

Food and Nutritional Security in the Context of Climate Change in Ethiopia: Using Household Panel Data

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Abstract : Climate-induced shocks have been shown to reduce agricultural production and cause fluctuation in output in developing countries. When livelihoods depend on rain-fed agriculture, climate-induced shocks translate into consumption shocks. Despite the substantial improvements in household consumption, climate-induced shocks, and other factors adversely affect consumption dynamics at the household level in Ethiopia. Therefore, household consumption dynamics in the context of climate-induced shocks help to guide resilience capacity and establish appropriate interventions and programs. The research employed three-round panel data based on the Ethiopian Socioeconomic Survey with spatial rainfall data to define unique measures of rainfall variability. The linear dynamic panel model results show that the lagged value of consumption, market shocks, and rainfall variability positively affected consumption dynamics. In contrast, production shocks, temperature, and amount of rainfall had a negative relationship. Coping strategies mitigate adverse climate-induced shocks on consumption aftershocks that smooth consumption over time. Support to increase the resilience capacity of households can involve efforts to make existing livelihoods and forms of production or reductions in the vulnerability of households. Therefore, government interventions are mandatory for asset accumulation agendas that support household coping strategies and respond to shocks. In addition, the dynamic linkage between consumption and significant socioeconomic and institutional factors should be taken into account to minimize the effect of climate-induced shocks on consumption dynamics.

Keywords : climate shock, Ethiopia, fixed-effect model, food security

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