

Composition of Zambian Public Spending on Agriculture

By:

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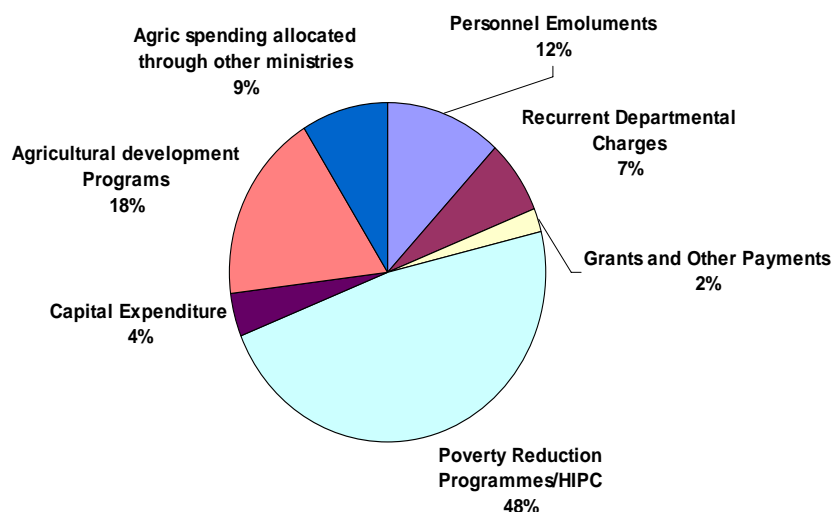
The Agricultural Consultative Forum

FSRP/MATEP

Outline

1. Composition of GOZ spending
2. Returns to alternate public investments

3. Composition of agricultural spending, 2001 - 2006



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Trends in selected agricultural budget lines (nominal ZK billion)

	2001	2006
Personnel (PE)	15	84
Recurrent departmental charges (RDC)	19	39
Ratio RDC/PE	1.3	0.5
Capital spending	38	1
PRP/HIPC (Poverty reducing Projects/HIPC)	65	270
ADP (Ag. Dev. Projects)	22	211
Total	194	650

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Trends in selected agricultural budget lines (Real ZKbillion - 2006)

	2001	2006
Personnel (PE)	33	84
Recurrent departmental charges (RDC)	42	39
Ratio RDC/PE	1.3	0.5
Capital spending	84	1
PRP/HIPC (Poverty reducing Projects/HIPC)	142	270
ADP (Ag. Dev. Projects)	47	211
Total	426	650

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Trends in internal allocations

- Ratio of RDC/PE falling
 - 1.3 in 2001 and 0.5 in 2006
- Capital expenditures neglected – equipment and buildings run down
- Poverty Reduction Projects (PRP) and Ag. Dev. Projects (ADP) growing fastest

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Investing in public vs. private goods

- Public goods: most research, roads, extension, information, competition regulation: private sector will under invest
- Private goods: inputs (fertilizer, seeds), mkting & processing infrastructure

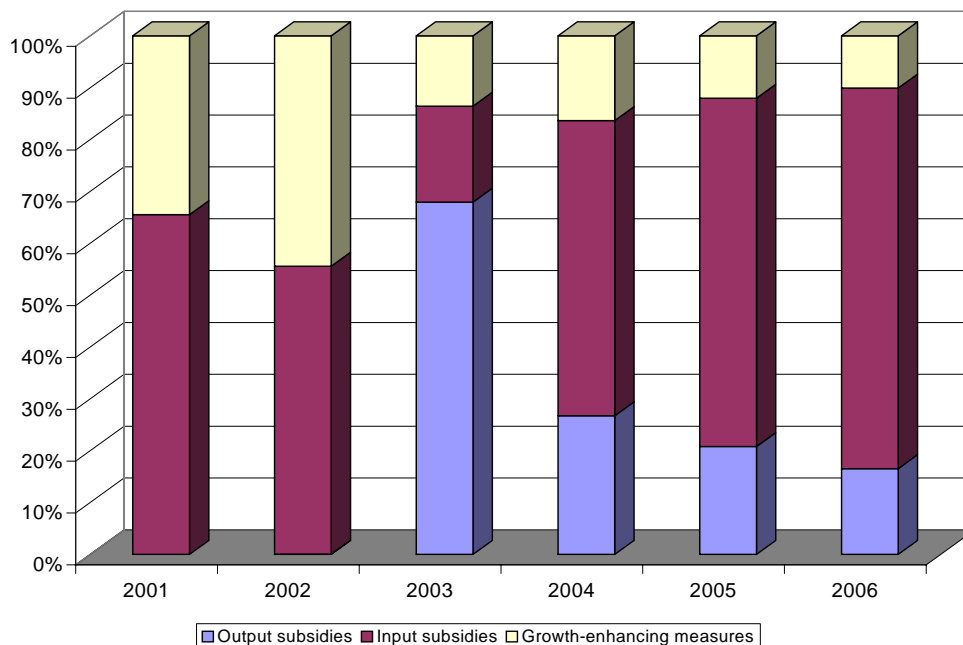
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Where does Zambia spend?

2006 Budget Spending	Total (with donors)	Discretionary (GRX only)
Recurrent private subsidies		
• <i>Fertilizer</i>	31	45
• <i>FRA</i>	8	11
Operating expenditure		
• <i>Salaries</i>	13	19
• <i>Operating costs</i>	6	9
Donor programs		
	32	
Investments		
• <i>Capital spending</i>	1	2
• <i>Energy and water</i>	1	1
• <i>Lands</i>	1	2
• <i>Roads and transport</i>	1	1
Other	7	10 ¹¹
Total	100	100

Poverty reducing investments

(PRPs + agricultural spending through other ministries)



4. Spending alternatives

	Returns?
Subsidies for recurrent (private) inputs	
Public Investments	
- technology (R&D,ext)	
- roads	
- communications	
- irrigation	

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Agricultural subsidies

- Returns frequently **negative**

1% increase in budget share on agricultural subsidies **reduces** per capita agricultural income by .3% to .5%

15 Latin American countries, Lopez (2006)

Why?

- Subsidized inputs crowd out the private sector deliveries & discourage investments
- Misallocation and inefficiencies in usage
- Diversion and rent seeking
- Late delivery

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Agricultural subsidies

- returns sometimes positive, but generally lower than in investments

\$1 in ag. R&D → \$4.30 in ag. Income

\$1 in ag. subsidies → \$1.70 in ag income

43 countries, Fan and Rao (2003)

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Input subsidies most likely to be viable

- When new technology becomes available
- When temporary and aimed at encouraging adoption of new technology
- When farmers control water
- Good extension services
- When information/will is available to help target assistance to those farmers who otherwise would not use the private market

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Preliminary results from 2002/3, 1st year of Zambia's FSP

Fertilizer Use	% Smallholder Farmers	HH Income ('000 K/capita)	HH Assets ('000 K/capita)
None	71%	266	173
Purchased	21%	774	342
Fertilizer Support Programme Subsidies	8%	804	425

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Probable impact of FSP during its first year of operation, 2002/3

- FSP used fertilizer worth ZK125 billion
- 30 percent of recipients got basal fertilizer late
- Increased maize production due to fertilizer alone: 200,000 tons worth ZK 120 billion

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Fertilizer and maize marketing programs

- Loss-making
- Benefit few, better-off households
- Double subsidy: fertilizer + maize price support
- Divert public resources away from long-run investment
- Discourage private sector market participation, fuelling mistrust & misleading diagnosis: ***“market failure!” “private sector has no capacity!”***

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Public investments in agricultural research

	Returns
Asia	78%
Latin America	53%
Africa	50%

Allston et al (2005): 680 studies

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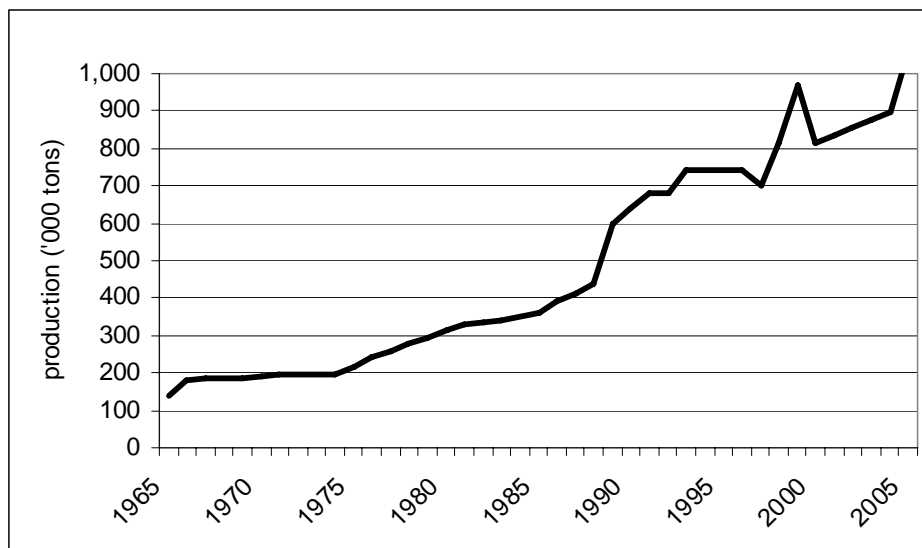
Research results in release of new cassava varieties in Zambia

Variety	Released	Yield (tons/ha)	Taste
1. Bangweulu	1993	31	Bitter
2. Kapumba	1993	22	Sweet
3. Nalumino	1993	29	Sweet
4. Mweru	2000	41	Sweet
5. Chila	2000	35	Bitter
6. Tanganyika	2000	36	Sweet
7. Kampolombo	2000	39	Sweet
Traditional	1600	7	Bitter

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Cassava production surges due to

- a) release of new varieties and
- b) removal of maize subsidies



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Investments in rural Uganda

	Returns to government spending (B/C)
Agricultural R&D	12.4
Feeder roads	7.2
Education	2.7
Health	0.9

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Returns to alternate investments (B/C)

	Research	Roads	Irrigation	Electricity
China	10	2	2	0.5
India	14	5	1	0.3
Thailand	13	1	1	5
Uganda	12	7		
V. Nam	12	3	0.4	

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Investments vary by location

China	Coastal	Western	All China
Agricultural R&D	8.6	12.7	9.6
Roads	8.4	4.3	8.8
Education	9.8	5.1	8.7
Telephones	7.1	4.1	7.0
Irrigation	2.4	1.6	1.9

Fan et al. (2003)

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Returns (B/C) vary over time

India	1960's	1990's
Private subsidies		
farm credit	3.9	0
fertilizer	2.4	0.5
irrigation operations	2.2	0
power	1.2	0.6
Public investments		
agricultural research	3.1	6.9
roads	8.8	3.2
education	6.0	1.5

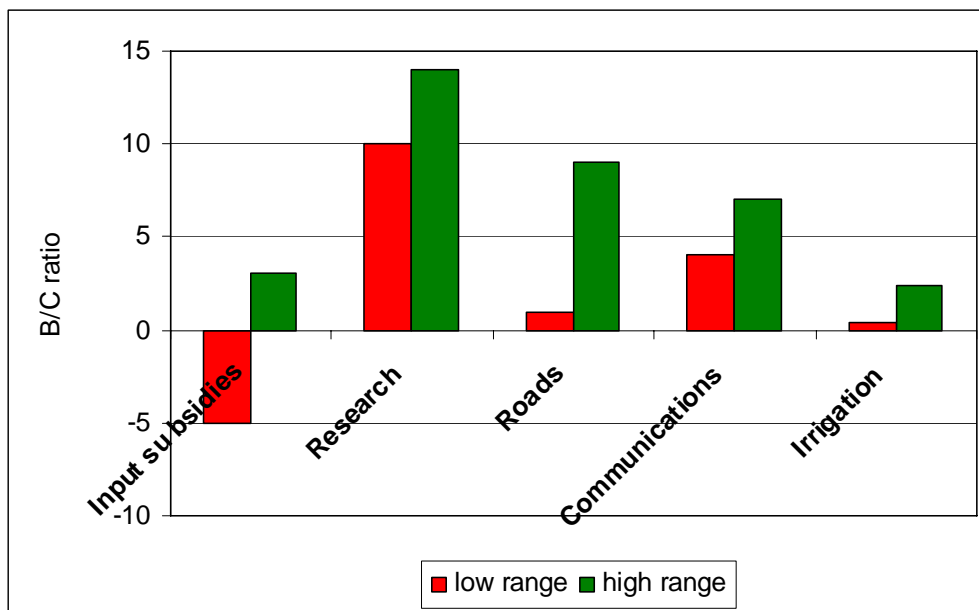
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Summary: returns to alternate forms of agricultural spending



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Summary- Investment Implications & Challenges for Zambia

- Composition: allocation focuses on the least profitable forms of agricultural spending (financing recurrent private inputs) at the expense of long-term investments in productive public goods (research, roads, communications, information, irrigation)

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