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LOCAL RISK MANAGEMENT: PROTECTING HOUSEHOLD ASSET BUILDING AND FARM PRODUCTIVITY FROM IDIOSYNCRATIC SHOCKS

by **Christopher B. Barrett** cbb2@cornell.edu, **Ernest Aryeetey, Agnes Quisumbing, Akhter Ahmed, John Hoddinott, Felix Naschold, Jacqueline Vanderpuye-Orgle,** *and* **Tassew Woldehanna**

Appropriate interventions

SUSTAINABLE POVERTY REDUCTION is difficult to achieve without mechanisms that help households manage shocks. Covariate shocks, which impact virtually everyone in a community, occur because of natural disasters, war, price instability and financial crises. Idiosyncratic shocks, which impact only individuals or specific households, commonly arise due to plot- or farm-specific crop failure or livestock mortality, illness, injury or death of a household member, or property loss due to fire or theft.

Appropriate interventions to insure against or help people cope with shocks depend on the nature of the risk. Covariate shocks are difficult to insure locally and thus require a coordinated external response, usually with the national government coordinating the actions of both governmental or non-governmental agencies. Idiosyncratic shocks, in principle, can be effectively managed locally. A rural community's norms and institutions may mitigate part of a shock, but typically leave at least some risk uninsured and often fail to prevent a household's fall into destitution. Individuals therefore self-insure, often by adopting livelihood strategies that lower the probability of suffering adverse shocks. Yet, since these strategies are often low-risk and low-return, they actually can impede a household's efforts to escape chronic poverty.

Recognizing the limited range of traditional risk management arrangements, states have instituted various insurance, price stabilization and safety net programs, often at great cost and with modest impacts. Also, there have been considerable recent efforts to improve risk management by using index-based risk transfer products related to rainfall and other climate variables, options and futures in international commodity markets, and other innovations.

Overwhelmingly, the focus is on covariate risks, yet a growing body of evidence suggests that idiosyncratic risk may be the greater problem in rural Africa and Asia. Therefore, timely research and innovations that improve local risk management in developing countries may yield great benefits in household economic growth and poverty reduction.

Our project will provide research and suggestions for innovations in three countries where idiosyncratic risk and poverty are linked concerns: Bangladesh, Ethiopia and Ghana. The focus will be on understanding how idiosyncratic risk impacts the asset holdings of households and their productivity. The goal is to identify mechanisms that allow these households to minimize risk and cope with shocks in order to avoid or even climb out of chronic poverty.

Filling the risk management gap

In the absence of well-functioning insurance and credit markets, the poor turn to informal institutions for coping mechanisms. Social networks can help with risk sharing, though empirical tests show that these networks do not always provide full insurance, nor do they cover all individuals. For example, because some poor households may be unable to borrow money after suffering an idiosyncratic shock, they may end up selling assets at a loss, eroding their asset base, which in turn can cause those households to collapse into poverty traps and remain destitute indefinitely.

To supplement or supplant traditional, informal arrangements that often exclude the poorest members of communities, households may benefit from institutional, technological and other innovations. Innovations that improve household productivity can enhance a household's ability to self-insure, as can microfinance institutions that improve access to financial products. Formal mutual aid groups also can provide effective insurance against idiosyncratic risk, and contracts with external suppliers or buyers sometimes build in implicit insurance through limited liability clauses and flexible payment terms.

Yet access to such benefits is not uniform. We will explore the extent to which inter-household variation in the impact of idiosyncratic risk can be attributed to differential participation in social networks and other traditional arrangements (permitting informal social insurance), to household initial wealth (permitting self-insurance), and to access to financial products or flexible contract terms (permitting contractual or quasi-contractual insurance).

Relatively little is known about the extent to which mechanisms like self-insurance, social networks, formal programs through groups or contractual and quasi-contractual arrangements insure households against idiosyncratic risk. Most empirical work focuses on understanding one type of insurance mechanism rather than the interaction among them. That means there is much yet to understand about gaps in coverage, who is truly vulnerable, and what factors help mend the holes in the social safety net.

We will seek to fill those gaps by finding out if some households are better insured by some mechanisms rather than others, and if some vulnerable households are systematically excluded by most forms of social insurance. We also will create a picture of how asset stocks and insurance coverage co-evolve over time.

Our findings also will help show what causes a household's idiosyncratic risk management capacity to improve or degrade. For example, to what extent do asset shocks lessen one's subsequent access to social networks? To what extent do past claims on social networks reduce recourse to that support? Risk management capacity may well evolve endogenously along with household asset dynamics, with the two dynamics reinforcing each other. Our objective is to identify where important gaps exist in extant insurance networks, how effectively those gaps could be plugged through new and expanded access to existing innovations, and what types of households and individuals should be targeted for assistance in managing idiosyncratic risk more effectively.

Risks to wellbeing

Our research will build on important longitudinal studies in each of the countries. In Bangladesh, we will build on newly collected panel data assessing the long-term impact of three interventions: human capital, new agricultural technologies, and microfinance. Earlier studies built the foundation for exploring over time people's perceptions of what drives improvement or decline in wellbeing, and the role (if any) the three interventions play in improving wellbeing. The panel survey revisited households first interviewed between 7 and 13 years before to ascertain how their living standards have changed over the intervening period and which factors, institutions and processes have trapped certain households in chronic poverty while allowing others to escape from it.

Preliminary analysis shows that respondents mention dowry payments, illness and injuries, and large family size and dependency ratios as the most frequent causes of long-term impoverishment. Results also suggest that illness and injury tend to affect the poor disproportionately. The results further hint at the possible role NGOs play in providing a safety net, especially for the poor.

For example, households routinely use NGO loans to fund large expenditures such as essential medical care for children, elderly parents and other family members. We will analyze the data to determine the long-term impact of idiosyncratic shocks on asset accumulation and wellbeing, and the coping mechanisms used by households from different income groups. We will conduct new case studies of selected NGOs to examine their role in helping households cope and draw lessons from the provision of this type of safety net.

In Ethiopia, we have access to detailed information on assets, consumption and sources of income, as well as specific information on three forms of household level health shocks: temporary illness, physical disability, and HIV/AIDS. Nearly half the sample households indicated that illness was one of the most devastating shocks to affect the household. Furthermore, there is detailed information on the mechanisms households can call on when such shocks occur, mechanisms such as labor-sharing networks, mutual-help societies, credit and remittances.

The longitudinal data upon which we will build show evidence of considerable increases in consumption and assets over a 10-year period, yet there are noticeable variations in the distribution of these gains. Illness and poor adult nutrition appear to be major factors in some households showing zero growth and in danger of being caught in a poverty trap.

Poor health and nutrition has long been hypothesized as causing poverty traps, and our study will attempt to document this causal link empirically. As with the Bangladeshi work, we also will look at idiosyncratic shocks' long-term impact on a household's wellbeing and ability to accumulate assets, and the mechanisms that households from different income groups use to cope.

In Ghana, our research builds on a survey of farming communities transitioning from the cultivation of maize-cassava intercrop for domestic production to pineapple cultivation for export and, more recently, contract farming of tomatoes. This transition involves a significant amount of idiosyncratic risk associated with learning new agronomic practices, but it may also facilitate marked improvements in asset accumulation given increased incomes associated with pineapple cultivation.

Preliminary results from existing data show that recent migrants and young farmers who do not belong to a major clan are far more likely to be socially excluded from informal insurance networks than are others within these villages. Those socially excluded fail to achieve even partial risk pooling with other individuals in the village. These results suggest the benefits to be gained by targeting interventions to assist those who face idiosyncratic shocks on their own. Our project will seek to understand how institutions—whether informally organized within villages or externally provided by non-governmental or government agencies—can or do fill in these gaps in the social safety net.

As in the other two countries, we will identify how uninsured idiosyncratic risk affects asset accumulation trajectories. In this case, where there are emerging commercial agricultural options, we will investigate whether people with access to social networks or other mechanisms of effective insurance against idiosyncratic risk are more likely to take up new crops, technologies or marketing arrangements that yield higher expected returns. For those who have adopted new crops or technologies or entered into new marketing arrangements, we will look into whether idiosyncratic agronomic, health or theft shocks—commonplace among all groups of households in the sample—have a greater and/or more persistent effect on household asset holdings. We also will look into the effect gender has on patterns of social exclusion, uptake of new opportunities, and shock effects on asset dynamics.

Ability to cope

In all three countries, we will estimate the dynamic impact shocks have on assets and other welfare measures such as consumption. We will analyze the extent to which inter-household variation in the impact of idiosyncratic risk can be attributed to household initial wealth, differential participation in social networks and other traditional arrangements, access to financial products, or flexible contract terms.

In Bangladesh and Ethiopia, for example, a large number of households use coping mechanisms such as incurring debt, selling assets, receiving transfers from friends or relatives, and participating in public safety net programs. However, poorer households are not equally able to make use of private coping mechanisms such as credit, while richer households with better-educated heads tend to receive more remittances than do poorer households. Microfinance institutions and NGOs may therefore have increased the access of the poor to credit with which to cope with idiosyncratic shocks, although there is evidence that the ultra-poor find themselves excluded from NGO benefits because they are asset poor.

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Briefs

Authors

Christopher B. Barrett, Felix Naschold
Cornell University, USA

Akhter Ahmed, John Hoddinott, Agnes Quisumbing,
International Food Policy Research Institute

Ernest Aryeetey, Jacqueline Vanderpuye-Orgle
University of Ghana

Tassew Woldehanna
Addis Ababa University, Ethiopia

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Comments encouraged:
Department of Agricultural and Applied Economics,
University of Wisconsin,
Madison, WI 53706 USA
basis-me@facstaff.wisc.edu
tel: +608-262-5538
fax: +608-262-4376
http://www.basis.wisc.edu

The quantitative data allow us to examine the potential impact different types of institutions (e.g., social networks, self-help groups, funeral societies), markets (e.g., interlinked cash crop contracts, microfinance contracts), and household characteristics (e.g., own wealth) have on a household's ability to cope with idiosyncratic risk. We will study the structural correlates of social connectedness, participation in microfinance or contract farming schemes, etc., including how access to these prospective risk-mediating factors varies with asset holdings. To the extent that we find that participation in insurance mechanisms varies systematically with asset stocks, a natural feedback loop emerges, wherein uninsured risk that leads to asset losses impacts subsequent participation in insurance mechanisms, which may lead to increased vulnerability.

We will complement the quantitative analyses by obtaining people's own views of shocks and coping mechanisms. By exploring respondents' experience of changing access to formal or informal insurance, we can create a richly textured picture as to how (and if) access evolves. The qualitative work will enable us to flesh out the assessment of idiosyncratic risks and mechanisms available to manage these. In Bangladesh, for instance, we will compare individual histories of shocks and their impacts with coping mechanisms provided by NGOs. In Ethiopia, we will assess the role of *iddirs* (burial societies that sometimes provide health insurance) in providing insurance against health and other shocks, and enforcement mechanisms used by *iddirs* to ensure repayment. In Ghana, we will focus on the role of funeral, farming and church-related organizations in providing insurance and specifically explore with commercial agrifood firms the insurance mechanisms—explicitly or implicitly—built into emerging contracts for cash crop production.

Toward effective policy

National and local governments, NGOs and international donors struggle with how best to help individuals, households and communities manage risk without becoming excessively interventionist. Careful analysis of the links between risk, mediating mechanisms and welfare dynamics can lead to informed and effective strategies that help households protect and accumulate assets, leading in turn to a foundation for poverty reduction and economic growth. In this way, the project will contribute significantly to BASIS research priorities of managing risk and limiting vulnerability to asset loss due to household shocks.

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Related reading

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