Regional Trade in Food Staples: Stimulating Agricultural Growth and Improving Food Security in Eastern and Southern Africa

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Outline

• Importance of food staples
• Regional trade in food staples
• Secondary food staples
• Policy implications

Value of Agricultural Production in Sub-Saharan Africa, 2000

<table>
<thead>
<tr>
<th></th>
<th>Value ($US billions)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag. Exports</td>
<td>$17</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Domestic staples</strong></td>
<td><strong>$50</strong></td>
<td><strong>73%</strong></td>
</tr>
<tr>
<td>Other</td>
<td>$2</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>$68</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Diao and Hazell (2004)

Growing markets for food staples

Urban population will double in next 15 years

Urbanization → growing demand for purchased and prepared foods

Rural specialization → growing rural food markets
Dried cassava exiting Zambia for the DRC

Food Staple Markets
- Big
- Growing
- Important to the rural and urban poor

- Agricultural growth
- Poverty reduction
- Improved food security

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Deficit markets

Surplus food production zones

Mozambique
Surplus Zones and Deficit Markets in ESA

**Surplus Zones**
- Northern Mozambique
- Southern Tanzania
- Eastern Uganda
- South Africa

**Deficit Markets They Serve**
- Malawi
- Malawi, DRC
- Kenya
- Zimbabwe, S. Mozambique, Malawi

Maize Market Sheds in ESA
Cross border opportunities

- Africa’s political boundaries cut across natural market sheds.
- COMESA and other RECs enable cost savings by facilitating low-cost cross-border flows.
Trade moderates price volatility

South Africa, domestic and border prices for white maize, 1992-2006

Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1993-2000

Source: Dorosh (2001).
Lusaka, domestic and border prices for white maize, 1994-2006

When does import parity fail to cap price rises?
- When import and export bans prevent trade
- Foreign exchange unavailable
- Government protects farmers
- Late decision making and import authorization
- Uncertainty over government action
- When traders fear subsidized government sales will

Import parity caps price rises
- When borders remain open
- Foreign exchange is available
- Under stable, predictable government policies

South Africa, domestic and border prices for white maize, 1992-2006

Regional trade in food staples
- **Deficit Zones**
  - Reduces price volatility
  - Improves food security
- **Surplus Zones**
  - Improves producer incentives
  - Accelerates agricultural growth

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Cassava is drought-resistant

Perennial food staples: cassava, banana
- Can be harvested any time of year
- Over multiple years
- Drought resistant
- Dual staple zones allow farmers to expand cassava production for local consumption and export maize to deficit zones in times of stress

Cassava production

Maize production

Dual staple zones
Northern Zambia, a dual-staple zone

<table>
<thead>
<tr>
<th></th>
<th>Dual staple zone</th>
<th>Maize belt</th>
<th>All Zambia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cassava</td>
<td>270</td>
<td>12</td>
<td>282</td>
</tr>
<tr>
<td>Maize</td>
<td><strong>376</strong></td>
<td>525</td>
<td>901</td>
</tr>
<tr>
<td>Cassava plus maize</td>
<td>646</td>
<td>537</td>
<td>1,183</td>
</tr>
</tbody>
</table>

Maize and cassava sell side-by-side

Two food security shock absorbers

- Regional trade
- Substitution among food staples

Trade policy impact on maize prices in Zambia

<table>
<thead>
<tr>
<th>Maize price under alternate trade regimes (% change from normal)</th>
<th>Closed border</th>
<th>Open border</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize harvest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bumper harvest (30% above normal)</td>
<td>-50%</td>
<td>-26%</td>
</tr>
<tr>
<td>Drought (30% below normal)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Dorosh, Dradri and Haggblade (2007)

Open borders plus consumer substitution among food staples

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<th>Maize price under alternate trade regimes (% change from normal)</th>
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<tr>
<td>Maize price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor household consumption (1000 tons of maize-equivalents)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassava</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
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</table>

Source: Dorosh, Dradri and Haggblade (2007)
oppen border moderates price increases (by capping price increases at import parity) during a drought and also limits price fall during a bumper year (by allowing exports to cushion the price fall).

aecsetup, 05/11/2007
Open borders plus consumer substitution among food staples

<table>
<thead>
<tr>
<th>30% fall in maize prodn</th>
<th>Closed border</th>
<th>Open border</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize price</td>
<td>+163%</td>
<td>+36%</td>
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</table>

Poor household consumption

<table>
<thead>
<tr>
<th>1000 tons of maize-equivalents</th>
<th>Closed border</th>
<th>Open border</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>-100</td>
<td>-43</td>
</tr>
<tr>
<td>Cassava</td>
<td>+43</td>
<td>+11</td>
</tr>
<tr>
<td>Total</td>
<td>-57</td>
<td>-33</td>
</tr>
</tbody>
</table>

Source: Dorosh, Dradri and Haggblade (2007)

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Policy Implications

• Open borders
• Secondary food staples
• Trust

Open borders

• Stabilize prices
• Moderate consumption pressure,
• improve investment incentives for farmers and traders in surplus zones

Trade bans

• Drive trade into informal channels
• Raise transaction costs
• Increase bands between import and export parity
• Discourage investment in staple food production and trade
Secondary staples
- Stabilize food availability during drought years
- Substitute for maize in livestock feeds, starch and sweeteners
- Require public investments in research

Trust
- Stable, predictable policies
- Open dialogue and communications
- Competitive markets (predictable policies, finance, good infrastructure)
- Good crop forecasting and market information systems