

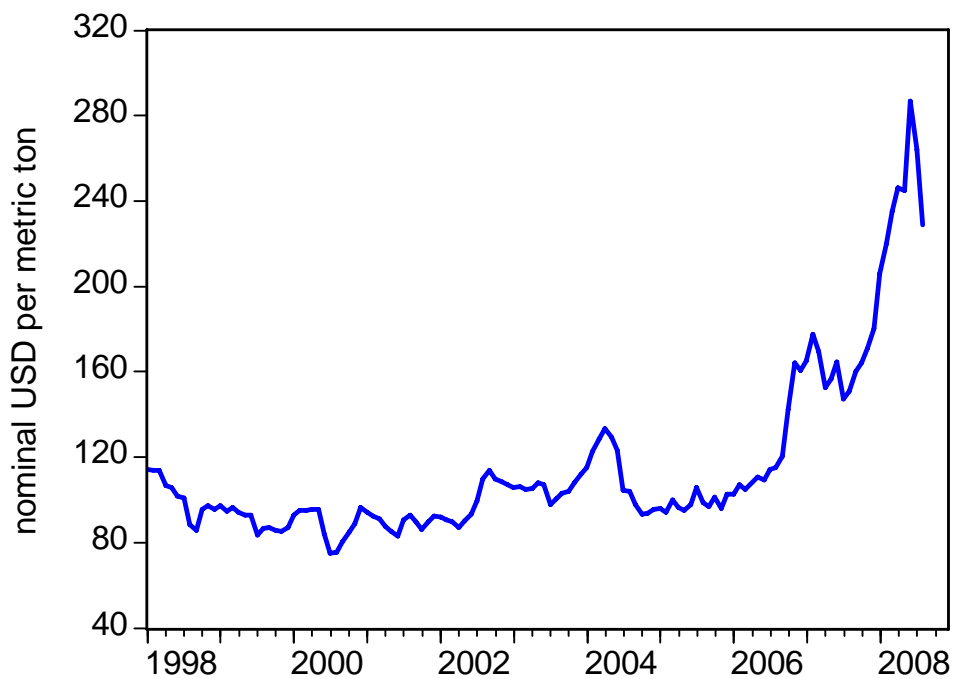
Rising World Food Prices and their Implications for Food Security Policy in Eastern and Southern Africa



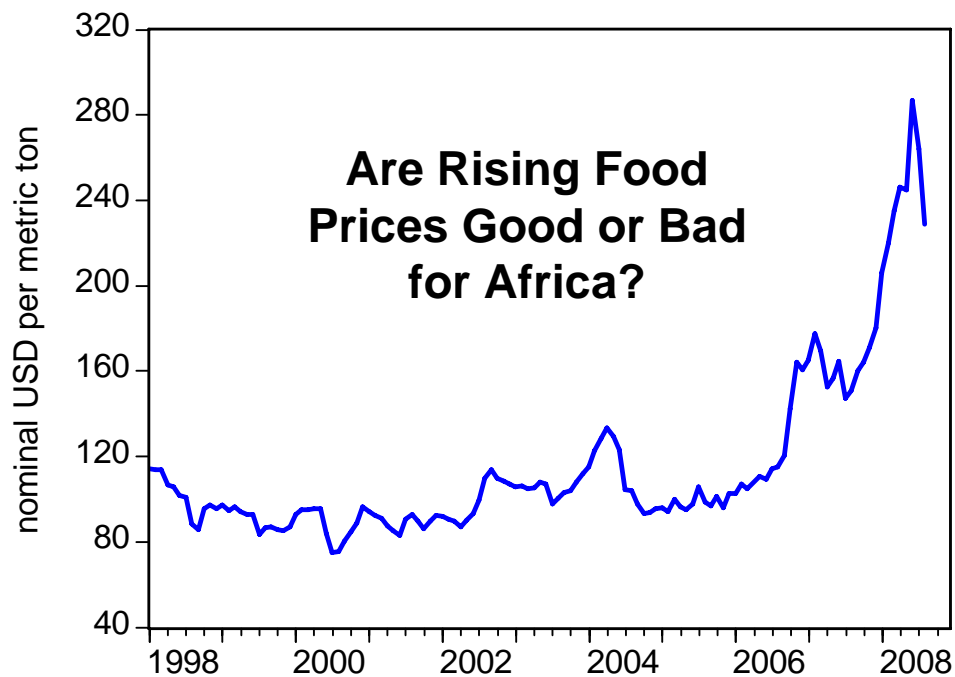
T. Jayne, A. Chapoto, and I. Minde

Presentation at Institute for African Development
Cornell University
August 28, 2008

Trend in Maize Price, fob US Gulf



Trend in Maize Price, fob US Gulf



Result of debate and subsequent poll in The Economist:

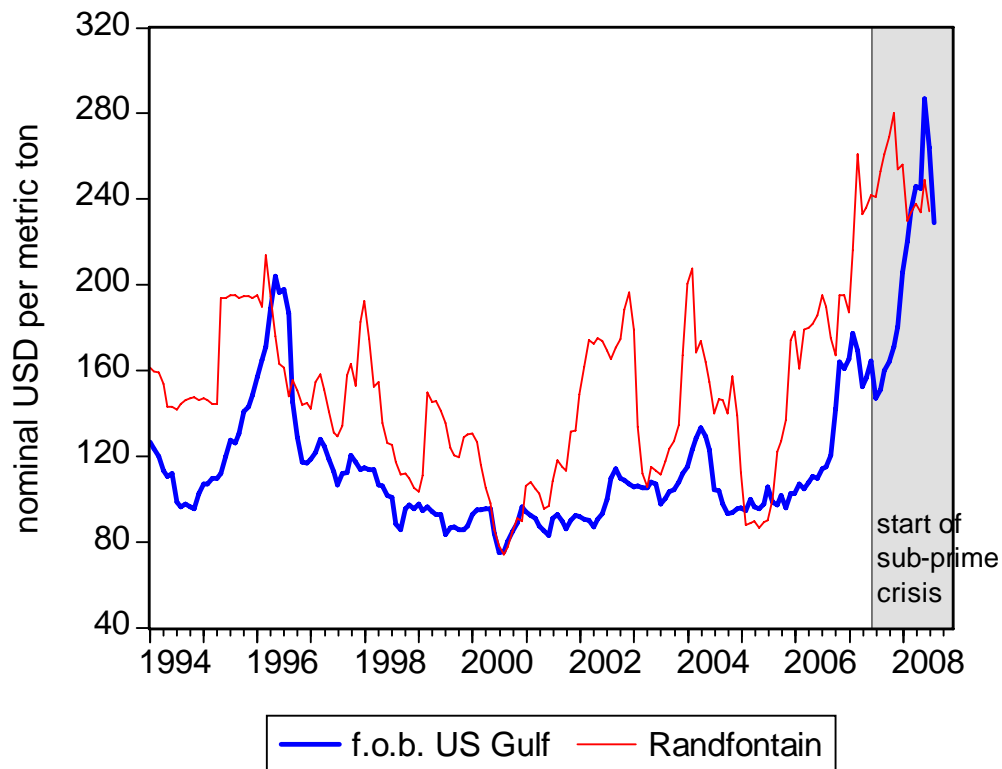
-
- Upside offsets downside: 56%
 - Downside prevails: 44%

Objectives of our presentation:

1. to present recent food, fertilizer price movements in domestic markets;
2. to assess possible changes in cropping patterns, national food production, and consumers' access to food in light of these price movements; and
3. to consider implications for policy and program response by governments and donors

Why have world food prices risen so dramatically in 2007-2008?

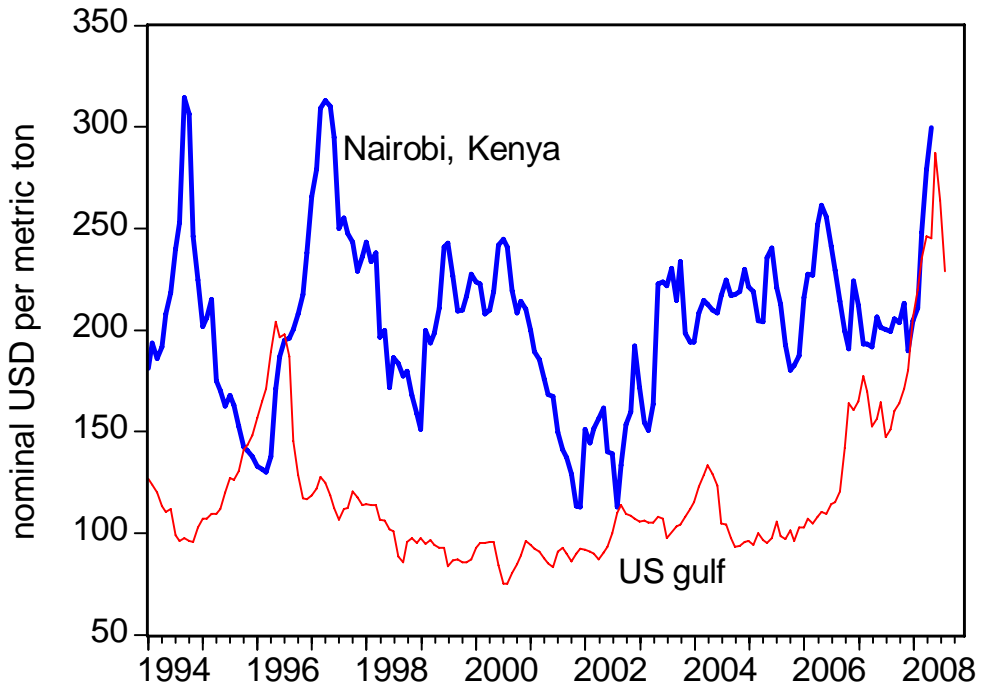
- Initial explanations – structural shifts in world food supply and demand:
 - US bio-fuels policy
 - Rising incomes in large middle-income countries (e.g., China, India)
 - Climate change (e.g. recurrent drought in Australia)
- More recent explanations acknowledge these structural shifts but also include:
 - US sub-prime crisis and expansionary US monetary policy starting in mid-2007.



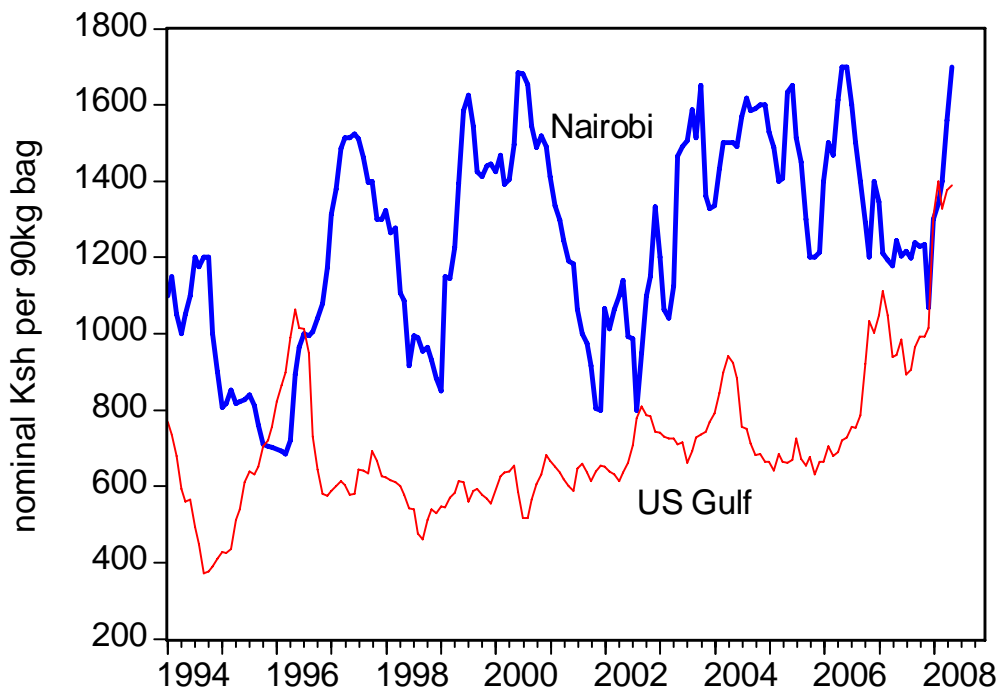
Trends in Food Prices in Eastern/Southern Africa

- Depends on price transmission
- There are at least 3 ways to assess price trends:
 1. in US dollars
 2. in nominal local currency units
 3. in inflation-adjusted local currency units

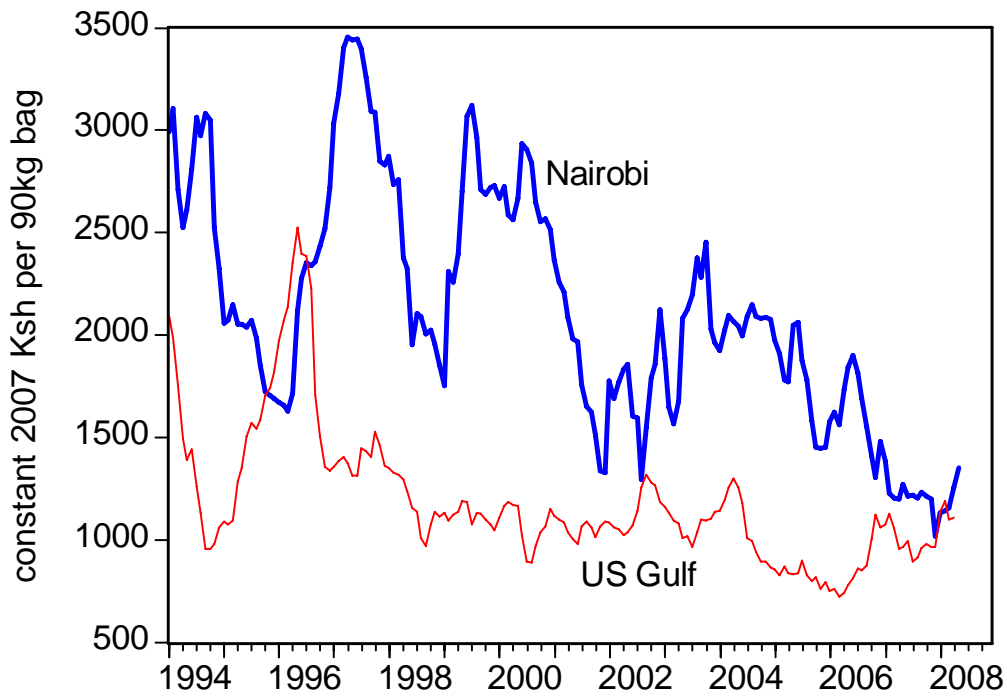
Wholesale maize, Nairobi, **nominal USD per ton**



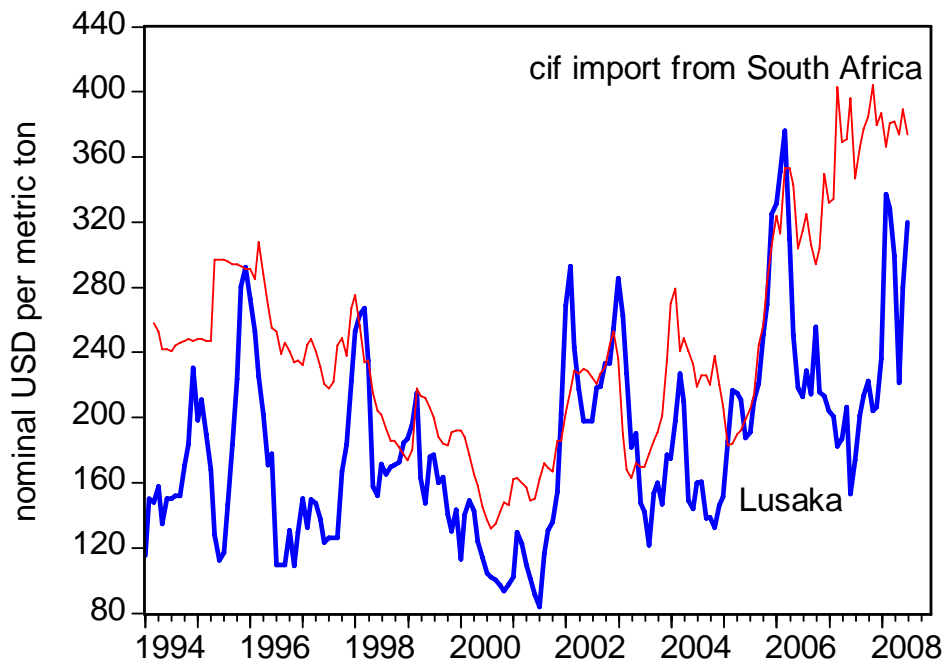
Wholesale maize, Nairobi, **nominal Ksh**



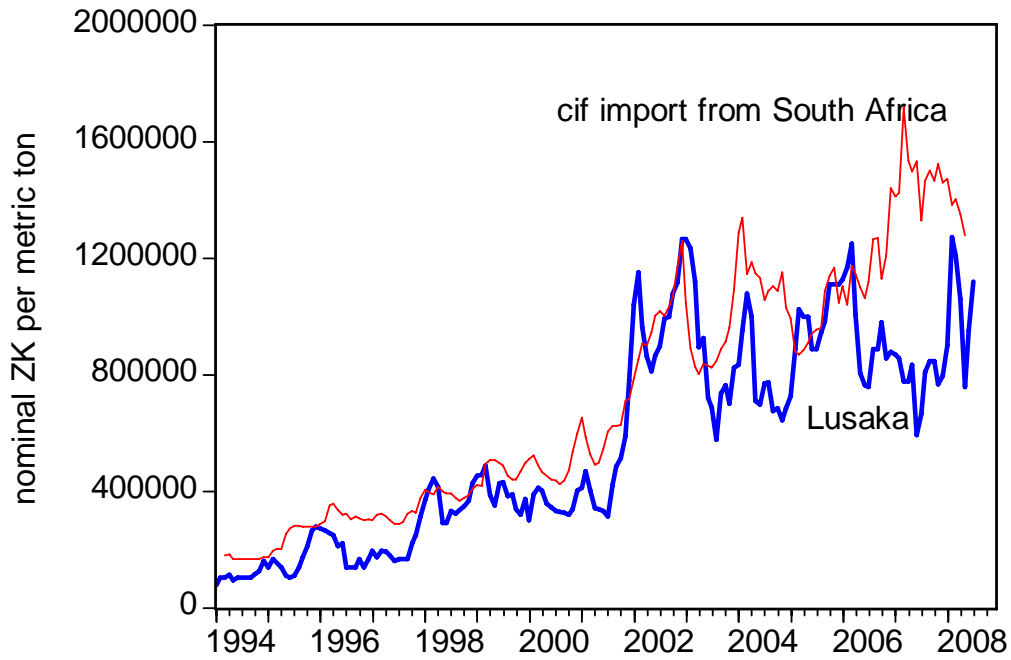
Wholesale maize, Nairobi, **Constant 2007 Ksh**



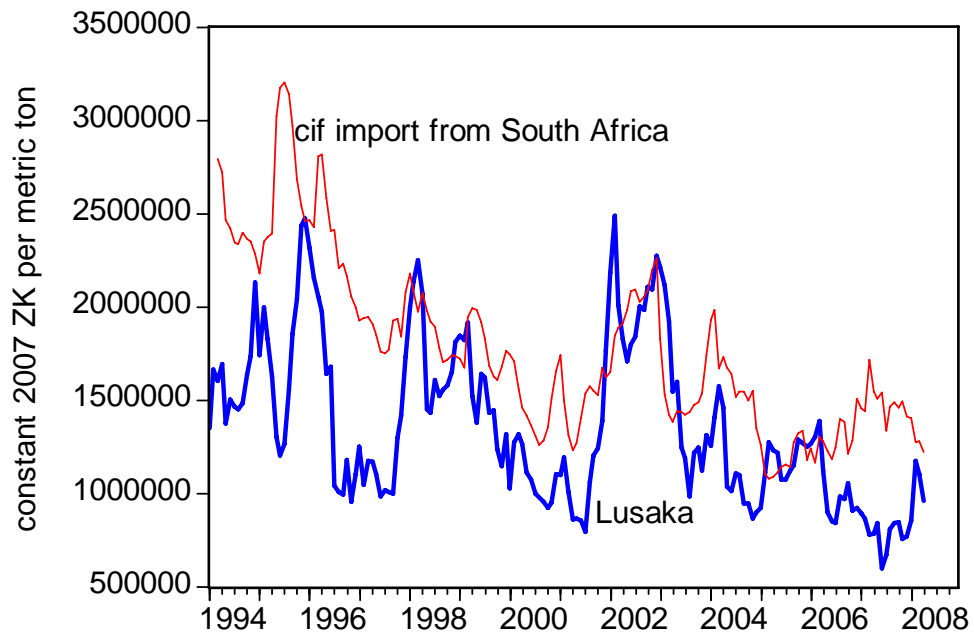
Retail maize, Lusaka, Zambia, **nominal USD per ton**



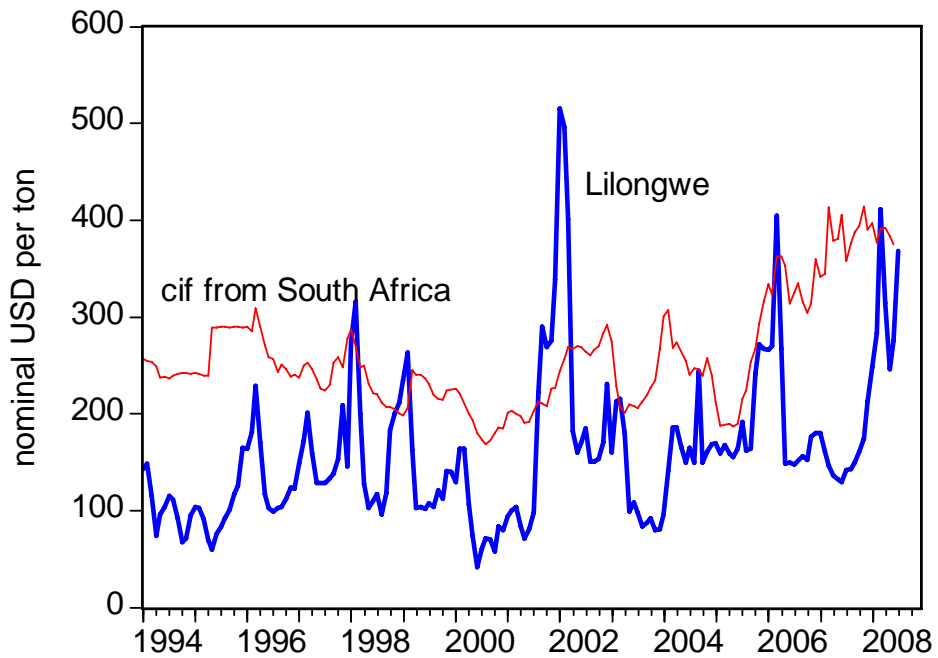
Retail maize, Lusaka, Zambia, nominal ZK per ton



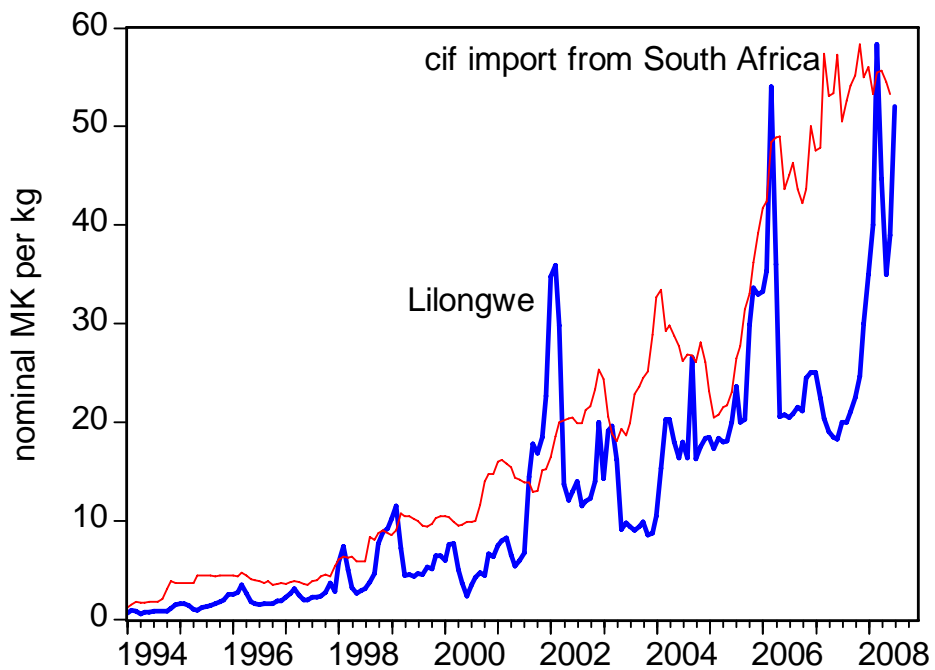
Maize, Lusaka, Zambia, Constant 2007 ZK per ton



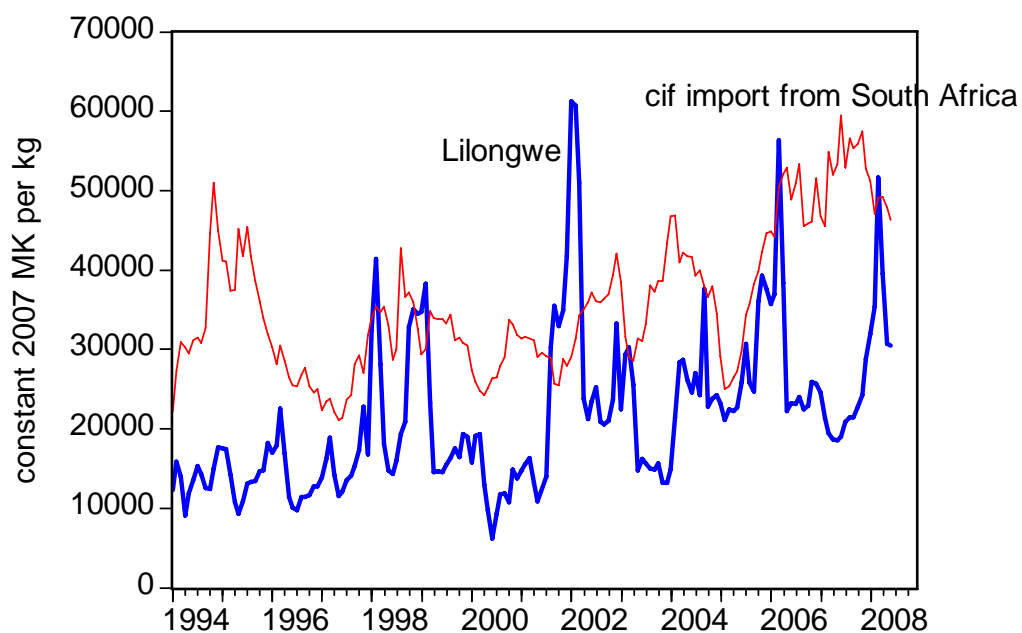
Retail maize, Lilongwe, Malawi, USD per ton



Maize, Lilongwe, Malawi Nominal MK per kg



Retail maize, Lilongwe, Malawi, constant 2007 MK per kg



Maize price transmission estimates

Monthly(1994-2008)	In USD		In real local currency	
	Non-drought	drought	Non-drought	drought
US Gulf → South Africa	0.73	0.93	0.69	0.90
S. Africa → Lusaka	0.59	0.79	0.56	
S. Africa → Lilongwe	0.62	0.02	0.13	
S. Africa → Maputo	0.52		0.48	
S. Africa → Nairobi	-0.04		-0.38	-0.05

Upshot on food prices:

1. In local currency units, 2008 maize prices are very high, but comparable to levels seen before in past decade – Why?
 - HIPC, budget support, stable macro-economy (varies by country) → exchange rate appreciation against dollar → softening the food price rise
 - Official 2007 and 2008 crop estimates have been moderate to good (credible?)
 - Only partial price transmission of world prices to domestic markets in region
2. Hence, countries in the region will likely differ in terms of their exposure to rising global food prices

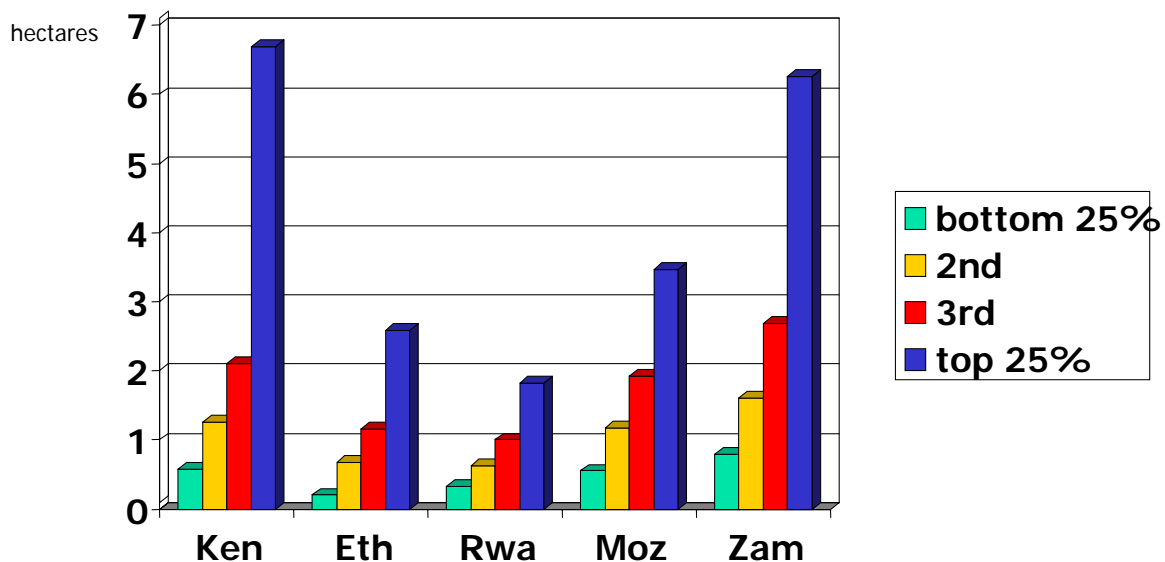
Upshot on food prices (cont.):

3. In current environment, food crises driven by reductions in purchasing power more so than production failure
 - Implications for food balance sheet approach
4. World supply response? Up till recently, policy in US, India and other countries has sought to limit grain output → great potential for ramped-up world production in 2-3 years

Will smallholder farmers be able to take advantage of higher grain prices?

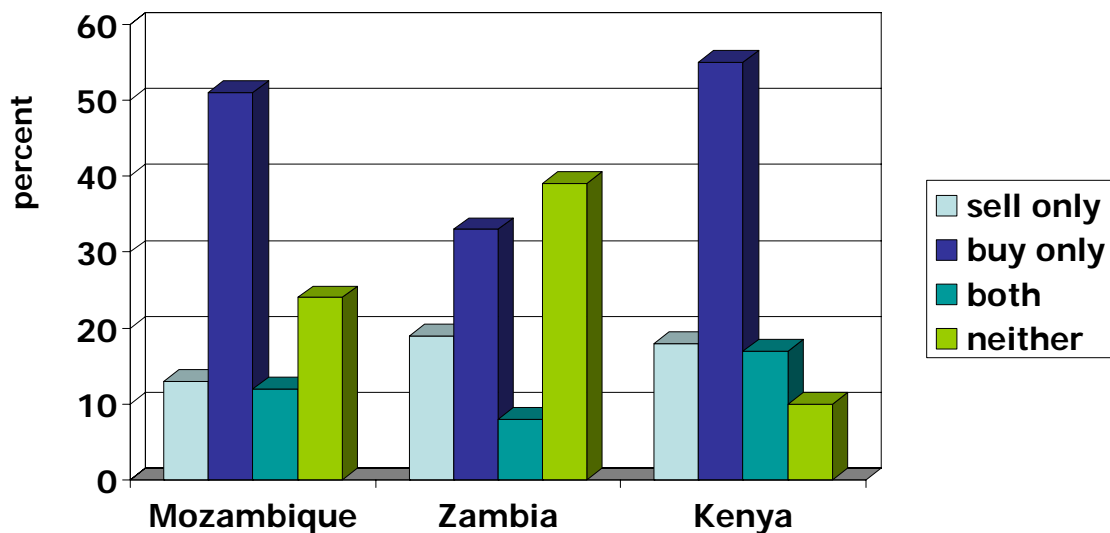
- Main determinants:
 - Access to land / farm structure
 - productive assets
 - input prices
 - access to markets
- Emerging land pressures are generating fundamental challenges for broad-based rural income growth

Farm size distribution: Small farm sector



Source: Jayne, Mather, Mghenyi, 2006

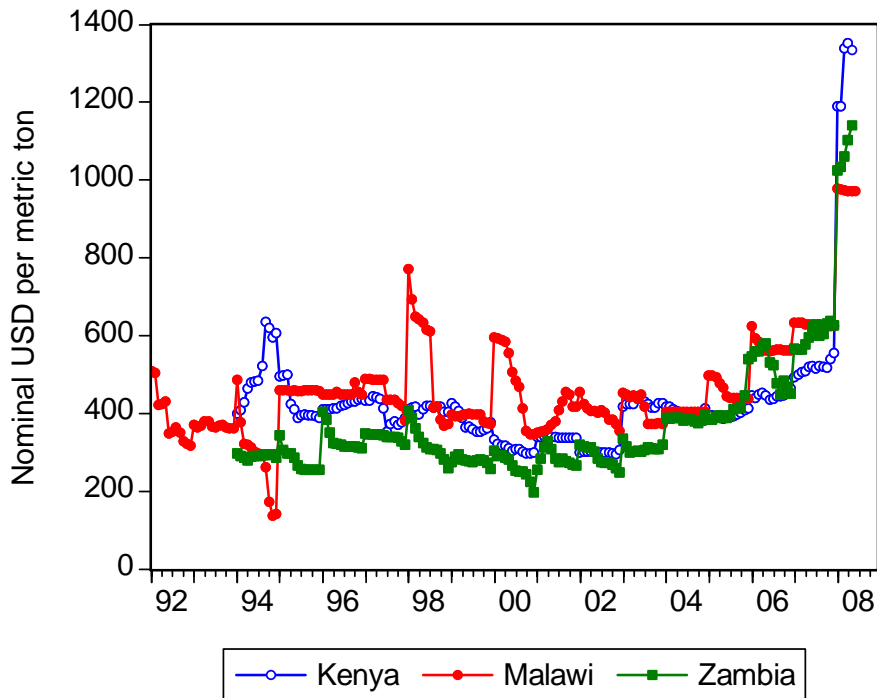
Smallholder Households' Position in the Maize Market



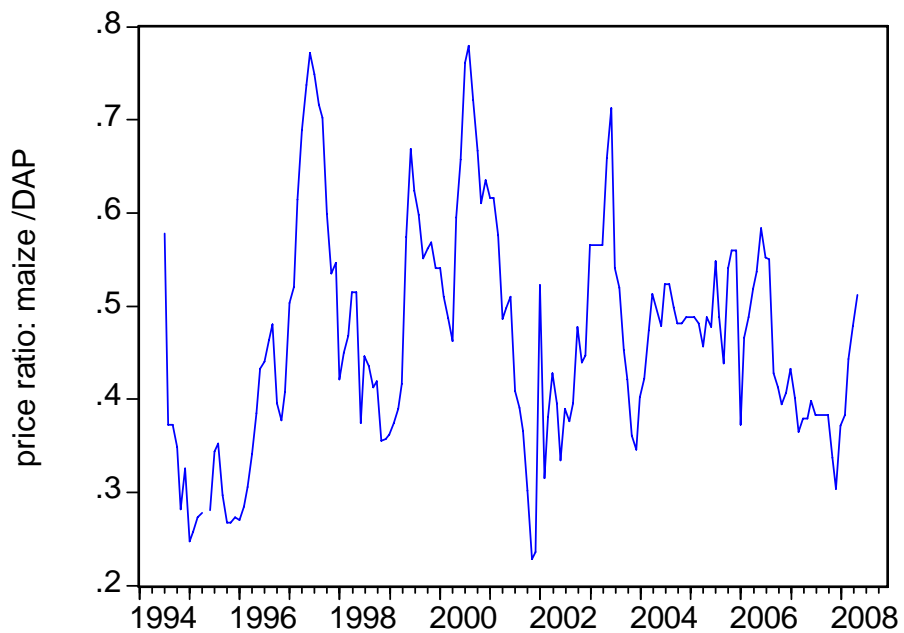
Characteristics of smallholder farmers, Zambia 2003/04

	N=	Farm size (ha)	Asset values (US\$)	Gr. Rev., maize sales (US\$)	Gr. Rev., crop sales (US\$)	Total hh income (US\$)
Top 50% of maize sales	31,328 (2%)	4.3	1,132	720	1163	2,932
Rest of maize sellers	328,561 (26%)	1.6	316	88	193	634
Households not selling maize	907,255 (72%)	0.9	231	0	97	415

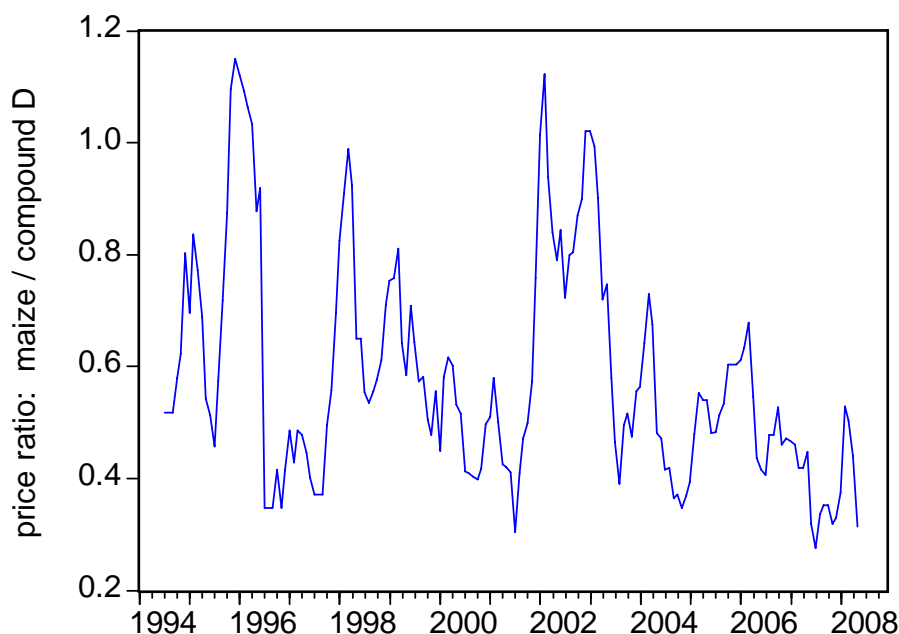
Fertilizer price trends



Maize-fertilizer price ratios, Kenya



Maize-fertilizer price ratios, Zambia



Upshot on smallholder behavior:

1. A small minority of relatively better-off farmers will be able to take advantage of higher food prices
2. Most smallholders, who are net buyers of food, and urban consumers, will be worse off
3. Rural and urban poverty rates likely to rise
4. Reduction in incentives to use fertilizer → yields down → increasingly likelihood of needing to import at high world prices
5. Shifts in cropping patterns toward staple food (including roots and tubers), away from export crops

Implications for food security policy?

The outcomes in E/S Africa will be influenced greatly by political response:

1. Future role of marketing boards and price stabilization
2. Input subsidy programs
3. Commitment to public goods investments
4. Commitment to open borders/regional trade
5. US/EU policy toward flexible food aid response (cash vs. food depending on situation)
6. US energy policy
7. US/EU agricultural and trade subsidy policies



Export bans and trade restrictions

- Generally doesn't stop trade from occurring but raising smuggling costs, which depress prices for farmers and raise costs for consumers
- Fact: only 5% of all grain imported by Africa countries comes from other African countries – 95% of imports is grown by farmers on other continents

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What about fertilizer?

- Major gains can be achieved by reducing the costs of delivering fertilizer to farmers and raising the efficiency of fertilizer use
 - Survey findings show wide variations in fertilizer use efficiency even within same village
- What about fertilizer subsidies?
 - Compelling on paper, but need to overcome political capture

Zambia	Total Income	Assets	Landholding size
Fertilizer source:	'000 kwacha per capita		ha per capita
<i>Households not acquiring fertilizer:</i>	266	173	.15

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Source: Govereh et al, 2006

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<i>Households not acquiring fertilizer:</i>	266	173	.15
<i>Cash purchases from private retailers:</i>	774	342	.20
<i>Government Fertilizer Support Program (50% subsidy)</i>	804	425	.23

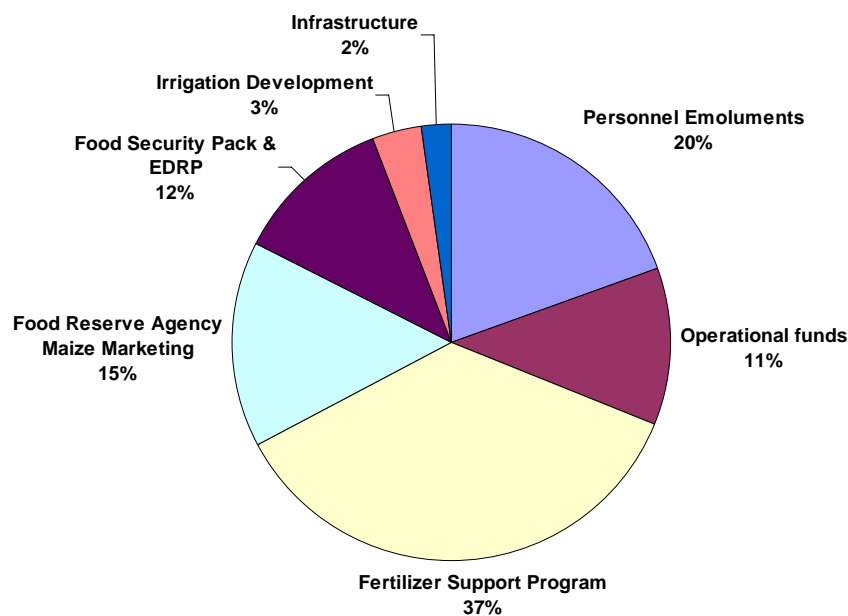
Source: Govereh et al, 2006

IFPRI review of rate of return studies:

	Returns
Subsidies	Negative – 12%
Investments	
- research & extension	35% to 70%
- roads	20% to 30%
- education	15% to 25%
- communications	10% to 15%
- irrigation	10% to 15%

If we believe these findings, they have major implications for government and donor response

Budget allocation to Agricultural Sector in Zambia: ZMK465 million in 2005



Source: Govereh et al, 2006

-
- As massive as the poverty problems are now, they will be much greater unless budgets are re-allocated sooner or later to investments that will make the economy productive in the long-term:
 - Population growth w/o productivity growth → civil strife
 - Not a viable option to have more and more “state failure” in Africa

Possible Response Options for Consideration:

	Good harvest	Production shortfall
Response options for governments		
Response options for donors		

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Response options for governments	<ul style="list-style-type: none"> • Income support (food for work, cash transfers) for vulnerable groups • Production contracts • build cash reserves for import in future • build buffer stocks? 	
Response options for donors		

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	<ul style="list-style-type: none"> • ramp-up investment in crop science, infrastructure, irrigation, farmer knowledge 	
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Response options for donors	<ul style="list-style-type: none"> • Support local crop science • Resources for local food purchase or imports • Support improved crop production estimates and market information • Support overhaul of food balance sheet approach • Reconsider energy policy and impacts on food prices and climate effects 	

Summing Up

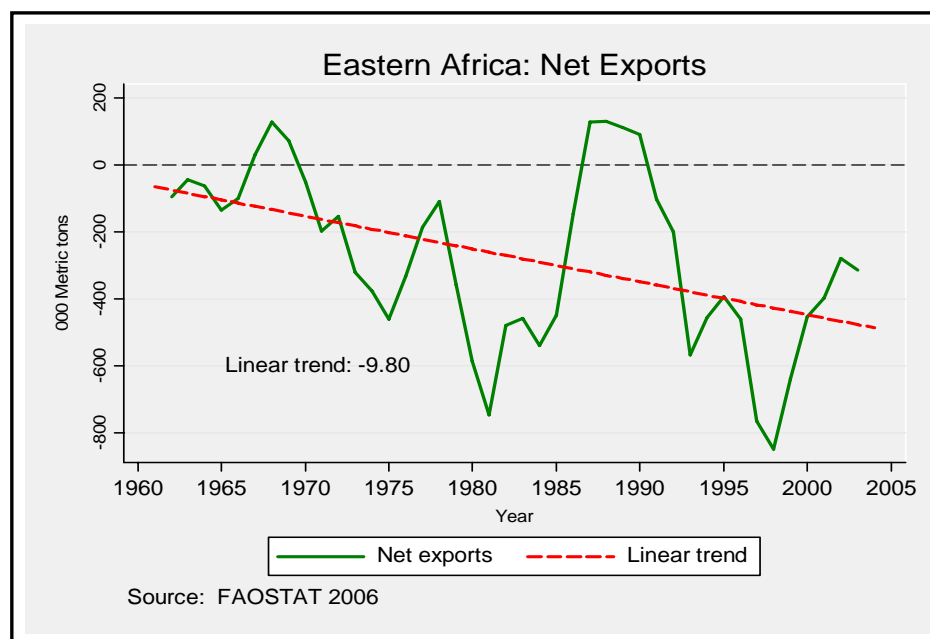
1. Major distributional effects: relatively few will gain – many will lose
2. Poverty likely to rise
3. Greater urgency for good governance
 - political responses will greatly influence outcomes
4. Heightened importance of inter-linked macroeconomic factors and energy-food linkages in determining future food security in Africa and many other parts of the world.

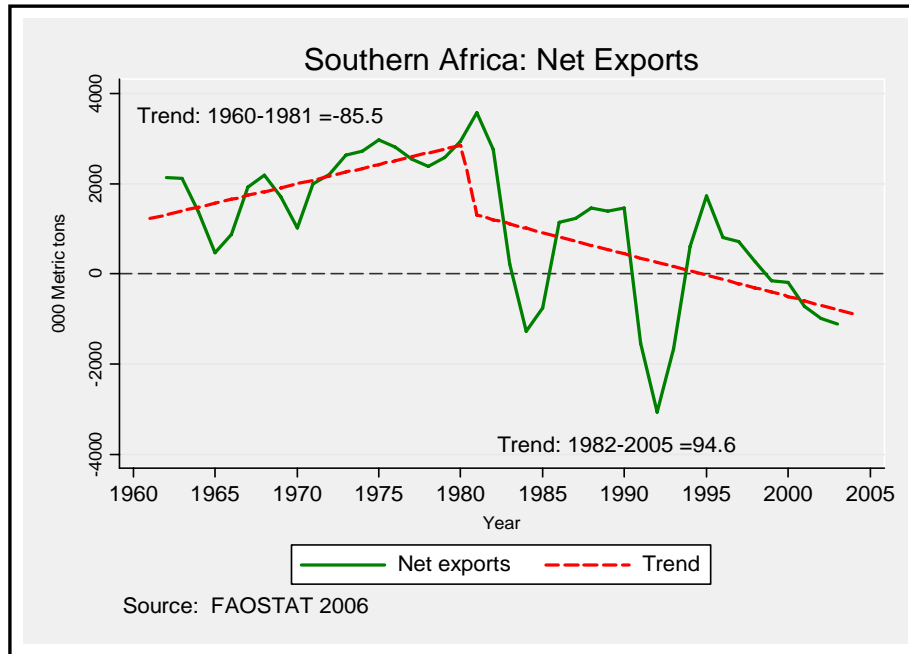


thank you

	period	Ag. Growth rate (FAO)	AgGDP (WB)
Malawi	1990-2006	+3.26	+5.70
Mozambique	1990-2006	+4.76	+5.21
Kenya	1990-2006	+2.15	+2.69
Zambia	1990-2006	+1.41	+2.82
Sub-Saharan Africa	1990-2006	+2.98	+3.43

I. Gradual transition to structural grain deficit





Political economy of public resource allocation

