FOOD SELF-SUFFICIENCY: DOES IT MATTER FOR DEVELOPING COUNTRIES?

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Trace the trajectories of successful commercial smallholders operating under differing sets of market institutions.

Maize receives intensive government input and marketing support.

Cotton relies primarily on private contract farming schemes.

Horticulture enjoys no large-scale institutional support from either the public or private sectors.

## How Institutional Frameworks Influence Farmer Opportunities and Agricultural Trajectories

<table>
<thead>
<tr>
<th></th>
<th>Key Institutional Support</th>
<th>Input Supply</th>
<th>Output Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maize</strong></td>
<td>Public</td>
<td>Farmer Input Support Programme (FISP)</td>
<td>Food Reserve Agency (FRA)</td>
</tr>
<tr>
<td><strong>Cotton</strong></td>
<td>Private</td>
<td>Input Credit from Ginneries</td>
<td>Contract Sales to Ginneries</td>
</tr>
<tr>
<td><strong>Horticulture</strong></td>
<td>None</td>
<td>Individual Farmers self Financed Inputs</td>
<td>Farmers, Assembly traders and private brokers manage marketing</td>
</tr>
</tbody>
</table>
• High social payoffs
  • But payoffs come 5-20 years later
  • Critical for sustained poverty reduction

• Supply of public good
  ✓ Long-term productive investments: R&D, infrastructure, education, etc.
  ✓ Private agribusinesses manage market transactions

• Public management of agricultural inputs and output markets
  ✓ Input subsidy programs
  ✓ Marketing board price supports

• Immediate political payoffs;
• Visible support to constituencies
• Contribution to sustained growth / poverty reduction is unclear

Which way to go?

Government Policy

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TOP TIER COMMERCIAL PRODUCERS

Smallholder farmers

- Top tier commercial producers
- Bottom half of sales
- Growers with no sales

Maize
- 3%
- 36%
- 62%

Cotton
- 20%
- 80%
- 0%

Horticulture
- 1%
- 46%
- 53%
# Productivity Differences Across Seller Groups in Zambia

<table>
<thead>
<tr>
<th>Seller category</th>
<th>Area Planted (ha/crop)</th>
<th>Yield (kg/ha)</th>
<th>Value (US$/ha)</th>
<th>Fertilizer (kg/ha)</th>
<th>Hybrid seed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maize</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top half of sales</td>
<td>4.8</td>
<td>3,393</td>
<td>571</td>
<td>247</td>
<td>97%</td>
</tr>
<tr>
<td>Bottom half of sales</td>
<td>1.1</td>
<td>2,074</td>
<td>413</td>
<td>175</td>
<td>56%</td>
</tr>
<tr>
<td>Growers with no sales</td>
<td>0.8</td>
<td>1.161</td>
<td>197</td>
<td>64</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Cotton</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top half of sales</td>
<td>1.5</td>
<td>1,581</td>
<td>481</td>
<td>2</td>
<td>n.a</td>
</tr>
<tr>
<td>Bottom half of sales</td>
<td>0.8</td>
<td>822</td>
<td>179</td>
<td>0</td>
<td>n.a</td>
</tr>
<tr>
<td>Growers with no sales</td>
<td>0.9</td>
<td>975</td>
<td>240</td>
<td>0</td>
<td>n.a</td>
</tr>
<tr>
<td><strong>Horticulture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top half of sales</td>
<td>0.6</td>
<td>n.a</td>
<td>6,979</td>
<td>0</td>
<td>n.a</td>
</tr>
<tr>
<td>Bottom half of sales</td>
<td>0.2</td>
<td>n.a</td>
<td>683</td>
<td>0</td>
<td>n.a</td>
</tr>
<tr>
<td>Growers with no sales</td>
<td>0.0</td>
<td>n.a</td>
<td>79</td>
<td>0</td>
<td>n.a</td>
</tr>
</tbody>
</table>
The low road, exemplified by cotton production
- involves a two-generation transition via low-value but with well-structured markets.

The more restrictive high road, epitomized by horticulture production
- offers a steeper ascent
- enabling prosperity within a single generation, but requires commensurately higher levels of financing, management and risk.
Farmers growing low-value crops such as cotton and maize often shift from one commercial crop to another in response to changing price incentives.
Millions of small family households cultivate less than 2ha
- Not a homogenous group but cultivate small parcels, majority remain poor, malnourished and less educated
- +90% grow maize

Hindrances to change and growth:
- Not so progressive agricultural policies
- Low productivity
- Land degradation
- Education and skills of the majority of farmers
- Failure to fully embrace new technology
- Price Volatility
- Trade barriers
- Climate Change, etc.
Two sets of institutions are crucial for stimulating agricultural growth

- those that affect farm productivity
- those that govern market development.

One component without the other will not suffice

- Productivity gains without markets lead to temporary production surges and price collapses.
- Markets without increased farm productivity remain moribund, with farm households unable to generate surpluses for sale at competitive prices.
ZAMBIA: RAINFALL, SOIL AND CROP SUITABILITY BY AGRO-ECOLOGICAL REGION

Lots of Opportunities Beyond Staple Grains

Region I:
- Rainfall Less than 800mm/annum
- Loamy to clay soils
- Cotton, sorghum, millet, sesame, cashew nuts, livestock, fisheries

Region Ia:
- Rainfall range - 800 to 1,000mm/annum
- Inherent fertile plateau soils.
- Maize, cotton, tobacco, sunflower, soybeans, irrigated wheat, groundnuts, flowers, paprika, vegetables, cassava, millet, horticulture, livestock.

Region II:
- Rainfall range 800 – 1,000 mm/annum
- Loamy to sandy soils
- Cassava, sorghum, millet, sesame, cashew nuts, livestock, fisheries

Region III:
- More than 1,000mm of rainfall/ annum
- Very deep soils, sandy clay loam.
- Cassava, millet, sorghum, beans, groundnuts, rice, coffee, tea, pineapples, fish farming, livestock.

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THANK YOU