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Resilience to climate shocks among rural households in Nigeria

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Abstract

Determining resilience to climate shocks could help to improve the livelihood of rural households, improve their farm production, and increase their ability to bounce back from the effects of climate change in a bid to contribute to economic growth and sustainable development. Therefore this study examines the climate change effects and the level of resilience of rural households to climate shocks in Nigeria. The study utilised Nigeria General Household Survey Panel Data (GHS-P) from the Living Standard Measurement Survey-Integrated Survey of Agriculture (LSMS-ISA) of 2010/2011 and 2018/2019 with a sample size of 2800 rural households. Descriptive statistics, ordered probit model, and Multiple Indicators Multiple Causes (MIMC) were used for data analysis.

The socioeconomic characteristics showed that there were more male-headed households than female counterparts with an average household size of 6. The mean age is 49 years which implies that the majority of household heads are still within the productive stage of their lives where 41 % have no formal education. The descriptive statistics revealed climate shocks affecting rural households in the study areas are 1.21 % destruction of harvest by fire, 5.32 % dwelling damaged/demolished, 25.21 % poor rain that caused harvest failure, 21.64 % flooding that caused harvest failure, 10.57 % pest invasion that caused harvest failure or storage loss, 6.50 % loss of property due to fire or flood, 2.18 % loss of land and 27.36 % death of livestock due to illness. The resilience index examined using MIMIC model showed that 52.96 % were least resilient, 34.68 % less resilient and 12.36 % most resilient to climate shocks in the study areas. The results of the ordered probit show that education, dependency ratio, age, marital status, and social capital are significant variables that affect the level of resilience of rural households. Climate shocks demonstrate the urgent need for effective adaptation strategies to mitigate and manage the risks associated with climate change-induced shocks. Formal education should be more enhanced among rural households to strengthen their resilience capacity to overcome the negative impacts of climate change. It is also crucial to address climate challenges through policies and actions that prioritise resilience and sustainable development.

Keywords: Climate shocks, livelihoods, Nigeria, resilience, rural households

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