

Annual Activity Report 2007

I. Research Project Title: Understanding the impact of idiosyncratic shocks on farm productivity and household asset building and protection in Ghana, Ethiopia and Bangladesh

II. Collaborating Institutions and Researchers

Cornell University (Ithaca, NY): Dr. Chris Barrett (principal investigator), Ms. Vivian Hoffmann, Mr. Felix Naschold, Mr. Thomas Walker

Addis Ababa University, Department of Economics (Addis Ababa, Ethiopia): Dr. Tassew Woldehanna

Data Analysis and Technical Assistance, Ltd. (Dhaka, Bangladesh): Mr. Zahidul Hassan
Institute of Statistical, Social and Economic Research, University of Ghana (Accra, Ghana): Dr. Ernest Aryeetey (co-principal investigator), Dr. Robert Osei, Dr. Jacqueline Vanderpuye-Orgle

International Food Policy Research Institute (Washington, DC): Dr Agnes Quisumbing (co-principal investigator), Dr. Akhter Ahmed, Dr. John Hoddinott

III. Project dates

June 1, 2007 – May 31, 2011.

IV. Support

Core AMA CRSP with matching funds from Cornell University and IFPRI as well as leveraged supplemental funding to IFPRI from the Chronic Poverty Research Centre (\$40,000) and CAPRI (\$62,500). In addition, funds covering training activities in Ethiopia will be provided by the World Bank; the exact amount to be determined by 31 December 2007.

V. Program Overview

Idiosyncratic risk appears to dominate covariate risk in rural incomes in Africa and Asia, indicating the potential contribution of improved local risk management of idiosyncratic risk to household asset accumulation, productivity growth and poverty reduction in developing countries. Understanding better how households differentially experience idiosyncratic risk and what mediating structures minimize the adverse dynamic effects of such risk is therefore of considerable importance for sustaining broad based economic growth and designing effective poverty reduction strategies, not just in the three project countries, but more broadly, throughout the developing world.

The project focuses on the impact of idiosyncratic risk on the dynamics of household well-being, asset accumulation and productivity. Ex ante, who trades off expected asset and productivity growth for reduced exposure to idiosyncratic risk? Ex post, what determines the impact of idiosyncratic shocks (e.g., due to illness, theft) on households? What formal and informal institutions mediate those experiences? The research aims to clarify what existing mechanisms help households through episodes of adverse idiosyncratic shocks, to what extent different mechanisms (self-insurance, social networks, formal programs through groups or contractual and quasi-contractual arrangements), individually and cumulatively, are able to insure households against risk,

what gaps in coverage exist, and how different interventions affect insurance against idiosyncratic risk and its dynamic effects on rural households' asset holdings, productivity and well-being.

In contrast to most existing empirical work, this holistic approach to studying household insurance mechanisms can provide information to policymakers about gaps in insurance coverage, about who is truly vulnerable, and what factors help mend the holes in the social safety net. We aim to establish whether some households are systematically better insured by some mechanisms than are other households, and whether asset stocks and insurance coverage co-evolve over time, reinforcing each other?

These are especially topical issues in the three project countries. In Bangladesh, long-term poverty is often caused by idiosyncratic shocks in the form of illness and injury. In Ethiopia, illness ranks as the greatest risk to long-term household welfare. Serious undernutrition of adults may trap a household in poverty as low nutritional status is highly correlated with subsequent low growth in consumption. In Ghana, idiosyncratic risk associated with illness, injury, theft and farm shocks are widespread and key determinants of current incomes. Preliminary findings suggest that socially excluded groups, such as new migrants and young farmers who don't belong to major clans, are least able to cope with such risks because they have minimal social networks to manage idiosyncratic risk through interhousehold transfers. Shocks appear to have persistent effects on their asset dynamics but not on those of better-connected and better-off neighbors. In each country there are different primary mechanisms which can help households recover from individual shocks: loans from NGOs in Bangladesh, burial societies in Ethiopia, and funeral societies and farming and church-related organizations in Ghana. We aim to enrich understanding of the role such institutions play and the dynamic gains from these idiosyncratic risk management mechanisms.

The project directly addresses AMA CRSP research priorities 1 ("managing risk and vulnerability to enhance asset protection and accumulation") and 3 ("asset building for growth and poverty reduction") given our project's emphasis on how risk mediates asset accumulation. It will also contribute directly to knowledge supporting USAID's strategic objectives in each project country, in particular those related to expanded economic opportunities created through equitable economic growth, and a healthier and more productive population. We also anticipate significant degree and non-degree training of research professionals and practitioner partners over the life of the project.

A. Summary of Activities

These first few months of the project have been spent on organizational details in each of the three project countries, on completing the initial project policy brief, on analysis of existing data in Ghana and of new data collected in Bangladesh, culminating in two new working papers, and on preparing for upcoming activities in the three project countries.

B. Status of Activities

The activities accomplished in these first few months were as expected and prepare us well for the first full project year.

VI. Discussion of Annual Activities

This activity report covers the first four months of the project thus there is little to report. Basic administrative tasks related to contracting and subcontracting were completed. We completed the first project policy brief. A project web site has been designed and will launch early in the 2007-8 year. The project PI and an ISSER representative (Vanderpuye-Orgle) attended the Technical Committee meetings in Newark, NJ. Preparations have been made for the resurvey of the Ghana panel households and a Cornell economics Ph.D. candidate with prior field research experience with the World Bank has been recruited to handle the field supervisory duties alongside his ISSER counterparts.

The research undertaken to date builds on work begun under other projects. In Bangladesh, the quantitative phase of data collection was completed in March 2007 using non-AMA CRSP funds. The team was able to interview 1787 core households of former respondents (out of an approximate 1800 potential households to be interviewed) and 365 new households. Preparations were also made for the upcoming qualitative and institutional data collection, likewise with leveraged funds (from the CGIAR Systemwide Initiative on Collective Action and Property Rights). The co-PI leading the Bangladesh effort completed a draft paper (“Poverty transitions, shocks and consumption in rural Bangladesh: Preliminary results from a longitudinal household survey”). The team likewise completed a working paper using data from Ghana (Vanderpuye-Orgle and Barrett, “Risk Management and Social Visibility in Ghana”). Work continued on a paper using the ERHS data from Ethiopia (Hoffmann and Barrett, “Returns to assets in rural Ethiopia: Implications for sustainable poverty reduction”).

Degree training at Cornell involved three Ph.D. students working on the project, although to date none have been funded by the project. Jacqueline Vanderpuye-Orgle (female, Ghana) completed her Ph.D. in August 2007. Vivian Hoffmann (female, Canada) and Thomas Walker (male, Australia) began working with data from Ethiopia and Ghana, respectively, for analysis for the project.

The team (Hoddinott and Woldehanna) have also organized a capacity-building consortium led by the Ethiopian Development Research Institute (EDRI) and received a World Bank grant of \$350,000 to fund five training activities over the next 18 months. These will include:

- Initiation workshop bringing together researchers, policymakers and stakeholders to identify the areas and topics of interest for further detailed study;
- The training of Ethiopian researchers in the application of “best practice” research techniques to the analysis of poverty.
- Active mentoring by international experts of Ethiopians engaged in follow up empirical research in a learning by doing mode;
- In depth collaborative work between Ethiopian researchers and international experts.
- Workshops that disseminate and discuss the work emanating from this project.

We encountered a few relatively modest problems in these initial project months. We faced some unanticipated resistance from USAID/Dhaka that has required some

reallocation of tasks across different streams of funding. We had to eliminate all Bangladesh-based work undertaken with AMA CRSP funds, which have been redirected toward data analysis. This consumed significant time for the Bangladesh sub-team. Nonetheless, this unexpected development does not impact the overall research design or timeline. We also had to shift co-PIs with ISSER (Ghana) as Dr. Vanderpuye-Orgle, the originally proposed co-PI, has taken a temporary full-time position in the United States, although she will remain affiliated with ISSER and involved in the project. Prof. Ernest Aryeetey will now play the role of co-PI, with Dr. Robert Osei assisting him. We have also had to delay the commencement of the Ghana resurvey by approximately 4-5 months, to late 2008-early 2009 in order to accommodate the availability of key personnel. Again, these changes have not significantly disrupted any of our project activities and we remain on track to complete all benchmarked activities as planned.

VII. Collaboration with Other Projects

This project builds on the recently completed USAID BASIS CRSP project on “Conceptual and Statistical Foundations for the Estimation of Poverty Traps,” which funded work developing concepts and methods being employed in this new effort.

In Bangladesh, the project builds on an ongoing longitudinal study funded by the Chronic Poverty Research Centre, HarvestPlus, the University of Waikato, and the Systemwide Initiative on Collective Action and Property Rights (CAPRI) of the CGIAR.

In Ethiopia, this project will link to the recently funded World Bank capacity building project, “Pathways from poverty in Ethiopia: Strengthening Ethiopia’s PRSP through the analysis of longitudinal household data.”

In Ghana the project builds on the USAID SAGA cooperative agreement, which funded closely related policy research and outreach in Ghana and helped ISSER found the highly successful Economy of Ghana Network (<http://www.enghana.org/>).

VIII. Outputs

1. BASIS CRSP Publications:

Policy Brief 2007-03, “LOCAL RISK MANAGEMENT: PROTECTING HOUSEHOLD ASSET BUILDING AND FARM PRODUCTIVITY FROM IDIOSYNCRATIC SHOCKS,” Christopher B. Barrett, Ernest Aryeetey, Agnes Quisumbing, Akhter Ahmed, John Hoddinott, Felix Naschold, Jacqueline Vanderpuye-Orgle, and Tassew Woldehanna, July 2007.

2. Other Print Outputs:

Jacqueline Vanderpuye-Orgle and Christopher B. Barrett, “Risk Management and Social Visibility in Ghana”, Cornell University working paper, September 2007.

Agnes Quisumbing, “Poverty transitions, shocks and consumption in rural Bangladesh: Preliminary results from a longitudinal household survey,” IFPRI working paper, October 2007.

IX. Key Research Findings and Results

Findings in the first few months are necessarily limited. The two papers completed thus far do nonetheless offer some useful initial findings. In Bangladesh, regression analysis shows that per capita consumption increases with years of schooling and assets. Higher proportions of children and older people are also significantly associated with lower per capita consumption, pointing to the importance of life-cycle and demographic factors in the creation and transmission of poverty. Having older household members also makes the household vulnerable to shocks such as illness, death, and property division. Illness shocks—in particular, the income foregone when an income earner falls ill—are important contributors to poverty. The impact of these and other shocks—such as dowry and wedding expenses, floods, and legal costs—in reducing consumption varies according to the amount of land and assets owned by the household together with the schooling of the household head.

In Ghana, our analysis identifies a distinct subpopulation of socially invisible individuals who tend to be younger, poorer, engaged in farming, recent arrivals into the village who have been fostered and are not members of a major clan. While we cannot reject the null hypothesis that individual shocks do not affect individual consumption and that individual consumption tracks network and village consumption one-for-one among the socially visible, risk pooling fails for the socially invisible subpopulation. These results offer preliminary evidence suggesting that social networks indeed function reasonably well in insuring socially connected individuals against idiosyncratic risk, suggesting that efforts to improve risk management are best concentrated on identifiable, socially invisible subpopulations and on covariate risks faced by these populations.

X. Photos, Illustrations or other Graphics



Project co-PI Agnes Quisumbing visiting the communal floodplain pond managed by a women's group in Jessore.



Jute harvest in Bangladesh, in one of the more remote villages (photo: Agnes Quisumbing).



Female interviewer, interviewing female respondent, about the ladder of life. (photo: Agnes Quisumbing)



Male respondent describing shocks in the last 10 years (photo: Agnes Quisumbing).