

Information Asymmetries in Crop Insurance Contracts

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December 3, 2010

Failure of crop insurance markets

- ▶ Agriculture is risky and there is much evidence for incomplete insurance.
- ▶ Near universal failure of insurance schemes for crops
- ▶ Literature credits the failures mainly to:
 - ▶ Adverse selection – farmers who are more susceptible to damage have higher demand of insurance
 - ▶ Moral hazard – insured farmers have less incentive to prevent damage
 - ▶ Time and spatial co-variability of shocks

Index insurance

- ▶ To get around adverse selection and moral hazard problems, people have tried index insurance, but
 - ▶ Take-up has been low
 - ▶ Possibly low correlation between shocks to individual farms and the index

Field experiment in the Philippines

- ▶ A multi-peril crop insurance scheme for rice is offered by the government:
 - ▶ Covers typhoons, drought, pests and crop diseases.
- ▶ The program is heavily subsidized but still has very low take-up.
- ▶ Experiment is designed to identify the role of information asymmetries in the failure of the market.

Data

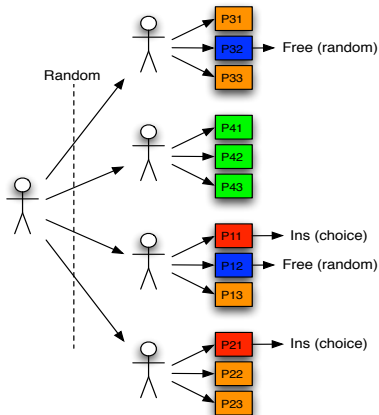
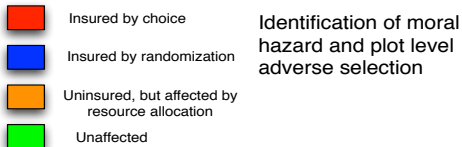
Data collection and experimental design is based on:

- ▶ Collecting plot level data on inputs, outputs and damages.
- ▶ Spatial data.
- ▶ Overlaying a randomized experiment of insurance, with plot level randomization.

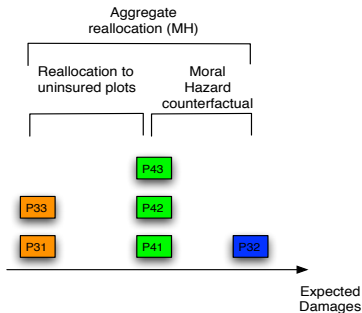
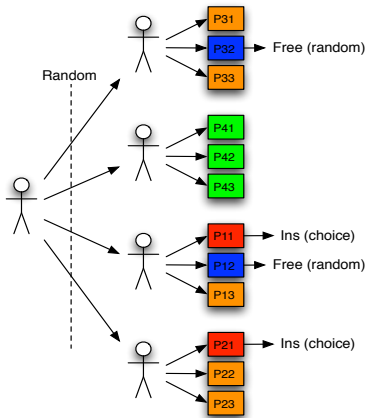
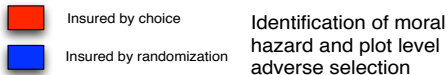
Mechanics of moral hazard and adverse selection

- ▶ In my context, hypothesized mechanics of moral hazard include:
 - ▶ Amounts of pesticides, insecticides, rat poison.
 - ▶ Labor use (e.g. in preventing rat damage, apply pesticides, etc)
 - ▶ Seed choice
- ▶ Hypothesized mechanics of adverse selection, in this context include:
 - ▶ Elevation
 - ▶ Location (closeness to rivers, residential areas)

Experimental Design



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