Strategy Options for the Maize and Fertilizer Sectors of Eastern and Southern Africa

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July 1, 2005

- General consensus
  - Need for “big push” agricultural strategy to stimulate economic growth in Africa
  - Current trends are pointing to demise of the smallholder farm sector unless change in commitment
- Major debate over how to do it, particularly with regard to
  - Food price support/stabilization
  - Input subsidies
Format:

1. “Empirical regularities” of small farm agriculture in Africa
2. Discuss pros and cons of contentious policy issues
3. Review performance – ag. stagnation
4. Clarify the policy environment having generated poor ag. performance
5. Conclusions and policy directions

Farm Size Distribution: Smallholder Sector only
Smallholder Households’ Position in the Maize Market

Characteristics of smallholder farmers, Zambia 1999/00

<table>
<thead>
<tr>
<th></th>
<th>N=</th>
<th>Farm size (ha)</th>
<th>Asset values (US$)</th>
<th>Gr. Rev., maize sales (US$)</th>
<th>Gr. Rev., crop sales (US$)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Top 50% of maize sales</td>
<td>23,680</td>
<td>6.0</td>
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<td>823</td>
<td>2,282</td>
</tr>
<tr>
<td>Rest of maize sellers</td>
<td>234,988</td>
<td>3.9</td>
<td>541</td>
<td>74</td>
<td>135</td>
<td>514</td>
</tr>
<tr>
<td>Households not selling maize</td>
<td>762,566</td>
<td>2.8</td>
<td>373</td>
<td>0</td>
<td>36</td>
<td>291</td>
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</table>
Role of maize in small farm incomes is declining (share of gross sales revenue)

<table>
<thead>
<tr>
<th></th>
<th>maize</th>
<th>Other grains/beans/oilseeds</th>
<th>Non-food cash crops</th>
<th>Fruits - veges</th>
<th>Animal products</th>
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<tbody>
<tr>
<td>Kenya</td>
<td>13.3</td>
<td>7.9</td>
<td>34.0</td>
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<td>2.3</td>
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<td>Mozam</td>
<td>13.8</td>
<td>9.3</td>
<td>16.9</td>
<td>30.4</td>
<td>23.4</td>
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<td>28.2</td>
<td>7.7</td>
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Conclusions thus far:

- Great rural differentiation
- Land allocation highly concentrated
- 2% of households account for 50% of marketed grain surplus
- Crop price supports:
  - highly concentrated benefits
  - anti-poor?
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Strategies for the maize and fertilizer sectors:

- Strategies for which there is widespread agreement:
  - invest in crop science and technology
  - Extension / farm management
  - Rural infrastructure
  - Education
  - HIV/AIDS
  - Governance
  - Safety nets for vulnerable consumers
Strategies for the maize and fertilizer sectors:

- Strategies for which there is controversy:
  - Commodity price stabilization / price supports
  - Input subsidies

Commodity Price Supports

- Arguments for:
  - Market failures – private sector is weak
  - During years of good harvests, small farmers need price supports to maintain incentives to producer
  - High prices exacerbate hunger and possibly political unrest
  - Large price fluctuations between import parity and export parity prices
Domestic Prices Reaching Import Parity More Frequently: Malawi

Domestic Prices Reaching Import Parity More Frequently: Zambia
Commodity price stabilization/subsidy

- Arguments against:
  - Revenue stability or price stability?
  - Only 20% of farmers sell grain – most farmers don’t face export parity prices
  - Benefits proportional to landholding size
  - Regressive?
    - In Zimbabwe prior to market reform, 4% of smallholder farmers derived 50% of all govt expenditures on maize pricing policies
  - Very costly – 5% of GDP in Kenya, Zimbabwe
  - Hinders development of private trade
    - example from Uganda-Kenya, 2004/05; Malawi 2001/02

Characteristics of smallholder farmers, Zambia 1999/00

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Domestic Prices Reaching Import Parity More Frequently: Malawi

![Graph showing domestic prices reaching import parity more frequently in Malawi.]

Fertilizer/credit subsidies:

- Arguments for:
  - Input market failures $\rightarrow$ small farmers are denied access
  - Gives producers incentives to intensify food production
  - Instrumental part of “green revolutions” in Asia
  - Productivity growth nurtures structural transformation processes
Fertilizer/credit subsidies:

- Arguments against:
  - What does “market failure” mean?
    - Underlying cause of low use:
      - Lack of credit or low profitability of input use?
  - Benefits tend to be disproportionately captured by better-off farmers, unless near universal coverage
  - Costly – foregone payoffs from alternative public investments
  - Inhibits development of private sector capacity

IFPRI study findings:

- Fertilizer subsidies could be justified on either efficiency or equity grounds in principle, but not in practice, given their poor performance.
- “If a fertilizer subsidy program is to be economically justifiable, it should be designed (1) to preserve a competitive fertilizer marketing program, and/or (2) to provide benefits to poor farmers in a cost-effective way. It is not clear that either goal is feasible” (Kherallah et al, 2002; IFPRI study)
Format:

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✓ Discuss pros and cons of contentious policy issues
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✓ Conclusions and policy directions

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<th>Market-led</th>
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<td>E. / S. Africa (post 1990)</td>
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Market performance in much of E. / S. Africa since 1990 has not been impressive

What has been the food and input marketing policy environment since 1990?

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Marketing Boards’ share of estimated maize surplus:

- NCPB (Kenya):
  - 40% (1990-2003)

- ADMARC (Malawi):
  - 15% (1995–2003) – not including sales from imported stocks

- FRA (Zambia):
  - 34% (1997-2003) - mostly from sales of imported stocks

Major features of policy environment in E. / S. Africa

- Marketing boards continue to play strong role in food markets
- Discretionary approach to
  - export bans
  - import tariffs
  - state importation/stock release
  - internal levies
- Large-scale input subsidies in Malawi and Zambia
“Empirical assessments of these countries since 1990s reflects not the impact of unfettered market forces but rather the mixed policy environment of legalized private trade within the context of continuing strong govt. operations in food markets” (Jayne et al., 2005).


<table>
<thead>
<tr>
<th>Year</th>
<th>Sub-Saharan Africa</th>
<th>Kenya</th>
<th>Malawi</th>
<th>Zambia</th>
<th>Zimbabwe</th>
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<tbody>
<tr>
<td>1985</td>
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The Challenge: How to promote labor productivity of small farms?

\[ Y = A \times L \]

- \( Y \) = value of output
- \( A \) = area cultivated
- \( L \) = labor in agriculture
Policy Implications: Where from here?

- Policy focus on:
  - Public goods support for market development –
    - R & D, extension, rural infrastructure, etc.
    - currently very low
  - To what extent are "market failures" a reflection of "public goods failures"?

Policy response (cont.)

- Lobby forcefully for more level playing field in international trade
  - OECD support for African ag: $50 bill./yr
  - OECD ag. subsidies: $350 bill./yr
  - Reassess developed country policy of dumping free food in Africa under guise of "food for development"
Getting Markets Right: What does this mean?

- Not getting government out of markets
- Changing the *role* of government from direct intervention to supportive investments to make markets work
  - Public goods investment
  - Support development of farmer organizations
  - Create “stable” policy environment: uncertainty over import tariffs, export bans
  - Commodity risk management tools (e.g. warehouse receipt systems)
- Is market liberalization complete? Wrong question

Last point:

- Must deal realistically with political economy issues
- “In theory, there is no difference between theory and practice, but in practice, of course, there is”
Emerging consumption trends

- Urban population growth:
  - 50% of Africa will be urban by 2020
  - → rapid growth in staple demand
- Major staple in many urban areas: WHEAT, RICE, not maize
Nairobi staple expenditure patterns

Figure 7: Expenditure on Primary Staples (KSh per a.e/month)

Emerging consumption trends

- Urban population growth:
  - 50% of Africa will be urban by 2020
  - \rightarrow rapid growth in staple demand
- Major staple in many urban areas: WHEAT, RICE, not maize
  - largest part of demand growth for staples will not be for domestic staples
- Challenge: how to fuel demand for domestic staples when intl supplies are increasingly substituting for domestic crops