was approximately 33years. Among the respondents, seven individuals (5.8%) identified as female, while the majority of respondents, 113 individuals (94.2%), identified as male. These results show that youth and female participation in poultry farming was very low. The majority of respondents (68 individuals, 56.7%) had 6-10 years of experience, while 32 respondents (26.7%) had 11-15 years of experience. A smaller proportion of respondents (8 individuals, 6.7%) indicated having 16 or more years of experience in the poultry farming industry. This implies that majority of the respondents had enough experience to participate in poultry farming and would be productive.

Cross-tabulation of many variables was done to determine the significance of each of them to adoption of poultry-based poultry insurance. It was recommended that various channels, including government agencies, insurance companies, agricultural cooperatives and poultry Association of Nigeria be used to popularize the need for insurance cover for poultry farms. Insurance companies should design the policy in a tailored manner that will encourage poultry farmers to uptake insurance policy.

Keywords – Assessment, Policy, Insurance, Risk, Uptake, Poultry

I. INTRODUCTION

1. Background to the Study

Poultry farming is an ancient (agrarian era) practice in animal husbandry in which birds such as chickens, ducks, turkeys, and geese are domesticated to produce meat or eggs or both for food either under subsistence or intensive practices. Under subsistence practice, a few numbers of local birds (sometimes new breeds too) are kept roaming or in cages within the family compound and mostly for personal consumption. Intensive poultry farming, especially of chickens, is conducted on a large scale for commercial purposes. Chickens are categorized into layers, which are bred for egg production, and broilers, which are raised for meat. Layers are managed to produce eggs consistently, while broilers are optimized for rapid growth and meat production. Both types of chickens are raised in controlled environments using advanced techniques and technologies to maximize productivity and

ensure bird health. This large-scale approach is essential to meet the global demand for eggs and chicken meat. (Vendatu, 2021).

The poultry industry in Nigeria plays a pivotal role in the country's economic landscape, significantly contributing to its development. This industry generates numerous job opportunities, which are crucial for both urban and rural inhabitants. Employment in the poultry sector spans various activities, including farming, processing, distribution, and sales. These job opportunities provide a steady source of income for many households, thereby uplifting their economic status and enhancing their quality of life. Furthermore, poultry farming is a vital source of animal protein, offering products such as chicken and eggs that are essential components of a balanced diet. These products are rich in protein, which is necessary for growth, tissue repair, and overall health. By ensuring the availability of affordable and nutritious food, the poultry industry plays an essential role in promoting food security



in Nigeria (Nasiru, Haruna, Garba and Tafawa, 2012). This means that more people have reliable access to sufficient, safe, and nutritious food, which is a critical component of national health and wellbeing. Moreover, the economic benefits of the poultry industry extend to poverty alleviation. By creating jobs and generating income, especially in rural areas where economic opportunities can be scarce, the poultry sector helps to reduce poverty levels and improve the livelihoods of many Nigerians. However, the industry faces several significant challenges that hinder its growth and sustainability. One of the primary issues is the rising cost of feed and feed ingredients. Feed represents a substantial portion of the overall production costs in poultry farming, and any increase in feed prices directly impacts the profitability of poultry operations. Additionally, the sector is frequently threatened by outbreaks of diseases such as avian influenza and other virulent illnesses. These diseases can lead to high mortality rates among poultry, causing severe financial losses for farmers. The presence of these diseases also results in trade restrictions and a reduction in consumer confidence. Environmental factors, such as flooding, also pose significant risks, damaging infrastructure and reducing productivity. Poor production yields, fluctuating output prices, and the broader impacts of the global financial crisis further compound these challenges. Many farmers struggle with inadequate access to credit, which limits their ability to invest in necessary resources and technologies that could enhance productivity and efficiency. Moreover, the low level of production specialization means that many farmers cannot optimize their operations for better yields. Transportation losses due to poor road conditions, particularly those leading to farms, add another layer of difficulty. Bad roads increase the risk of damage to poultry products during transit, resulting in financial losses for farmers. In summary, poultry production in Nigeria, like other agricultural enterprises, involves making decisions under a cloud of pervasive and complex risks and uncertainties. These challenges necessitate robust strategies and supportive policies to ensure the sustainability and growth of the poultry industry in Nigeria.

According to O' Reilly (2022) every human endeavor is faced with risks. Intrinsicly, all agricultural activities face one risk or the other at different stages from the beginning of production cycle till the harvesting period. Most farmers tend to mitigate the risks, and, in the process, the efforts lead to various forms of loss. According to Adeyonu, Otunaiya, Oyawoye and Okeniyi (2021), risk and uncertainties create a huge danger in business. If not well considered and mitigated, it results in impressive loss of money, psychological displacement, complete business failure, etc. Therefore, risk management becomes imperative. Commercial farmers engage in risk management strategies with the simplest being insurance cover as concluded by Kahan (Food and Agriculture Organization, 2013) among others. As further cited by Anderson and Dillon (FAO, 1992), "studies suggest that

an effective insurance policy can transfer risk to other financial markets (Joint Research Centre 2013; Bielza, et al. 2009; Carriquiri, Osgood 2012). Meanwhile, for farmers to get an insurance cover that will encourage high productivity, production risk must be reduced. It is also possible that the right insurance policies can motivate farmers to apply effective mitigation techniques (World Bank, 2005; Mahul and Stutley, 2010). The above statements indicate symbiotic responsibilities between farmers and the insurers.

"Insurance is a common way to manage risk through payment of an insurance premium" (FAO, 2013). According to the World Bank Group/IBRD/IDA (2021), "an important challenge is to address systemic risks through insurance and other risk management mechanisms and lower operating costs in dealing with smallholder farmers". Until recently, the conventional insurance companies in Nigeria did not provide insurance for agriculture (production) due to its high risks which are mostly perceived to be common and mostly natural and unavoidable. Whether livestock, crop production or forestry, there are inherent associated risks including natural, pandemic, systemic and normal occurrences. There was a noticeable unwillingness by conventional insurers to accept agricultural risks, which they considered too risky (Ajiboye, 2021). Meanwhile, a specialized agricultural insurance company, Nigerian Agricultural Insurance Corporation (NAIC), was established in 1987 to provide insurance cover to farmers.

But there has been noticeable incapacitation of the major agricultural insurance company to carry the burden of insuring the vast sector. Currently, there are at least twenty-nine insurance companies that offer insurance covers for diverse agriculture-based risks among which only six including American International Insurance Company (AIICO) Plc, Industrial and General Insurance (IGI) Plc, NEM Insurance Plc, Leadway Assurance Plc, Linkage Assurance Plc and Tangerine Plc are pronounced (NAICOM, 2017). Among those who offer poultry farms insurance policy, a few of them cover major associated risks from intensive commercial farms while others have exemptions.

2. Statement of the Research Problem

International Finance Corporation (2021) stated that "in providing access to finance for the vulnerable, insurance is an important element to poverty alleviation. Unfortunately, agricultural insurance and disaster insurance are either unavailable or prohibitively expensive in many developing countries".

Fortunately, insurance companies in Nigeria like AIICO Plc, IGI Plc, NEM Plc, Leadway Assurance Plc, Linkage Insurance Plc and Tangerine Plc have included agricultural risk insurance policies to their product offers and at a relatively low rate. Despite the availability of poultry-



based risk poultry insurance policies aimed at mitigating financial losses in the poultry farming sub-sector, the uptake and adoption of such insurance policies among poultry farmers in Ondo State, Nigeria, remain relatively low. According to Okereafor, Akah, and Shah (2021), the number of farmers under insurance cover is less than five percent. This poses a significant challenge as poultry farmers are exposed to various risks, including disease outbreaks, market fluctuations, and environmental hazards. The limited uptake of poultry-based insurance hampers the ability of poultry farmers to effectively manage and transfer these risks, potentially leading to financial vulnerability and hindered sector growth.

Majority of Poultry Farmers in Nigeria who may want to have such insurance (risk) cover may lack some requirements for such policy as many smallholding poultry farms are not duly registered under the statutory bodies especially business registration body, Corporate Affairs Commission (CAC). This was attributed to ignorance of insurance among farmers in Nigeria.

Also, most farms do not have necessary facilities or bio-security measures. There are necessary requirements such as pen construction type, health and hygiene, water system, biosecurity (preventive measures against diseases and pandemic spread), waste disposal system and so on, that must be put in place by poultry farmers before consideration for insurance cover by insurance companies. However, farmers are used to their old (subsistence) ways.

“The relative importance of the different sources of risk depends on the nature and circumstances of the individual farmer and the farm household. This includes the resource base of the farm, its physical location, the enterprise combinations chosen, the specific production processes practiced by the farm family and the attitude of the farmer towards risk” (FAO, 2013). Farmers need to fully be aware of the conditions required to participate in the insurance policy before they can accept to participate.

There are defined concerns that have been attributed to constraints to uptake of poultry-based risk- insurance in Nigeria including ignorance among farmers, socioeconomic characteristics of farmers, risk perceptions and attitudes by farmers, insurers need for re-modification and government intervention. These constraints must be investigated in order to identify the root cause(s) of poultry farmers’ unwillingness to procure insurance policy causes and make necessary recommendations. Therefore, there is a need to assess the factors influencing the uptake of poultry-based risk poultry insurance policies in Ondo State and identify the barriers and facilitators that impact farmers’ decision-making processes. By addressing this knowledge gap, the study aims to provide insights and recommendations to promote the wider adoption of poultry-based insurance policies among poultry farmers, thereby enhancing their resilience and ensuring the long-term sustainability of the poultry industry in Ondo State.

3. Research Questions

- What are the socio-economic characteristics of the poultry farmers in Ondo State?
- What is the level of awareness among poultry farmers in Ondo State, regarding poultry-based risk insurance policy?
- What are the factors influencing the decision of poultry farmers in Ondo State to adopt or reject the poultry-based insurance policy?
- What are the benefits and challenges associated with the uptake of the poultry-based risk poultry insurance policy among poultry farmers in Ondo State?
- What are the perceptions and attitudes of poultry farmers in Ondo State towards risk management and insurance practices in the poultry industry?

4. Objectives of the Study

The general objective of this study is to assess the uptake of the poultry-based insurance policy by poultry farmers in Ondo State, Nigeria.

The specific objectives are to:

- Describe the socio-economic characteristics of the poultry farmers in the study area.
- Examine the level of awareness among poultry farmers in Ondo State, regarding the poultry-based risk insurance policy.
- Assess the factors influencing the decision of poultry farmers in Ondo State to adopt or reject the poultry-based insurance policy.
- Evaluate the benefits and challenges associated with the uptake of the insurance policy among poultry farmers in Ondo State.
- Explore the perceptions and attitudes of poultry farmers in Ondo State towards risk management and insurance practices in the poultry industry.

4. Hypotheses

Ho1: There is no significant relationship between poultry farmers’ socio-economic characteristics and adoption of policy.

Ho2: There is no significant relationship between farmers’ awareness of the poultry-based poultry insurance policy and their uptake of the insurance.

5. Justification of the Study

Poultry production in Nigeria is estimated to amount to 454 billion tonnes of meat and 3.8 million eggs annually, with an estimated population of 180 million birds. About 80 million chickens are raised in extensive systems, 60 million in semi-intensive systems and the remaining 40 million in intensive systems (African Sustainable Livestock [ASL] 2050, 2018). Sahel (2015) asserted that “Nigeria has the second largest chicken population in Africa after South Africa”, producing 650,000 tonnes of eggs and 300,000 tonnes of poultry meat in 2013 (FAOSTAT, 2017). According to Oduntan (2020), since around 2008, there has been a deliberate national drive to promote agriculture as a business. The federal government



encouraged farmers to upgrade from subsistence to commercial agriculture. In fact, a financial intervention policy was launched in this regard, the Commercial Agriculture Credit Policy (CACPS).

The Nigerian poultry industry is a well-organized sub-sector in the agricultural sector contributing about 25% of the total agricultural contribution to the national GDP. The poultry industry has also witnessed tremendous technical improvement over the last two decades and continues to contribute to achieving Nigeria’s food sufficiency and economic growth (Oduntan, 2020). The justification for conducting this in Ondo State lies in several key aspects including:

Importance of Risk Management

Poultry farming involves inherent risks such as disease outbreaks, natural disasters, and market fluctuations. Effective risk management strategies, including insurance, are crucial to protect farmers from potential losses and ensure the sustainability of their businesses. This study will investigate perception of poultry farmers to risks associated with the business to assess farmers willingness to transfer such risks to insurance companies by taking insurance cover.

Limited Uptake of Insurance Policy

Even though some insurance companies in Nigeria have keyed into agricultural insurance, including poultry-based risk insurance policy, the low response of poultry farmers who are the core beneficiaries of the new development calls for concern. Understanding the factors influencing the uptake of such policy is vital for improving their effectiveness and promoting their usage among farmers. This study will serve a purpose of awareness creation, during data collection, to farmers about the existence of new and conventional poultry-based risk insurance policy aside the government owned Nigerian Agricultural Insurance Corporation. The awareness will make poultry farmers to work towards meeting necessary requirements for insurance policy and putting them into consideration, as would be reflected in the structured questionnaire that will be served to the respondents.

Potential benefits of Insurance

Poultry-based insurance can provide financial security to poultry farmers by mitigating losses incurred due to unforeseen events. Assessing the uptake and identifying barriers to adoption can help policymakers and stakeholders devise strategies to enhance insurance participation and ultimately improve the resilience and profitability of the poultry industry.

Local context of Ondo State: Ondo State, Nigeria, is known for its significant poultry production. However, there may be specific factors unique to the region that influence the uptake of insurance policy. Examining the situation in Ondo State provides valuable insights into the

challenges and opportunities for promoting poultry-based insurance in a specific geographic context.

Policy Implications

Findings from this study can inform policy decisions related to agricultural risk management, insurance design, and support programs. This study will assess the policy content of the insurance packages of the selected insurance companies in coherence with actual risks that farmers face in poultry sector, farmers’ willingness to pay for insurance policy and what motivates poultry farmers’ willingness to uptake insurance cover. Policymakers can utilize the results to develop targeted interventions, enhance awareness, and address barriers to improve the adoption of poultry-based insurance policy among poultry farmers.

Overall, this study will be a guide to insurance companies in understanding the actual concerns and risks that poultry farmers are most and unavoidably ready to transfer through insurance. This will enable insurance companies to provide a tailored policy policy that will attract poultry farmers and efficient enough to meet insurance claims.

II. CONCEPTUAL FRAMEWORK

A conceptual framework is a representation of the expected relationship between variables. In the diagram below, it is shown that an uptake of the poultry-based risk insurance is dependent on the awareness of the insurance policy by poultry farmers, their perception of the insurance policy, knowledge of the insurance policy, perceived factors like access to cheap credit facility, low premium, their scale of production and demographic factors of the respondents. However, institutional support and social networks and information sharing can impact the independent variables and thereby influence the dependent variable.

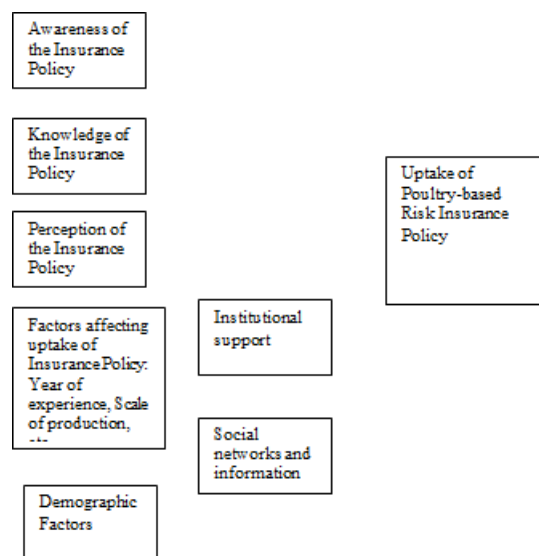


Figure 1: Conceptual Framework



III. METHODOLOGY

1. The Study Area

This study was conducted in Ondo State. Ondo State consists of 18 Local Government Areas. The State borders Osun State cardinal to the Northwest, Kogi State to the Northeast, Ogun State to the Southwest, Ekiti State to the North, Edo State to the East, and the Atlantic Ocean to the South.

The total area of Ondo State is 15,500km² with a national population forecast, 2006-2016, of 4,671,695 as at the last population census (National Bureau of Statistics , 2006). The State lies between longitudes 4° 30' and 6° East of the Greenwich Meridian, 5° 45' and 8° 15' North of the Equator. This makes the State a tropical zone (Ondo State ministry of Economic Planning, 2021).

The people are mostly subsistence crop farmers, cocoa farmers, poultry farmers, fishermen and traders. Farming provides income and employment for over 70 per cent of the population of the State.

According to Weather Spark (2021), the wet season in Ondo State is warm and overcast, the dry season is hot and partly cloudy. The temperature typically varies from 66oF to 91oF and is rarely below 60oF or above 95oF. This makes poultry business a good one in Ondo State among other farming activities.

2. Sources of Data

Primary data was collected from respondents through the organized Poultry Association of Nigeria (PAN), Ondo State chapter with the aid of a well-structured questionnaire. The questionnaire covered the socioeconomic characteristics of the respondents, awareness of poultry-based risk insurance policy, factors influencing adoption or rejection, risk perception and management and benefits and challenges associated with the uptake of the poultry-based risk insurance policy.

Also, to buttress objectives iv and v, another primary data was collected from the selected seven insurance companies (NAIC, AIICO, SANLAM, Linkage, Leadway, NEM and Tangerine) that are currently providing agricultural insurance policy and three agricultural credit lending institutions (BOA, BOI and LAPO) that have branches within the study area.

The close and open-ended questionnaire that was used to gather data from the companies include response about the necessary requirements to be met by farmers, perceived benefits and challenges in the adoption of the insurance policy, perception of the attitudes of the farmers towards insurance policy uptake, institutional support, etc.

3. Sampling Procedure / Sample Size

Multistage sampling technique was used for this study. At the first stage, the three senatorial zones of the

States were identified for poultry farming practices. Second stage involved purposive selection of two Local Government Areas (LGAs) from each of the senatorial zones to obtain sample from the population of registered poultry farmers under PAN within the senatorial districts in Ondo state.

The LGAs include Akure South, Ondo West (Ondo Central Zone); Akoko North East, Owo (Ondo North Zone); Odigbo, Okitipupa (Ondo South Zone). This follows same technique used by Akintunde (2015).

Thirdly, a total of 120 farmers were randomly selected from among the registered farmers under PAN but with different capacities classified as Small-scale (less than 500 birds), Medium-scale (500-2,000 birds) and Large-scale (more than 2,000 birds).

Also, purposive sampling technique was used to collect data from the 7 selected insurance companies and 3 agricultural credit lending institutions, with branches in Ondo State, to buttress the objectives iv and v. This makes a total of 130 respondents of interrelated groups.

4. Method of Data Analysis

In this study, both descriptive statistics and regression analysis were used for data analysis. Basic descriptive statistics, such as tables, frequency, mean and, percentage were used to provide insights into relationship between the independent variables and uptake of poultry-based insurance policy.

Chi-squared test was applied to assess the association between variables such as demographic characteristics, awareness of the insurance policy and insurance uptake, perceived influencing factors and insurance uptake, risk perception and insurance uptake, etc. Probit regression model was used to test the significance of the variables to the hypotheses testing.

Table 1 presented the distribution of farmers by local government within the three senatorial zones of the State. Twenty respondents were randomly chosen per each LGA among the registered poultry farmers under PAN.

Table 1: Sample Distribution of Respondents based on Local Government Area

<u>LGA</u>	<u>Frequency</u>	<u>Percent</u>
Akoko NE	20	16.7
Akure South	20	16.7
Odigbo	20	16.7
Okitipupa	20	16.7
Ondo West	20	16.7
Owo	20	16.7
<u>Total</u>	<u>120</u>	<u>100.0</u>



Table 2 showed the distribution of poultry farmers by farm location or town within the six selected LGAs. The number of farmers per LGA differs based on random selection among the group of registered farmers in the locality.

Table 2: Sample Distribution of Respondents based on Farm Location/Town

LGA	Frequency	Percent
Ajebamidele	3	2.5
Ajebanbo	3	2.5
Akungba	7	5.8
Araromi.	8	6.7
Ayeka	4	3.3
Ayetoro	3	2.5
Ayila	4	3.3
Dagbe Odowo	2	1.7
Emure Ile	2	1.7
Enuowa	2	1.7
Igboroko	3	2.5
Igbotako	3	2.5
Ijomu	2	1.7
Iju-Oke	3	2.5
Ikare	5	4.2
Ikoya	2	1.7
Iloro	6	5.0
Iimuagun.	4	3.3
Ipele	1	0.8
Isikan	2	1.7
Isuada	5	4.2
Iyame	2	1.7
Lokuta	1	0.8
Loro	4	3.3
Modebiayo	2	1.7
Obanla	2	1.7
Obasooto	3	2.5
Oda	7	5.8
Odeyare	2	1.7
Okeaiba	3	2.5
Okelisa	5	4.2
Okoja	2	1.7
Ore	8	6.7
Oyinmo.	2	1.7
Uro	3	2.5
Total	120	100.0

Source: Computed from field data (2023)

Table 3 showed the sample distribution of the selected insurance company within the study area.

Table 3: Sample Distribution of Insurance Company Name

Insurance Company	Frequency	Percent
Aiico	1	14.3
Leadway	1	14.3
Linkage	1	14.3
Naic.	1	14.3
Nem	1	14.3
Sanlam	1	14.3
Tangerine	1	14.3
Total	7	100.0

Source: Computed from field data (2023)

Table 4 showed the sample distribution of major agriculture loan creditors/loan givers within the study area.

Table 4: Sample Distribution of Major Agriculture Loan Creditors/Loan Giver

Institution	Frequency	Percent
Bank of Agric	1	33.3
Bank of Industry	1	33.3
LAPO	1	33.3
Total	3	100.0

Source: Computed from field data, 202

IV. RESULT, DISCUSSION AND INTERPRETATION

Probit Regression Model Specification

To explore the factors influencing the uptake of the poultry-based risk insurance policy among poultry farmers in Ondo State, Probit model was used. Probit model, also called probit regression, is a widely used statistical model for studying dichotomous or binary outcome variables. This applies in this study.

Table 5: Probit regression

Insured	Coef.	St.Err.	t-val.	p-val	[95% C.]	Int	Sig
Age	.339	.265	1.28	.201	-.181.	.858	
Education	.174	.214	0.82.	.414	-.244	.593	
Year	.08	.04	1.99	.046	.001	.159	**
Awareness.	.486	.193	2.52	.012	.109	.864	**
H_Size	-.082	.105	-0.78.	.433	-.288	.124	
Income	-.122	.59	-0.21.	.836	-1.278	1.034	
Affordability.	.181	.212	0.85	.394	-.235	.596	
Constant	-4.09	1.33	-3.08	.002	-6.696	-1.483	***
Mean dependent var			0.217.		SD dependent var		0.414
Pseudo r-squared			0.141.		Number of obs.		120
Chi-square			17.703		Prob > chi2		0.013
Akaike crit. (AIC)			123.734		Bayesian		
crit.(BIC)			146.034				
Log-likelihood			77.334466				

*** p<.01, ** p<.05, * p<.1



The AIC (Akaike Information Criterion) value is 123.734, and the BIC (Bayesian Information Criterion) value is 146.034. These values can be used for model comparison. The log-likelihood value of 77.334466 indicates that the explanatory variables used in the probit model are appropriate. The probability value of 0.013 for a chi squared of 17.7 shows that at least one of the parameters of the variables is different from zero. The empirical results from the analysis revealed that years of experience in poultry farming and awareness of poultry-based risk insurance policy were significant at 5%. Hence, the null hypothesis of the study will be rejected due to the result from this study that shows there is a significant relationship between the socio-economic characteristics of respondents and the level of adoption of poultry-based insurance policy. An increase in the years of experience in poultry farming poses a higher likelihood of adopting a poultry-based insurance policy. This follows the a priori expectation that with growing experience in poultry farming, the farmer will understand better the production technology, all associated challenges, and the benefits of taking risks and adopting new technologies. An increase in awareness of poultry-based insurance policy has a chance of increasing the level of adoption of the insurance policy due to the high risk associated with poultry production.

It is to be noted that, according to Isik et al. (2009), the coefficients estimated in the probit model do not have direct interpretations but can be used to calculate probabilities of the dependent variable with different levels and the corresponding marginal probabilities.

As a result of multi-colinearity among variables, some variables with significant p-values under chi-square analysis test as shown above were exempted from the regression analysis. This is more especially so because they are not of relative interest in hypotheses testing.

Note: Statistical significance is denoted as *** ($p < .01$), ** ($p < .05$), and * ($p < .1$) based on the corresponding p-values.

VI. SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The study assessed the uptake of poultry-based risk insurance policy among poultry farmers in Ondo State, Nigeria. The curiosity stemmed from the pronouncement by Okerefor, Akah, and Shah (2021), that the number of farmers under insurance cover was less than five percent. Poultry as an important agricultural practice with pervasive risks and uncertainties can better be managed under insurance cover through indemnity. It is therefore necessary to assess the level of adoption of insurance coverage by the stakeholders. The specific objectives of this study were to: describe the socio-economic characteristics of the poultry farmers in the study area; examine the level of awareness among poultry farmers in Ondo State, regarding the poultry-based risk insurance

policy; assess the perceived factors influencing the decision of poultry farmers in Ondo State to adopt or reject the poultry-based risk insurance policy; evaluate the perceived benefits and challenges associated with the uptake of the poultry-based risk insurance policy among poultry farmers in Ondo State; and explore the perceptions and attitudes of poultry farmers in Ondo State towards risk management and insurance practices in the poultry industry.

Multistage sampling technique was used for this study through the collection of primary data that were collected from 120 respondent registered poultry farmers under the organized Poultry Association of Nigeria (PAN), Ondo State chapter with the aid of a well-structured questionnaire from six Local Government Areas across the three senatorial zones. Another set of primary data were collected from selected seven insurance companies (NAIC, AIICO, SANLAM, Linkage, Leadway, NEM, and Tangerine) that are currently providing agricultural insurance policies and three agricultural credit lending institutions (BOA, BOI, and LAPO) that have branches within the study area. A total sample size of 130 was collected for interviews using structured questionnaires. Descriptive statistics were used to summarize the socioeconomic characteristics of the respondents. Chi-square test was applied to assess the association between variables. Probit regression model was used to test the significance of the variables for hypotheses testing.

The study examined the distribution and relationship between various factors related to farm insurance in the poultry farming sector. The tables generated from the analyses provide valuable insights into the distribution of respondents based on different variables, such as age, gender, marital status, education level, farm size, awareness, and aspect of poultry farming. Additionally, chi-square tests were conducted to assess the associations between these variables and farm insurance status.

The results indicated that a majority of respondents (76.7%) considered insurance to be important for their poultry business. However, only 23.3% of respondents reported having farm insurance. Furthermore, significant associations were found between farm insurance and variables such as age group, awareness, aspect of poultry farming, and the scale (size) of poultry farm. These findings suggest that certain factors, such as awareness and scale of operations, may influence the decision to obtain farm insurance in the poultry farming sector.

Conclusion

In conclusion, the results of the Probit regression analysis suggest that years of experience and awareness have a significant impact on the likelihood of being insured, while other factors such as age, education, household size, income, and affordability do not show statistically significant associations with insurance uptake.



The findings of this study highlight the importance of farm insurance in the poultry farming sector. While a majority of respondents recognized its significance, the adoption of farm insurance appears to be relatively low. The study revealed that certain demographic and operational factors, such as age, awareness, aspect of poultry farming, and scale of operations, are associated with farm insurance status. These insights emphasize the need for targeted efforts to increase awareness and improve access to farm insurance for poultry farmers.

Recommendations

Based on the results, the following recommendations are made:

Increase Awareness: Implement awareness campaigns targeting poultry farmers to enhance their understanding of the benefits and importance of farm insurance. These campaigns can be conducted through various channels, including government agencies, insurance companies, agricultural cooperatives and poultry Association of Nigeria to popularize the need for insurance cover for poultry farms.

Tailored Insurance Products: Develop insurance products specifically designed to meet the needs and challenges of poultry farmers. Consider factors such as the scale of operations, type of poultry farming (broilers, layers, or both), and the specific risks associated with poultry farming.

Access and Affordability: Explore options to make farm insurance more accessible and affordable for poultry farmers. This could include collaborations with financial institutions to provide credit facilities or incentives to lower insurance premiums.

Collaboration and Support: Foster collaborations between insurance companies, government agencies, and agricultural cooperatives to provide comprehensive support to poultry farmers. This can include training programs, technical assistance, and information sharing on best practices in risk management.

Research and Evaluation: Conduct further research with a larger sample size to validate and expand upon the findings of this study. Evaluate the long-term impact of farm insurance adoption on the financial sustainability and resilience of poultry farmers.

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