

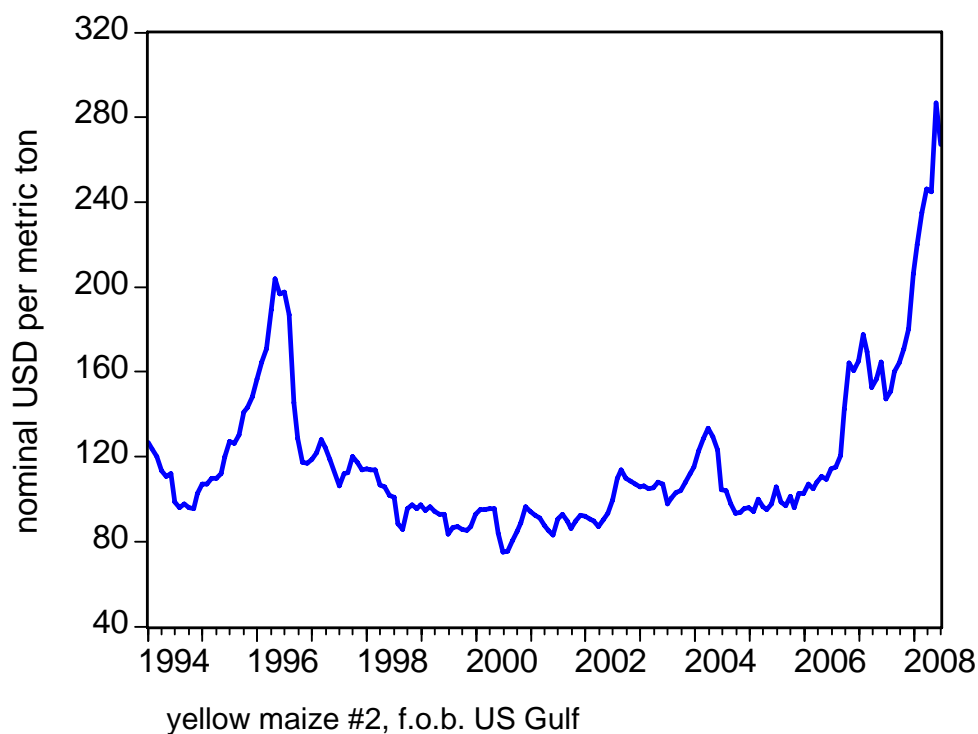
# The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer-Run Responses



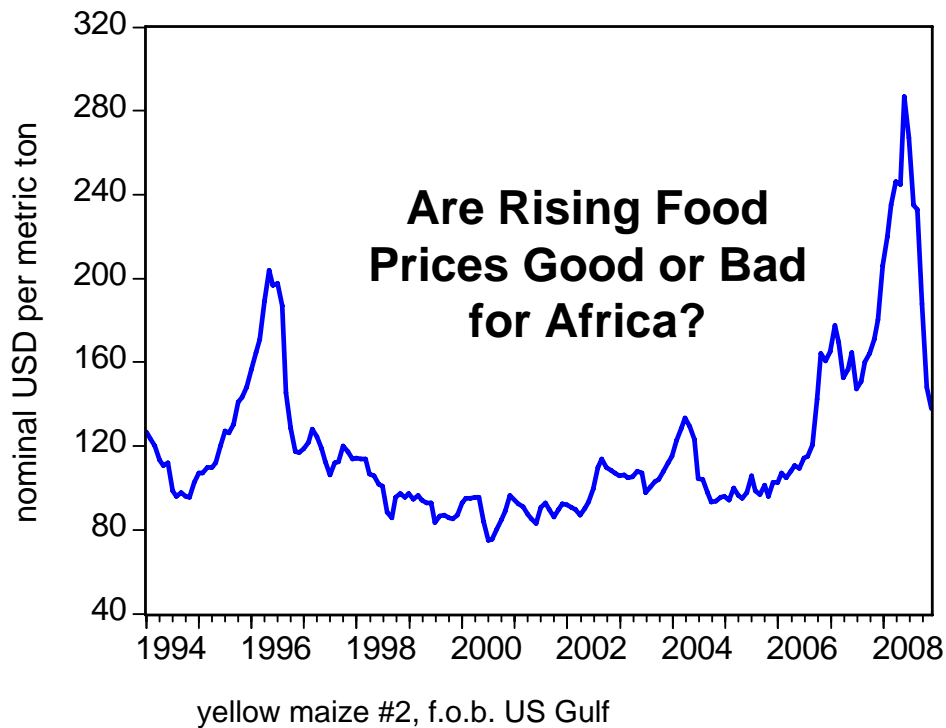
T. Jayne, A. Chapoto, I. Minde, and C. Donovan

Presentation at African Agricultural Markets Policy Workshop,  
Nairobi, Kenya, December 11, 2008  
Sponsored by the Common Market for Eastern and Southern Africa  
(COMESA)

## International Maize Price, Jan. 1994 - Jul. 2008



## International Maize Price, Jan. 1994 – Oct. 2008



## Result of debate and subsequent poll in The Economist:

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

# Objectives:

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1. to assess how changes in world prices have affected food and fertilizer prices in the region;
2. to determine likely effects on cropping patterns, food production, and the potential for food crises;
3. to consider implications for states, donor agencies, and “new funding agents”

Impacts of higher world prices on  
maize prices and the food situation  
in eastern and southern Africa

# Six Main Findings:

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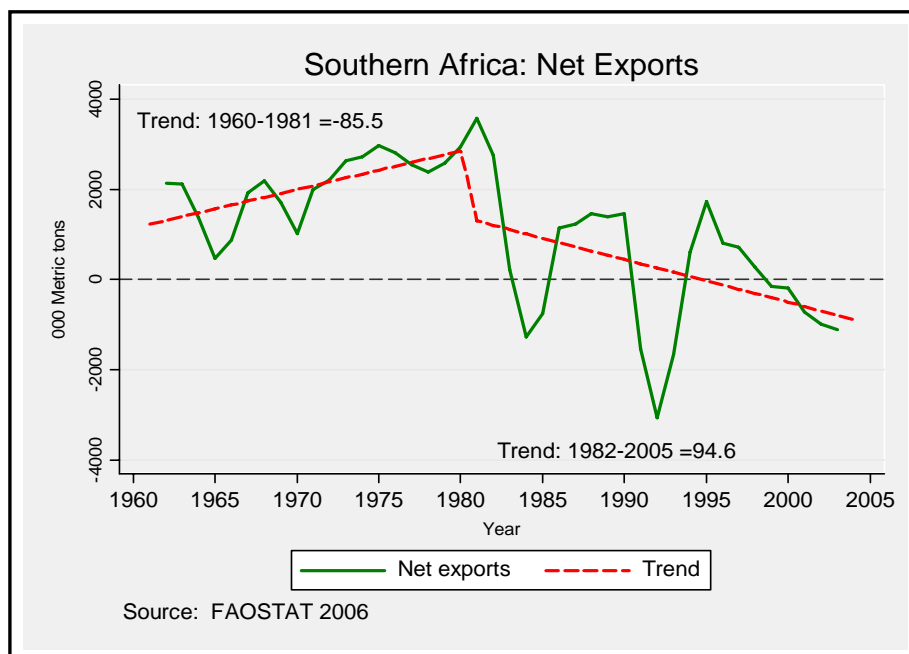
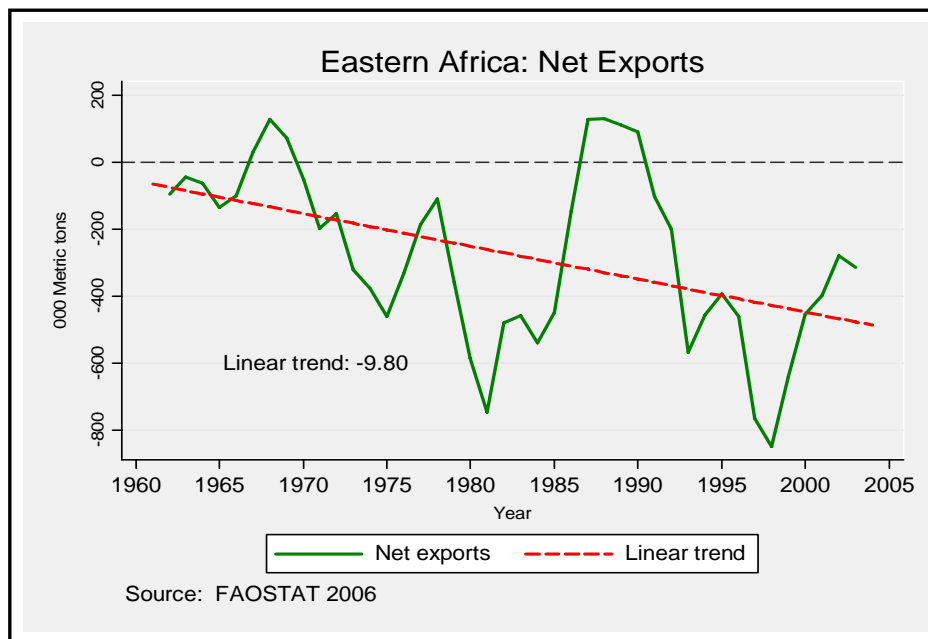
1. Both E/S Africa turning into regional maize deficit
2. World food prices are tumbling but remain high in E/S Africa
3. Questions as to whether Zambia and Malawi may face food shortages by early 2009, not because food prices are abnormally high, but because of uncertainty over need to import
4. The spectre of food crisis is heightened by barriers to regional trade
5. Maize-fertilizer price ratios have declined → will have marked effect in parts of the region on cropping patterns, production, government budgets
6. Even though world food prices are rapidly falling, the food situation in E/S Africa will remain precarious at least into 2009

## Finding 1:

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Both E/S Africa turning into  
maize deficit regions

# Gradual transition to structural grain deficit



## Per capita growth rates

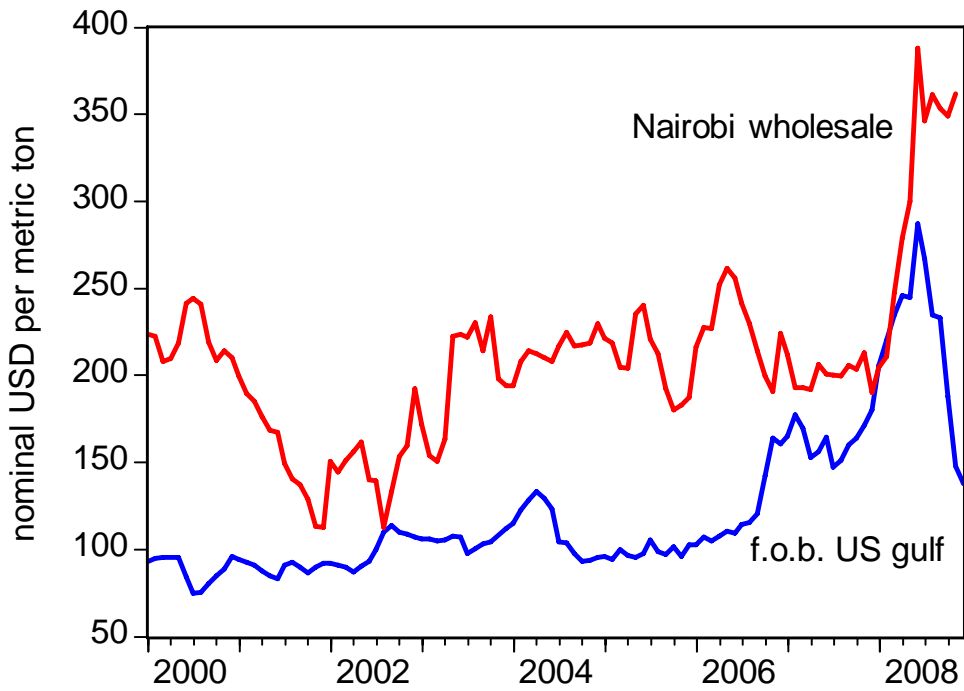
	period	Ag. Growth rate (FAO)	AgGDP (WB)
Malawi	1990-2006	+3.26	+5.70
Mozambique	1990-2006	+4.76	+5.21
Kenya	1990-2006	+2.15	+2.69
Zambia	1990-2006	+1.41	+2.82
Sub-Saharan Africa	1990-2006	+2.98	+3.43

## Finding 2:

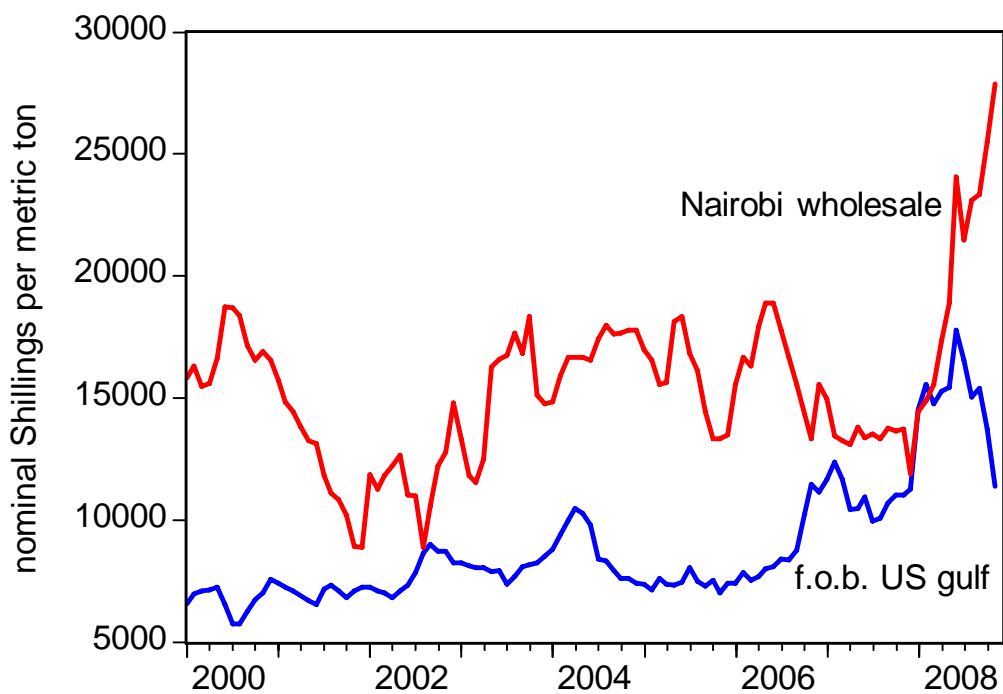
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World food prices have declined dramatically since August 2008, but maize prices in the region remain very high

## Nominal USD maize prices, Nairobi, Kenya



## Nominal shillings maize price, Nairobi, Kenya



## Finding 3:

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### ***Divided opinion about possible food crises emerging in Zambia and Malawi in early 2009***

- not because food prices are abnormally high, but because of physical shortages.
- In both countries, national maize supplies may be depleted before the 2009 harvest
- Zambia recently agreed on need for imports

## Finding 4:

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### ***Opportunities to relieve maize deficits and stabilize prices are hindered by regional trade barriers***

- Tanzania, Zambia, Malawi all have
  - restrictions on exports;
  - Import tariffs on maize
  - Sometimes ban imports
- Various trade impediments that raise costs to consumers and reduce prices to farmers

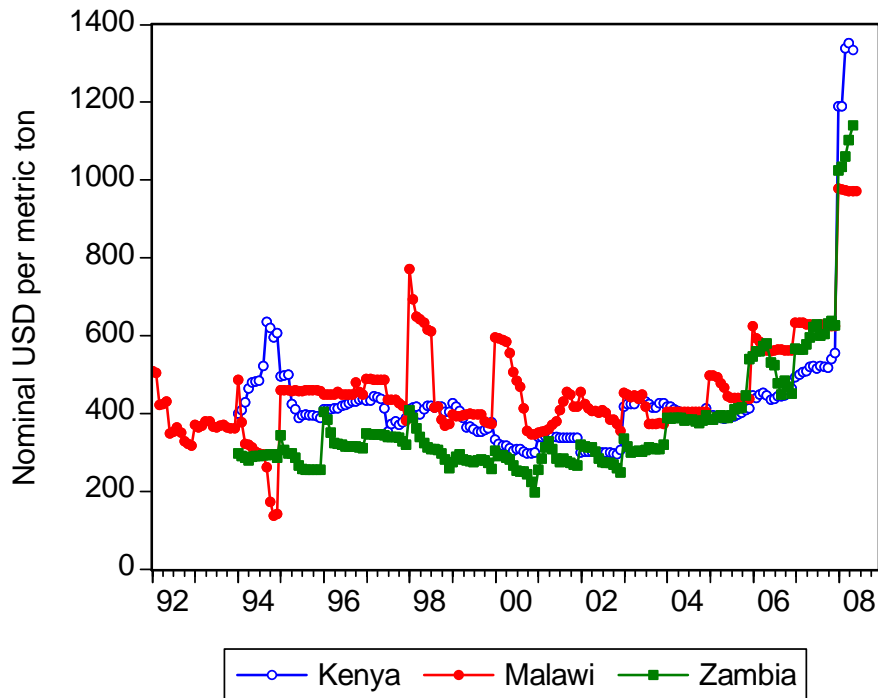


## Finding 5:

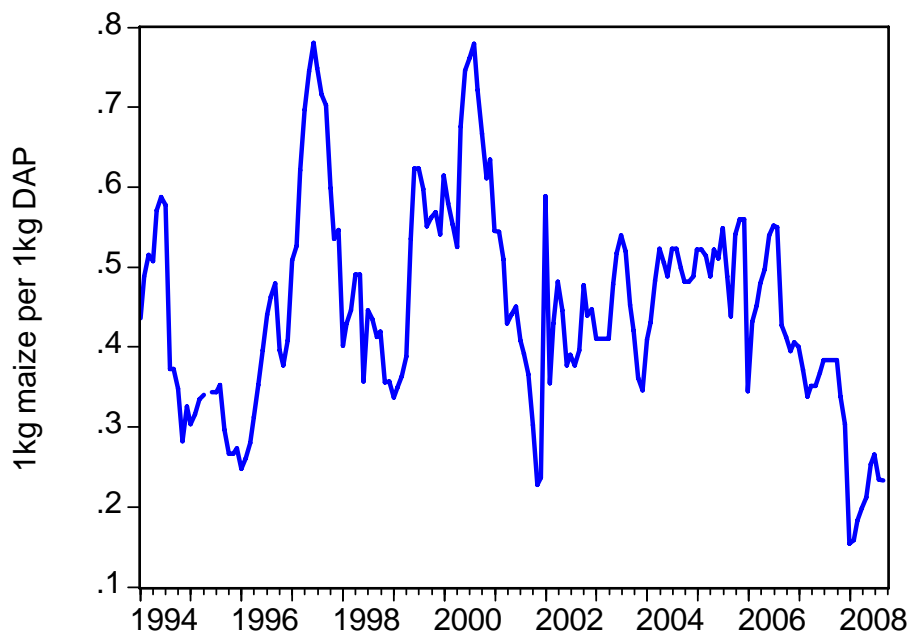
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Decline in fertilizer use  
on staple crops in the  
region in 2008

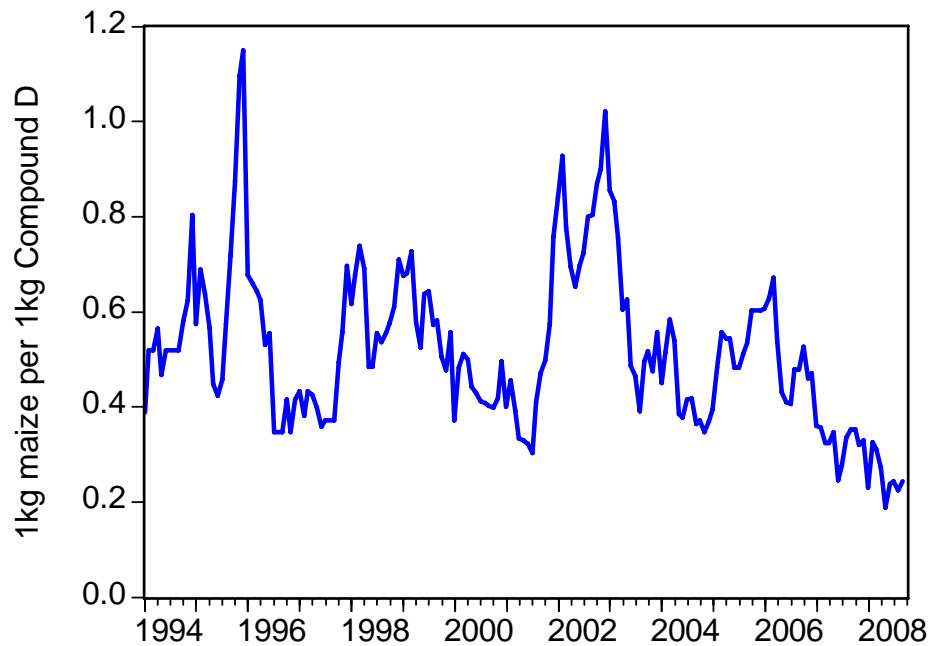
# Fertilizer price trends



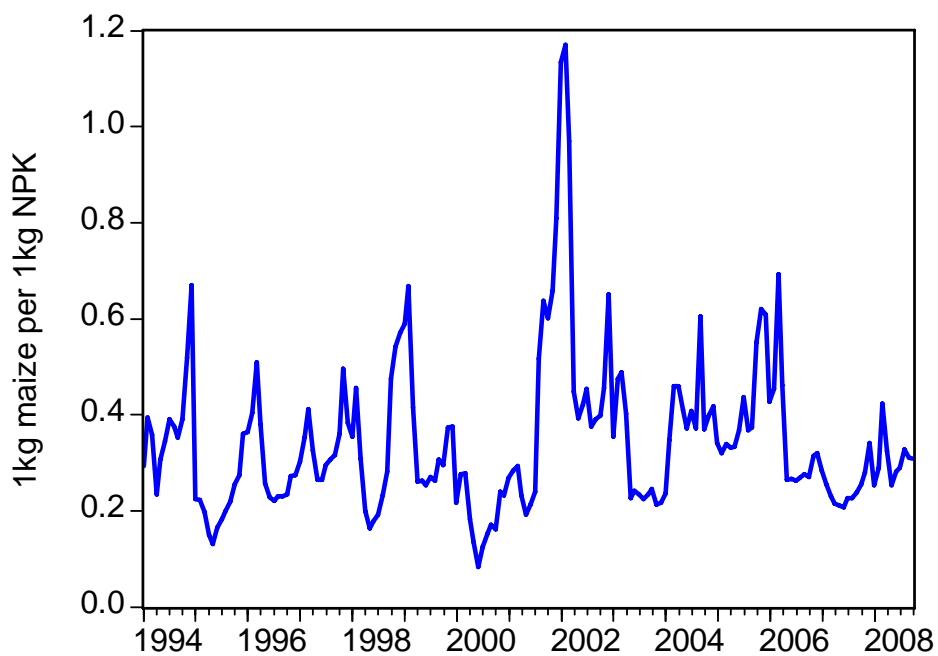
# Maize-fertilizer price ratios, Kenya



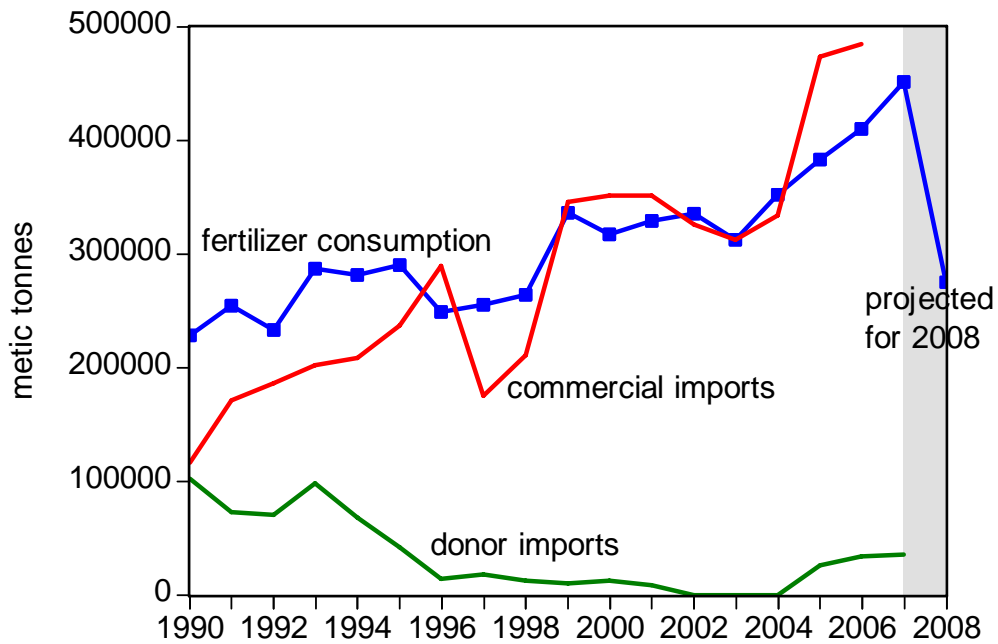
## Maize-fertilizer price ratios, Zambia



## Maize-fertilizer price ratios, Malawi



## Trends in fertilizer use, Kenya



### Finding 5:

#### ***Decline in fertilizer use on staple crops in the region in 2008. Anticipated outcomes:***

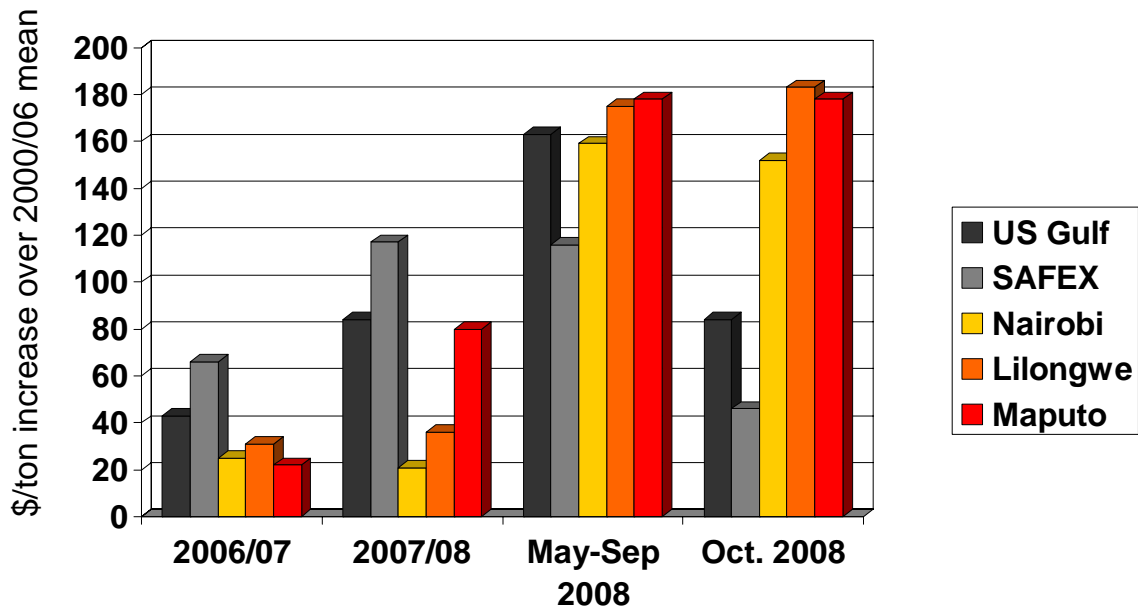
1. less fertilizer used on maize and other crops in the coming cropping season
  2. lower 2009 yields and production
  3. continued upward pressure on maize prices
  4. possible shift in area out of crops that require heavy fertilization for profitability and into crops that are profitable even at low or no fertilizer use
- most discernable in countries that make relatively intensive use of fertilizer
- least so in countries where fertilizer use is negligible

## Finding 6:

*High fertilizer prices in 2008 are likely to contribute to high food prices in 2009 in the region, even if world food prices continue to decline.*

- Even though international prices are tumbling, no evidence of this yet in interior markets

Mean price rises over historical  
(2000-2006 averages)



## Upshot on food prices:

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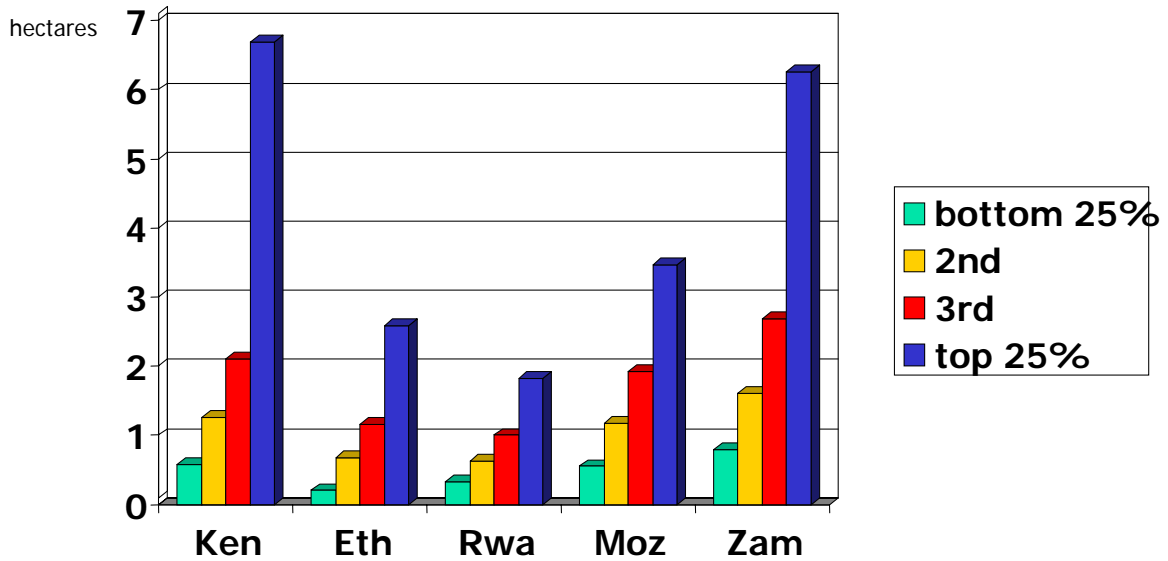
1. In local currency units, 2008 maize prices are very high, but comparable to levels seen before in past decade, and not as high as in USD terms.
2. World prices are declining, but regional prices remain very high – why?
  - Supplies remain very tight in some countries
  - Imports arranged late
  - Fertilizer prices high → production declines expected
3. 2009 maize prices likely to remain near import parity levels in some countries

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

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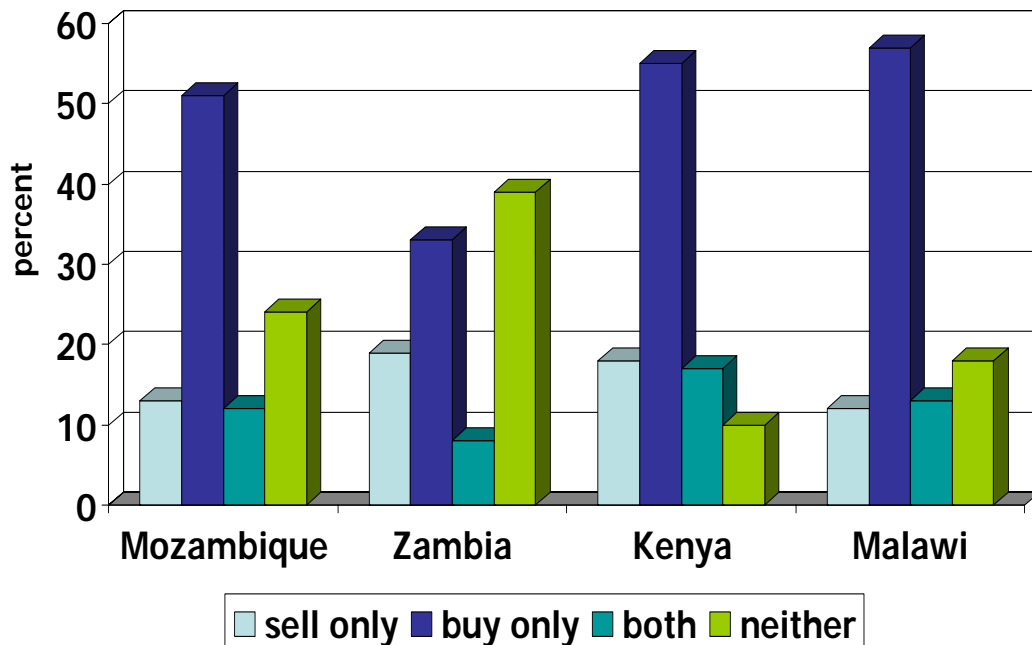
- Main determinants:
  - Access to land / farm structure
  - productive assets
  - input prices
  - access to markets
- Emerging land pressures are generating fundamental challenges for broad-based rural income growth

## 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

### Upshot on smallholder behavior:

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- **Short run:** A small minority of relatively better-off farmers will be able to take advantage of higher food prices
  1. Most smallholders, who are net buyers of food, and urban consumers, will be worse off
  2. Rural and urban poverty rates likely to rise
  3. Reduction in incentives to use fertilizer → yields down → increasingly likelihood of needing to import in 2009
  4. Shifts in cropping patterns toward staple food (including roots and tubers), away from export crops
- **Longer-run:** could be positive for Africa if accompanied by supportive public investments and policies

# Implications for food security policy?

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

1. Future marketing and trade policies
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

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- 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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thank you

## Possible Response Options for Consideration:

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

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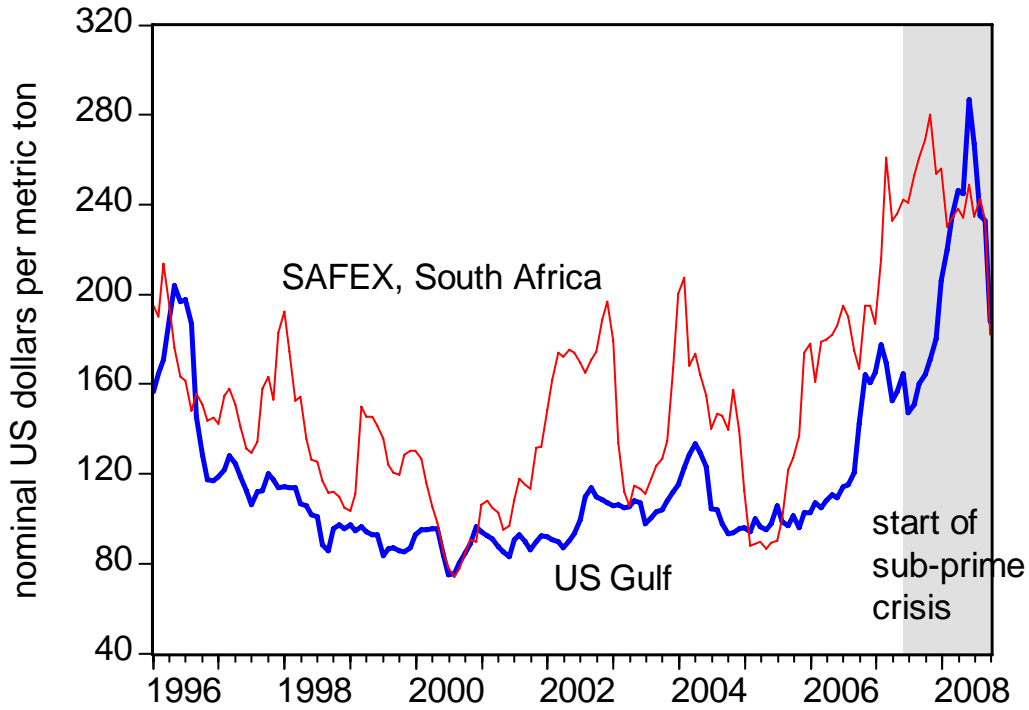
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Response options for donors	<ul style="list-style-type: none"> <li>• Support local crop science</li> <li>• Resources for local food purchase or imports</li> <li>• Support improved crop production estimates and market information</li> <li>• Support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

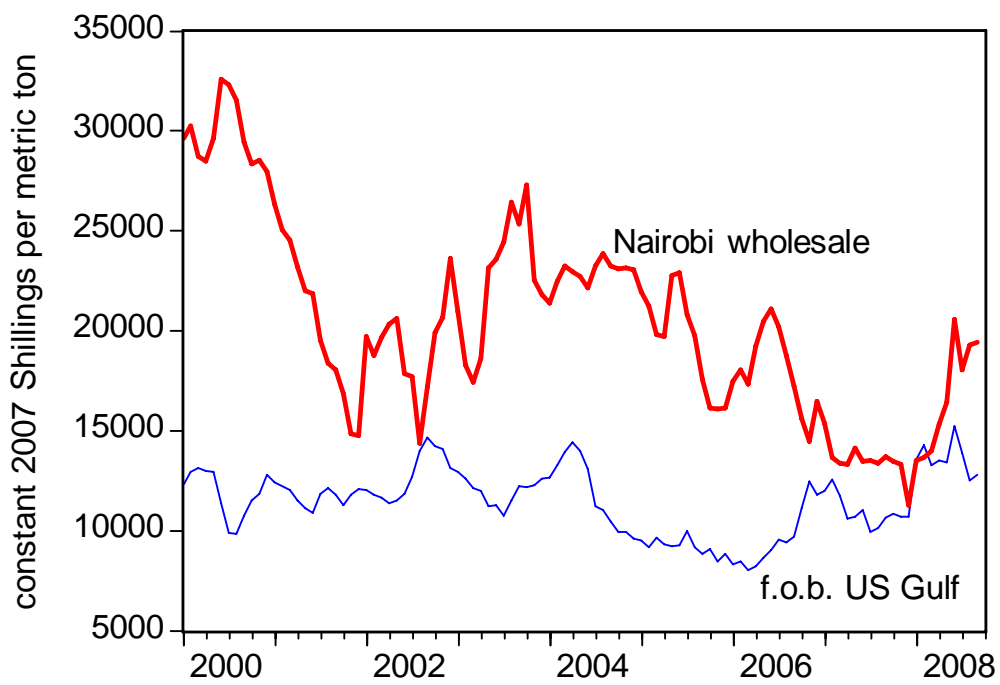
## Why have world food prices risen so dramatically in 2007-2008?

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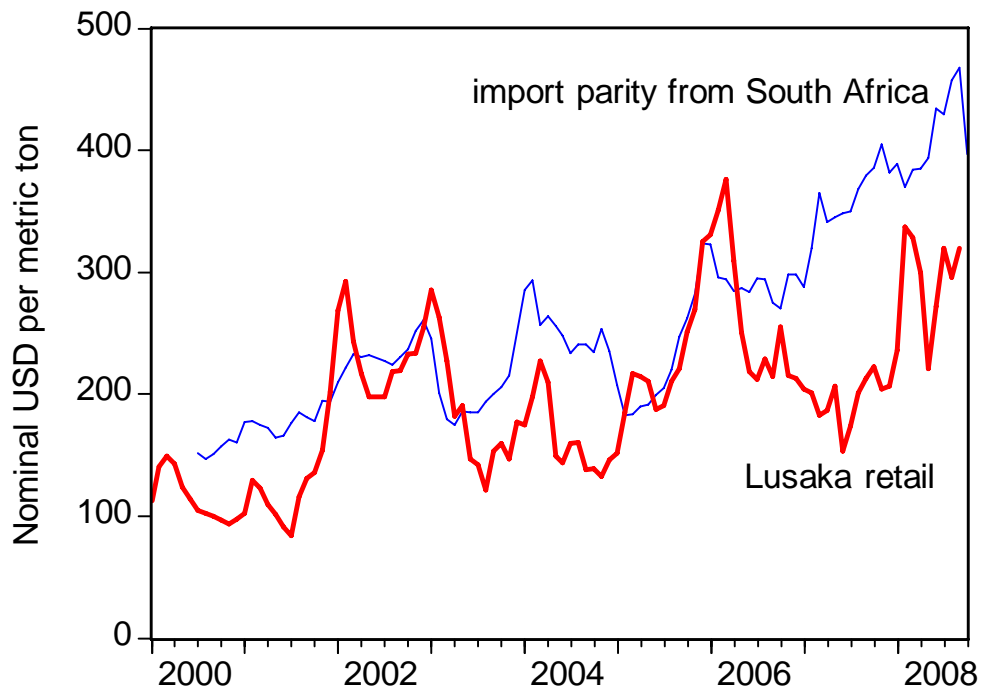
- Initial explanations – structural shifts in world food supply and demand:
  - US bio-fuels policy
  - Rising incomes in large middle-income countries (e.g., China, India)
  - Climate change (e.g. recurrent drought in Australia)
- More recent explanations acknowledge these structural shifts but also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



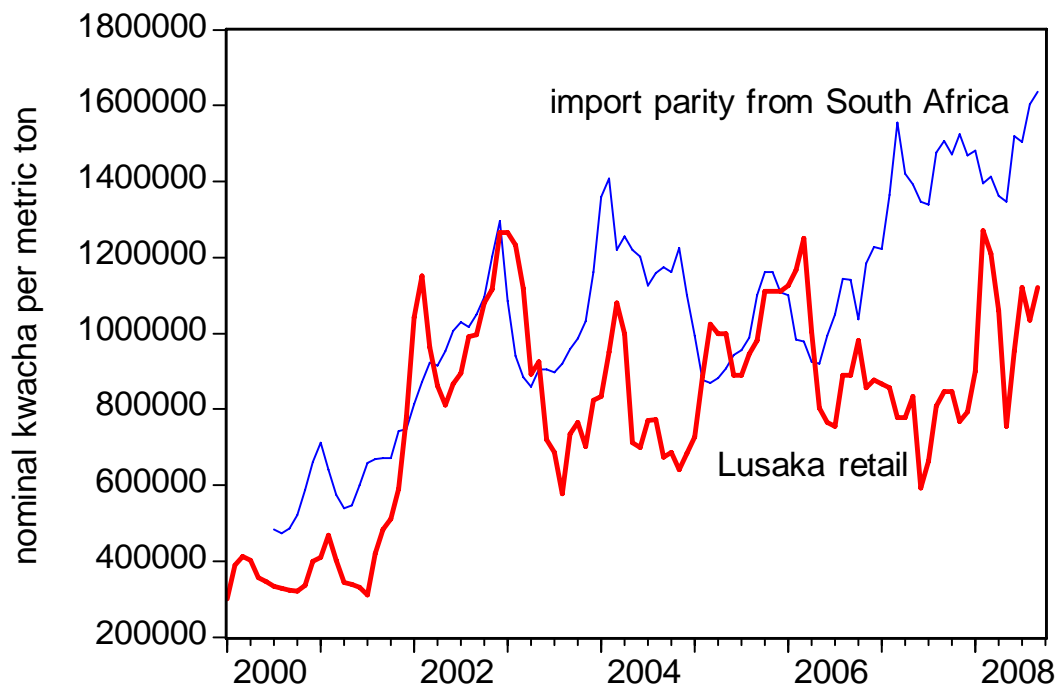
## Constant shillings maize price, Nairobi, Kenya



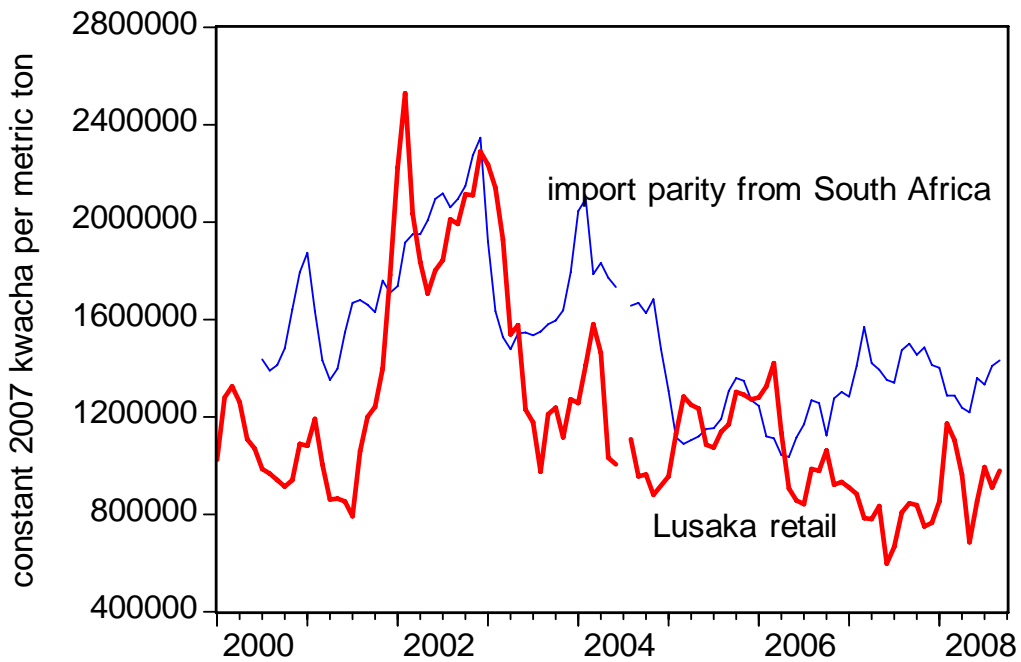
## Nominal USD maize prices, Lusaka, Zambia



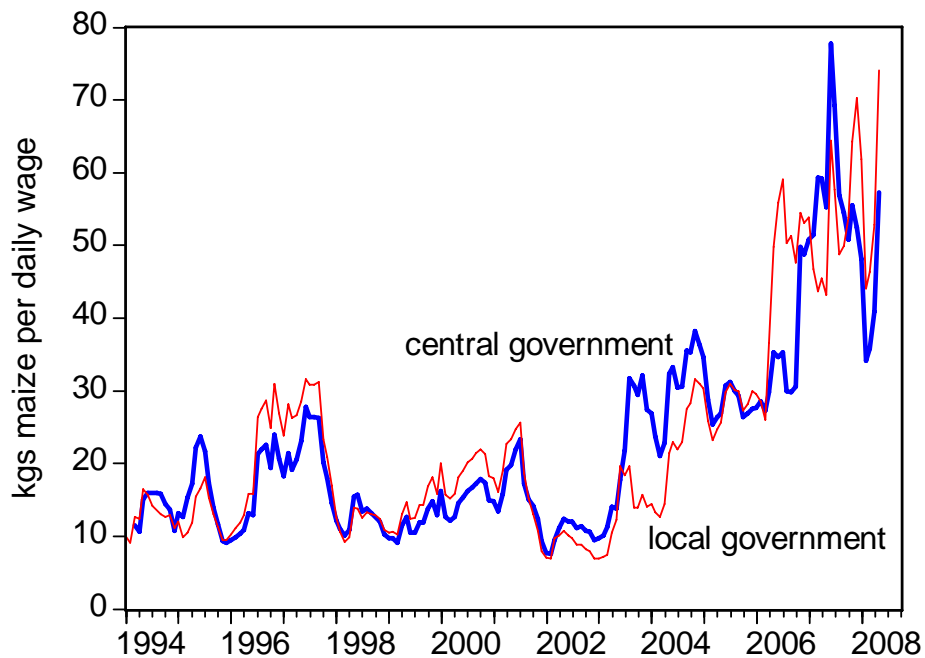
## Nominal kwacha maize prices, Lusaka, Zambia



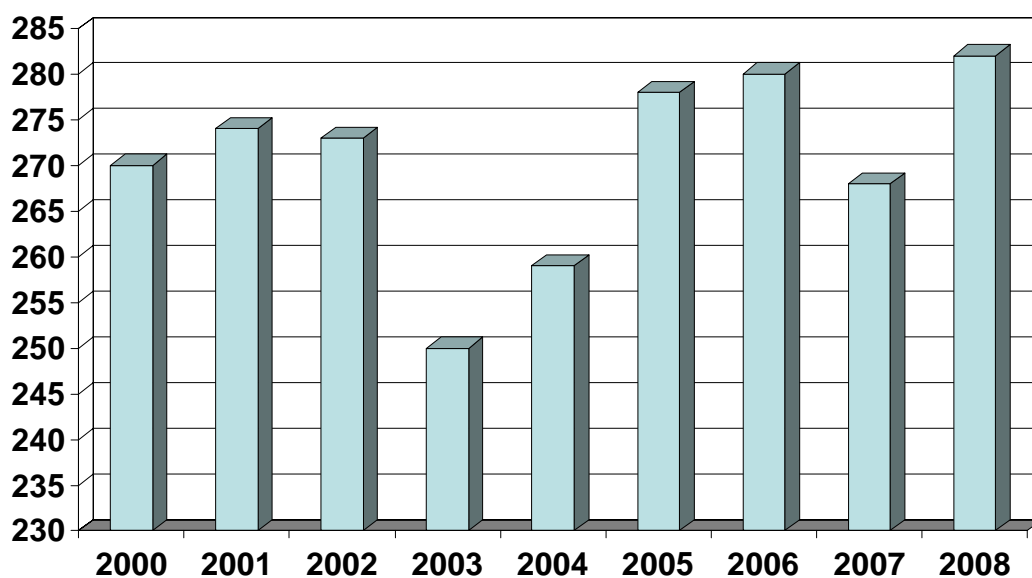
## Constant 2007 maize prices, Lusaka, Zambia



## Kilograms of maize capable of being purchase per daily wage rate for Zambian government employees

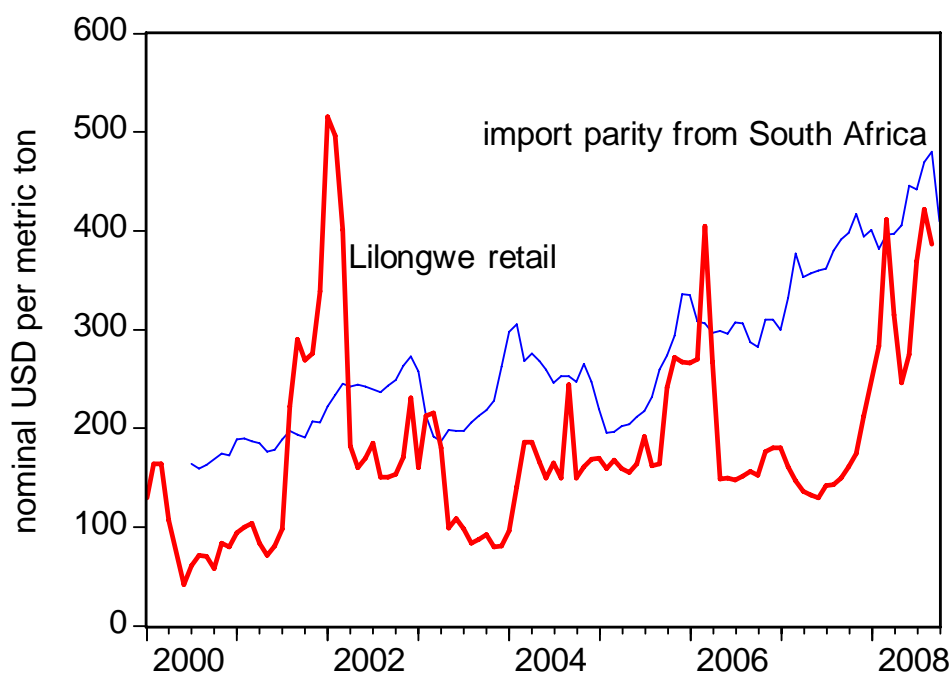


## Ratio of rice prices to Bamako civil service salary index

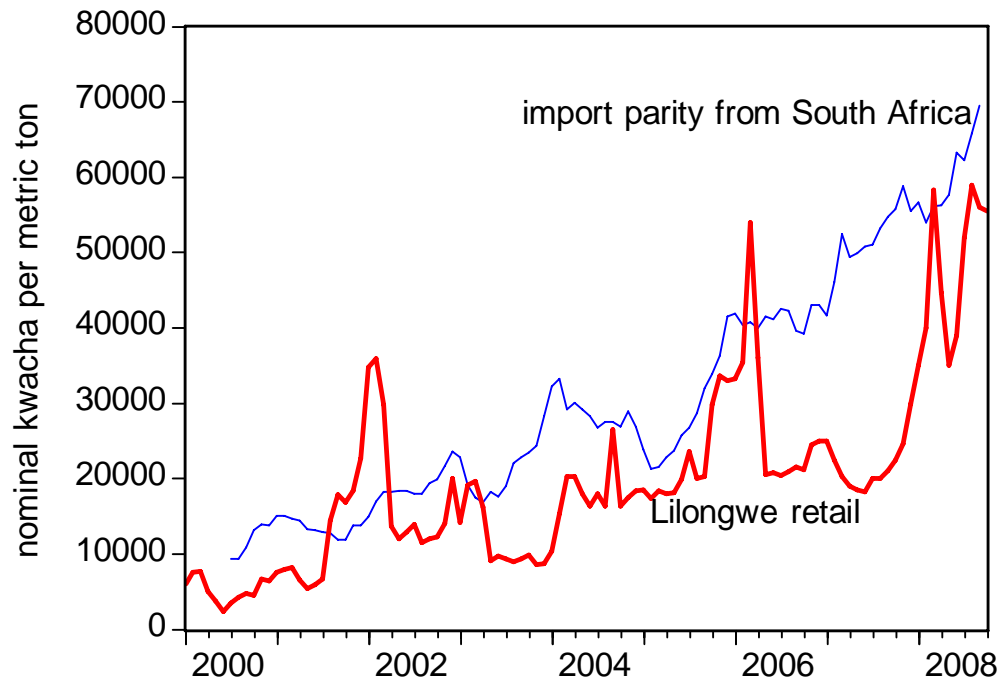


Source: Dembele et al., 2008

## Nominal USD maize prices, retail Lilongwe, Malawi



## Nominal kwacha maize prices, retail Lilongwe, Malawi



## Constant kwacha maize prices, retail Lilongwe, Malawi

