FONDATION POUR LES ÉTUDES ET RECHERCHES SUR LE DÉVELOPPEMENT INTERNATIONAL

Reinsuring the poor: group microinsurance Design and costly state verification

Daniel J. Clarke

Daniel J. Clarke works at the University of Oxford as Departmental Lecturer and research fellow at the Centre for the Study of African Economies (CSAE). He also works with the World Bank's Insurance For The Poor Unit and Global Facility for Disaster Reduction and Recovery. His research is on financial contracting in developing countries.

How is microinsurance, that is insurance for low-income people, economically different to conventional insurance sold to individuals in developed countries? The key assumption modeled in this paper is that many low income people are part of extended families or communities that share strong economic and social links, and that the cost of verifying a loss and making a transfer, known to insurers as *loss adjustment*, is much lower for individuals within such groups than for formal sector insurers.

.../...

policy brief
42
September
2011
note brève

…/… To understand the implications of this assumption for optimal financial contracting, suppose that thirty low income farmers who lived in the same village and shared strong economic and social ties each wanted financial protection against a bad harvest. What form of arrangement might be optimal?

The traditional approach to insurance would involve each farmer purchasing a bilateral 'multiple peril' crop insurance policy from an external insurance company, each paying a premium to the insurance company in return for a claim payment from the insurer in the event that that farmer had a very bad harvest. Such an arrangement could offer solid protection to farmers but would be very expensive; the insurer would have to incur the cost of sending a loss adjuster to the village even if only one farmer reported a loss.

A second approach would be for the individuals to mutually support each other, with farmers who have good harvests helping out those who have unusually bad harvests. However, whilst this could perhaps be arranged at low cost, within-village mutual support offers only partial protection, with farmers still vulnerable to the risk that everyone in the village loses their crop due to a systematic shock.

A third approach would be for the agents to offer mutual insurance to each other and for the group of 30 farmers to purchase a Stop Loss insurance contract from the formal insurer which paid out only if the total yield across all members of the group was unusually low. Such an arrangement seems to offer the best of both the first two contracts, with farmers obtaining cheap cover for shocks that do not affect the whole group and reliable cover for shocks that do. The insurer would not need to send a loss adjuster to the village if only a few farmers report a loss, only when a large number of farmers report a loss. To compare the arrangement with developed financial markets, the formal insurer acts as reinsurer to the group who, in turn, act as a mutual or captive insurer.

Finally, the insurer could make use of verifiable, observable indices such as weather indices so that in the event of a large drought the insurer would not need to send a loss adjuster to the village, instead paying a claim based only on the readings from nearby weather stations. This could reduce loss adjustment costs further, by focusing them on states of the world where the farmers had experienced a large aggregate shock that was not reflected in cheaply observable indices.

This paper was motivated by the desire to design better insurance products for poor individuals and focuses on indemnity-based contracts, the historical cornerstone of personal lines insurance. Although multilateral credit contracts are now common, multilateral insurance contracts, where the claim payment to one policyholder explicitly depends on the losses incurred by other policyholders, are rarely observed in practice. This paper demonstrates that it is possible to design insurance contracts that combine the best feature of the formal sector contract, namely the reliability of claim payment even in the face of large covariate shocks, with the best feature of the mutual support, namely the low informational cost. We wonder whether the contracts outlined in this paper might be useful here and there for formal contracting with the poor, particularly in the life, longevity and crop insurance classes of business.

FERDI

Contact
www.ferdi.fr
contact@ferdi.fr
+33 (0)4 73 17 75 30