The Role of Government Policy in Zambia's Agricultural Commodity Markets

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Presented at the University of Zambia, School of Agricultural Sciences, Department of Agricultural Economics and Extension, Age 4142 Agricultural Marketing and Pricing Students, 26 July 2017
Outline of the Presentation

1. Evolution of government policy with respect to agriculture in Zambia
2. Current government policies & the effects on the sector
3. Welfare implications of current policies on all economic actors
4. Policy proposals
What is the main policy problem in agriculture?

Farmers lobby for higher maize prices + lower fertilizer prices

Lower consumer prices, usually culminating into consumer subsidies

Undesirable results
- Maize centric policies
- Unpredictable maize market
- Mistrust been Government and Private Sector
- Overburdened Treasury

Source: pixgood.com
The Food Price Dilemma

- A big challenge for policy makers
  - How to ensure that prices for ag. commodities are sufficiently high to enable food producers to generate adequate profits to continue to produce, but...
  - Low enough to be affordable to consumers
Evolution of government policy in Zambia’s Agriculture

First Republic: 1964-1972

- National Agricultural Marketing Board (NAMBOARD) - bought maize at differential prices
- Credit Organization of Zambia (COZ) - supplied subsidized fertilizer and seeds on credit to the farmers
Evolution of government policy in Zambia’s Agriculture

Second Republic: 1972 to 1991

- Transitioned to a one party state
- Pan-territorial maize pricing through the NAMBOARD
- LINTCO to oversee seed cotton marketing
- Growth in the cooperative movement
- Several models of financing small scale farmers with loans e.g. Lima Bank, but failed due to poor loan repayments
- Increased uptake of hybrid maize through research and extension
- High spending on agriculture: input subsidies-60% of agricultural budget by 1986
- Dissolved NAMBOAD in 1989-replaced with ZCF
- Food Riots: 1986 and 1991
...Evolution of government policy in Zambia’s Agriculture


- Structural Adjustment Program - macroeconomic stabilization, liberalizing price and exchange regulations, remove trade restrictions and removal of the public monopolies
- Major food price shocks in 1991/1992
- ASIP - promotion of free market development, reduction of government’s role in commercial activity, and enhancing efficient delivery of public services
- Difficult to transition to a private sector led agriculture
- FRA established in 1995 - to hold buffer stocks, dampen price variability and provide liquidity in the maize market
Evolution of government policy in Zambia’s Agriculture

Fourth and Fifth Republics: 2001-2017

- Improved government’s fiscal space, debt relief in 2005 and high copper prices improved the economy
- In 2002 FSP/FISP to improve access to inputs for viable but vulnerable smallholder farmers
- Government also repealed the FRA Act in 2005 to expand its crop marketing activities
- The share of the agricultural budget increased from 40% in 2002 to 90% in 2013
- Characterized by the desire to consolidate rural political support
Performance of the Maize Sector

Increase in maize production mainly as a result of increase in area under maize

Zambia has moved from a deficit to a surplus maize producer

Productivity (yields) remain low
Maize Area and Production Increased

Maize Production and Area

Source: MoA, Crop Forecast Survey
Yield has changed marginally

Source: MoA, Crop Forecast Survey
Zambia has become a consistent surplus maize producer

Maize Annual Balance Sheet Food Requirements
Surplus/Deficit 1989/90 to 2016/2017

Source: MoA, Crop Forecast Survey
Main policies implemented in the maize sector

- Farmer Input Support Program
- Maize Procurement through the FRA
- Trade Policies
FISP increased over the years

Source: Ministry of Agriculture
Maize Procurement

Source: MoA, FRA
FRA price—mainly higher than the market price

Source: CSO/FRA
Small holder vs Large Scale Maize Sales

Source: MoA, Crop Forecast Survey
Zambia’s Agricultural Budget

FISP 53.4%
FRA 17.3%
All Other 29.3%

- Quality of expenditure?
- Too little to key drivers of agricultural growth
  - agricultural R&D
  - extension services
  - livestock production and disease control
  - rural infrastructure i.e. feeder roads
  - Irrigation

2017 Budget allocation
FISP and FRA account to a large share of the agricultural budget

Source: Ministry of Agriculture
Trade Policies

- Removal of import tariffs and other restrictions during deficit years;
- Export bans/restrictions;
- Other export restrictions-SPS requirements, centralized issuing of permits, export taxes;
- Strategic stock piles;
- Price controls
Trade Policy Response During Drought Years

1992/93
- **584,000 MT Deficit**
  - Govt removes import restrictions; sets floor price and into-mill and consumer prices

2001/02
- **-581,294 MT deficit**
  - Subsidized maize imports later sold to millers undercutting private sector

2004/05
- **-85,000 MT deficit**
  - MACO issues import permits for 150,000 Mt; import duty waived; FRA undercuts importers

2012/13
- **+453,995 MT Surplus**
  - Export ban though SI#85; mealie meal price controls; Ban lifted in April 2014

2015/16
- **+634,881 MT Surplus**
  - Export ban; mealie meal price controls; FRA buys maize from traders and subsidizes millers; Export ban lifted in May 2017

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Welfare Implications of Agricultural Policy

- Small holder farmers in Zambia are land constrained

<table>
<thead>
<tr>
<th>Landholding size</th>
<th>Households (HH)</th>
<th>Land cultivated</th>
<th>Female headed</th>
<th>HH income</th>
<th>Value of HH assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Ha</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Less than 0.5</td>
<td>161,450</td>
<td>11.4</td>
<td>0.2</td>
<td>98.7</td>
<td>36</td>
</tr>
<tr>
<td>0.5–1.0 ha</td>
<td>291,806</td>
<td>20.6</td>
<td>0.8</td>
<td>91.3</td>
<td>34</td>
</tr>
<tr>
<td>1.0–2.0 ha</td>
<td>376,235</td>
<td>26.5</td>
<td>1.5</td>
<td>83.8</td>
<td>25</td>
</tr>
<tr>
<td>2.0–5.0 ha</td>
<td>415,079</td>
<td>29.3</td>
<td>3.1</td>
<td>73</td>
<td>18</td>
</tr>
<tr>
<td>5 ha or more</td>
<td>173,423</td>
<td>12.2</td>
<td>10.9</td>
<td>46.9</td>
<td>11</td>
</tr>
<tr>
<td>All farmers</td>
<td>1,417,993</td>
<td>100.0</td>
<td>2.8</td>
<td>79</td>
<td>24</td>
</tr>
</tbody>
</table>

Distribution of Smallholder Farmers Who Perceive that no Additional Land Is Available

Source: RALS 2012
Welfare Implications of Agricultural Policy

- Small holder farmers in Zambia are land constrained

Source: Chapoto & Sitko, 2015
**Welfare Implications of Agricultural Policy**

- **Zambia maize market is highly concentrated**

<table>
<thead>
<tr>
<th>Percent of maize sales</th>
<th>Households</th>
<th>Land cultivated</th>
<th>Value of assets</th>
<th>Value of Non-farm income</th>
<th>FISP Received</th>
<th>Maize Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Ha</td>
<td>ZWK</td>
<td>ZWK</td>
<td>Number of 50 kg bags</td>
</tr>
<tr>
<td>Maize sellers</td>
<td>616,717</td>
<td>51.9*</td>
<td>2.3</td>
<td>1,815</td>
<td>600</td>
<td>3</td>
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<tr>
<td>Top 50% of maize sales</td>
<td>27,697</td>
<td>4.5</td>
<td>7.4</td>
<td>17,960</td>
<td>2,500</td>
<td>7.5</td>
</tr>
<tr>
<td>Rest of all other maize sales</td>
<td>589,020</td>
<td>95.5</td>
<td>2.1</td>
<td>1,680</td>
<td>580</td>
<td>2.8</td>
</tr>
</tbody>
</table>

*Source: RALS, 2012*
Almost 30% of small holder farmers are net buyers of maize and do not benefit from higher maize market prices

Source: RALS, 2012
Welfare Implications of Agricultural Policy

Trade Restrictions/Price Controls Increase Price Volatility

Source: Chapoto & Jayne, 2009
Benefits of Trade

Shortfall + Closed Borders

![Diagram showing benefits of trade with price and quantity axes.]
...Benefits of Trade

Shortfall + Open Borders

<table>
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<th>Price $/ton</th>
<th>Quantity</th>
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<tr>
<td>300</td>
<td></td>
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<tr>
<td>Pm</td>
<td></td>
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<tr>
<td>200</td>
<td></td>
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<tr>
<td>100</td>
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……Benefits of Trade

Bumper Harvest + Closed Border

Price $ / ton

Quantity

D
S₀
S₂

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......Benefits of Trade

Bumper Harvest + Open Border

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……Benefits of Trade

Trade Reduces Price Volatility

Price $ / ton

Quantity

D S₁ S₀ S₂

Pm

Pe

100 200 300

……
Trade Restrictions increases price volatility

Coefficient of variation across countries

Chapoto & Jayne, 2009
Export bans discourage private sector investments

Private investments in the entire agricultural value chain tend to be adversely affected by the implementation of unpredictable trade policies.
Export bans do not achieve food security

Many governments impose export bans during El Nino years as a way of ensuring food security for their citizens:

• such protectionist policies do not lead to food security
• even under the tight control of formal trade, informal trade often flourishes
Huge price differences: a major pull factor for informal exports

Mealie Meal Price differences between Zambia and DRC: April, 2016

- **Kitwe, Zambia**
  - Breakfast meal price
  - K85 per 25kg

- **Kasumbalesa (Zambian side)**
  - Breakfast meal price
  - K175 per 25kg

- **Kasumbalesa (DRC side)**
  - Breakfast meal price
  - K250 per 25kg

- **Lubumbashi, DRC**
  - Breakfast meal price
  - K400 per 25kg

Source: IAPRI Rapid Survey, 2016
Huge Strategic Reserves and price controls

Maintaining a huge national maize stocks is a drain to the national treasury

- Consumption patterns are changing

Price controls such as subsidies to millers do not work because millers do not pass the benefits to consumers

- rural poor do not consume commercial mealie meal (only 6% based on RALS 2015)
Huge Strategic Reserves and price controls

Major Problem

Frequent ad hoc export bans even when country has a surplus
Soya beans—an important option for small holder farmers

Source: CFS, Crop Forecast Survey
Soya beans-private sector led

Contract farming, forward contracts, credit provided e.g. under lima credit scheme

Soya beans bought mostly through forward contract from small holder farmers in Mkushi during the 2015/16 marketing season by Afgri Corporations.
Positive Policy Developments - E-voucher

FISP through E-voucher:

- 2015 started piloting the Electronic Voucher (e-voucher) first in 13 districts during the 2016/17 farming season.
- 39 districts during the 2016/17 farming season.
- 1 Million farmers through the electron voucher in the 2017/18 season.

E-voucher:

- Improves targeting.
- Encourages crop diversification.
- Encourages private sector participation.
- Cost effective.
Positive Policy Developments-ZAMACE

ZAMACE operational since 2014 with govt signing of the credit Act

• ZAMACE implementing WRS on behalf of govt
• ZAMACE has certified 5 warehouse operators with a total storage capacity of 425,000mt

Benefits:

• Quantity & Quality
• Aggregation
• Transparent
• Pricing
• Liquidity
• Pool (many buyers and sellers)
• Market linkage (willing buyer & willing seller)
WHAT SHOULD THE POLICY CHOICE LOOK LIKE GOING FORWARD?

Policy stability – to attract private sector investment. Government funds alone are not enough to meet the rising demand.

Openness to trade in food and investments led by the private sector (especially food staples).
- Trade is an opportunity and not a threat.

Invest in the key drivers of agricultural development:
- Irrigation, research & extension, infrastructure.

Governments should focus public investment into areas that stimulate growth instead of private goods:
- Subsidies should not crowd out private sector participation.
Enactment of the Agricultural Marketing Act

Limit FRA’s role in maize marketing. Help Capitalise the commodity Exchange by buying strategic reserves through ZAMACE

Government should promote private sector storage by eliminating pan territorial and seasonal pricing

Moderate price volatility through trade. Maintain an open border maize policy in order to make Zambia a reliable supplier
Unpredictable policies

Mistrust between Private sector and Government

Limited private sector investment and market participation plus unsustainable government involvement and expenditure

If government intervenes too heavily in markets, efficient markets will not develop
Recommended Reading

- Chisanga, B and Chapoto, A. 2016/17 Zambian Maize Market Outlook and Regional Analysis”
- Chisanga, B and Chapoto, A. 2015/16 Zambian Maize Market Outlook and Regional Analysis”
THANK YOU