

Barriers to Household Risk Management – Evidence from India

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Introduction

One of the primary functions of financial markets is to pool and diversify risks across households. In recent years, a variety of financial innovations have emerged with the potential to improve household risk management. Despite their appealing features, these financial innovations are still in their infancy, and take-up is generally still low. This is true for rainfall insurance as well, which is an innovative financial contract designed to insure rural Indian households against a source of income risk: variation in rainfall during monsoons.

A study conducted by the Centre for Microfinance (CMF) in 5 districts of Andhra Pradesh and Gujarat looked deeper into identifying the reasons for the low take-up of these products using a statistically rigorous methodology (Randomized Controlled Trials - RCTs). For the purpose of implementing the interventions for the study, BASIX and SEWA were the partners selected with high presence and penetration in the respective states. The study particularly looks to answer the price and non-price factors that influence take-up of rainfall insurance products.

How does rainfall insurance work?

- Premium represents an investment at the beginning of the monsoon season
- Products offered are segregated to accommodate different phases of rainy season
- Payout is linear to rainfall index, and are designed to hedge against drought and floods
- Payout is calculated automatically by insurer, rather than customer having to file a claim

Research Findings

Detailed surveys, conducted in 1047 households in 37 villages, found substantial evidence to conclude that rainfall insurance products being offered are extremely price-sensitive. This finding complements recent research estimating that consumer credit demand in developing countries is significantly price-elastic. For the purpose of the study, price elasticity was estimated by randomly varying the price of the policy when offered to different households.

Non price factors, such as liquidity constraints and limited trust in the insurance provider, are also found to be important in accounting for limited take-up. Providing enough cash to these households in order to purchase the rainfall insurance increased take-up by almost 40 percentage points. Based on historical data, it is estimated that rainfall insurance is priced at a significant premium to actuarial value.

In addition, it is also found that individual household visits conducted by agents to introduce and sell the product increases take-up by 15 percentage points on average. Endorsement of the product by the local organisation (if the household is familiar with the partner organisation) also visibly increases take-up of the product, highlighting trust dynamics within the local community. It was for this reason that reputed NGOs such as BASIX and SEWA were selected. Finally, lack of knowledge about rainfall insurance and its outcomes also contribute extensively to low demand for this category of products.

Research Implications

The above findings point towards several suggestions for those associated with the industry. The current structuring of these products combined with price-elasticity calculations, lead to estimates that demand would increase by 50-75% if products were offered with the same markup as US insurance contracts, hinting at appropriate pricing mechanisms. These are strong indications that the products are expensive relative to actuarial value, a characteristic typical of insurance in developing countries.

Liquidity constraints is one of the primary non-price factors, as seen in the Ahmedabad area, where over half of the households surveyed chose not to purchase rainfall insurance even when price levels were set significantly below the actuarial value of the insurance policy. Improved credit access, particularly in low-income households, can potentially increase the demand for rainfall insurance.

The results from the study suggest that it may take significant time and ingenuity on the part of the insurance providers to increase adoption of risk management tools such as rainfall insurance products at the household level.

Insurance companies should look to get endorsements of their products from organisations with a strong local presence to improve their perception in the community, and also work on additional ways to increase awareness of these products so that households can better understand the benefits and risks they can encounter when choosing such products.

Policy Recommendations

Receiving certified rainfall data in quick time – quick payouts would ensure that the liquidity constraints can be partially overcome at the right time. Automated rain gauges could be mandated at the local level to measure rainfall instantaneously. Increasing density of rainfall gauges - this will reduce basis risk because the average distance between the household and the rain gauge will decrease, so payouts will be more strongly correlated to actual crop losses

Foster competition in the market – Currently there are only a handful of providers, which may be one reason why the product is prohibitively expensive. The government could provide incentives for participation in the market, or even scale up WBCIS, which is its own program, so that it competed with private providers. Combine the product with a loan – Our study shows that liquidity constraints affect the decision to buy the product, so combining it with a loan, may help in that regard.

Since all information is publicly available, the product can be offered to entire groups or villages rather than to individuals only

Research should be encouraged in further pursuing appropriate technologies (such as Geographical Information Systems) which can predict improved payout methodologies using local weather and soil patterns.