

# ECONOMIC CRISIS IN ASIA: A FUTURE OF DIMINISHING GROWTH AND INCREASING POVERTY?

Mark W. Rosegrant and Claudia Ringler

2020 BRIEF 57

A 2020 Vision for Food, Agriculture, and the Environment

OCTOBER 1998

After more than a decade of rapid economic growth, many East and Southeast Asian countries face the prospect of a long economic slump, and the poor in these countries face a reversal of their halting climb out of poverty. Between mid-1997 and the spring of 1998, the currencies of five of these nations (South Korea, Indonesia, Malaysia, the Philippines, and Thailand) fell by 40–80 percent against the U.S. dollar, precipitating a financial and economic crisis, the long-term effects of which are uncertain. The expected growth rates of gross domestic product in the region's economies have been revised sharply downward, into negative territory in most cases. The declining growth rates and depreciating exchange rates may significantly alter the levels of malnutrition, nature of domestic food demand, and patterns of trade in the region and throughout the developing world. Exports from the developed world will be affected as well.

Although the long-term effects of the crisis on income growth and real exchange-rate depreciations are unclear at this point—making it difficult to assess long-term changes in global food markets and food security—the crisis is likely to have some persistent negative effects. The potential impact on agriculture and nutrition can be gauged by using IFPRI's recently updated global food model—which covers world food production and consumption for 18 agricultural commodities—to compare three scenarios through 2020. The baseline scenario reflects the economic trends prevailing before the onset of the crisis. In the severe Asian-crisis scenario, the short-term effects seen so far in Asia are assumed to worsen significantly. Income growth rates drop to half of pre-crisis levels and domestic agricultural prices rise by 10–30 percent as a result of currency devaluations. In the moderate Asian-crisis scenario agricultural commodity prices rise to half the severe-scenario levels and income growth rates almost recover to pre-crisis levels.

## CEREAL AND LIVESTOCK DEMAND

Pre-crisis trends indicate that world cereal demand would have grown from 1,773 to 2,511 million metric tons between 1993 and 2020—a 42 percent increase—and that demand for cereals consumed by humans would have grown by 354 million tons, a 39 percent increase. As a result of the Asian crisis, cereal demand will fall in comparison with the baseline scenario, but by relatively small amounts. Total cereal demand in 2020 is expected to decline by 74 million metric tons (3 percent) in the severe-crisis scenario and by 19 million tons (0.8 percent) in the moderate scenario. In Asia, the contraction will be slightly

larger: 4.1 percent in the severe- and 0.9 percent in the moderate-crisis scenarios. Falling rates of income growth will increase the demand for food cereal in China and other East Asian countries but decrease this demand in South and Southeast Asia. Larger changes are likely for feed cereal demand, which will decline by 60 and 17 million tons in the severe and moderate scenarios, respectively. All developing Asian countries will decrease their feed demand in the severe scenario except for Malaysia and South Korea. In these two countries higher prices for livestock resulting from currency depreciation will drive up livestock production more than decreasing income growth will push it down.

The Asian crisis will have far larger repercussions on the global supply, demand, and markets for livestock products, which are more price- and income-sensitive. In the pre-crisis baseline scenario, global meat demand was expected to increase by 64 percent, with Asian demand accounting for 61 percent of this increase, and Chinese demand alone accounting for 42 percent. But if a severe-crisis scenario unfolds, world meat demand will be 8 percent below the baseline trend (2 percent below in the moderate scenario) and developing countries in Asia will be hit hardest. Demand for meat in China, for example, will plunge by 23 percent, and the Chinese share of the increase in global meat demand will drop 10 percent. Indonesian and Philippine meat demand will decrease by almost one-third. The biggest drop in livestock demand in developing countries will be for pigmeat (19 percent), followed by poultry and beef, 13 and 8 percent, respectively.

Although the contraction in the demand for meat in Asia could be large, it will not threaten the region's increasingly important role in global food markets. Asia's share of global meat demand will fall by 7 percent, to 35 percent, under the severe scenario, and by only 2 percent under the moderate scenario. Global meat demand will still be dominated by developing countries—they will account for 59 percent of the demand for meat even in the severe scenario.

## TRADE

In the pre-crisis baseline, global net trade in cereals rises by 75 percent and trade in livestock products nearly doubles by 2020, with increased Asian imports accounting for much of this growth, and U.S. and European exports expanding rapidly. Some of the shifts in demand are dramatic—developing Asia, for example, increases its cereal imports by almost 350 percent. Eastern Europe and the



**Projected number of malnourished children in 2020—baseline, moderate, and severe scenarios**

Region	Baseline	Severe Asian crisis	Moderate Asian crisis
	(million)		
South Asia	65.6	76.7	68.1
Sub-Saharan Africa	38.6	37.8	38.1
China	16.4	19.1	16.9
Southeast Asia	10.1	12.2	10.7
West Asia/North Africa	6.4	6.3	6.3
Latin America and the Caribbean	6.4	6.2	6.3
<b>Total</b>	<b>143.4</b>	<b>158.3</b>	<b>146.5</b>

Source: Mark Rosegrant and Claudia Ringler, "Asian Economic Crisis and the Long-Term Global Food Situation," June 1998.

former Soviet Union become large net exporters instead of large importers by 2020.

But if the crisis continues to be severe, global net cereal trade will decline by 20 million tons (6 million if the crisis turns out to be moderate) and net imports by developing countries will decline by 13 million tons (3 million if the crisis is moderate) compared with the baseline projections. Asia would reduce its imports the most; its net imports of cereals would be 21 percent below pre-crisis levels. Within Asia, Southeast Asian net cereal imports would contract by 55 percent.

How the Asian economic crisis plays out will also have a decisive impact on the direction and magnitude of global livestock trade and export earnings of developed countries. Under the severe crisis scenario, China and several Southeast Asian countries will shift from import to export positions in livestock, virtually eliminating growth in developed-country livestock exports. The sharp reductions in meat exports and smaller cutbacks in other agricultural exports, combined with lower world commodity prices, would result in large reductions in the agricultural export earnings of developed countries. The United States would lose US\$12 billion annually in exports of cereals, meat and dairy products, soybeans, oils, oilcakes, and roots and tubers. Western Europe and other developed countries would earn US\$10 billion less in exports of these commodities.

**FOOD SECURITY AND NUTRITION**

Pre-crisis trends show per capita food availability increasing by about 10 percent between 1993 and 2020. Daily calorie consumption per person rises from 2,684 to 2,945.

Although per capita food availability improves in all major regions, the level of improvement is small in some regions.

The most devastating impact of a severe crisis would be on the food security of Asian countries. Energy intake would drop by about 140 calories per person per day in developing countries, with Southeast Asian consumption dropping by 291 calories to 2,647. Small-scale farmers and the rural and urban poor in developing Asia would be hit hardest by declines in income levels. But in some regions—Latin America, Sub-Saharan Africa, and West Asia/North Africa—calorie availability would actually improve slightly because of price-induced increases in food consumption.

If pre-crisis trends had continued, the number of malnourished children under the age of five would have decreased by 23 percent in developing countries. But as a result of the Asian crisis, the number of malnourished children could rise substantially in comparison with the baseline projection. In the severe-crisis scenario the number of malnourished children in developing countries will increase by 15 million by 2020, from 143 to 158 million. In the moderate scenario, the human cost would still be an additional 3 million children without adequate food. In the severe crisis scenario, the number of malnourished children will increase by 11 million in South Asia, by almost 3 million in China, and by 2 million in Southeast Asia (see table). The number of malnourished children will decline slightly in developing regions outside Asia as a result of lower food prices.

**CONCLUSIONS**

Recovery from the crisis will depend, in part, on increases in Asia's exports to some of the larger developed markets, like the United States and Western Europe. But developed countries themselves are suffering from the crisis to varying degrees, depending on their trade and financial links with Asia and pre-crisis economic and financial positions. Long-term scenarios for food supply, demand, and trade indicate that world cereal and livestock prices will decline much more slowly than in the past several decades, even under the severe-crisis scenario. The stronger price structure is the result of the continuing, gradual slowdown in the rate of growth in both production and consumption. Other structural elements will also hold in place even as changes in welfare occur. The growth in cereal trade remains strong in all three scenarios, and Asia's role as a major player in cereal and livestock markets in the coming decades is not likely to be threatened by the current crisis. But at the same time the crisis is expected to have its most devastating effect on Asian food security.

For more information, see Mark Rosegrant and Claudia Ringler, "Asian Economic Crisis and the Long-Term Global Food Situation," paper prepared for the International Agricultural Trade Research Consortium Symposium on Policy Reform, Market Stability, and Food Security, June 1998.

Mark Rosegrant is a research fellow and Claudia Ringler a research analyst in the Environment and Production Technology Division at IFPRI.



"A 2020 Vision for Food, Agriculture, and the Environment" is an initiative of the International Food Policy Research Institute (IFPRI) to develop a shared vision and a consensus for action on how to meet future world food needs while reducing poverty and protecting the environment. Through the 2020 Vision initiative, IFPRI is bringing together divergent schools of thought on these issues, generating research, and identifying recommendations. The 2020 Briefs present information on various aspects of the issues.