

## IGC Policy Brief [for IGC Research Award RA-2009-11-033]

**Title:** Offering rainfall insurance to informal insurance groups: evidence from a field experiment in Ethiopia

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### **Summary**

*Weather risk remains a key constraint for agricultural development in Ethiopia. Index-based insurance may offer an innovative cost-effective mechanism to offer insurance and thereby allow more high return investments in agriculture. However, the uptake of these products is often low. New insurance products are not delivered in a vacuum, as poor communities have various mechanisms to cope with risk. Existing risk sharing networks could provide a cost-effective means of spreading innovative risk management mechanisms such as insurance. Furthermore if they can be encouraged to mutually insure some components of basis risk we may observe higher take-up with better welfare outcomes.*

*Using an experimental design we offer such policies to informal funeral societies in Ethiopia and find that when offering specific training to highlight the group benefits of these policies, uptake is boosted considerably. These findings are of direct relevance for government to develop effective catastrophic and agricultural risk management strategies, and for private sector aiming to expand their insurance market into rural areas.*

### **Background and motivation**

Rainfall risk remains a key problem for Ethiopian farmers. In a recent survey conducted in 2009, 44% of farmers reported serious losses in wealth and consumption due to drought in last 4 years, and 22% report losses due to too much rain and floods. Rainfall risk also seems to affect the uptake of modern inputs in Ethiopia. Dercon and Christiaensen (2011) report a strong link between willingness to take up fertilizer and weather risk in Ethiopia. This would suggest that these farmers are likely to be interested in insurance.

Index-based insurance products seem to offer much potential in this setting. They offer payouts based on easily observable data, without the verification or incentive problems of traditional crop insurance contracts. However, take-up of indexed insurance products has been quite low. Trust and poor understanding of insurance are general explanations often offered to explain why people are not taking up insurance in poor settings (e.g. Cai et al 2009) and are also important in explaining low demand for index-insurance products. Additionally, because index products pay based on an index rather than a farmer's actual loss there will be some years in which a farmer experiences a loss, but the index shows that there is no payout (basis risk). This basis risk has a deleterious effect on demand (Clarke 2011).

### **Groups as a means to manage basis risk**

Providing insurance through groups could carry a number of possible advantages. Selling through groups reduces the costs of retailing insurance: training can be organized with group leaders; and group leaders can subsequently train members, assemble a list of demands, collect premium payments, and distribute insurance certificates and claims to members. In practice any type of group can be used to retail insurance in this way.

Training group leaders in the insurance product also has additional advantages: they are often more literate and numerate than other members of the group so may be able to understand the products quickly in a training session and then communicate the key concepts effectively to other members. And by vouching for the insurance products they can increase trust in the insurance products among other members of the group.

However, we focus our research question on whether groups can provide an additional benefit in the case of index insurance. Specifically we ask whether groups can help absorb some of the basis risk inherent in index-based products.

We can decompose the basis risk of one farmer into two components: the part that he shares with others in his community and the part that is unique to him. The shared component of basis risk could arise because the community is located some distance from the point at which the index is measured, or because the index is not perfectly calibrated to average losses. Any of the following could increase the unique component of basis risk: heterogeneity in cropping practices, differences in the type and slope of land owned (Suri2011) or the presence of pests and disease.

If selling index insurance to a mutual insurance group encourages them to share the unique component of basis risk among themselves (essentially "crowding in" more informal insurance), selling to a mutual group will result in a product with lower basis risk. The basis risk will now only comprise the component that the farmer shares with others in his community. Given basis risk causes index-based insurance to be an unattractive prospect for some farmers, reducing basis risk will cause demand to rise.

### ***Testing the potential for group risk-sharing***

To explore the benefits of offering insurance to groups, we collaborated with an Ethiopian insurance company (Nyala Insurance S.C.) to offer insurance to farmers in three districts of Ethiopia in 2010. The entire marketing was done towards members of informal insurance groups, the iddir, which are funeral societies. Further details are provided in Dercon et al 2011, but here we describe the main lessons.

Iddir are widespread in Ethiopia, with virtually every household a member. Against the payment of a premium, it offers funeral insurance, in the form of support in cash and kind in case a household member dies. In all communities, a large number of these groups exist, with several dozens of members in each group. They are considered well governed and democratic institutions, with no government or NGO involvement in their functioning (Dercon et al 2006). They appear very suitable groups to roll out insurance, as they tend to understand insurance and its functioning, and are well respected by their members and in their communities.

As part of a marketing campaign we carried out training sessions for iddir leaders and members. While all training sessions had a similar focus, introducing concepts of insurance and explaining in detail the insurance policies, we varied the content of these sessions across iddirs. Whilst one training focused on the insurance benefits for individual farmers, other training sessions focused on the insurance benefits when risk-sharing activities are considered within a group. Members of the iddir leadership were randomly assigned to training of one of these two types. This intervention design allows us to explore the extent to which emphasis on the group benefits of the policies generates higher demand for insurance. Because all other aspects of the marketing were held constant--the transactional and communication roles that iddir leaders played was identical across both training types--the design allows us to focus on the perceived benefits that result from emphasizing sharing policies within a group, rather than marketing advantages that groups may have as a result of encouraging trust in the insurance product or reducing transaction costs.

We find that iddirs in which leaders were trained in the group benefits of insurance had substantially higher take-up rates than iddirs in which leaders were trained in the individual benefits of insurance. Demand was 13 percentage points higher (increasing demand from 21% to 34%) among iddirs in which leaders were trained in the group benefits of insurance. The additional demand generated by group insurance training originated from both iddir leaders as well as regular members.

Our analysis shows that these effects are not due to pre-intervention differences across randomised iddirs, nor due to differences in how effective training might have been. We also provide evidence that group training did indeed result in trained farmers discussing the insurance more with others, in particular among small groups of farmers.