Global Food Policy and Food Security Symposium Series

Managing Food Price Volatility: Approaches at the Global, National, and Household Levels

Peter Timmer
Thomas D. Cabot Professor of Development Studies, Emeritus
Harvard University
May 26, 2011
Stanford University
Managing Food Price Volatility: Approaches at the Global, National, and Household Levels

C. Peter Timmer
Thomas D. Cabot Professor of Development Studies, Emeritus
Harvard University
ptimmer63@gmail.com

Presented at the Stanford Symposium on Global Food Policy and Food Security

May 26, 2011
What is the right price of food?

Quotations collected by
Johan Swinnen and Scott Rozelle
What is the right price of food?

Oxfam:

**In 2005:**
“US and Europe’s surplus production is sold on world markets at artificially **low** prices, making it impossible for farmers in developing countries to compete. As a consequence, **over 900 millions of farmers are losing their livelihoods.**”

**In 2008:**
“**Higher** food prices have pushed millions of people in developing countries further into hunger and poverty. There are now **967 million malnourished people in the world.**…”
What is the right price of food?

IFPRI:

In 2003:
“The combination of agricultural protectionism and subsidies in industrialized countries [and the resulting low agricultural prices] has limited agricultural growth in the developing world, increasing poverty and weakening food security in vulnerable countries.”

In 2008:
“In 2007, rapidly rising food prices began to further threaten the food security of poor people around the world. … The current food-price crisis can have long-term, detrimental effects on peoples’ health and livelihoods, and can contribute to the further impoverishment of many of the world’s poorest people.”
What is the right price of food?

FAO (United Nations):

In 2005:
“The long-term *downward* trend in agricultural commodity prices threatens the food security of hundreds of millions of people in some of the world's poorest developing countries.”

In 2008:
“Rising food prices are bound to *worsen the already unacceptable level of food deprivation suffered by 854 million people*. We are facing the risk that the number of hungry will increase by many more millions of people.”
What is the right price of food?

OECD, IMF, World Bank:

In 2003/4:
“Many (developed countries) continue to use various forms of export subsidies that drive down world prices … Because the majority of the world’s poorest households depend on agriculture and related activities for their livelihood, this is especially alarming.”

In 2008/9:
“The increase in food prices represents a major crisis for the world’s poor … Up to 105 million people could become poor due to rising food prices alone.”
A Framework for Discussion
# Basic framework for understanding food security issues

Table 1

<table>
<thead>
<tr>
<th>SHORT RUN</th>
<th>LONG RUN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MACRO</strong></td>
<td></td>
</tr>
<tr>
<td>Managing food price crises and budgeting for safety nets</td>
<td>Inclusive economic growth and the management of price stability</td>
</tr>
<tr>
<td><strong>MICRO</strong></td>
<td></td>
</tr>
<tr>
<td>Vulnerability to shocks, coping mechanisms and resilience</td>
<td>Poverty reduction and access to nutritious food = <em>sustainable food security</em></td>
</tr>
</tbody>
</table>
## Different categories of price instability management instruments

<table>
<thead>
<tr>
<th>GOVERNANCE</th>
<th>OBJECTIVE</th>
<th>STABILIZE PRICES</th>
<th>REDUCE EFFECTS OF PRICE INSTABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARKET-BASED</td>
<td>Category A</td>
<td>Storage and transportation</td>
<td>Category B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insurance, hedging, and futures markets</td>
</tr>
<tr>
<td>PUBLIC</td>
<td>Category C</td>
<td>Buffer stocks</td>
<td>Category D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Import/export controls</td>
<td>Safety nets</td>
</tr>
</tbody>
</table>
Some historical perspective: What’s the problem?
World Bank forecast for prices of grains

Figure 1: Annual grain prices (constant US$2000) historically high, and forecast to stay high in medium term (by World Bank)

Source: Christiaensen, 2011
Real rice prices since 1900

Figure 2. Long-run trend in real rice prices, 1900-2008

Source: Data from Eberstadt (2008), analysis by author.
General issues to be resolved:

- Where is price instability a problem?
- Which commodities need more stable prices?
- What instruments are available to stabilize prices?
- How can interventions be governed?
- How do we evaluate results?
Approaches at the local level:

- See Chris Barrett presentation on April 27

- Social safety nets
  - input subsidies, food transfers, cash transfers, nutrition interventions, public works

- Inclusive economic growth and higher real wages
  - the only sustainable solution
Approaches at the National Level:

• Food reserves to stabilize prices

• Border controls to prevent high world prices from being transmitted to domestic markets

• Higher agricultural productivity

• Food subsidies

• Nutrition and health programs
Approaches at the Global Level:

• Information/analysis as a public good

• Transfer risk from countries to donors

• Invest in raising agricultural productivity

• Stabilize food prices in world markets (?)

• Prevent/mitigate climate change (?)
Contrasting experiences in Asia and Africa
Figure 3: Indexes of real international and producer prices of rice, developing countries’ unweighted average, 2006-2010 (2005=100)

Source: FAOSTAT producer prices (www.fao.org) and international reference prices from the World Bank’s Prospects Group (econ.worldbank.org) [from Martin and Anderson, 2011]
Rice prices in India and Bangladesh, relative to Thai export price

Figure 4. Dhaka, Delhi and Bangkok Rice Prices from Jan 2000 to Oct 2010, converted to Taka

Source: Clay, Keats, and Terhal, 2011
Maize prices in Malawi compared with world export prices

Figure 5. Monthly Malawi and International export prices in US dollars since 2004

Source: Clay, Keats, and Terhal, 2011
Rice prices in Mali and Senegal

Figure 6. Rice prices in Mali and Senegal, compared with Thai export prices

Source: Clay, Keats and Terhal, 2011
What to do?

• Help households cope with price risks

• Help countries stabilize domestic food prices, with minimal spillover to global markets

• Help regional organizations provide productive forums for coordinated food reserve policies

• Treat stable food prices as a “good” rather than a “bad”
So, what is the right price of food?

About US $400 per metric ton for 25% broken rice, fob Bangkok or Saigon
FSE wishes to thank our speaker
Peter Timmer
and our series sponsor
The Bill & Melinda Gates Foundation

May 26, 2011
Stanford University