

Helping Farmers and Traders to Overcome Constraints on Productivity Growth of Staple Food Production and Market Development



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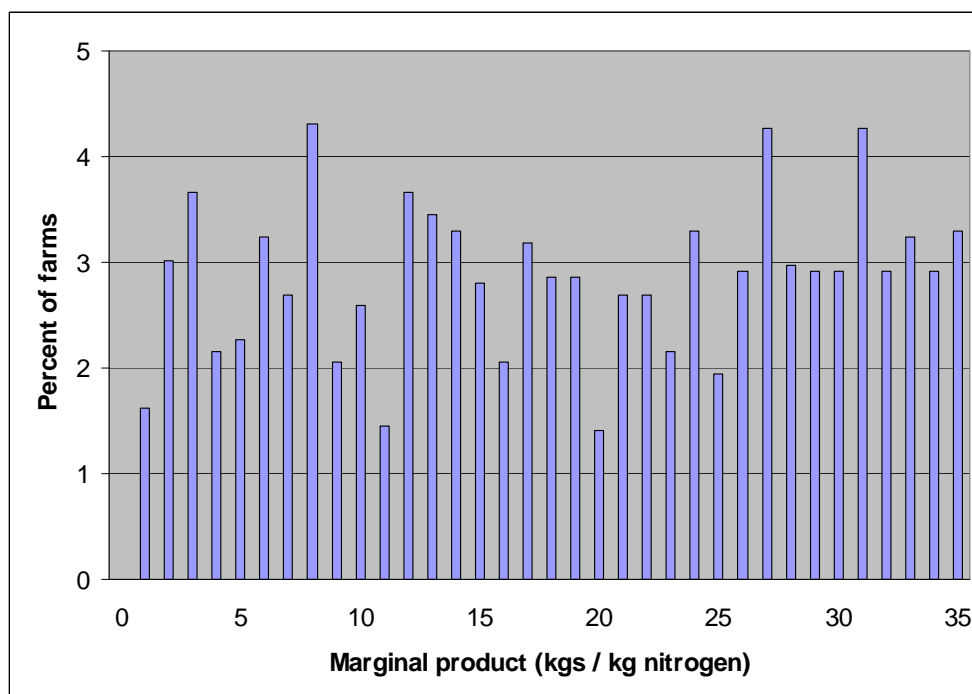
Objectives of presentation

1. To identify major on-farm constraints limiting smallholders' ability to raise their agricultural productivity and incomes
2. To identify major barriers impeding traders' ability to meet the needs of smallholder farmers
3. To identify investments, programs, and policies that could help overcome these impediments

Fact #1

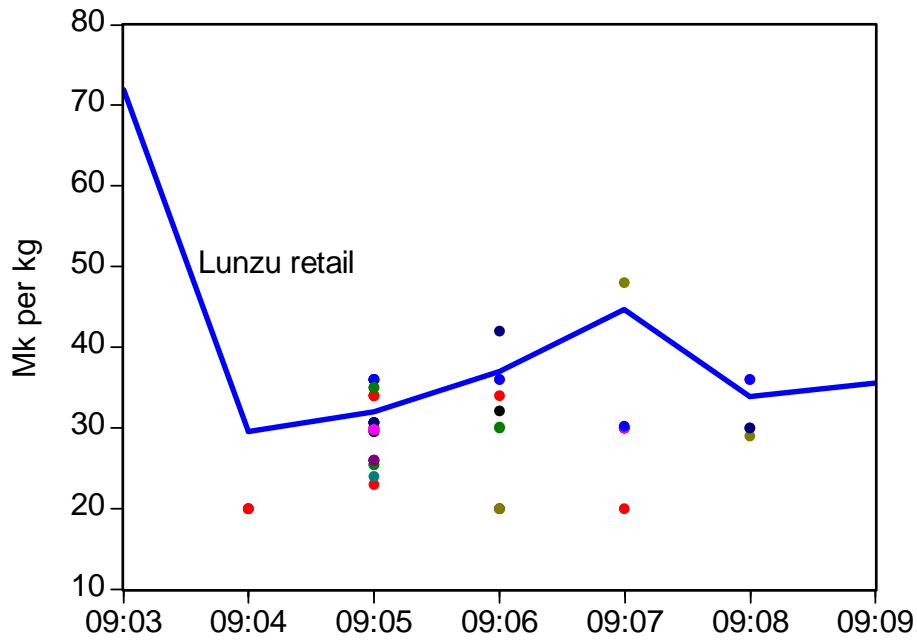
- Smallholders are getting highly variable crop response from fertilizer – even in the same season and agro-ecological zones
- Smallholders also getting very different output prices – even in same village at the same week of sale
- Continuum of smallholders from passive / feeling of helplessness to very proactive and market savvy

Variation in farmers' efficiency of fertilizer use on maize, Agroecological Zone IIa, Zambia

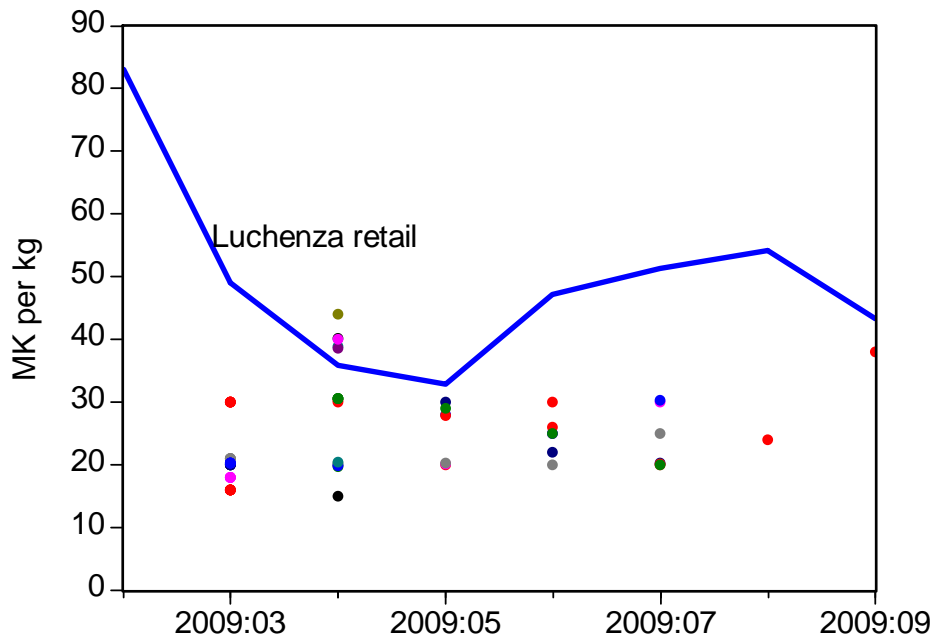


Note: Zone IIa is a relatively high-potential zone suitable for intensive maize production

Lunzu retail price and farmer-reported prices received in remote villages in Blantyre District, 2009



Luchenza retail price and farmer-reported prices received in remote villages in Mulanje District, 2009



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- These findings would point to seemingly high payoffs to extension efforts to improve smallholders' farming and marketing skills
 - Yet – ironically at first glance – extension has had historically mediocre payoffs to agricultural growth and poverty reduction

Ranking of Alternative Investments: Meta-Study Evidence from Asia and Africa

Productivity Drivers	The Economist	IFPRI study
Policies		
Road investment		
Agricultural R&D		
Agricultural extension services		
Credit subsidies		
Fertilizer subsidies		
Irrigation		

Ranking with respect to *Agricultural Growth*: Evidence from Asia

Productivity Drivers	The Economist	IFPRI
Policies	1	
Road investment	2	1
Agricultural R&D	3	2
Agricultural extension services	4	4
Credit subsidies	7	3
Fertilizer subsidies	5	5
Irrigation	6	6

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- Public investments with the greatest returns to ag growth and poverty reduction leading to Asian green revolution have been:
 - infrastructural investment
 - R&D
 - conducive policies that support incentives for private investment in markets and production
 - Low historical return to extension reflects the way most public extension systems have performed, not the potential for viable extension systems to improve farmer welfare

Factors significantly related to maize price received by Zambian farmers (from econometric models of farm-gate price):

- Household owns a radio (+2.7% increase in farm-gate price)
- Household owns bicycle (3.6%)
- Household owns car or truck (+11.4%)
- Each 1 km reduction in distance to nearest feeder road (+0.7%)
- Each 1 year increase in educational attainment of household member (+0.7%)

Fact #2

- Chronic problem of non-standard weights in grain sales transactions between farmers and assemblers
 - GISAMA Maize Value Chain field work found scales used by traders under-weighs farmer grain by 10-20% - Zambia, Malawi, Kenya
 - Example: Same “gorogoro” held 3kgs at assembly level; 2.0 to 2.25kg at retail (Nakuru and Bomet district averages in Kenya)

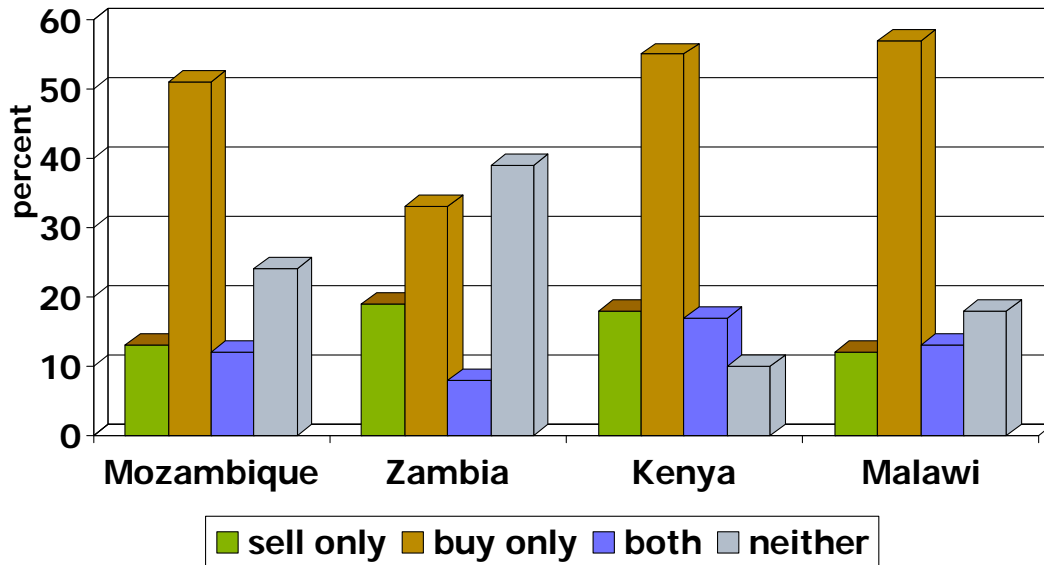
Fact #3

- Farmers do not pay attention to moisture quality issues – neither do assemblers. Wholesalers try to pass off wet maize to millers, sometimes bribing inspection agents at mill gate
 - major market failure caused by lack of adherence to moisture content
 - Raises storage losses and marketing costs
 - creates disincentives to store grain for extended periods

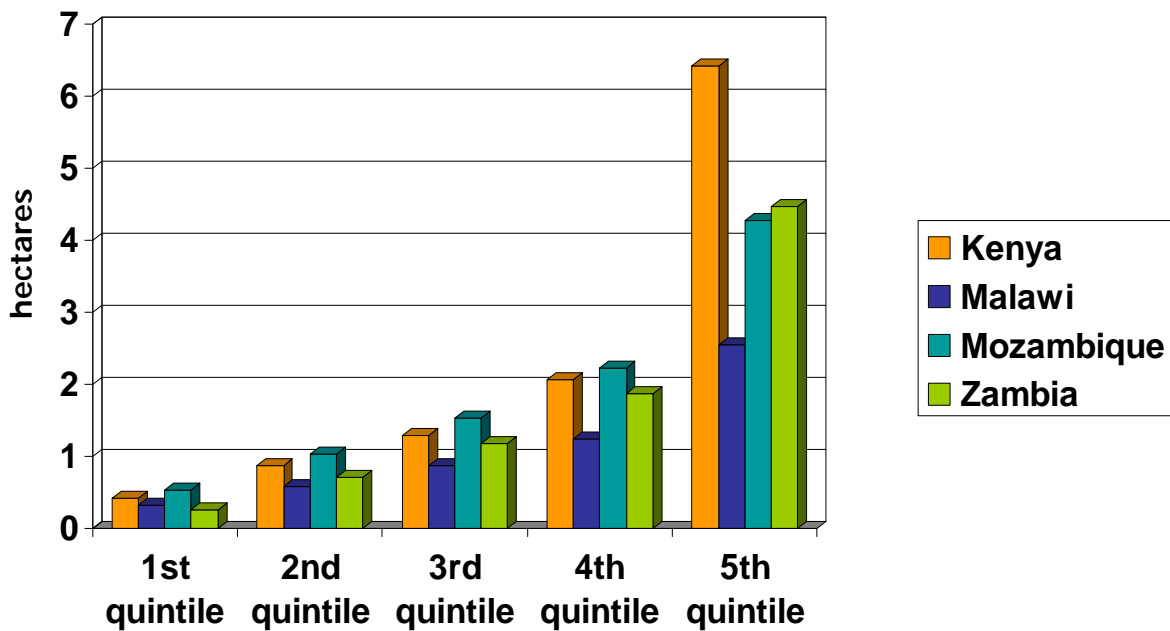
Fact #4

- Tackling rural poverty, promoting smallholder commercialization and enabling more farmers to become surplus producers will require expanding smallholders' access to land:
 - Only 25% of smallholders sell grain
 - Can market improvements enable 80%-90%?
 - Land and asset constraints prevent this

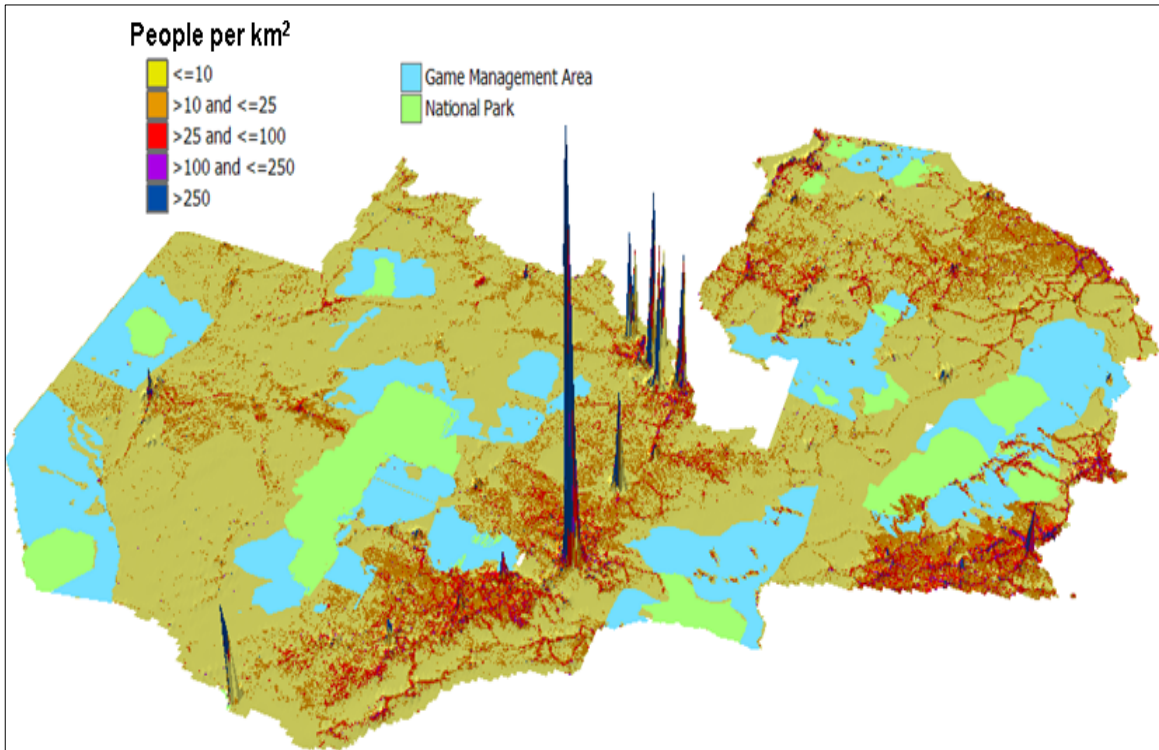
Smallholder Households' Position in the Maize Market



Farm size distribution: small-scale sector



Population Density and Distribution Zambia 2007



Recommendations/ proposals

1. Help farmers with training in crop husbandry, fertilizer use, soil testing, and marketing skills
 - i. Example: KMDP in Kenya
2. Actively take measures to relieve land constraints on smallholder market participation:
 - i. Public investments in currently under-utilized areas (e.g., Gokwe, Zimbabwe)
 - ii. Support staple food productivity growth through R&D, crop science, extension
 - iii. Promote crop diversification into higher-valued crops

Recommendations/ proposals

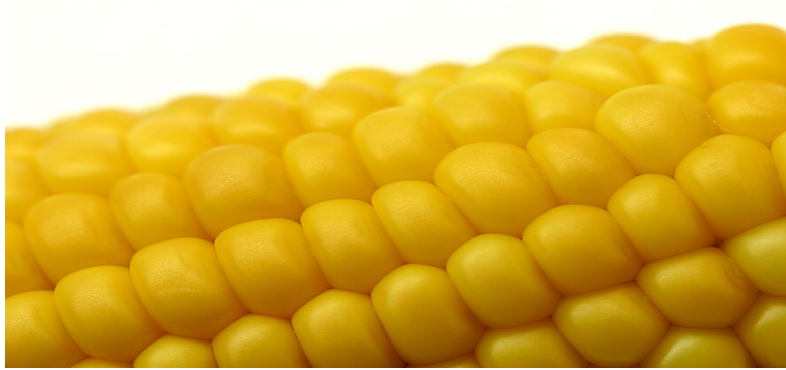
3. Lease some marketing board silos in need of rehabilitation to private sector: win-win by leasing > 10 years.
 - i. Farmers and private sector benefit from increased supply of storage facilities
 - ii. Government benefits from capital investment in rehabilitated storage
4. Donors pay cost of SAFEX option contracts in return for ensuring open regional trade
 - i. Should reassure governments that adequate supplies will be available, and can therefore commit to a rules-based system (Model 2)

Recommendations/ proposals

5. Address the policy uncertainty and unpredictability that inhibits development of:
 - i. Storage in rural areas and small towns
 - ii. Bank financing of large-scale storage and annual trader working capital operations
 - iii. Vibrant commodity exchanges
 - iv. Warehouse receipt systems

(circulate hand-out)

Thank you.....

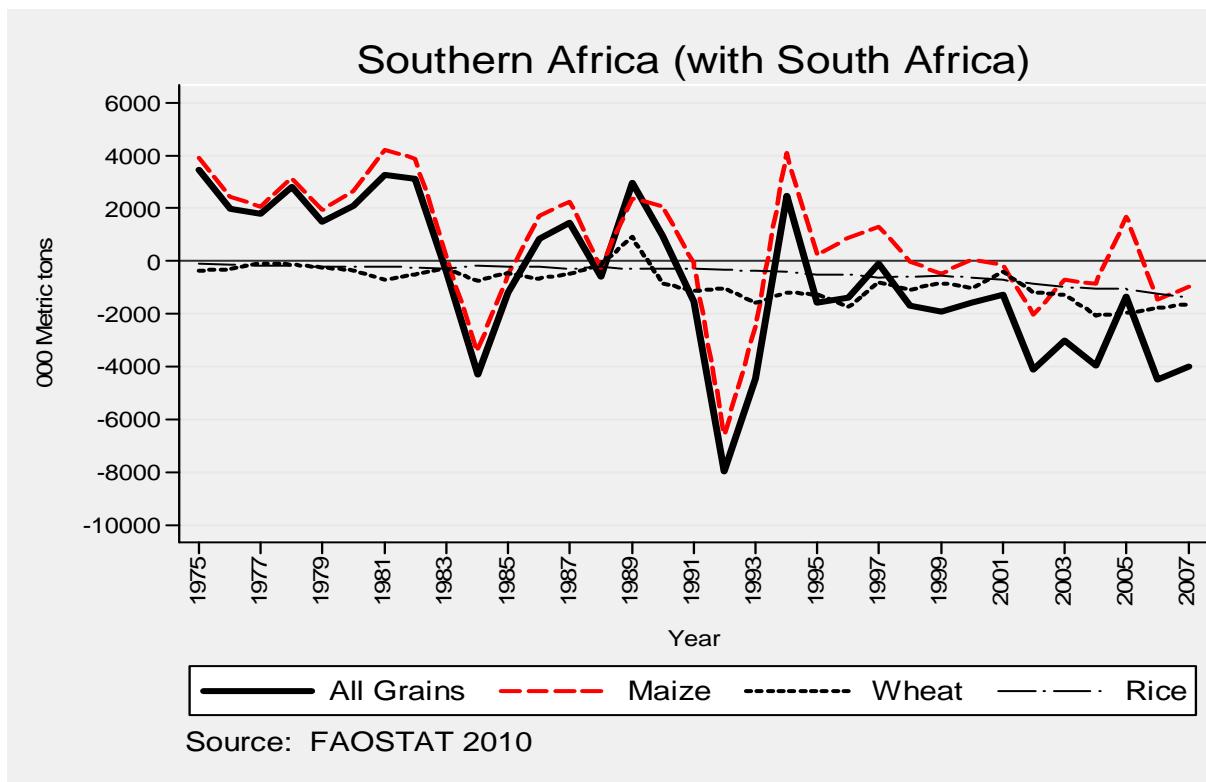


- Extra slides that could possibly be utilized

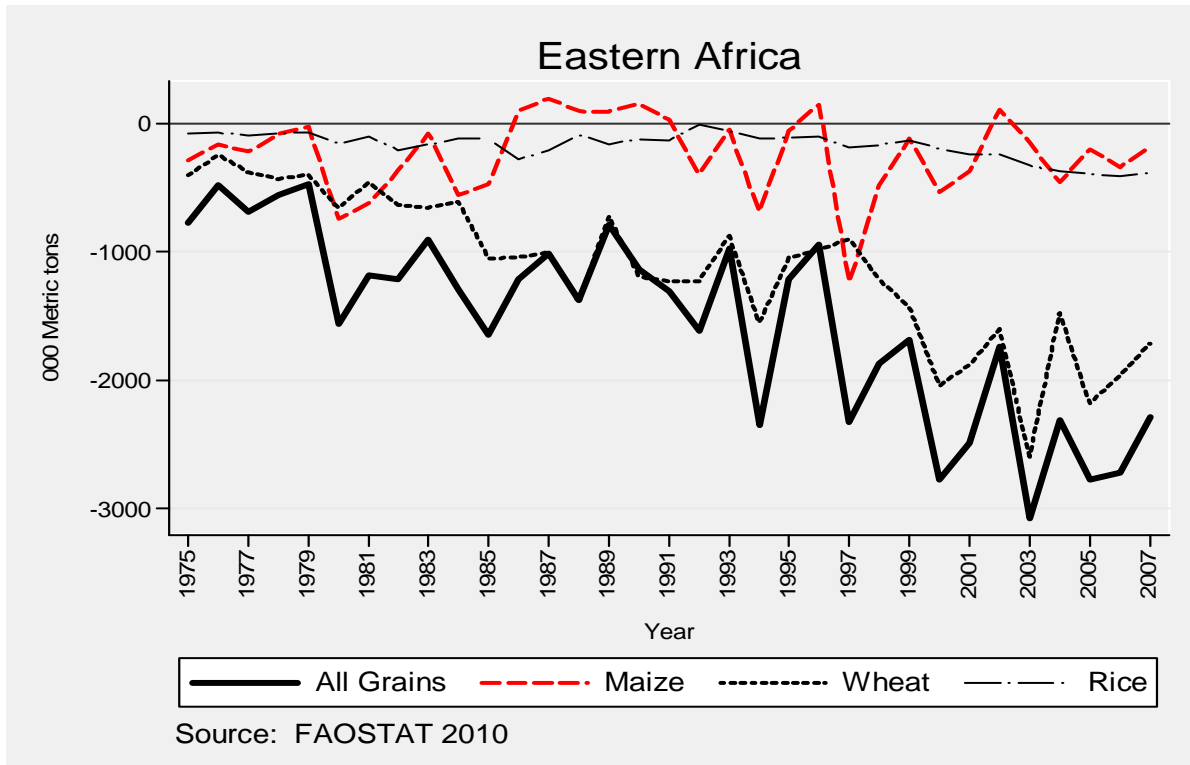
Fact #?

- Both E and S Africa are rapidly becoming food deficit regions
 - Urban populations growing much faster than the region's ability to feed it
 - Wheat imports rising rapidly – wheat is becoming the #1 staple in terms of consumer expenditures

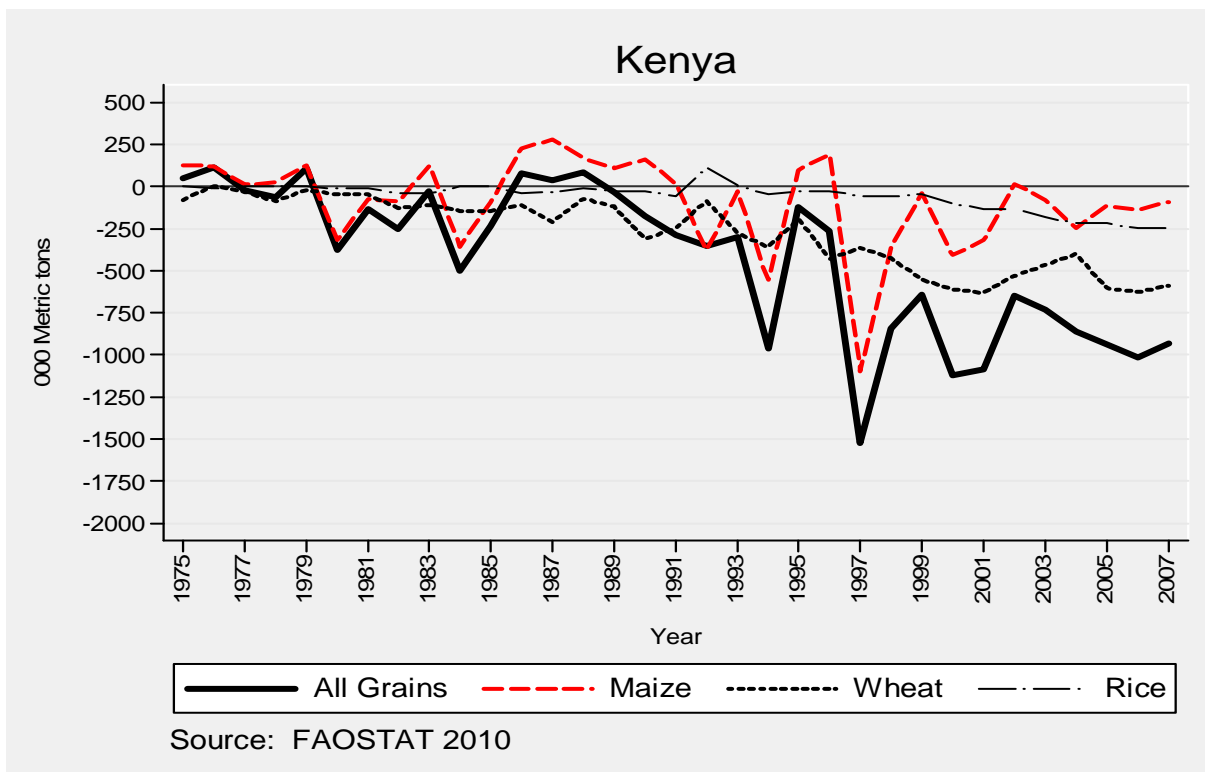
Net grain exports: 1975-2007



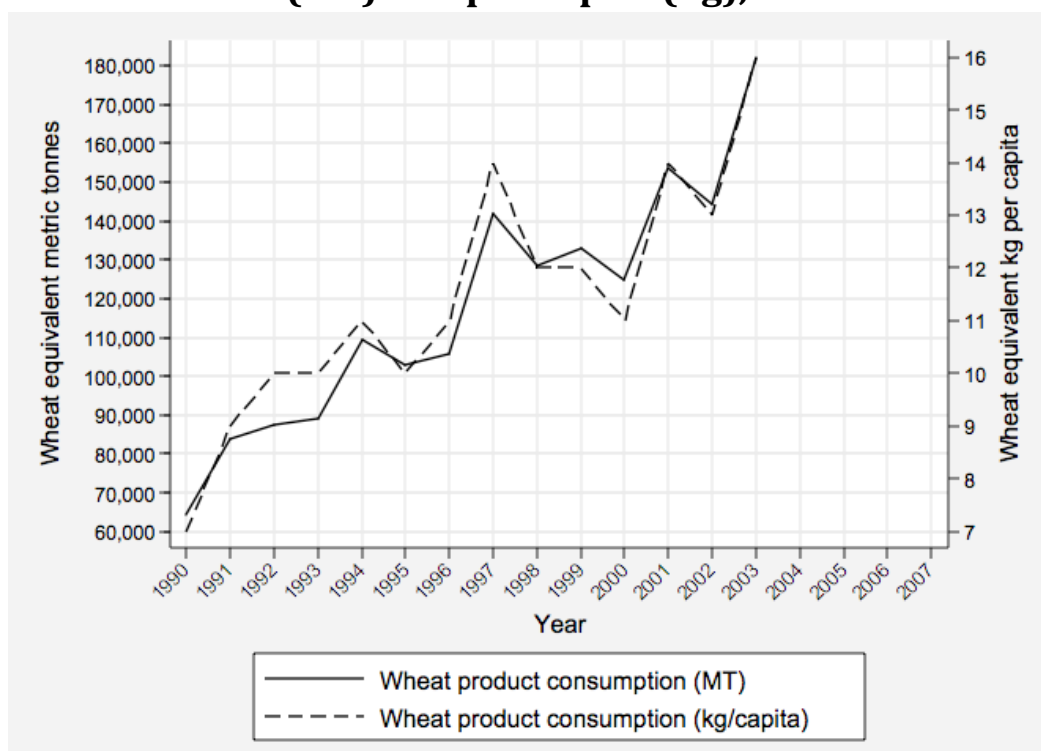
Net grain exports: 1975-2007



Net grain exports: Kenya



Wheat product consumption total (MT) and per capita (kg), Zambia



Diversification of consumption patterns due to increasing wheat imports

Urban center	Year	% share of main staples budget ("main staples" = maize, wheat, rice and cassava)				Main staples % share of total food budget
		Maize	Wheat	Rice	Cassava	
Nairobi	2003	36	39	25	0	28
Maputo Province	2002	9	57	29	5	27
Northern Mozambique*	2002	33	8	15	44	48
Lusaka	2007/8	39	49	11	1	20
Kitwe	2007/8	43	45	10	2	23
Mansa	2007/8	46	28	10	16	24

*includes Nampula city