



**INTERNATIONAL FOOD
POLICY RESEARCH INSTITUTE**
sustainable solutions for ending hunger and poverty
Supported by the CGIAR

ifpri FORUM

Interviews with
Lamon Rutten, MCX India, and
Carl Hausmann, Bunge North America

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IFPRI Contributes to the Debate on Rising Food Prices

With rising food prices generating riots and exacerbating hunger in many countries, the international community is engaged in urgent discussions about how best to respond. IFPRI has contributed to this global dialogue on prices through policy papers, seminars and briefings, and media outreach.

IFPRI first noted the existence of worrisome trends in global food prices about three years ago. More recently, in December 2007, IFPRI published a food policy report entitled *The World Food Situation: New Driving Forces and Required Actions*, by Joachim von Braun, director general of IFPRI, describing the risks to poor people posed by high and rising food prices. Since then IFPRI has published two policy briefs spelling out policy options for helping both poor consumers and poor food producers cope with the threats and opportunities posed by high food prices: "Rising Food Prices: What Should Be Done?" and "High Food Prices: The What, Who, and How of Proposed Policy Actions."

To draw attention to the issue and its implications, IFPRI has held two events at its headquarters for the Washington,

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Speculation and World Food Markets

As food prices continue to rise, threatening the livelihoods of many poor people around the world, some observers have pointed a finger at speculation as a culprit in the price run-up. What role is speculation playing in the current food crisis and how can markets be calmed?

In recent years, rising prices for basic foodstuffs have further reduced food and nutrition security for many of the world's poorest people, pushing them to the edge of starvation and spawning social unrest in many countries. Rising food prices have also strained the capacity of food aid agencies, spurred a

United Nations summit, and drawn extensive worldwide press coverage.

As with previous commodity booms, many have been quick to blame speculators for food-price increases, and, in fact, there is considerable evidence of recent increased

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Examining the Implications of Biotechnology for Developing Countries

Since the first genetically modified (GM) crops were commercialized in the mid-1990s, several new technologies have been developed for potential use in agriculture-based economies. The implications of these developments have elicited both hope and hesitation: hope because GM crops have the potential to reduce crop damage, reduce production costs, increase yields, and possibly improve food security; hesitation because there may be uncertain impacts on trade, the environment, human health, and the livelihoods of poor people.

As global food costs rise, the extent to which agricultural biotechnology, particularly GM crops, may benefit poor people is sparking considerable interest. IFPRI has been undertaking a broad range of research to assess the pro-poor impacts of biotechnology, from studies that examine specific GM crop varieties to those that explore whether smallholder farmers in developing countries are aware of and have access to GM seeds. At the same time, the IFPRI-managed Program for Biosafety Systems (PBS, www.ifpri.org/pbs/pbs.asp) is providing guidance to partner countries in Asia and Africa that are working to establish fully functioning biosafety systems.

To showcase this research, IFPRI recently hosted an international dialogue on “Biotechnology and Biosafety in Developing Countries” for government officials, civil-society representatives, and academics. Presentations highlighted work on socioeconomic, trade, governance, and legal aspects of biotechnology and biosafety, and discussion sessions dealt with related topics, including the impact of GM crops on farmers, biodiversity, and the environment.

While it is understood that GM crops cannot alone solve the global hunger problem, a growing body of evidence at IFPRI indicates that it is prudent to evaluate GM crops as one means of overcoming specific productivity constraints in many developing countries. For example, work done on the impact of virus-resistant tomato, insect-resistant cabbage, and insect-resistant garden egg in Ghana shows that these plant varieties have the potential to decrease yield loss, income variability, labor, and pesticide use. In addition, data collected on a GM variety of banana—one of Uganda’s staple crops—shows that this variety may have a positive impact on social welfare. (The fungal-resistant banana is being developed by the National Agricultural Research Organisation-Uganda

and the Agricultural Biotechnology Support Project II led by Cornell University.)

Although the benefits of biotechnologies may vary across countries and over time, by considering their use and providing science-based research and data to developing countries, IFPRI and PBS are working to ensure that the implications of agricultural biotechnology and use of GM crops are understood by relevant stakeholders and that partner countries choosing to adopt GM technologies do so in a safe and sustainable manner.

The policy dialogue agenda and presentations are available on the PBS Blog: <http://pbs.ifpriblog.org/>. For more information: ifpri-pbs@cgiar.org. ■

IFPRI Policy Dialogue in Europe on Agriculture, Development, and the Poor

As a major player in international development, the European Union helps shape the global agenda for agricultural growth and poverty reduction. To facilitate deeper engagement with European stakeholders, IFPRI, in conjunction with its Board meeting, organized a high-level policy dialogue, “Agriculture, Development, and the Poor: Challenges, Stakes, Opportunities,” on May 14 in Tervuren, Belgium. About 100 people attended, including Belgian, French, and German government officials, members of the European Commission, and representatives from the diplomatic, scientific, and donor communities in Europe. The dialogue included panel discussions on the development agenda and challenges for food and agriculture, sustainable agricultural growth, and new strategic directions for poverty reduction.

To see the full program of the dialogue and access the presentations that were videotaped, go to <http://www.ifpri.org/events/conferences/2008/20080514.asp>. ■

Achieving Development through Agriculture in Nigeria

Most governments, donors, and development experts agree that agriculture is critical for reducing poverty and promoting economic development. But what actually happens at the policy level when it comes to sequencing and prioritizing actions and investments? Do strategies match up with policies and their implementation? These are questions that IFPRI's Development Strategy and Governance Division is examining through the Agricultural Policy Support Facility (APSF), an IFPRI initiative that is part of its Nigeria Strategy Support Program (NSSP). NSSP is funded by the Canadian International Development Agency and implemented in collaboration with the Nigerian Federal Ministry of Agriculture and Water Resources to strengthen evidence-based policymaking in the country's agricultural sector.

Initial research results—which were presented to Nigerian stakeholders, farmer organizations, donor representatives, development partners, and members of the research community at an APSF workshop held earlier this year in Abuja, Nigeria—show that a lack of transparency and consistency in policymaking, low productivity, poor infrastructure, and insufficient financial support for the sector constrain the country's agricultural sector. However, research-based policymaking, sufficiently allocated and monitored public investment, and targeted support in such key areas as roads and rural credit can help the sector realize its full potential.

Some of the most dramatic findings came from a review of Nigeria's expenditure on agriculture, which revealed extremely low and at times erratic funding to agriculture, with a lack of evidence-

based research behind budgetary decisions. Recommendations included improving how spending is tracked; clarifying the roles and expenditure assignments of the federal government as well as state and local governments; and investing in research to answer urgent questions about the effectiveness of programs that receive the vast majority of the sector's spending, such as fertilizer subsidies, a national grain storage system, and the National Special Program for Food Security.

IFPRI researchers also evaluated a World Bank community development project in Nigeria known as Fadama II and found that the household incomes of participants increased by 60 percent in one year and that they acquired productive assets (such as irrigation equipment) at a level far greater than nonparticipants. To replicate the success of this project, the researchers recommended that the Nigerian government continue its poverty-reduction efforts through similar community-driven development projects, and involve the private sector to provide affordable credit for productive assets.

In order to achieve social and economic development through agriculture, government policies must be based on evidence and designed to be pro-poor, gender sensitive, and environmentally friendly. The APSF program is working hand in hand with Federal Ministry of Agriculture and Water Resources to implement these recommendations.

For more information, contact NSSP program coordinator Valerie Rhoe (v.rhoe@cgiar.org). ■

IFPRI Contributes to the Debate on Rising Food Prices

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DC, policymaking and research community. The first was a February 2008 panel discussion called "Rising Food Prices: Implications and Consequences," featuring perspectives from IFPRI and other stakeholder organizations. In May 2008, IFPRI held a policy seminar entitled "High Food Prices: The What, Who, and How of Proposed Policy Actions," laying out the institute's recommended action plan for coping with the crisis.

IFPRI research and researchers have also appeared extensively in media reports on the food price crisis, including in *The Economist*, *Reuters*, *Newsweek*, *Wall Street Journal Asia*, *Economic Times (India)*, *The New York Times*, *The Nigerian Tribune*, *BBC*, and *Voice of America*.

In addition, IFPRI staff have addressed many key groups of policymakers and researchers on the issue of food prices. For example, Joachim von Braun addressed a special meeting of the United Nations Economic and Social Council on the global food crisis held in May 2008, as well as audiences at the U.S. Agency for International Development and the International Fund for Agricultural Development. Mark Rosegrant, director of IFPRI's Environment and Production Technology Division, testified before the U.S. Senate Committee on Homeland Security and Governmental Affairs on biofuels and grain prices, and senior research fellow Nick Minot has testified before a U.S. Congressional subcommittee on agriculture regarding high prices and agricultural development.

For downloads and to see the full range of IFPRI's work on food prices, go to www.ifpri.org/themes/foodprices/foodprices.asp. ■

“Commodity exchanges are a catalyst for inclusive growth.... [S]mall farmers tend to have little access to information and are restricted in their marketing opportunities. A commodity exchange empowers them.”

Interviews

IFPRI Forum speaks with Lamon Rutten and Carl Hausmann about high food prices, grain markets, and the impact of financial speculation.



Lamon Rutten Joint Managing Director, Multi Commodity Exchange of India Ltd. (MCX)

FORUM: From your perspective, what are the key reasons behind the sharp rise in food prices and the current volatility in agricultural markets?

Rutten: Supply/demand factors account for price levels. Supply growth has not kept up with demand. Not enough money has gone to agricultural R&D and infrastructure. Land is lost to urban development. Demand growth has been fast because of income growth and use of food crops for biofuels. Keep in mind that it is the cost of the last unit of production added that will determine prices—not average production cost. Increased uncertainty accounts for high volatility. In an environment of high uncertainty (regarding government interventions in particular), prices sometimes “overshoot,” moving too far in one direction before, normally in a day or so, reverting to the proper level, so you see strong price fluctuations.

FORUM: To what degree and in what way is speculation a problem in the present food crisis?

Rutten: It is not a big problem. Just compare wheat and rice prices. There is no genuinely international rice futures market where speculation can take place, and yet prices are high and volatile. Still, speculation has an impact on the market. People often confuse two types of non-trade-related investments: investment funds that build up long-term positions; and short-term speculators who trade on a daily basis, often responding to merely “technical” indicators. The first group has a largely beneficial effect, but public perception is different: when they build up a position in food commodities, this is seen by some as “hoarding,” as harmful speculation. However, investors build up positions because they anticipate even greater scarcities in the near future. The “speculation” on prices gives a signal to producers that encourages them to produce more. The end-result is that prices are stabilized: rather than a severe crisis at some time in the future, there is a gradual increase in prices that gives people opportunities to react. As to short-term speculators, the result of “overshooting” can be that some genuine hedgers (e.g., cooperatives that manage the price risks on their expected production) are exposed to sudden large financial demands, just to maintain their hedge positions. Some cannot cope (in an environment of high prices, banks have become averse to providing more credits) and are forced to give up their futures positions and, as a result, become exposed to massive price risks.

FORUM: How is the Multi Commodity Exchange (MCX) working to regulate market conduct in the present crisis?

Rutten: Futures trade in the major food crops has been suspended in India—wheat, rice, and some pulses since early 2007, soy oil and potatoes since May 2008. Prior to the latest suspension of food crop futures, MCX had installed a proactive system to monitor positions: who holds positions in the markets, how do futures prices compare with physical market prices, is there any threat of manipulation? At the least sign of possible market disruption, the exchange had the power to force market participants to reduce their positions. This ensured that no single entity, or group acting in concert, could build up a dominant stake in a futures contract. Our sister company, the National Spot Exchange, has now started electronic trading in spot contracts, which means that market signals will flow more efficiently across the country: this will reduce wastage and shorten supply chains (and thus, reduce supply chain costs, bringing down consumer prices).

FORUM: What else needs to be done to stabilize prices?

Rutten: In the short run, if government policy becomes more predictable and governments allow food crops to flow freely, global markets will become more stable. But “stabilization” is often used as a euphemism for “reduction.” That is the wrong response. Targeted food subsidies are needed, not measures to depress prices—these will only prolong the crisis. In the medium term, farmers will react, as long as governments allow high prices to be passed on to them. But also a lot can be done to reduce wastage (e.g., through more efficient logistics and better processing); improve marketing structures, including for international trade (many farmers now produce less than they can because they cannot be certain of finding ready markets); improve input credits; and, in general, raise investments in the agricultural sector. At an international level, a food import financing facility, in accordance with the Marrakesh Decision in favor of net food importing developing countries agreed to by GATT (General Agreement on Tariff and Trade) in 1995, could have helped, but this Decision was never implemented by the World Trade Organization and it is now too late—at least in helping with the current crisis.

FORUM: More broadly, what role do you see commodity exchanges playing in accelerating agricultural and economic growth that is equitable and inclusive for small farmers?

Rutten: Commodity exchanges are a catalyst for inclusive growth. In developing countries, small farmers tend to have little access to information and are restricted in their marketing opportunities. A commodity exchange empowers them. Because of better access to price information, even small farmers are able to negotiate better prices with their buyers (however, at least in India, farmers who are indebted to their buyer seem to be an exception). Farmers also change their cropping pattern, making decisions on the basis of futures prices rather than past prices. Processors of products such as cotton or sugar can use commodity exchanges to safely offer minimum prices to farmers, which (as practice has shown) can lead to a revival of crop production. An electronic spot exchange offers new marketing outlets. A commodity exchange ecosystem also brings better access to postharvest finance. The second green revolution is unlikely to come by seeds alone: it will need also a strongly improved marketing, risk management, and finance infrastructure. Commodity exchanges can play a critical role in this regard. ■



Carl Hausmann President and CEO, Bunge North America

FORUM: From your perspective (as head of an agribusiness/food company), what are the key reasons behind the sharp rise in food prices and the current volatility in agricultural markets?

Hausmann: The current commodity price environment is being driven by fundamental economic factors and government policies, as well as by the growing use of commodities as an investment. In simple terms, the most significant factor is an imbalance between supply and demand. I begin in this obvious way to distinguish between the supply factors and the demand factors. The more important causes of high prices, in my opinion, are the demand forces.

Certainly, there are supply concerns—current flooding in the United States and drought conditions in Australia during 2006 and 2007 have reduced production. However, a quick look at worldwide wheat and feed grains production over the past five years shows not only steady production, but production trending slightly higher in primary food grains. In fact, projections for wheat this year suggest a dramatic—and necessary—increase of nearly 52 million tons. This steady global production with relatively low prices led many analysts in 2006 and 2007 to conclude that prices were too low to remunerate farmers and incentivize increased production in developing countries.

This level of production, however, was unable to meet the increasingly obvious growth in food demand. Increases in population together with increased purchasing power, particularly in Asia, signaled that demand would be rising. And in fact, demand did increase, resulting in a little-noticed drawdown of the world’s reserve stocks of grain.

Thus, the single biggest reason for the price increase is that the growing demand was not met by a sufficient increase in supply.

Perhaps exacerbating this situation is the recently developed linkage between energy and agricultural markets and the reality that energy prices are a very significant factor in agricultural commodity values. I would say that in the current environment it is difficult to imagine a decline in agricultural commodity prices unrelated to a corresponding decline in energy values.

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Interviews (continued from page 5)

IFPRI Forum speaks with Lamon Rutten and Carl Hausmann about high food prices, grain markets, and the impact of financial speculation.

“In summary, whatever the level of prices, the world needs greater supplies of sustainably produced food commodities to meet the demand. . . . Without a supply response today, the focus may turn to rationing demand—a result that I sincerely hope the world will not contemplate.”

In summary, whatever the level of prices, the world needs greater supplies of sustainably produced food commodities to meet the demand. Therefore, my analysis takes me full circle: I began by arguing that prices are high due to increased demand and I conclude by arguing that high prices are really due to the absence of a supply response sufficient to match consumption trends that became more and more visible over the past few years.

Without a supply response today, the focus may turn to rationing demand—a result that I sincerely hope the world will not contemplate.

FORUM: To what degree and in what way is speculation a problem in the present food crisis? How can companies like Bunge help reduce market volatility?

Hausmann: I think speculation is too easily the villain. As I indicated in my previous response, there are many factors and events shaping the dynamics of the current energy and agricultural marketplaces, the most important of which are the fundamentals of supply and demand. Moreover, traditional speculators tend to be trend followers and as such are unlikely to affect anything more than short-term intra-day prices.

Of course, one of the factors I mentioned is the emergence of commodities as an investment class for index funds, pension funds, and others that invest in commodities as buyers. While it is hard to quantify, there perhaps has been some upward price impact from the sizable growth of these new investors. However, it is important to understand that none of these market participants actually participate in the cash markets. As such, their investments are subject to the same market fundamentals that are driving the cash markets more broadly. The resultant increased prices and market volatility have significantly increased risks for all market participants.

Companies like Bunge are more critical during periods of market stress because we are able to tap our global value chain to bring the greatest efficiency possible to the market, delivering commodities and foodstuffs from surplus supply regions to those regions in greatest need at the lowest costs possible. It is our ability to manage risks across the value chain that helps us minimize volatility for our farmer customers, as well as our customers who are the ultimate consumers.

FORUM: What else needs to be done to bring more stability into grain markets?

Hausmann: The single most important thing that governments can do to help bring stability to grain markets from my perspective is to allow market forces to work. Right now the world food markets are signaling that we need more production. Yet many governments are responding by imposing export controls through taxes or embargoes. As well intentioned as these policies might be to secure food supplies, export controls miss the mark by reducing domestic prices for farmers and simultaneously worsening tight supplies globally. The result is that local farmers in those countries—oftentimes developing countries—get the wrong market signals, produce less, and miss opportunities to benefit financially from strong global demand. ■

Latin America: Challenges and Opportunities

By *Maximo Torero*

The Latin America and Caribbean (LAC) region presents significant challenges and opportunities for policymakers intent on accelerating rural development. On the one hand, the region is host to some of the most difficult environments in the world, either because of altitude, climate, or topography, or because of huge inequalities in the distribution of land (the bottom 60 percent of landowners—those with the smallest landholdings—own only 4 percent of all land). The region also features striking income inequality, higher than that of Asia, in spite of economic growth. On the other hand, the LAC region provides researchers and policymakers with major opportunities to learn from the successful structural reforms that most of the LAC countries have undertaken in recent decades to reduce poverty and inequality.

Since the late 1980s, almost all LAC countries have adopted a series of far-reaching reforms, especially trade, financial, and capital account liberalization. Increased economic openness has gone hand in hand with large financial inflows—particularly in the first half of the 1990s—and has brought new sources of economic growth. As a result, economies have grown and inflation has declined. Although overall growth slowed after 1995, the region performed strongly in the past five years, its best showing since the 1970s, with inflation remaining relatively modest in most countries.

Despite these positive results, uneven economic growth, unacceptably high poverty and malnutrition rates, and lagging agricultural growth are common. The current food price crisis is exacerbating these problems. Although the region is fairly immune to external shocks, the food price crisis will severely affect all the LAC countries in terms of inflation, especially food inflation. The impact will be greater on net importing countries (specifically, Central America and Mexico), and also on poor consumers in peri-urban and rural areas. Before the crisis, most LAC countries were on track to reach the

Millennium Development Goal of halving the proportion of people who suffer from hunger by 2015; now, a significant number of countries will not be able to achieve this goal. Furthermore, inflationary pressures will reappear and persist in coming years.

More over, if there ever was a case where growth does not trickle down to the poor, the adverse geographical areas of the LAC region exemplify it. In those areas, there is a need for a coordinated rural development strategy that addresses the structural causes of poverty. Such a strategy would be based mainly on investments in productivity-increasing infrastructure, a large expansion in projects that link small producers in rural communities to national and export markets, a significant expansion of off-farm activity, and a partnership between the public and the private sectors. All of this could sustainably move these areas out of poverty, which would allow the region to meet and even surpass the MDGs.

To help the LAC region meet the challenges of accelerating growth and reducing poverty and malnutrition rates, IFPRI is developing a research strategy for the region. The strategy includes examining policy choices related to macroeconomic reforms; globalization and trade liberalization; inequality, poverty, nutrition, and social protection interventions; climate change and biofuels; decentralization; transformation of smallholder farming; urban and rural linkages; investment in less-favored lands; and governance.

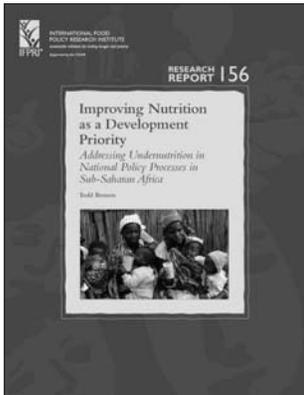
During the past two years, IFPRI's Central America Program has been evaluating the impact of CAFTA (the Central America Free Trade Agreement) on agriculture and the rural sector in Central American countries. Research has produced a detailed analysis of the types, numbers, and location of people in the region who—in the absence of corrective public policies and investments—will be negatively affected by CAFTA, and has identified the impacts of CAFTA on economic growth, employment, and trade for the member countries. IFPRI researchers have also identi-

fied new market opportunities (especially for agricultural and agro-industrial products) and income and employment opportunities for small farmers and other poor rural household groups, and have highlighted the investment priorities in infrastructure needed to diminish the potential negative effects of CAFTA.

In the Andean region, IFPRI has been working in Peru and Ecuador—where most of the rural population lives in poverty and almost half the children in the mountainous regions suffer from chronic malnutrition—to increase the productivity of the poor so that they can earn their way out of poverty. This research has focused on designing a framework for policy interventions that can overcome current income-growth bottlenecks in specific regions. The project aims to provide a roadmap for the actions and investments that would help realize these regions' potential. In addition to developing the framework, researchers have been testing it through pilot projects that can be scaled up.

Finally, IFPRI continues to be involved in several other Latin American countries in designing and evaluating innovative poverty-alleviation programs that simultaneously improve child nutrition, health, and education. The most important of these are conditional cash transfer programs such as Oportunidades in Mexico, the Red de Protección Social in Nicaragua, the Red Solidaria in El Salvador, and the Bolsa Familia in Brazil. IFPRI's work has led to a greater understanding of which policies, interventions, and circumstances have been most conducive to reducing poverty and undernourishment, especially among preschool children, and increasing the educational attainments of future members of the labor force. ■

Maximo Torero is the director of IFPRI's Markets, Trade, and Institutions Division, and is also IFPRI's Latin America Coordinator.



Putting the Spotlight on Undernutrition

Often, addressing the most basic issues reaps the greatest rewards. That is why it is so puzzling that many countries that place a high priority on national development pay so little attention to something as essential as proper nutrition for their citizens. This is especially true for many Sub-Saharan African countries, where the response to widespread undernutrition and the danger it poses to larger development goals is often inadequate.

A new IFPRI research report by senior research fellow Todd Benson, *Improving Nutrition as a Development Priority: Addressing Undernutrition in National Policy Processes in Sub-Saharan Africa*, analyzes why nutrition does not receive the attention it deserves in this region. Drawing on data from Ghana, Mozambique, Nigeria, and Uganda, Benson finds that simple ignorance about the effects of undernutrition, combined with overly compartmentalized public agencies, undermines effective nutrition policies. He argues that governments in these and other developing nations will only make the necessary effort to combat undernutrition if their citizens pressure them to do so. Benson concludes by suggesting that civil-society groups can play a role in this regard by helping to raise general public awareness of undernutrition, emphasizing the fact that adequate nutrition goes beyond just food security, linking nutrition to the larger goal of national development, and cultivating advocates among senior political and bureaucratic decisionmakers.

For more information contact Todd Benson: t.benson@cgiar.org. ■

Lessons about Agricultural Reform and Prioritization of Public Resources

IFPRI's ongoing examination of reform and prioritization of public spending in the agricultural sector has led to the publication of two new books: *From Parastatals to Private Trade: Lessons from Asian Agriculture* and *Public Expenditures, Growth, and Poverty: Lessons from Developing Countries*. (Both are published for IFPRI by Johns Hopkins University Press and, in South Asia, by Oxford University Press.)

The first book, edited by Shahidur Rashid, Ashok Gulati, and Ralph Cummings Jr., discusses the role that parastatals—state-owned corporations or government agencies—have played in the agricultural policies of six Asian countries, especially with regard to government efforts to stabilize food prices. The book suggests that the commonly cited rationales for public intervention in food markets are no longer convincing, that the costs of parastatal-led food-price stabilization are staggering, and that price policies are being dictated by special interests. Evidence from early reformers also indicates that reduced intervention can promote competition, decrease subsidies, and release funds for development and antipoverty programs. The editors conclude that private institutions are significantly stronger now and can be entrusted with many of the functions that parastatals traditionally performed.

Public Expenditures, Growth, and Poverty, edited by Shenggen Fan, assesses the efficacy of poverty-reduction spending in Africa, Asia, and Latin America by synthesizing studies conducted by IFPRI during the past 10 years. Overall, the book finds that in the past, food aid and poverty-reduction programs had only limited and short-term effects on hunger and income, and that developing countries should instead focus on long-term, broad-based growth by allocating more government expenditures to sectors that can generate income for the majority of the poor. In most African countries and some Latin American and Asian countries where many of the poor still rely on agriculture for their livelihoods, that means that governments need to accelerate broad-based agricultural growth through public spending in agricultural research, rural infrastructure, and education. For many other developing economies—such as Chile, China, Thailand, and Vietnam—the focus should shift to spending on economic growth, particularly agricultural growth, in regions and communities where the poor are increasingly concentrated. While food aid and emergency relief are still much needed to help the poor in the short run, the efficiency and targeting of such efforts should be improved. ■

speculative activity in food markets. Most notably, institutional investors have invested billions of dollars in U.S. commodity futures markets (the largest in the world), betting that food prices would continue to rise. "Even if it is difficult to gauge the real impact of this financial speculation, it has certainly played a role in influencing trading prices," says David King, Secretary-General of the International Federation of Agricultural Producers. "Take for example the fact that in a normal year, trading and movements on the wheat futures market in Chicago represent the equivalent of 20 times the annual U.S. wheat harvest. In 2007/2008, these movements represented the equivalent of more than 80 harvests."

At the same time, commodity futures markets have been plagued by serious technical problems and wildly oscillating prices, which have combined to threaten their ability to fulfill their long-standing role as a risk-management venue for producers and consumers of agricultural products. Many casual observers have fingered speculation as a primary cause of the market turmoil.

Speculative behavior such as food hoarding also has been on the upswing in other areas of the world food economy. Some governments have engaged in what amounts to international hoarding, restricting their exports of food commodities or introducing export taxes in order to fend off price increases in their domestic markets. Other countries, fearing domestic shortages, have engaged in panic buying on international markets, rushing to import food in order to build up reserves even as prices were skyrocketing.

Whether speculation is primarily a cause or a symptom of rising food prices and commodities-market dysfunction is unclear. The more crucial question about the effects of speculation on food markets is whether prices are telling the truth about supply and demand. Are producers, investors, and policymakers receiving the right signals to guide their actions? If they are not, and an agricultural price bubble is underway, the consequences could be severe for farmers and consumers around the world.

Speculation...or Investment?

What, exactly, is speculation? Technically, it is the purchase (or sale) of something in the hope of profiting from changes in its price. In the context of food markets, two forms of speculation are the most significant:

- the purchase and/or hoarding of commodities in the hope that their price will continue to rise
- the purchase of agricultural futures and options—essentially, bets that prices will either rise or fall—purely as an investment strategy (rather than as a way to manage risk related to the sale or purchase of commodities).

An aggressive form of commodity speculation involves holding large stocks of commodities off the market in a time of shortage in order to drive prices up. Sometimes, speculators will combine

hoarding with trading strategies that attempt to create or exacerbate shortages. "Cornering" a market—buying up enough of a commodity to effectively control its price—is the extreme example of such an approach. Formal commodities markets are generally subject to government regulations aimed at preventing such activities, though the effectiveness of such regulation varies widely around the world. Smaller markets are generally more susceptible to manipulation.

In many cases, only analysis after the fact will tell the difference between destructive speculation and healthy, productive investment in commodities and the agricultural sector. While some argue that the large chunks of new capital in the commodities markets have a destructive influence, others say that they simply make the markets more liquid, and thus more efficient, reducing trading costs. Low or declining food prices have long played a major role in keeping agricultural production stagnant in much of the developing world, and international development advocates have been clamoring for increased investment in agriculture for many years. Now, high prices are attracting capital to agriculture. In theory, this should be a good thing. But purely speculative investment is hardly what the development community had in mind.

Agricultural Markets: A Flood of New, Speculative Capital

"No one wants to get rich off hunger. But...profits on agriculture could cushion the blow for other sectors you own that might be getting hurt. One way to do it is with the PowerShares DB Agriculture ETF (DBA). It tracks an index composed of futures contracts on corn, wheat, soybeans and sugar. It's up 17% year-to-date—pretty good compared to the 9.5% loss for the S&P 500."

— Money and Markets, U.S. online investment newsletter

At the end of March 2008, according to Citigroup, investors worldwide held an estimated \$400 billion in commodity futures contracts—about \$70 billion more than at the beginning of the year, and twice as much as in late 2005. These investors include commodity index funds, commodity trading advisors, hedge funds, and exchange-traded funds. Many of them are trying to assemble commodity portfolios that replicate the performance of major commodity-price indexes, such as the Standard & Poor's/Goldman Sachs Commodity Index and the Dow Jones/AIG Index. They are doing so for two reasons. One is that commodity investments generally increase in value when other classes of assets decline. The second is that many investors believe that the commodity markets are in the midst of a "super cycle"—a long-term trend that will drive prices higher for years to come.

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Since the indexes mentioned above consist, respectively, of 12 and 30 percent agricultural products, roughly \$48-120 billion of the above investment is in agricultural futures. AgResource Company estimates that index funds alone now have more than \$47 billion invested in maize, soybeans, wheat, cattle, and hogs (in U.S. markets), up from \$10 billion only two years ago. Combined with growing activity by traditional futures traders, this capital influx has sharply increased the overall size of the futures markets. For example, the number of open futures contracts on the Chicago Board of Trade (CBOT) has increased more than threefold for both wheat and corn in the past five years, and has doubled for soybeans.

The Buying and Selling of Futures Contracts

Futures markets allow investors to bet on which way commodity prices will move over time. Each futures contract represents a commitment to sell or deliver a specified quantity of a commodity at a given price on a given date. For example, a grain elevator operator may agree in April to buy 40,000 bushels of corn (1,016 metric tons), to be delivered in December, after the fall harvest, at a price based on that of the December CBOT futures contract. On the same day, that operator will sell 8 December futures contracts (a standard CBOT corn contract is for 5,000 bushels, or about 127 metric tons of grain)—agreeing to sell the grain at roughly the same price paid the farmer—in order to cover the elevator against a possible fall in the cash-market corn price between April and December. The operator will deposit a “margin”—perhaps 8 to 10 percent of the contracts' value—with the commodity exchange, in order to cover possible changes in their value. In December, the grain elevator will usually buy another futures contract—one requiring it to purchase the same amount of grain. The two contracts cancel each other out, eliminating the need to deliver grain through the futures market. Any money gained or lost on the futures contract should be offset by gains or losses on the grain purchased from the farmer, since the futures-market price for corn should be the same as the cash-market price when the contract expires. In theory, any divergence between the two prices will be closed by arbitrageurs, who profit by buying in one market and selling in the other.

The transactions described above embody the two most critical purposes of futures markets: price discovery and hedging. Commodity transactions outside the futures markets are often based on the prices established within the markets. Hedging is the process by which those trading in physical quantities of commodities offset their price risks by buying or selling futures contracts.

Historically, most futures-market participants have been hedgers or “commercial traders,” seeking to manage risks associated with buying and selling the underlying commodities (see box). Commodity speculators, or “non-commercial traders,” have also been active in the markets, making limited, relatively short-term bets on price movements and employing sophisticated trading strategies to benefit from differences in prices for different delivery months. Traditional speculators move in and out of the futures markets in response to supply and demand developments. In contrast, the new, index-related investors in commodities seek to balance risks from other investments, such as stocks, bonds, and real estate. They buy futures without regard to price, until they have met their investment target, which is established in proportion to their investments in other sectors. They also bet only that commodity prices will rise.

A Speculation-Driven Bubble?

While food prices are rising for a number of reasons, there is growing concern that supply and demand do not adequately explain the speed and severity of the price increases. Many blame the flood of speculative capital into the U.S. commodity futures markets, which attract capital from around the globe and set global benchmark

prices. The Food and Agriculture Organization of the United Nations (FAO) chief Jacques Diouf has pointed to speculation by “hedge funds, index funds, and so on” as a factor in price increases. So have the head of the U.N. Environment Programme (UNEP), the U.N.'s Special Rapporteur on the Right to Food, prominent politicians in many countries, and well-placed financial analysts. Todd Kemp of the U.S. National Grain and Feed Association told Business Week, “The enormous influx of capital has resulted in the futures markets no longer reflecting supply and demand.”

In the United States, prominent critics such as hedge-fund manager Michael Masters, former U.S. commodities regulator Michael Greenberger, and Goldman Sachs chief economist Jim O'Neill, argue that the large, new, index-driven investments in commodities are driving up prices out of proportion to market fundamentals. They point to a major problem that has recently affected several U.S. agricultural commodity markets: the failure of futures and cash-market prices to match up when futures contracts expire. When futures and cash prices for commodities do not converge, futures contracts do not provide an effective hedge against price risks. This problem has occurred often enough in recent years for some in the agricul-

tural sector to describe the futures markets as “broken.” It can add up to very large losses when prices move the wrong way. One Missouri grain trader told the New York Times that he lost \$940,000 last fall when his futures hedge on a million bushels of soybeans did not match up with the cash market.

Price volatility has also been a major problem in agricultural commodity futures markets. In the first few months of 2008, volatility in several key agricultural futures markets was very high—triple the historical monthly averages for wheat and soybeans, and double for corn. High volatility means that those who trade in futures have to put more money down in order to maintain their hedges. If they do not have the cash—or an adequate source of credit—the commodity exchange will cancel their contracts and seize the funds they already have on deposit. Many market participants have found it increasingly difficult to obtain enough credit since global credit markets tightened in response to the U.S. subprime mortgage collapse.

The combination of price convergence problems and high volatility has made the commodity exchanges less reliable gauges of future prices and has lessened their usefulness as risk-management venues for agricultural producers and consumers.

Hoarding: the Real Speculative Problem

Many economists argue that speculation cannot be blamed for such problems, pointing instead to technical concerns regarding futures contracts, such as where grain is to be delivered and whether there is adequate storage available for those who would like to make money on price differences between cash and futures markets. They are also skeptical of a link between futures-market speculation and rising food prices. In a recent Wall Street Journal survey of economic forecasters, only 11 percent of respondents pointed to speculation as the most important factor in food-price increases. Furthermore, Princeton University economist Paul Krugman has argued that futures-market speculation cannot be exerting upward pressure on cash prices for commodities, unless high futures prices are leading to hoarding, and he finds no evidence in official statistics on stocks of agricultural commodities that such hoarding is occurring. The chairman of CME Group—the operator of the Chicago futures markets—Terry Duffy told Reuters that “to say that the speculator or the hedge funds or other participants are the root of the problem is really misguided.”

However, political scientist Robert Paarlberg counters that hidden hoarding may well be a significant factor in the global agricultural economy. He says that small-scale behaviors—such as household hoarding of rice in Asia or importers buying half a year’s supplies in a panic in January or February instead of spacing their purchases over six months—can add up to very significant numbers when multiplied by millions of families or thousands of firms. He cautions that it is simply too early to know whether hoarding is a significant factor,

especially given the time lag involved in most statistics.

Some hoarding is definitely occurring. Expatriate Filipinos in Canada are sending 40-pound bags of rice to family members in the Philippines. Even American consumers have stocked up on some commodities—especially rice—in response to limited availability. In addition, governments around the world have been cracking down on grain hoarders. Peru’s prime minister “declared war” on food-price speculators in March. In India, large rice warehouses in New Delhi and Mumbai have been raided by police. In the Philippines, criminal syndicates have been caught reselling large quantities of grain originally intended for subsidized sale by the government to the poor.

Ironically, it is national governments themselves that may be the biggest hoarders. Export bans are the most significant way in which food stocks are kept off international markets. At least 29 countries recently have put sharp limits on their food exports, in order to build up reserve stocks and keep prices low in their domestic markets. These include 14 countries that have put limits on rice trade and more than a dozen that have limited corn exports. Several major producers have also curbed wheat exports. In response to this, Rajat Nag, the managing director of the Asian Development Bank, declared “[The] banning of exports is no different from hoarding at a national level.”

Managing Speculation...and Prices

Strong, sustained commodity market movements virtually always attract speculation. Noted investor Warren Buffett has observed that fundamentals start most major market trends, and then speculation takes over. Policymakers now face the challenge of limiting speculation that distorts markets without discouraging healthy investments in agriculture. Their key goals will be to promote transparency and reduce opportunities for market manipulation at all levels of the world’s food markets, from local to global.

Reforming commodity markets is an important first step. In the United States, where the world’s largest markets set global benchmark prices, domestic regulatory decisions have worldwide implications. A federal task force led by the Commodity Futures Trading Commission is considering possible reforms to the futures markets. Some of the most likely initiatives include

- implementing technical reforms—especially those related to commodity delivery—in order to tighten links with cash-market prices,
- requiring more comprehensive and detailed reporting of transactions, in order to make it easier to determine how speculation is affecting markets,
- re-examining limits on the size of speculative positions, especially for index-fund investors,

(continued on page 12)

- revising margin requirements (requiring investors to provide larger “down payments” on futures contracts),
- and reforming the laws governing pension funds and limiting their ability to invest in commodity futures.

Reforms to improve transparency are crucial because they should enhance understanding of how and when markets are affected by speculation. However, reforms that could take some traders out of the futures markets are more controversial. A recent University of Illinois study concluded that increasing margins, for example, “may well be counter-productive in terms of price levels or market volatility.” Fewer traders can mean less liquidity, which can make a market less efficient.

While futures markets are often disparaged as venues for speculative activity, countries with limited or nonexistent formal markets for agricultural products should not discount their potential benefits. Small farmers in developing countries desperately need real investments not only in agriculture itself, but also in the institutions and infrastructure that underpin healthy agricultural economies. Unpredictable prices are among the farmer’s greatest enemies. As International Monetary Fund chief Dominique Strauss-Kahn argues, “We...need a new approach to risk mitigation and insurance at the level of both individual farmers and countries,” including “robust futures markets.” Freer agricultural markets offer the promise of greater potential rewards for producers, and, in turn, greater food supplies, but the increased output only comes when farmers invest more labor and capital, and thus risk more. Futures markets—and free, transparent cash markets, on which they must be founded—can be a key component of a suite of institutions and products that can help agricultural producers and consumers manage production and price risks.

While politicians tend to highlight criminal prosecutions of hoarders—or high-profile shutdowns of commodity markets—quieter, often slower efforts to establish, and more effectively oversee, formal markets may be more important ways to reduce the influence of speculation on domestic agricultural markets. The recent opening of the Ethiopian Commodities Exchange, led by IFPRI researcher Eleni Gabre-Madhin, is a good example. One Ethiopian grower told the Wall Street Journal that if his country had had such an exchange in 2003, “maybe we wouldn’t have had the famine,” since greater access to markets might have led to more consistent planting and harvests. Strong oversight is also important. While the Indian (and Chinese) government’s recent temporary suspension of futures trading in some agricultural commodities has received considerable attention, it is not clear that it will do much to reduce food-price inflation. It may be more important for Indian authorities to focus on reforms that improve market transparency, argues Indian business journalist G. Chandrashekar.

As IFPRI director general Joachim von Braun points out, “real shortages in the world food markets are the fundamental problem, but excessive speculation is now a cause for concern, because without properly functioning markets the incentives for investment will not translate into stimulating production and the poor are hurt by any increased price volatility.” The small-farm producers in the developing world are often the ones who end up suffering the most from market instability.

The complex problem of speculation needs a set of complex solutions. In the long run, investment in agricultural production is key for reducing the incentive for speculation. Another important route to reducing the influence of speculative behavior on food prices is international trade reform. Export restrictions and other forms of hoarding can affect food markets as much as any other speculative activity. Moreover, the current low levels of grain reserves need to be addressed. A recent report by von Braun and Maximo Torero, director of IFPRI’s Markets, Trade, and Institutions Division, proposes that a “virtual grain reserve” be established to help calm markets through the futures market. It is an innovative approach to creating a global reserve that would solve the problem countries face of insuring against abrupt price increases and supply disruptions without building up physical stocks of food—actions that can, by themselves, drive up prices. ■

—Reported by John E. Young

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