



Unlocking Markets and Trade for Rural Development

The complexity of supply and demand and the nuances of trade and markets have grown exponentially as the world grows smaller. Fortunately, so have our tools to understand them and to harness the knowledge for pro-poor benefits.

Our understanding of the complexity of farming and agricultural markets is greater than it used to be. While early agricultural development investments generally focused on production, the International Food Policy Research Institute (IFPRI) has also consistently looked at the impact of markets, trade, and government interventions on both productivity and poverty reduction. IFPRI's research has evolved with the widespread shift from heavy state intervention in agricultural markets toward broad market liberalization over the last 40 years, but maintains its focus on ensuring that small-scale producers are not left behind. Research areas today include analyzing markets for agricultural inputs and outputs; international trade opportunities and barriers; risk management; and such macroeconomic issues as exchange rates. IFPRI has been a leader in looking at access to markets in a rapidly changing local, regional, and international economic landscape.

During the Green Revolution, agricultural development focused on increasing yields for markets that, it was assumed, would absorb them. Governments and other stakeholders worked to support this paradigm, with major interventions in agricultural input and output markets. However, as market liberalization policies of the late 1980s and 1990s reduced these government supports and increased the role of markets and private agents, the landscape for small producers has changed. Today more suppliers across larger geographic areas compete to gain access to markets, and growers must comply with changing consumer demand and evolving market standards. In large regional and global markets, economies of scale are needed to meet these standards, making it hard for small farmers to participate.

IFPRI research shows how policy interventions may improve access to markets and trade opportunities and create environments in which markets can operate effectively and benefit small farmers.

The Road to Liberalization: Vietnam

IFPRI's work on rice markets in Vietnam in the 1990s exemplifies the development of both the Institute's scientific methodology to address real issues facing countries and its value-added approach through communications and relationship building.

Prior to the 1990s, most poor countries emphasized national self-sufficiency in food production, a tendency reinforced during the food crises of the early 1970s. This paradigm was also prominent in behavior at the household level, where subsistence production came first. As the definition of food security evolved, the focus in the broader research and policy community began to shift toward finding the optimal combination of trade, production, and storage options that would provide sufficient food and well-being. In the late 1980s and early 1990s, many developing countries with tightly regulated economies began to consider relaxing price controls and moving toward more liberal markets as one way of facilitating economic growth.

In 1995, IFPRI embarked on the Rice Market Monitoring and Policy Options Study, funded by the Asian Development Bank in the context of an agriculture sector loan to Vietnam. IFPRI researchers conducted extensive surveys at all levels of the rice supply chain and developed a spatial equilibrium model of agricultural markets in Vietnam, which they combined with household survey data. This model was used to simulate the consequences of domestic and international trade options on household well-being.

According to an independent impact assessment, this research “not only informed but influenced the timing of the changes in rice policies that ensued.” Those changes had a benefit to the Vietnamese economy, after just two years, of US\$61 million. Liberalization did raise rice prices inside Vietnam, but the higher prices in this case actually had a positive effect on rural income, and poverty declined sharply over the 1990s, mainly because of rapid economic growth.

Perhaps most important, the project in Vietnam showed how field-level research helped a centrally planned economy make the transition to a broader agricultural and rural development strategy with a greater role for markets.

Parastatals in Changing Economies

When the developing countries in Asia embarked on the Green Revolution in the 1960s, infrastructure was inadequate, market institutions were poorly developed, and commodity prices were volatile. Governments adopted price stabilization as part of a solution, and in the process they created parastatal agencies to market and distribute basic staples such as rice and wheat. These operations made it possible for governments to provide farmers with price supports, procure staples on government accounts, hold public stocks, and distribute these stocks through public distribution systems. Similar food parastatals were created in much of Africa in the 1970s.

From 2003 to 2005, IFPRI carried out extensive research to analyze the effectiveness of these public institutions in three South Asian countries—Bangladesh, India, and Pakistan—and three East Asian countries—Indonesia, the Philippines, and Vietnam. Price stabilization was vital to widespread adoption of new high-yield wheat and rice varieties and had led to increased economic growth as well as decreased undernutrition and poverty. The policies worked when there were severe market failures and high levels of government commitment, but they lost their relevance over time as infrastructure improved, markets became well integrated, and the foreign currency reserves and import capacities of all Asian countries increased dramatically.

IFPRI research demonstrated that the parastatals were less efficient than private traders in creating effective markets and were being increasingly exploited by special interests. But reforms in the region were limited—only Vietnam and Bangladesh substantially reduced government control of markets. In fact, the food price crises of 2007/2008 drove some governments to increase market controls. IFPRI's studies of market liberalization in Vietnam and Bangladesh provide strong evidence that reducing market interventions can increase efficiency and market development, and free up funds for other poverty reduction investments. However, while the economic arguments for making policy changes are clear, the complex relationships between interest groups and politicians can make reform difficult.

High-Value Commodities

IFPRI was an early leader in easing the way of smallholder subsistence farmers into a more diversified and stable income pattern. Forty years ago, many smallholders primarily grew cereals for their own use, selling only in years when they had small surpluses. However, global and national markets in developing countries have been undergoing rapid change.

Demand for higher-value products—such as fruits, vegetables, and animal protein—is expanding in response to economic growth. The growing global food trade is increasingly built around vertically integrated supply chains. In the face of these changes, it was widely thought that the difficulty of producing for these new markets would exclude smallholders.

IFPRI's field research and analysis, however, has shown that smallholders are playing a leading role in the diversification process, and these new markets can offer real opportunities for poverty reduction. High-value commodities provide much higher returns to smallholders than do low-value staple crops. Nevertheless, there are substantial barriers to smallholder participation. Among the most important are high transaction costs. Many of these products are highly perishable and markets are distant, requiring storage and transport infrastructure. Buyers, particularly for export products, have high food-safety and quality standards and require regular supply, conditions not easily met by small farmers. IFPRI field research—particularly in India, Kenya, and Ethiopia—has looked at these barriers and at means to boost smallholder participation.

There are solutions. Researchers found that producer cooperatives and contract farming arrangements, for example, help small farmers to lower transaction costs and meet market requirements. In addition, case studies of contract vegetable production for export in Madagascar and cooperative dairy farming in India showed income benefits for participants. A recent ADB/IFPRI book, *The Quiet Revolution: Staple Food Value Chains*, which looks at Bangladesh, China, and India, finds major changes taking place in the “midstream” of value chains—processing, storage, and distribution—that are boosting small producer participation. Small farmers are benefiting from improved infrastructure, input markets, and connection to information. Moreover, even the poorest can benefit from increased demand for labor for fruit and vegetable production.

These studies have raised a range of important questions about what conditions encourage smallholder participation and about the proper role of government and the private sector in fostering that participation. However, they have also provided strong evidence that high-value commodities can be an engine of pro-poor growth.

Adapting Market Institutions for Small Producers

Market participation offers one of the surest routes out of poverty for small farmers. But poor producers face a

number of obstacles, including limited access to two important market institutions: credit and insurance. Banks and insurers are often reluctant to work with smallholders and small farm organizations because the transaction costs are high and the returns are low. IFPRI has worked to improve the institutions and tools that can facilitate smallholder investment and reduce their risk in order to foster market participation and poverty reduction.

IFPRI researchers asked, how can we redefine the way credit risk is assessed and credit is advanced so that more farmers in impoverished areas might benefit? Out of these discussions grew poverty-sensitive scorecards. Poverty-sensitive scorecards are a tool for prioritizing lending and grant allocation for small enterprises, such as farms. The innovation lies in combining an assessment of credit risk with an estimate of the poverty impact of a project, through a two-step process. First, potential projects are given a risk score, using an innovative model for assessing creditworthiness that excludes fewer poor applicants. Second, those projects that have received an acceptable risk score are ranked in terms of potential poverty impact. This approach allows lenders and donors to choose projects based on their chances of success and their poverty reduction impact. The poverty scoring system has now been integrated into a mechanism to prioritize public investment in more than 10 countries.

Insurance markets for small producers present many similar problems, including high transaction costs and lack of appropriate products. Beginning in the late 1990s, IFPRI researchers started to explore index-based insurance that could meet the needs of small farmers. What began as a homogenous product has diversified in recognition of the heterogeneous needs of small farmers. To reduce transaction costs, IFPRI researchers developed the concept of “weather securities,” which won an award as an innovative financial solution. This idea forms the basis for simple products that are easy for farmers to understand and use. Pilot projects in Bangladesh, Ethiopia, India, and Uruguay have informed their design. Recently, a successful pilot project in Uruguay used a system of coupons that allows farmers to customize their insurance based on their individual situation and risk preferences.

Assessing Trade Impacts

Trade policy reform, unilateral domestic policies of large countries, or a macroeconomic crisis can drive changes in international markets that have critical impacts on poverty. IFPRI has developed a set of tools, including simulation

models, databases, and political economy models, to address the links between trade and poverty.

Modeling International Relationships in Applied General Equilibrium (MIRAGE) is a multicountry, multisector dynamic model of the global economy developed by IFPRI researchers and partners for the study of trade policy scenarios. Modeling of trade policy impacts has provided a public good for developing countries that do not have the capacity to make these assessments. For example, IFPRI played a central role in assessing the potential benefits and risks of the Doha Round of World Trade Organization (WTO) negotiations using MIRAGE. Providing this assessment reduced the asymmetry of information between negotiators, particularly when addressing the intricacies of agricultural trade talks and specific outcomes for Least Developed Countries. Now, well beyond the Doha Round, IFPRI continues to inform parties to ongoing WTO, bilateral, and multilateral trade negotiations to help address the needs of the world's poorest and most vulnerable economies.

A poverty module of the MIRAGE model allows researchers to understand how poverty in low income countries is affected by shocks in international markets. Incorporation of household survey data makes it possible to estimate the impacts of international price changes on domestic markets, inequality, and household welfare.

Sharing Knowledge

Beyond the MIRAGE model, IFPRI has developed other economic models that increase understanding of the role of markets in shaping outcomes for the poor, including food security and sustainability. IFPRI has supported capacity building in developing countries for the use of these models: for example, through the African Growth and Development

Policy modeling consortium (AGRODEP). The Institute has also made a critical contribution in making both data and tools available for policymakers to respond to market changes and shocks, for example through the Food Security Portal, and in extending knowledge tools to small farmers, through use of information and communications technology.

At 40, IFPRI is well established as an independent, honest-broker research organization. Its work in trade and markets continues to focus on policy-relevant research that has real impact on poverty and food security.

Resources

For IFPRI's research on markets and trade, see <http://www.ifpri.org/topic/markets> and <http://www.ifpri.org/topic/trade>.

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