

Abstract

Natural disasters, known as covariate shocks, heavily affect poor Filipino households and farmers in rural areas. To alleviate poverty and increase agricultural productivity, the government and international organizations have implemented large-scale conditional cash transfers (CCT) and agricultural infrastructure rehabilitation. This dissertation investigates the behavioral responses to these interventions under climatic shocks, presented in two substantive chapters.

Chapter 2 evaluates the impact of a CCT program on risk mitigation and informal insurance systems among poor Filipino households during exposure to negative income shocks. CCT can reduce dependence on informal arrangements by increasing beneficiaries' income, making them more resilient to shocks and less reliant on informal networks. Conversely, it can reinforce informal arrangements by enhancing the financial capacity of eligible households, enabling them to lend money to others during shocks. Theoretical outcomes can thus be ambiguous. Using a sample of 1,415 households from 130 village clusters randomly assigned to treatment and control groups, intention-to-treat (ITT) estimates suggest that CCT has unintended consequences on risk mitigation and positive spillover effects on the informal system. Beneficiaries' medical expenses and borrowings from the informal system increased during shocks. Additionally, increased lending support was observed among ineligible households in treatment areas, along with a decrease in their borrowings from the informal system.

Chapter 3 investigates the impact of an irrigation rehabilitation scheme on rice productivity and water management practices during wet and dry planting seasons, using data from small-scale community irrigation systems in the Philippines. It examines whether rehabilitated irrigation infrastructure has reduced the risk of climatic events, such as waterlogging during floods and water

scarcity during droughts. The study also explores if the intervention led farmers to sustain the management of communal water resources, ensuring sufficient water to improve rice productivity under extreme climatic conditions. Using a sample of 2,583 parcel-household levels from 113 community irrigation system clusters managed by irrigators' associations and random assignment to treatment and control groups, estimates suggest that rehabilitated irrigation infrastructure mitigated the effects of flooding and drought, leading to increased rice productivity. Farmers also demonstrated collective action through voluntary maintenance, particularly among those who attended water management training.