Food Price Volatility and Food Security

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Deflated Food and Petroleum Price indices, 1980-2010

FIGURE 2  Real non-fuel commodity price index, 1913–2010
(Index, 1977–79 = 100)

(c. 1917): peak of WWI
(c. 1951): postwar rebuilding
(c. 1974): first oil crisis

NOTE: Deflated using the US BLS consumer price index (CPI).

Naylor and Falcon, 2010
### Monthly variations by decade, for selected real commodity prices, coefficient of variation (in %)

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<tr>
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<tbody>
<tr>
<td>Wheat</td>
<td>0,143</td>
<td>0,176</td>
<td>0,331</td>
</tr>
<tr>
<td>Rice</td>
<td>0,303</td>
<td>0,142</td>
<td>0,489</td>
</tr>
<tr>
<td>Maize</td>
<td>0,168</td>
<td>0,170</td>
<td>0,317</td>
</tr>
<tr>
<td>Petroleum</td>
<td>0,322</td>
<td>0,140</td>
<td>0,457</td>
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Main Factors driving food price volatility

- Fundamental Factors (production, demand, supply)
- Market factors- improved price transmission from world prices
- Excess liquidity and Speculation
- Market liberalization
- Petroleum Prices
- Biofuels demand
- Role of emerging economies
Maize Prices for Zambia and World Prices

WORLD

ZAMBIA
Impacts of Food Price Volatility on African Households

- To the extent that international food price volatility transmits to domestic markets, the main question is how these price shocks affect food security of households.

- Higher food prices tend to hurt the poor, since they spend a much larger fraction of their incomes on food than do rich households.

- The high share of food and fuel in consumer baskets in these countries means their economies are particularly sensitive to food and fuel price shocks.

- Domestic price changes have implications for political stability of governments in some countries, e.g., demonstrations in some West African countries in 2008.
  - Burkina Faso, Cameroon, Guinea, Ivory Coast, Senegal witnessed large-scale riots in response to higher food prices.
FIGURE 6  Household expenditure patterns by poverty category from selected LSMS surveys

Source: Naylor and Falcon, 2011
<table>
<thead>
<tr>
<th>Location</th>
<th>Crops and Livestock</th>
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</thead>
<tbody>
<tr>
<td>Ghana, 1998</td>
<td>Maize (24), rice (4), cassava (5), vegetables (4)</td>
</tr>
<tr>
<td>Malawi, 2004</td>
<td>Maize (13), sweet potatoes (5), groundnuts (12), soybeans (5), vegetables (9), chickens (17)</td>
</tr>
<tr>
<td>Uganda, 2000</td>
<td>Maize (25), cassava (11), sweet potatoes (5), beans (23)</td>
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</tbody>
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Source: Wang (2009), Stanford University
Conclusions and Implications

- Policies at the macro level and petroleum prices appear to be the primary determinants of the recent food price volatility and will probably remain so in the future.

- Food price volatility, in particular price spikes, has profound effects on poor consumers, and remains a major obstacle to improved food and trade policy in developing countries.

- Low income countries are more vulnerable because they have less capacity to protect themselves from global price volatility.

- Food price volatility deserves much more attention in the policy arena in order to improve food security globally.