

SAMPLE #4

Agricultural Decisions After Relaxing Credit and Risk Constraints

Published in *Quarterly Journal of Economics* May 2014. 129(2).pp 597-652

1. Policy Equipoise

Is there policy equipoise? That is, is there uncertainty regarding participants' net benefits from each arm of the study relative to the other arms and to the best possible policy to which participants could have access? If not, ethical randomization requires two conditions related to scarcity: (1) Was there scarcity, i.e., did the inclusion of multiple arms change the expected aggregate value of the programs delivered? (2) Do all ex-ante identifiable participants have equal moral or legal claims to the scarce programs?

Although this RCT violates policy equipoise, because there is no genuine uncertainty among experts that receiving an offer of a cash grant is better for the recipient than not receiving such an offer, randomization remains ethical because of the two principles of scarcity. As mentioned, providing cash grants to farmers predictably improves their welfare, so the cash grant arm is better than the counterfactual policy of no cash grants. However, there is no consensus that providing cash grants to farmers as a policy is practically attainable and sustainable, given the cost of that policy. This meets the first requirement for scarcity. Nor is there a consensus about which farm households have stronger claims over receipt of cash grants. This meets the second scarcity requirement, and therefore randomization of access to the grants is acceptable.

2. Role of researchers with respect to implementation

Are researchers “active” researchers, i.e. did the researchers have direct decision making power over whether and how to implement the program? If YES, what was the disclosure to participants and informed consent process for participation in the program? Providing IRB approval details may be sufficient but further clarification of any important issues should be discussed here. If NO, i.e., implementation was separate, explain the separation.

The researchers are considered “active.”

We designed the insurance grant in collaboration with the Ghanaian Ministry of Food and Agriculture (MoFA) Savannah Agricultural Research Institute (SARI) and PAS, based on qualitative discussions with farmers.

Local insurance marketers were trained on the insurance product, and visited individually with those farmers selected to receive the insurance offer. Each farmer was offered a grant of insurance coverage for the number of acres they reported farming maize in the baseline. The marketers described the insurance policy, left a copy of the policy document with each farmer and informed the farmer he would have approximately two weeks to decide whether to take up the offer. Marketers returned to each farmer two weeks after this visit and issued a certificate to those farmers agreeing to take up the product.

The grant was fixed at \$85 per acre of land cultivated in the baseline, up to a limit of 5 acres.

For year two, we expanded the sample frame in order to conduct an insurance pricing experiment. In the third year, we negotiated a partnership with the Ghana Agricultural Insurance Programme (GAIP) to market GAIP's commercial drought-indexed insurance product, a product reinsured by Swiss Re and endorsed officially by the National Insurance Commission. Due to the increased complexity of the commercial product (compared to the original non-commercial product from years one and two), individual marketing scripts and protocols emphasized transparency about the product. The product was

offered at an actuarially fair price of \$7.90 per acre, as well as a subsidized price of \$4.00 per acre and a market price of \$11.90 per acre. The pricing assignments were randomized by community.

3. Potential harms to participants or nonparticipants from the interventions or policies
Does the intervention, policy or product being studied pose potential harm to participants or non-participants? Related, are participants or likely affected non-participants particularly vulnerable? Also related, are participants' access to future services or policies changed because of participation in the study? If yes to any of the above, what is being done to mitigate such risks?

The rainfall insurance product was created by the researchers. Thus, the researchers do bear responsibility for harm to participants caused by the product. Although the point of the research was exactly to learn how farmers would change behavior if granted rainfall insurance, if farmers did not understand the insurance, or exercised other misjudgements, then they may have been made worse-off, even in an ex-ante analysis, from the provision of free rainfall insurance. Thus, we devoted substantial effort to ensure that farmers had good knowledge about the terms of the insurance contracts and about the existence of basis risk. This was the primary purpose of making individual visits to each farmer who received rainfall index insurance. IPA also audited 10% of farmers who took up the product to verify that they understood the terms and conditions of the insurance product. Through informal interviews, we learned that farmers financed their insurance purchases through informal loans, produce sales, gifts or small ruminant sales.

There is also potential harm from the rainfall insurance arm of the experiment due to “basis risk”: the imperfect correlation between farmer profits and insurance payouts. Farmers may increase the riskiness of their farming choices, and suffer adverse shocks that they would otherwise not.

In addition, in years two and three, participants paid for the insurance. Most paid at or below the actuarially fair price (GHC 8-9.5); however, a subset paid at the competitive market price (GHC 12-14).

It is important that proper systems are in place to detect trigger events and ensure that farmers receive their payouts. The Ghana Meteorological Association (GMet) provided rainfall data at all steps of the process. IPA had systems in place to receive the incoming rainfall data and check automatically for trigger events. In the case that a trigger event occurred, payouts were made no more than three to four week days after the data were available (year 1), within two weeks after a dry or wet spell had been broken (year 2), or within three weeks of a trigger event (year 3).

For the cash grant treatment arm, it is possible that providing individuals cash grants could cause tension in the community. Field officers informed control group households that others had received grants but limited resources did not allow everyone to receive one, and that the selection was random and thus fair to everyone. We are unaware of evidence this transpired, nor have we heard of systematic evidence of this from other cash grant studies.

It is possible that farmers not receiving grants of cash or index insurance would be put at a disadvantage in local markets for land, inputs or labor. However, these communities are sufficiently integrated into regional markets that that spillover effect was judged unlikely. There is no evidence that such spillovers occurred.

4. Potential harms to research participants from data collection (e.g., surveying, privacy, data management) or research protocols (e.g., random assignment)

Are data collection and/or research procedures adherent to privacy, confidentiality, risk-management, and informed consent protocols with regard to human subjects? Are they

respectful of community norms, e.g., community consent not merely individual consent, when appropriate? Are there potential harms to research staff from conducting the data collection that are beyond “normal” risks?

IRB approval by Yale (0902004766) and IPA Protocol #: 12December-004. Data collection posed no unusual risks to research staff.

5. Financial and reputational conflicts of interest

Do any of the researchers have financial conflicts of interest with regard to the results of the research? Do any of the researchers have potential reputational conflicts of interest?

No.

6. Intellectual freedom

Were there any contractual limitations on the ability of the researchers to report the results of the study? If so, what were those restrictions, and who were they from?

The researchers had unrestricted intellectual freedom to report the results of the study.

7. Feedback to participants or communities

Is there a plan for providing feedback on research results to participants or communities? If yes, what is the plan? If not, why not?

This was not a norm at the time this study was conducted. However, had it been, it would not have been practical due to costs and challenges communicating due to the nuances of the results and theoretical nature of the research questions.

8. Foreseeable misuse of research results

Is there a foreseeable and plausible risk that the results of the research will be misused and/or deliberately misinterpreted by interested parties to the detriment of other interested parties? If yes, please explain any efforts to mitigate such risk.

No.

9. Other Ethics Issues to Discuss

Are there any other issues to discuss?

No.