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Case Study Bangladesh

Humanitarian cash interventions under forecast-based financing

Summary

In Bangladesh floods can have devastating impacts on vulnerable populations. People report destruction of property, loss of animals, reduced consumption of food, and the need to engage in negative coping-strategies, such as accepting high-interest loans.

We propose an innovative cash-transfer programme that provides transfers based on a *forecast* of a flood rather than after the event. This funding would enable people, for example, to move or otherwise protect valuable assets and reduce negative strategies. We believe forecast-based financing (FbF) in this region would have an impact of at least 3 times the value of the initial investment – every dollar invested in the program would save 3 dollars in beneficiary losses. This represents a reduction in losses of about 30% for the vulnerable population.

Forecast-based Financing

The International Federation of Red Cross and Red Crescent Societies has convened a bi-annual Dialogue Platform on the concept of Forecast-based Financing, facilitating the sharing of experiences on this topic and convening a community of practice.

Along the Brahmaputra River in Bangladesh, floods have enormous impacts on people, causing disease and destroying hard-earned assets for virtually the entire population. However, most of these events can be forecast by the Bangladesh Flood Forecasting and Warning Centre, giving people time to prepare.

The Bangladesh Red Crescent Society (BDRCS), with the German Red Cross and the Red Cross Red Crescent Climate Centre, is piloting forecast-based financing that establishes thresholds on various timescales that trigger disbursement of funds and short-term actions – all in the critical window *between* forecast and disaster.

Supported by the German Federal Foreign Ministry, this is the first cash-based pilot in the world. The project team carried out a scoping study to assess the effects of such a programme, interviewing Union Disaster Management Committees, holding focus groups with local residents, surveying a sample of more than 400 households, and consulting literature on cash transfers and historical disaster effects. Based on this, the team developed three scenarios.

Scenario A: floods happen with no humanitarian response

In this case, the main losses incurred are due to assets being spoiled or washed away by a large flood. In particular, people report losing their animals, crops, and a significant percentage of their goods.¹ They are displaced to high ground and struggle to get enough to eat. This also causes an increased risk of waterborne diseases.

During a flood disaster, people are in need of funds to purchase food and other supplies, and results show that people will sell many of their assets at approximately half their original value. In addition, people take out temporary loans at interest rates of as much as 30 per cent. Lastly, we see that people are delayed in returning to productive work after the flood.

Scenario B: Floods happen and are followed by post-disaster cash transfers

In this case, humanitarian agencies respond to the flood disaster with an *unconditional* cash transfer, already familiar in Bangladesh. Because the flood event has already happened, many of the losses have already been incurred.

However, if distributed in a timely manner, this ‘post-event’ cash can help the recipients buy back some of their assets and avoid some of the most negative coping-strategies. We assume that some of the cash would be used to purchase food, and therefore people would not be eating poorly for long.

In addition, the cash would enable people to reduce borrowing and avoid selling assets, reducing final losses to the population and allowing them to resume work quickly. *We believe every dollar invested in cash transfers even after a disaster reduces losses to the beneficiaries by slightly more than the dollar invested.*

Scenario C: cash is transferred based on flood forecasts before a potential disaster

In FbF cash is transferred around three days before a potential flood. In this case, the losses incurred by the population are substantially reduced because everyone has cash in hand at the time of the emergency.

Our analysis shows that some people will use the funds to pay for transport of valuable assets out of the flooding situation, avoiding the loss of these items altogether for a fairly small transport fee. Others report that they would use this cash to make temporary fortifications to their homes and salvage a portion of their crops.

In addition, with cash in hand during a flood event, people can reduce negative coping-strategies. Most of the population would choose to purchase food, and many could avoid taking out high-interest loans and selling off assets. We expect that people will be able to return to work more quickly.

However, forecasts are not perfect; they can be wrong anywhere. In this case, the cash transfer would be ‘in vain’ – an FbF term coined for this situation – but, we argue, not entirely wasted. For the same

¹ Ninno and Dorosh, 2002. Maintaining food security in the wake of a natural disaster: Policy and household response to the 1998 floods in Bangladesh.
<http://info.worldbank.org/etools/docs/library/79646/Dc%202003/courses/dc2003/readings/delninnobang.pdf>

overall outlay on FbF by donors compared to a response-only programme, final losses incurred by the population are still reduced over time.

Including these instances of acting “in vain”, we find that every dollar invested in this Forecast-based Financing system is expected to reduce at least 3 dollars in flood-related losses by the beneficiaries.

Assumptions

This is a forward-looking study on the value of cash transfers based on a forecast and will be updated with actual results. Our largest assumption in the design of this program is that the beneficiaries will remain in possession of the cash that they receive, and it will not be given to wealthy landowners or extorted by the powerful.

We have made three key assumptions in the methodology. Firstly, the study assumes that the amount of cash given would equal about 10 per cent of the losses incurred. We also assume that the lack of funds is a substantial cause of negative coping-strategies and that the cash intervention would not cause serious inflation. And we assume that the bulk of the cash will be spent before or immediately after the disaster and not saved. Several of the benefits of giving cash before the disaster assume that a portion of the population *will* take early action to prevent losses by adapting their homes or protecting crops, based on percentages reported in the baseline survey.

We carried out a sensitivity analysis using 5000 simulations of variations on these assumptions, and the avoided losses per dollar invested range from \$2.50 to \$3.90.

Conclusion

Ultimately, the value of forecast-based financing will extend beyond avoiding short-term losses to many long-term benefits as people retain hard-earned productive assets, and – in the long run – development gains are protected.