2015 - Zambia’s Agricultural Sector Budget Analysis

Presented by
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at
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In 2012, the AU declared 2014 as the Year of Agriculture, Nutrition and Food Security in Africa
Positive policy pronouncement in 2014

- The Agriculture Minister, Hon. Wylbur Simuusa, MP, should be commended for the open border policy on maize exports.
- This move will encourage farmers to grow more for export market to benefit from the open border policy.
Malabo Declaration

- To uphold Maputo declaration of allocating at least 10% of public expenditure to agriculture
- To sustain annual agricultural GDP growth of at least 6%
- To end hunger and cut poverty in half by 2025
- To accelerate agricultural growth by doubling current agricultural productivity levels by 2025
- To halve Post-Harvest Losses by the year 2025
- To triple agricultural intra-African trade by 2025
- To eliminate child under-nutrition by bringing down stunting to 10% and underweight to 5% by 2025
## Food Nutrition in Zambia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value 1990</th>
<th>Value 2001/2</th>
<th>Value 2010</th>
<th>MDG Target 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of underweight children (under 5 years of age)</td>
<td>25</td>
<td>28</td>
<td><strong>13.3</strong></td>
<td>12.5</td>
</tr>
<tr>
<td>Percentage of stunted children (under 5 years of age)</td>
<td>40</td>
<td>47</td>
<td><strong>46.7</strong></td>
<td>20</td>
</tr>
<tr>
<td>Percentage of wasted children (under 5 years of age)</td>
<td>5.1</td>
<td>5</td>
<td><strong>6</strong></td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: UNDP, 2003, LCMS, 2010
Where should the funds be invested

- Quality expenditure of the funds is critical to achieve sustained agricultural growth
- There is need for effective investments in the key drivers of agricultural growth
- Key drivers of agricultural growth include:
  - agricultural R&D
  - extension services
  - livestock production and disease control
  - rural infrastructure i.e. feeder roads
  - irrigation
Past agricultural budgets have not placed enough emphasis on broad-based public investments whose rate of return is:

<table>
<thead>
<tr>
<th>Investments</th>
<th>Rate of return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidies</td>
<td>Negative to 12%</td>
</tr>
<tr>
<td>- research &amp; extension</td>
<td>35% to 70%</td>
</tr>
<tr>
<td>- roads</td>
<td>20% to 30%</td>
</tr>
<tr>
<td>- education</td>
<td>15% to 25%</td>
</tr>
<tr>
<td>- irrigation</td>
<td>10% to 15%</td>
</tr>
</tbody>
</table>

Source: IFPRI review of rate of return studies
What is contained in this budget analysis

- Budgetary allocations to agriculture
- Budget Highlights
- Allocations & Releases by Sept for 2013 and 2014
- Areas of concern in the budget
- Recommendations for the future
Budgetary allocations to agriculture

- **Allocation to Agriculture (K' million)**
  - 2012: 1,500
  - 2013: 2,000
  - 2014: 3,000
  - 2015: 4,500

- **% of GRZ budget (right Y-scale)**
  - 2012: 0.0%
  - 2013: 1.0%
  - 2014: 2.0%
  - 2015: 3.0%

- **Sector Allocation up by 30%**
Budget Highlights

i. Limiting spending on maize which currently absorbs over two thirds of the entire agriculture budget

ii. Tailoring FISP according to ecological comparative adv. and delivering FISP through E-voucher

iii. FRA to purchase 500,000 MT of maize

iv. Provision of effective extension services to farmers by recruiting 500 additional extension officers

v. Constructing at least one smallholder irrigation scheme per province

vi. Establishing 23 livestock extension service centres, and 13 Satellite Insemination Centres
#1: Limiting spending on maize which currently absorbs over two thirds of the entire agriculture budget

2015 Allocations to Agriculture

<table>
<thead>
<tr>
<th>Program</th>
<th>% of others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Emoluments</td>
<td>62</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>21</td>
</tr>
<tr>
<td>Grants &amp; other payments</td>
<td>13</td>
</tr>
<tr>
<td>All others</td>
<td>4</td>
</tr>
</tbody>
</table>

Program % of PRPs

- FISP: 56
- FRA: 42
- All others: 2
- Total PRP: 100
Share of FISP and FRA to total Poverty Reduction Programs

Source: MAL and MoFNP actual expenditure
#2: Tailoring FISP according to ecological comparative advantage and implementing FISP through E-voucher

## Budget Allocations to FISP

<table>
<thead>
<tr>
<th></th>
<th>2013 K million</th>
<th>2014 K million</th>
<th>2015 K million</th>
</tr>
</thead>
<tbody>
<tr>
<td>FISP (Traditional)</td>
<td>500</td>
<td>500</td>
<td>1083</td>
</tr>
<tr>
<td>E-Voucher</td>
<td>-</td>
<td>-</td>
<td>254.9</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>500</td>
<td>1338</td>
</tr>
<tr>
<td>% of PRPs</td>
<td>58%</td>
<td>32%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Principal Crop Zones

Maize-led economy

Food Staple Zones
- Cassava belt: Cassava > 75% area
- Dual staple: Cassava & maize 25-75%
- Maize belt: Maize > 75% area

Surplus Maize – Central and South
Surplus Cassava – North
Diversified livelihoods

Zambia has potential for diversity

Legend:
1: Grassland, cereals, cassava
2: Highly productive maize, tourism, timber
3: Game reserves, tourism, hunting
4: Fishing, livestock, rice
5: Medium-small holders, tobacco, maize, timber
6: Subsistence, cassava, fruits
7: Mining, traditional farming, sweet potato, beans
8: Copperbelt mining, labour, vegetables
9: Agro-pastoral, cattle, fishing
10: Agro-pastoral, cattle, fishing, tourism
11: Commercial, maize, cotton
12: Eastern plateau: agro-pastoral, maize, groundnut
13: Subsistence, cassava, cereals
14: Fishing, subsistence farming
15: Highland, beans, millet, trade
16: Shifting cultivation, cassava, cereals, groundnut
17: Commercial/subsistence, maize, cotton, cattle
18: Luangwa valley, millet, cotton, sorghum

For most recent livelihood zone report see
Livestock ownership among smallholder HHs

Of 1,417,992 smallholder HHs
21.2% own cattle
25.3% own goats
14.7% own pigs
0.6% own sheep
76% own village chicken

Source: RALS (2012): Note HH=household
## Crops versus Livestock

<table>
<thead>
<tr>
<th>Provinces</th>
<th>2014</th>
<th></th>
<th>2015</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Allocated Crops</td>
<td>% Allocated Livestock</td>
<td>% Allocated Crops</td>
<td>% Allocated Livestock</td>
</tr>
<tr>
<td>Southern</td>
<td>41</td>
<td>59</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Eastern</td>
<td>88</td>
<td>12</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Western</td>
<td>87</td>
<td>13</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>Central</td>
<td>61</td>
<td>39</td>
<td>22</td>
<td>78</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>82</td>
<td>18</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>North Western</td>
<td>83</td>
<td>17</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td>Northern</td>
<td>89</td>
<td>11</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>Muchinga</td>
<td>76</td>
<td>24</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>Luapula</td>
<td>93</td>
<td>7</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>Lusaka</td>
<td>83</td>
<td>17</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>
Upward trends in maize production

Maize Production in metric tons

Production year

Source: MAL CFS various years

fertiliser + good rainfall + area expansion ≈ Bumper harvests
Risk of rainfed agriculture

- Zambian agriculture remains vulnerable to weather shocks

% of maize area planted to be harvested

How much is being invested in Irrigation?

K 206 million

Is this money enough?

Source: MAL CFS various years
Persistently low maize yields

Sources: MAL/CSO Crop Forecast Surveys, 2006/07 - 2013/14

Can Zambia achieve this target under the current agricultural policies?

Source: pixgood.com
E-voucher & FISP

- Delivering FISP through E-voucher rather the traditional system

- Why E-voucher
  - Flexible voucher
  - Private sector dealer network develops naturally
  - Lower implementation costs – more money for inputs rather than management of the program
  - Frees up MAL staff from managing tenders and distribution of fertilizer

- Proposed in 2011
  - Government hesitant to move program forward (WHY?)
E-voucher & FISP

- Making baby steps in right direction
  - K254.9 million (19% of total FISP) allocated to implement “Pilot” E-voucher scheme
  - NAIP targets:
    - 2014: 300,000 through E-voucher and 700,000 through Traditional FISP)
    - 2015-16: the remaining 700,000 under the traditional system should have moved to E-voucher
Relatively well off HHs obtain 55% FISP fertilizer

Source: RALS 2012
Budget Highlight #3

- #3: FRA to buy 500,000 metric tonnes for strategic reserves
2014 Marketing Experience

- FRA allocation in 2014 – K1,013 million
- Target purchases were 500,000 Mt
- FRA instructed to increase its target to 1 million MT in September
  - Another K1,013 million required –
    - How will these additional purchases be financed?
  - There is a likelihood that key agricultural drivers will be underfunded.
  - Negative effect for private sector market development
    - What is the way forward for current purchased stocks?
## Highly concentrated patterns of maize surplus production

<table>
<thead>
<tr>
<th></th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households reporting that they will sell maize (N)</td>
<td>647,937</td>
<td>606,736</td>
<td>619,880</td>
</tr>
<tr>
<td>Proportion of farms accounting for 50% of total expected maize sales (N and %)</td>
<td>72,052 (6%)</td>
<td>64,134 (5.2%)</td>
<td>70,095 (4.8%)</td>
</tr>
<tr>
<td>Households not selling maize</td>
<td>46.5%</td>
<td>50.7%</td>
<td>53.1%</td>
</tr>
</tbody>
</table>

Source: MAL/CSO Crop Forecast Survey
Better off HHs account for majority of maize sold to FRA, 2011

These account for 78% of maize sold to FRA

<table>
<thead>
<tr>
<th>Area cultivated</th>
<th>% of maize surplus sold to FRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0.49 ha</td>
<td>1%</td>
</tr>
<tr>
<td>0-5.99 ha</td>
<td>5%</td>
</tr>
<tr>
<td>1-1.99 ha</td>
<td>17%</td>
</tr>
<tr>
<td>2-4.99 ha</td>
<td>41%</td>
</tr>
<tr>
<td>5-9.99 ha</td>
<td>23%</td>
</tr>
<tr>
<td>10-20 ha</td>
<td>14%</td>
</tr>
</tbody>
</table>

Source: RALS 2012
# Allocations & % Releases by Sept

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>2013 Allocations (K’ million)</th>
<th>% Released by July 2013</th>
<th>2014 Allocations (K’ million)</th>
<th>% Released by July 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Crop</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Reserve Agency (FRA)</td>
<td>300</td>
<td>200%</td>
<td>1,013</td>
<td></td>
</tr>
<tr>
<td>Farmer Input Support Program (FISP)</td>
<td>500</td>
<td>61%</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Agriculture Research Stations</td>
<td>5</td>
<td>52%</td>
<td>16</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Livestock and Fisheries</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisheries Research Stations</td>
<td>13</td>
<td>38%</td>
<td>19</td>
<td>18%</td>
</tr>
<tr>
<td>Livestock Development</td>
<td>27</td>
<td>38%</td>
<td>31</td>
<td>16%</td>
</tr>
<tr>
<td>Vet &amp; Livestock Research Stations</td>
<td>18</td>
<td>41%</td>
<td>21</td>
<td>17%</td>
</tr>
<tr>
<td>Vet &amp; Livestock Research Stations</td>
<td>18</td>
<td>41%</td>
<td>21</td>
<td>17%</td>
</tr>
<tr>
<td>Provincial and Districts Allocations</td>
<td>325</td>
<td>46%</td>
<td>591</td>
<td>10%</td>
</tr>
</tbody>
</table>
% of releases against allocations at provincial level

Allocations

Releases as at July, 2014
% of releases against allocations for all districts in each province

Allocations  Releases as at July, 2014

Indaba Agricultural Policy Research Institute
Areas of Concern
Areas of concern

- From Past Trends
  - Government expenditure through FRA/FISP benefiting larger and relatively already well off HHs
  - GRZ spending through FISP/FRA has little impact on yields and poverty reduction
  - FRA/FISP come as an opportunity cost to key agric growth drivers (irrigation, rural electrification, R&D, extension, etc.)
Areas of concern

- Despite the increase in allocations to FISP/FRA, the two programs have problems:
  - Delayed input distribution to farmers
  - Crowding out the private sector (both agro-dealers and grain traders)
  - Late payment to farmers
  - High food prices despite bumper harvests
  - Limited impact on rural poverty
Recommendations for the future

- To achieve broad based poverty reduction and ag. growth, redirect more resources from FISP and FRA to key drivers of agriculture growth:
  - agricultural R&D,
  - extension services
  - livestock production and disease control
  - rural infrastructure i.e. feeder roads
  - irrigation

- Need for predictable agricultural policies
  - fasttrack the enactment of the Ag. Marketing Bill
Thank You