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COMMUNITY-BASED RISK MANAGEMENT ARRANGEMENTS

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Managing risk

VULNERABILITY TO RISK is a defining characteristic of poverty. Empirical microeconomic research finds mounting evidence of the long-term adverse effects that shocks can have on poor families. Finding how best to manage risk in the face of shocks is imperative if vulnerable families are to avoid being trapped in persistent poverty. Therefore, understanding patterns of risk exposure among the poor and the means they employ to cope with shocks is especially important for development policy and practice.

Shocks are either idiosyncratic—meaning one household's experience is typically unrelated to that of neighboring households—or covariate—meaning that many households in the same locality suffer similar shocks. Idiosyncratic shocks commonly arise due to illness, poor crop yields due to microclimatic variation, localized wildlife damage or pest infestation, and events such as fire or theft. Covariate shocks occur due to natural disasters, war, price instability, financial crises, etc.—events to which virtually everyone in a community is vulnerable. There is always an idiosyncratic component to shocks, even largely covariate ones, because families differ in their exposure and capacity to respond to shocks.

Rural communities commonly develop strategies to reduce the likelihood or impact of a shock before it occurs, or to cope with the shock after the fact. Such community-based strategies can, in principle, help households cope more with idiosyncratic shocks than

with covariate shocks, unless communities find a way to transfer risk, either outside the community or to others within the community who are willing and able to take on more risk.

While a growing body of evidence suggests that idiosyncratic risk may dominate in rural Africa and Asia and have frequent and devastating negative impacts on poor households, most external interventions focus on covariate risk. The importance of idiosyncratic risk and the relative dearth of attention given to it by researchers and policymakers alike raise the possibility of untapped potential for improved local risk management in developing countries. In light of the relative significance of idiosyncratic risk as well as the increasing shift towards community-based development funding, an increased understanding of existing communitybased risk management arrangements (CBRMAs) can inform future social protection initiatives. In this brief, we examine the strengths and limitations of CBRMAs and the implications for the design of communitybased social protection programs and policies.

Strengths and limitations

Relative to public or private risk-management schemes that do not involve communities in program identification and administration, CBRMAs have a number of advantages. There exists a large body of evidence that community participation often (albeit not always) results in improved targeting outcomes. Not surprisingly, relative to project managers from outside

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the community, communities typically can better identify the most needy and vulnerable among them, leading to lower rates of targeting errors. The growing evidence suggests that communities enjoy major informational advantages in identifying who needs assistance and when.

In addition to the targeting advantages, CBRMAs typically bear lower information and enforcement costs. Superior information on prospective transfer recipients reduces the costs of verifying the need for indemnity payments. Also, due to the frequent, repeated interactions among members of a village, clan, ethnic group or profession, and the general lack of privacy that characterizes peasant economies and densely-populated urban communities in developing countries, the effort and circumstances of a member of the community typically can be observed relatively easily, reducing the costs of monitoring fellow community members. Social sanctions also are commonly available as relatively low-cost enforcement mechanisms. In addition, given that members of a community typically interact with the same individuals repeatedly over long periods of time, unwritten or informal contracts can be self-enforcing as the short-term benefits from bad behavior are often much smaller than the long-term costs. Thus, even in the absence of formal legal contract enforcement through courts, CBRMAs can ameliorate problems of moral hazard and contract enforcement that commonly plague impersonal credit and insurance contracts.

CBRMAs are not a panacea for uninsured risk, however, and several problems may adversely affect their performance. For example, the interpersonal relations at the heart of community-based interactions can make these arrangements vulnerable to manipulation by influential or powerful individuals. In isolated rural communities where effective checks and balances are absent, individuals familiar with the workings of district-level administrative operations may be able to manipulate the process by which projects are awarded, beneficiaries identified, and benefits disbursed. Generally, only communities with reasonably egalitarian preferences and relatively transparent decision-making systems are more effective than outside agencies in targeting resources so as to benefit poor households within communities.

Also, there may be significant holes in the social safety net. For example, asset transfers within a community of poor pastoralists in southern Ethiopia respond to recipients' losses, but only for those whose

herd size does not fall below a certain asset threshold. The poorest herders are most likely to be "socially invisible" to their neighbors, and thus excluded from insurance networks. Similar findings arise with respect to farmers in southern Ghana. And Jutting (2003) finds that in Senegal the poorest members of the community cannot participate in semi-formal mutual aid health institutions because they cannot afford contributory payments.

The key point is that group formation is voluntary and endogenous. Certain subpopulations, commonly including those of most interest to policymakers, such as women, religious minorities and the poorest, are excluded from informal insurance networks and enjoy limited risk pooling with their neighbors. Yet, access to groups cannot be readily imposed through outside pressure. Indeed, excluding certain groups may be a rational response by the non-poor in the presence of poverty traps, as those who are trapped are far less likely to be able to reciprocate in the future and thus become undesirable insurance partners.

Group formation can also lead to exclusion along the lines of ethnicity, occupation, gender, and geographical proximity. Dercon and Krishnan (2000) find that women and southerners enjoy less informal insurance than do others in rural Ethiopia. Morduch (2005) provides evidence from south India that a system of reciprocal transfers is more effective for higher-caste households. While decisions to exclude insurance partners with certain characteristics can be rationalized on the basis of keeping information and enforcement costs low, more homogenous groups also are less likely to be able to withstand large covariate shocks.

This reveals another major limitation of local, community-based arrangements: their general inability to manage covariate risk. For example, Pan (2007) finds that while local interhousehold transfers offer some effective insurance against idiosyncratic shocks in rural Ethiopia, they offer no insurance against covariate shocks for the obvious reason that all community members find themselves in the same boat. CBRMAs thus commonly fail in the wake of natural or man-made disasters, during which poor households have limited resources for self-insurance and often cannot avail themselves of local risk sharing arrangements; consequently they must reduce consumption drastically. The severity of a shock also determines the efficacy of informal risk management arrangements; risk sharing may break down in the face of more severe shocks.

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Policy implications

Given the evidence on the breadth of existing CBRMAs, their strengths, as well as their limitations, social protection interventions may have a role to play in buoying such arrangements in order to help households manage risk better. Clearly, not all CBRMAs are equally suitable for receiving external assistance or being scaled up, given the differences in membership and leadership structure, history, longevity and the nature of activities. Studies that identify which features make CBRMAs more conducive to up-scaling will provide valuable information to future interventions. Given the lack of such evidence at present, we offer only more general policy implications.

First, social protection programs can address one of the most important limitations of CBRMAs: their exclusion of vulnerable groups, based on income or other characteristics. By funding an appropriate community-based insurance arrangement, social protection programs can subsidize the cost of poorer households' participation. If the characteristics (such as gender or ethnicity) of excluded groups can be clearly identified, social protection programs can include transfer schemes targeted at such groups.

Second, social protection programs can reinforce and harness the informational advantage enjoyed by CBRMAs that enable the delivery of group-based financial services on terms attractive to poor households. They can do so, for example, by subsidizing the start-up costs of microinsurance, microcredit and microsavings groups, which might not otherwise be profitable for a commercial provider nor priced attractively for poor households.

Third, social protection programs can help house-holds reduce exposure to covariate risk by providing risk-reducing public goods and services through community-based arrangements. Examples include community-based public health programs such as deworming, immunization, or insect and vector control. Social protection programs can also reduce the risk of infectious disease through community-based sanitation programs that, for example, promote changes in individual, household and community hygiene practices. Delivering these products and services through the community may be critical to the success of such programs, as it may depend on the participation of a critical mass of the community.

Fourth, social protection programs can build community-based mutual insurance groups' capacity to tap

into reinsurance markets necessary for sustaining large, correlated losses and by underwriting the start-up costs needed to create the relevant insurance products. For example, social protection programs can support the development of index-based risk transfer products such as the weather insurance contracts being used by the Mexican states and municipalities to insure against drought. Such programs can be combined with two-tier assistance allocation, whereby transfers to the community based on a non-manipulable index measure fund community-driven allocation to the poorest households based on superior local knowledge of individual circumstances.

While social protection programs can strengthen CBRMAs by addressing some of their limitations, the existence of risk pooling in the absence of external intervention should serve as caution to donors and policymakers against disrupting existing social insurance arrangements. A literature on the possible crowding-out effects of new, exogenous transfers emphasizes these prospective problems, though the extent to which these problems are prevalent remains an open question.

The key is whether cleavages can be identified and directly addressed through the design of social protection programs. Chantarat and Barrett (2008) show how transfers to poor households that are otherwise excluded from social networks can induce new social relations that not only help those who benefit directly from transfers but also nonparticipants with whom participants then endogenously link. Where CBRMAs such as informal insurance networks systematically exclude the poor, for example, social protection programs that benefit the otherwise-excluded poor or that reduce the costs of social interaction may enable people to come together more easily.

Nevertheless, given that group formation is voluntary and endogenous, external assistance that improves a household's position outside group-based informal risk-sharing arrangements can change the nature of informal networks. External assistance can reduce households' reliance on and need for each other, thereby adversely affecting the ability of informal networks to act as a safety net. Not only might this crowd out pre-existing community-based risk management, it can also have broader disruptive effects on information flow, cooperative decision-making in production, marketing, and community resource management processes. External assistance can change the characteristics of groups that may have originally made them attractive to donors.

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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 Similarly, an effectively functioning mutual insurance arrangement may cease to have a successful record once an external donor is involved if it no longer internalizes the cost of poor performance.

The above concerns tie in with scalability issues that arise when a previously existing CBRMA is scaled up by a social protection program. The potential of a CBRMA is based on its existing structure, but the impact of scaling up is unknown. Limitations in technical decision-making and management issues may potentially hinder the ability of an existing CBRMA to absorb external assistance.

Finally, as mentioned previously, CBRMAs may also be vulnerable to manipulation by powerful or influential individuals within the community, indicating that social protection policymakers need to be cognizant of community power dynamics. By investing in goods and services that have a public good character, social protection programs can reduce the potential for such manipulation.

To conclude, while CBRMAs potentially offer a useful basis for social protection programs, there exist no careful evaluations of the efficacy of or the rate of return to these arrangements and the extent to which they address problems of informational asymmetries and lower enforcement costs, either in absolute terms or relative to non-community based models. This should serve as caution to donors and policymakers planning to invest in community-based risk management programs. Studies that fill this gap in knowledge will play an important role in informing future policy decisions whether to bolster CBRMAs or allocate scarce resources elsewhere in efforts to address the pernicious effects of risk.

References and further reading

Alderman, H. 2001. "Multi-tier Targeting of Social Assistance: The Role of Intergovernmental Transfers." *World Bank Economic Review* 15(1): 33-53.

- Barnett, B.J., C.B. Barrett, and J.R. Skees. 2008. "Poverty Traps and Index-Based Risk Transfer Products." *World Development*, in press.
- Bhattamishra, R. and C.B. Barrett. 2008. "Community-based Risk Management Arrangements: An Overview and Implications for Social Fund Programs." World Bank Social Protection Discussion Paper, Draft.
- Chantarat, S., and C.B. Barrett. 2008. "Social Network Capital, Economic Mobility and Poverty Traps." Cornell University, Draft.
- Coady, D., M. Grosh, and J. Hoddinott. 2004. Targeting of Transfers in Developing Countries: Review of Lessons and Experience. Washington DC: World Bank.
- Dercon, S., and P. Krishnan. 2000. "Vulnerability, Seasonality and Poverty in Ethiopia." *Journal of Development Studies* 36(6): 25-53.
- Gugerty, M., and M. Kremer. 2008. "Outside Funding and the Dynamics of Participation in Community Associations." *American Journal of Political Science* 52(3): 251-82.
- Harragin, S. 2004. "Relief and an Understanding of Local Knowledge: The Case of Southern Sudan." In *Culture and Public Action*, edited by V. Rao and M. Walton. Stanford: Stanford University Press.
- Jutting, J. 2003. "Do Community-based Health Insurance Schemes Improve Poor People's Access to Health Care? Evidence from Rural Senegal." World Development 32(2): 273-88.
- Khwaja, A.I. 2004. "Is Increasing Community Participation Always a Good Thing?"

 Journal of the European Economic

 Association 2(2-3): 427-36.
- Mansuri, G., and V. Rao. 2004. "Community-based and -driven Development: A Critical Review." *World Bank Research Observer*. 19(1): 1-39.
- Morduch, J. 2005. "Consumption Smoothing Across Space: Tests for Village-Level Responses to Risk." In *Insurance against Poverty*, edited by S. Dercon. Oxford: Oxford University Press.
- Munyao, K., and C.B. Barrett. 2007. "Decentralization of Pastoral Resources Management and its Effects on Environmental Degradation and Poverty: Experience from Northern Kenya." In *Decentralization and the Social Economics of Development: Lessons from Kenya*, edited by C.B. Barrett, A.G. Mude, and J.M. Omiti. CABI.
- Pan, L. 2007. *Risk Pooling through Transfers in Rural Ethiopia*. Tinbergen Institute, Tinbergen Institute Discussion Papers: 07-014/2.

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