

Risk characterizes life for many of the world's poorest households. They are more likely to be located in environments where livelihoods are highly susceptible to weather and price variability and where health risks are pervasive. When these risks are uninsured, they not only reduce the current welfare of poor rural households, but also threaten future income growth and thus perpetuate poverty. Reducing the risks faced by poor households, and enabling poor households to better deal with bad events when they do occur, is essential to improving their welfare in the short run and their opportunities for income growth in the long run.

This set of briefs considers how to increase the risk-management mechanisms available to poor households. The focus is how to develop insurance markets, along with other financial instruments such as credit and savings and ex post mechanisms such as social protection policies.

The cost of uninsured risk

When shocks hit, households lose income or the ability to earn income. Households may cut back on consumption, reduce investments in education, or sell productive assets such as land and livestock. Short-term shocks can have long-lasting effects. For example, in a study conducted in villages in Kenya and Madagascar, a health shock affecting an adult household member was the most frequently cited reason for household poverty even many years later. Even the potential of an uninsured shock has welfare costs. Households take action to limit their exposure to risk—they may pass up a profitable but risky opportunity, diversify their economic activities, or keep as many assets as possible in easily disposable forms. These actions reduce their productivity and provide them with lower mean returns, thus perpetuating their poverty. For instance, in Guatemala small farmers were found to forgo market income from higher-value crops in order to have a certain supply of maize from their own production. In Tanzania, a shift into low-risk, low-return crops by poorer households resulted in 20 percent lower incomes per unit of land for households in the lowest quintile compared with the richest quintile. This relationship between risk and poverty is discussed further in the brief by Stefan Dercon.

Risks can be classified based on their level of covariance (the degree to which they occur to a large population at the same time) and on their frequency. Traditional insurance contracts are more difficult to offer when risks are covariate. Many rural households are engaged in farming, the returns to which are strongly affected by weather events that are typically covariate, such as droughts and flood. Health risks include both frequent and infrequent risks, and as Richard Leftley discusses, frequent risks pose additional logistical challenges to the provision of insurance. Therefore insuring the poor for weather and health risks poses challenges beyond the usual information asymmetries (moral hazard and adverse selection).

The role of insurance markets in protecting poor households

The development of insurance markets can help protect poor households against risk. Yet insurance markets, although important, will be only part of a set of tools to manage risk. Government-run schemes that protect the poorest households, financial instruments that make it easier for poor households to save and borrow, and informal networks of assistance all play a role in protecting poor households in both developed and undeveloped insurance markets. Insurance markets complement these tools.

Social protection

The poorest households are those least able to protect themselves against bad events, which reduce these households' long-run growth prospects. There is thus a strong rationale for providing public support to poor households on both equity and efficiency grounds. By increasing access to assets and providing transfers when shocks occur, social protection programs can play an important role in insuring poor households. Social protection programs encompass a wide range of interventions, from publicly provided health and life insurance and safety nets to child nutrition programs and cash transfers. As discussed in the brief on social protection by John Hoddinott, when it is well targeted and reliably distributed, social protection can help insure very poor households for whom market-based solutions are likely to be out of reach or for risks that are so widespread they would be difficult for private financial organizations to manage.

It can, however, be costly and difficult to target social protection schemes to the poorest households and to ensure they deliver timely support when bad events strike. Complementing social protection with market-based forms of insurance can help. Olivier Mahul, Nathan Belete, and Andrew Goodland discuss how public social protection against extreme risk and private market protection against smaller risks can be linked to provide full insurance against a major agricultural risk in Mongolia—livestock death. A similar structure is in place in the Cambodian health insurance scheme discussed by David Levine. In this case the government covers some high-cost chronic health conditions and partially subsidizes healthcare costs, while private health insurance covers the remaining costs. Amado Villarreal describes how Mexican state governments use insurance to help protect farmers against adverse weather conditions.

Public support can sometimes best be mediated through insurance companies, in the form of premium subsidies for poorer households. In countries with private health insurance provision, there are often segments of the population (such as the very old, the very poor, and children) for whom premiums are paid publicly for both ethical and public health reasons. In some cases subsidies may be more universally applied. In nearly all developed weather

insurance markets, insurance is subsidized to some extent. The widespread presence of subsidies raises two important points: (1) voluntary payment of full-cost insurance will likely result in much less than full insurance coverage, and (2) the ethical or moral imperative to protect poor households provides a rationale for state involvement in some aspects of insurance. Improving linkages between public provision of programs to protect the poor and market-based insurance schemes could help ensure that social protection meets its intended goals and insurance coverage is extended to more households.

Saving and borrowing

The use of borrowing and the accumulation and liquidation of assets to smooth consumption over time is common across countries. Richard Hornbeck notes the plethora of financial products currently used by households in many parts of the developing world. When well developed, borrowing and saving can be an efficient way for households to manage the risks they face. Without insurance, however, these financial products are also at risk: it is hard to develop credit markets in contexts of high risk, asset stocks become depleted and ineffective in times of repeated shocks, and both assets and borrowing are challenged by risks that simultaneously affect the incomes of all clients in a geographical area. There is thus a need to develop insurance products that complement financial products, such as the products discussed by Rupalee Ruchismita and Sona Varma in their brief on India and the weather insurance in Malawi described both by Richard Leftley and Xavier Giné.

Similar arguments can be made for informal networks of support. In many countries the giving and receiving of financial gifts are means by which households support each other in times of need. These networks of support have trust and informational advantages over formal insurance markets, but when bad events affect all members of a network at the same time, the network is not able to support its members. Ideally, insurance will support and complement these networks rather than substitute for them. Combining these networks with reinsurance schemes could both strengthen these groups and provide a means to effectively retail insurance. For instance, mutual societies were instrumental in the development of life insurance markets, and farmer unions are an important part of the structure of Spain's crop insurance and the provision of weather insurance in Ethiopia (see the brief by Meherette).

Lessons from recent innovations

In the past 10 years, financial and technological innovations have made insurance more affordable. One innovation is index-based insurance, which allows individual farmers to protect themselves

against agricultural production risk by paying out when an independently observable trigger (such as the level of rainfall at a local weather station or data on output in a given area) shows that an insurable event has occurred. This approach reduces the cost of providing insurance against a number of agricultural risks and thereby allows insurance companies to reach poor households. Because index insurance is based on an independent trigger that cannot be influenced by actions of the farmer, it reduces moral hazard and adverse selection, but because it is based on an independent trigger, it may involve substantial basis risk (that is, the risk that payouts may not always exactly match the losses a farmer experiences), which can be difficult for farmers to understand. The briefs by Ulrich Hess and Peter Hazell; Michael Carter; Richard Leftley; Xavier Giné; and Olivier Mahul, Nathan Belete, and Andrew Goodland discuss recent experiences with index insurance, drawing a number of lessons, including: (1) insurance often needs to also improve access to credit or technology adoption so that it clearly raises expected incomes (Hess and Hazell); (2) much more needs to be done to reduce basis risk in these contracts, a task that may require substantial investments in weather-station infrastructure and data collection (Carter, Leftley); (3) improving people's understanding and trust of insurance is key to increasing demand (Giné); and (4) scaling up insurance schemes in smaller and less-advanced countries will require investing in public goods, such as weather data infrastructure, and piloting and testing new products. It is also essential that providers understand what risks poor people are concerned about and take into account their irregular cash flows when designing the schemes and premiums.

Richard Leftley, David Levine, and Johannes Jütting discuss how technological and institutional innovations have led to the development of health insurance that allows poor households to obtain health services without paying out of pocket. Richard Leftley discusses MicroEnsure's experience in making third-party administration software available to allow cashless health-service provision. Johannes Jütting discusses how community-based health insurance can pool risk within a community to effectively insure healthcare costs. These briefs also highlight the importance of considering insurance provision through groups, both as a cost-effective means of provision (Leftley and Jütting) and as a means of combating the problem of adverse selection (Levine).

Recent innovations, new technologies, and continuing experimentation will make achieving adequate protection of poor households more likely. These new tools to manage risk will need to be complemented with investments that reduce the risks faced by poor households, such as low-cost irrigation schemes, drought-resistant seed varieties, improved sanitation, and better preventative healthcare. ■

Ruth Vargas Hill (r.v.hill@cgiar.org) is a research fellow at the International Food Policy Research Institute (IFPRI). **Maximo Torero** (m.torero@cgiar.org) is director of the Markets, Trade, and Institutions Division at IFPRI. The authors thank Meagan Keefe for excellent research assistance in preparing this brief.



International Food Policy Research Institute

2033 K Street, N.W. • Washington, D.C. 20006-1002 • U.S.A.

Phone: +1-202-862-5600 • Skype: ifprihomeoffice • Fax: +1-202-467-4439 • Email: ifpri@cgiar.org

IFPRI® www.ifpri.org