

## **Risk Attitudes and Poverty Status Nexus Among Fish Farmers in Ondo State, Nigeria**

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### **Abstract**

Poverty issues cannot be underestimated in fish farmers' production as they influence farmers' attitudes towards risk. Despite the fact that there are studies on fish production risks, there is little or no study on fish farmers' poverty status and risk attitudes nexus in Nigeria. Hence, this study examined risk attitudes and poverty status nexus among fish farmers in Ondo State, Nigeria. Multistage sampling technique was used to select 200 fish farmers. Descriptive statistics, Foster Greer Thorbecke Poverty Measures, Safety-First Model and Multinomial Logit Regression Model were used to analyse data from 179 respondents that gave adequate information. About 42.5% of the respondents were poor as the respondents identified Natural risks (29.0%), Social risks (24.9%), Economic risks (30.4%), Production risks (2.2%) and Technical risks (13.5%) as the sources of risks faced in fish production. The study further revealed that majority (57.0%) of the respondents in the study area were high risk-averse followed by intermediate risk-averse with 31.8%. Household size, Farmers' experience, Poverty status, Stocking density, Quantity of feed, Tertiary education and Access to credit were the significant factors that affected fish farmers' risk attitudes. Fish farmers should be encouraged to participate in agricultural insurance programmes. Individuals, government and non-governmental organizations should put programmes and policies that are capable of alleviating poverty in place in order to improve the ability of fish farmers to take risks in the study area.

**Keywords: Risk, Poverty, Fish, Attitudes, Safety-First Model, Ondo State, Nigeria**

### **Introduction**

Agricultural production throughout the world is known to be inherently risky for many reasons. Agricultural production depends crucially on biotic and abiotic processes that are not completely understood (e.g., why some crops are less susceptible to drought than others). Even when there is a reasonable understanding of certain processes, there may still be little that can be done to control them e.g., rainfall and drought (Hurley 2010). No wonder, agribusiness is widely believed to be highly risky compared to other businesses. This is accentuated by Nmadu and Peter (2010) who stated that agricultural enterprises still constitute the most risky business in Nigeria.

Peasant farmers are naturally keen to avoid taking risk which might threaten their livelihoods. This behaviour influences the levels and types of inputs they use and the aggregate levels of output produced. The vicious circle of poverty takes many forms but one key element in many versions of the spiral, in many environments is risk aversion. If poor people are risk-averse to the extent that they are unwilling to invest in the acquisition of modern inputs because that involves risks, they will remain poor (Mosley

and Verschoor, 2003). Agricultural production is subject to risk and the attitudes of producers toward risk will influence input choices as these affect production risk (Picazo-Tadeo and Wall 2011).

The bulk of agricultural production in Nigeria takes place in the rural areas and ironically, the level and incidence of poverty is very pronounced in these areas (NPC, 2004). In agricultural production, where farmers' yields and income are dependent on various exogenous factors such as weather conditions and price fluctuations, risk is ubiquitous in farming decisions (Menapace, Colson and Raffaelli 2012). One of the development challenges facing Nigeria today is how to reduce the high level of poverty prevailing among her population (Abiola and Olofin 2008). Akinyele (2009) further linked poverty to food in-security by stating that high levels of poverty in rural households in Nigeria are due to food insecurity in the country.

There is paucity of information in the area of nexus between risks attitude and poverty status among fish farmers particularly in Ondo State and Nigeria in general. There has been information emanating from studies on poverty and risk attitudes independently without connecting the two together. Therefore, this study was set to analyse risk attitudes and poverty status nexus among fish farmers in Ondo State, Nigeria with the following specific objectives of identifying the socio-economic characteristics of fish farmers, determining the poverty level among fish farmers, identifying diverse risks affecting fish farmers, assessing the attitudes of fish farmers towards risks and determining the effects of poverty status and other factors on risk attitudes of the fish farmers in the study area.

This study will provide needed information on the relationship between poverty and risk attitudes among fish farmers especially in Ondo State in particular and Nigeria in general. Programmes that will greatly encourage fish farmers to be risk takers can also be developed and implemented from the results of this study. All these are expected to reduce the poverty level among farmers as they get involved in risky activities but with immense benefits.

### **Methodology**

The study was carried out in Ondo State, Southwestern Nigeria. Primary data were collected through administration of well-structured questionnaire and interview schedule on the selected respondents. Multistage sampling procedure was used in the selection of 200 respondents. Descriptive Statistics, Foster-Greer--Thorbecke (FGT), Safety-First Model and Multinomial Logit Regression Model were used for the analysis of data. Out of 200 copies of questionnaire administered, 179 copies were used for the analysis. The remaining 21 were not used due to insufficient data provided.

### **Results and Discussion**

The study revealed that the proportion of respondents who earned less than the value of poverty line (poor) was 42.5%, while those who earned at least the value of poverty line (non-poor) was 57.5% of the sampled households. The reason for this could be attributed to the fact that majority of the respondents diversified their means of livelihood. The incidence of poverty ( $P_0$ ) in this study was 0.425 indicating that 42.5% of the sampled fish farming households were actually poor based on the poverty line (\$1.25 US dollar/day). The poverty depth among the sampled respondents was 0.245, implying that an average poor respondent would require 24.5% of the poverty line to get out of poverty. The poverty severity among the sampled respondents was 0.134, indicating that the poverty severity of poor households was 13.4%. The respondents identified Natural risks (29.0%), Social risks (24.9%), Economic risks (30.4%),

Production risks (2.2%) and Technical risks (13.5%) as the sources of risks faced in fish production. The study further revealed that majority (57.0%) of the respondents were high risk averse. The distribution of farmers based on risk attitude and poverty status revealed that majority (60.0%) of non-poor fish farmers were low risk averse while 40% of poor fish farmers were low risk averse. Also, about 56.1% of the respondents who were not poor were intermediate risk averse, while 43.9% of the poor respondents were intermediate risk averse. Lastly, 44.1% of non-poor fish farmers were high risk averse, while the remaining 55.9% of the poor farmers were high risk averse. In the study area were high risk-averse followed by intermediate risk-averse with 31.8%. Household size, Farmers' experience, Poverty status, Stocking density, Quantity of feed, Tertiary education and Access to credit were the significant factors that affected fish farmers' risk attitudes.

### **Conclusion and Recommendations**

The study focused on the analysis of risk attitudes and poverty status nexus among fish farmers in Ondo State, Nigeria. The results showed that feed is the most important determinant of fish output in the study area. Majority of the respondents were non-poor probably because of the diversification of means of livelihood. The results also showed that majority of the respondents were high risk averse in spite of the livelihood diversification that characterized fish farmers which is expected to encourage them to be low risk averse. The study revealed that poverty status significantly influenced the risk attitudes of the respondents which is an indication that there is an important connection between poverty status and risk attitudes among fish farmers in the study area. Based on the findings of this study, it is recommended that fish farmers should be encouraged to participate in agricultural insurance programmes. Also, cooperative societies should be formed amongst the fish farmers so as to enable them have access to credit facilities and also to take the advantage of economies of scale inherent in the societies. All these will automatically make high risk-averse fish farmers to be low risk-averse. Individuals, government and non-governmental organizations should put in place programmes and policies that are capable of alleviating poverty in order to improve the ability of fish farmers to take risks in the study area.

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