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Gendered analysis of climate change adaptation strategies and food security outcomes in selected agroecological zones of Cameroon

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Abstract

Climate change remains a major threat to food systems at various scales in the future decades, with serious implications for food and nutrition security, livelihoods, and overall well-being. This makes adaptation, mitigation, and resilience essential for the survival of global populations. Some researchers posit that women have relatively lower adaptive capacity than men while others hold that women are more likely than men to use climate change mitigation and adaptation strategies. Thus, there is no consensus on the adaptive capacity of male relative to female farmers in general and little is known about gender preferences in the adoption of climate change adaptation strategies. However, there is substantial evidence that rural women, particularly, are at high risk of negative impacts from climate change due to increased household responsibilities, agricultural activities, and male outmigration. Hence, given that climate change vulnerability and adaptive capacity tend to vary by gender, identifying and promoting appropriate climate change policies and strategies should consider gender norms. Based on the preceding, this study analyses the gender dynamics in the climate change adaptation practices applied by farmers. We also evaluate the effects of various climate change adaptation practices on food security while accounting for gendered preferences. Data analysis is based on a survey of 768 rural farmers in three agroecological zones of Cameroon conducted in 2023. Descriptive analyses show gender disparities in the choice of climate change adaptation practices. Multiple correspondence analysis and hierarchical clustering are used to establish typologies of farmers based on the climate change adaptation practices applied. Meanwhile, the multinomial logit model is employed to uncover the effect of gender on the choice of typology climate change adaptation practices. Additionally, evaluating food security through household dietary diversity and food insecurity experience scale scores, we employ the Negative Binomial Poisson Regression (NBPR) and Endogenous Switching Poisson Regression (ESPR) models to estimate the effects of climate change adaptation practices on food security. The findings of this study can help shape relevant policy interventions seeking to enhance farmers' adaptation capacity to the changing climate and enhance food security through gender-sensitive climate change adaptation and mitigation initiatives.

Keywords: Climate change, endogenous switching poisson regression Cameroon, gender

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