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# Maize Price Volatility in Zambia

Presented at a meeting on Zambia's Agricultural Finance Market,  
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Program, held in Lusaka, 9 December, 2009

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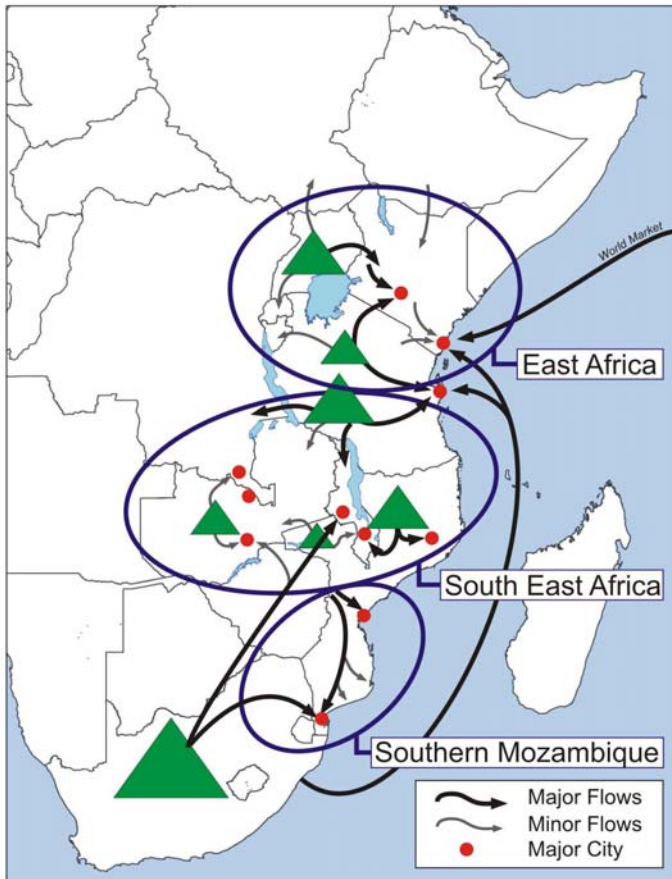
Antony Chapoto

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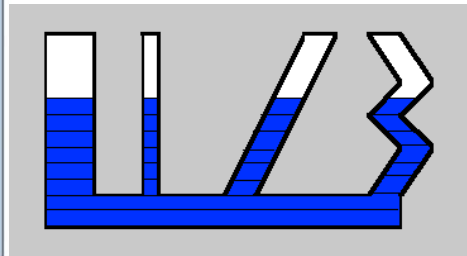
## Production and Price Instability

- Production fluctuations are substantial
  - Results in price fluctuations
  - Prices should fluctuate between import and export parity
    - Lower marketing costs (investments, competition) shrinks gap between import and export parity
      - Import parity lower: Increases food access
      - Export parity higher: Encourages production
    - Market access and functioning markets can also shrink the gap
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## ■ Regional Trade

- Major production zones linked to deficit zones - 'natural markets'
- Ideally, principle of communicating vessels:

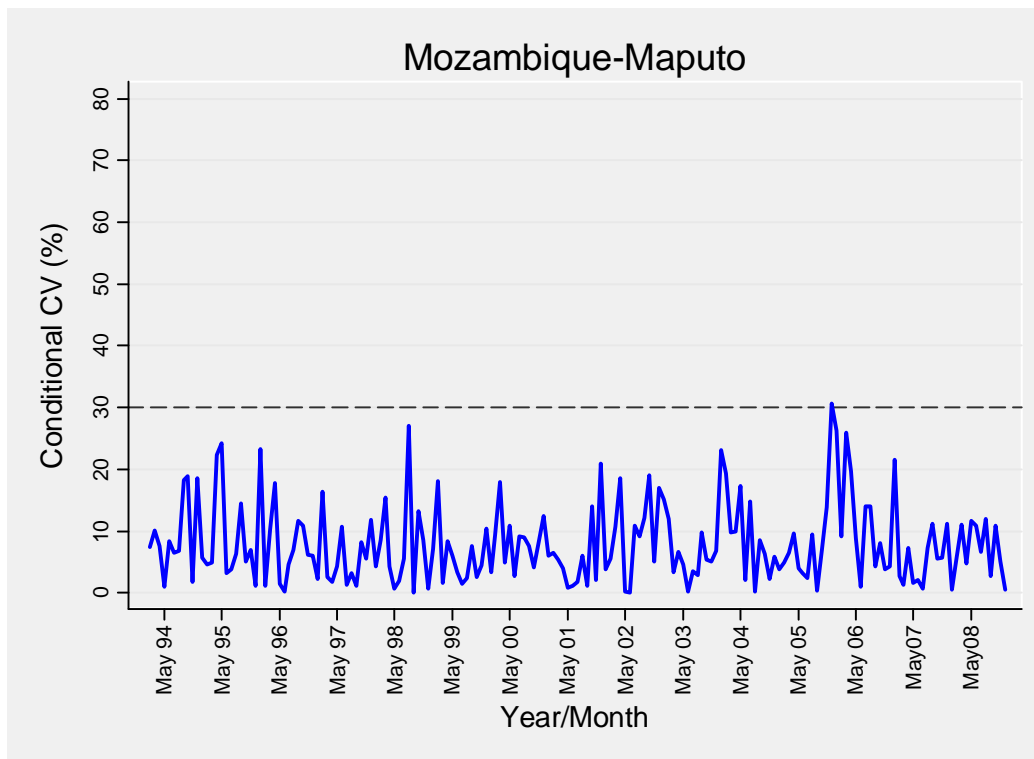


## Regional Trade – Challenges

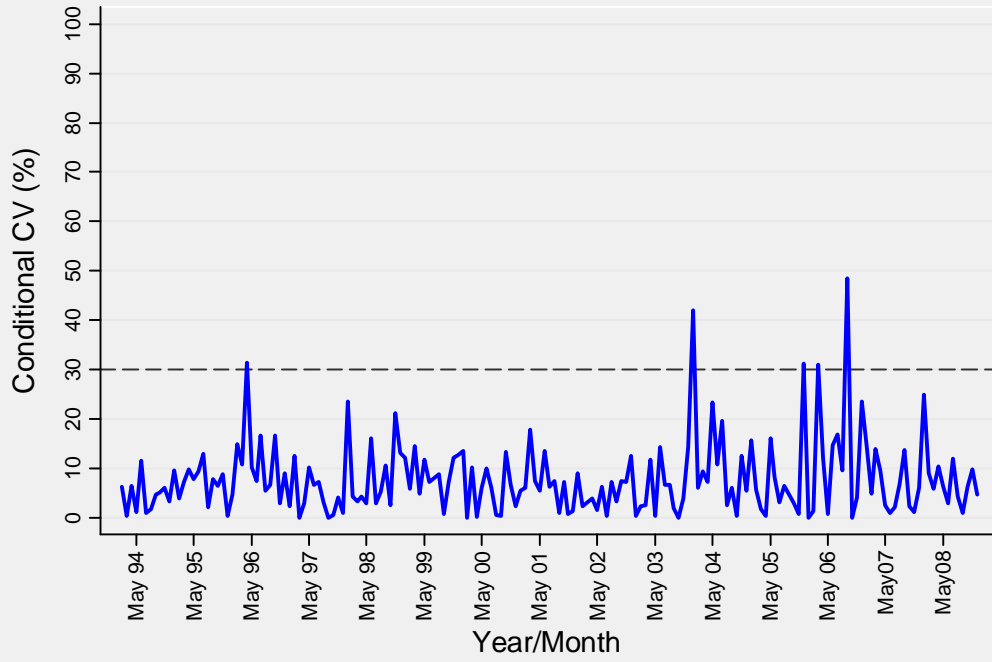
- Regional trade has potential to
  - Reduce price spikes, reduce consumer prices
  - Encourage maize production
- Despite Free Trade Area maize trade not free
- Various Tariff and Non-Tariff Barriers
- Main problem is their unpredictability, ad hoc nature
- Volatility=expected fluctuations+unpredictability

# Maize Price Unpredictability

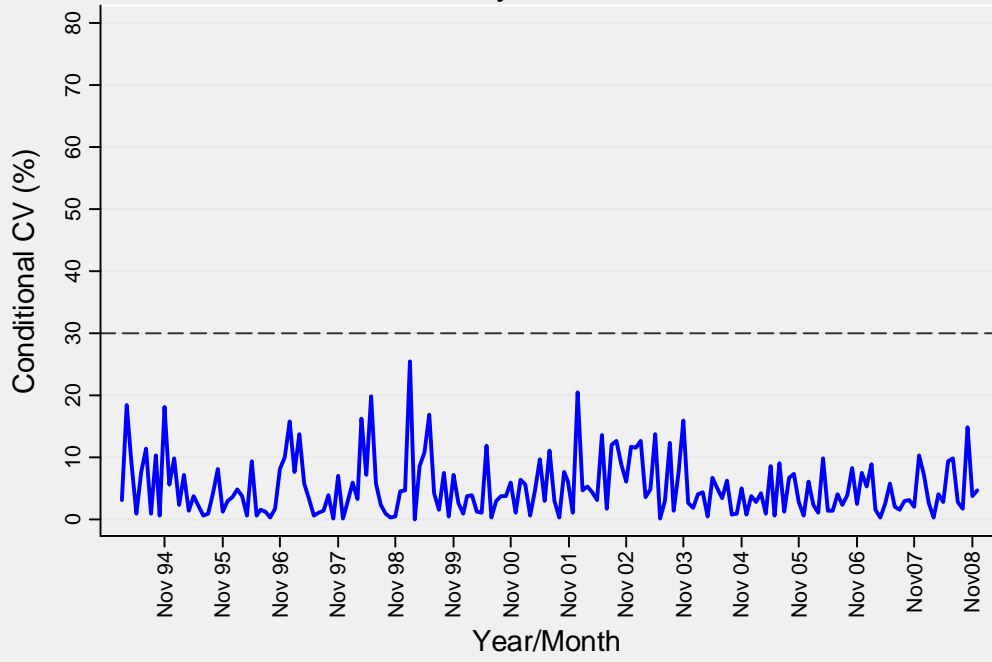
- **Conditional Coefficient of Variance:**
  - Measures level of price unpredictability, represents the unpredictable component of price variation
  - Considers difference between actual and predicted prices
  - Predicted prices take into account:
    - Seasonality
    - Production
    - World market prices

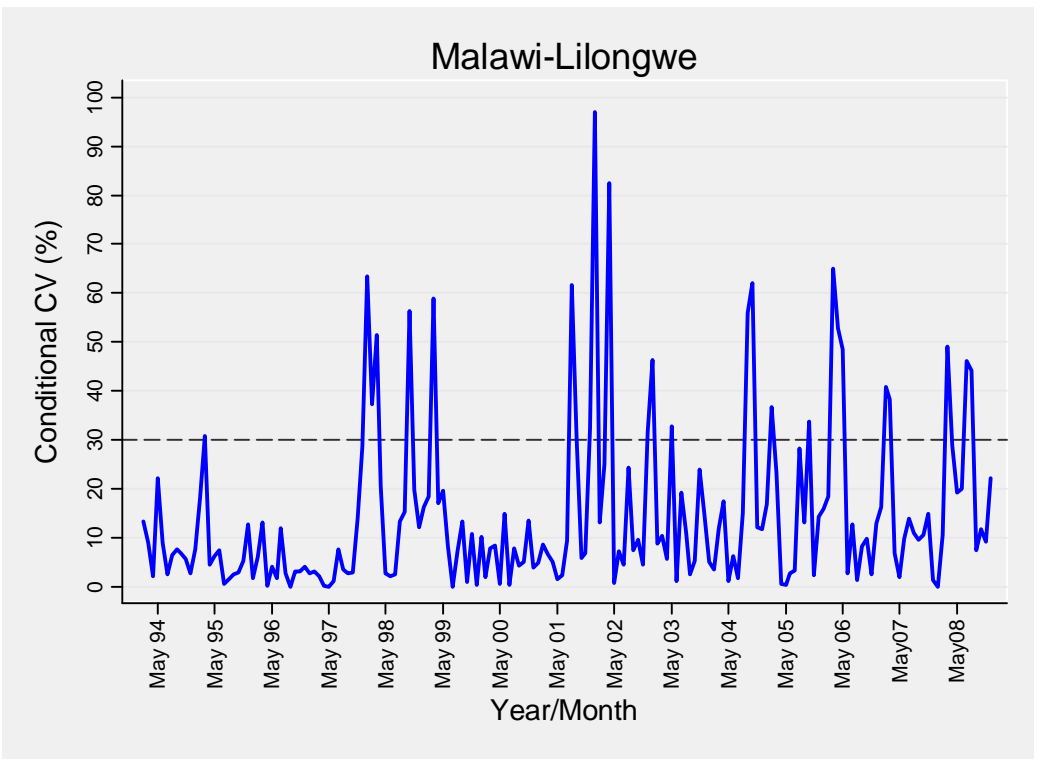
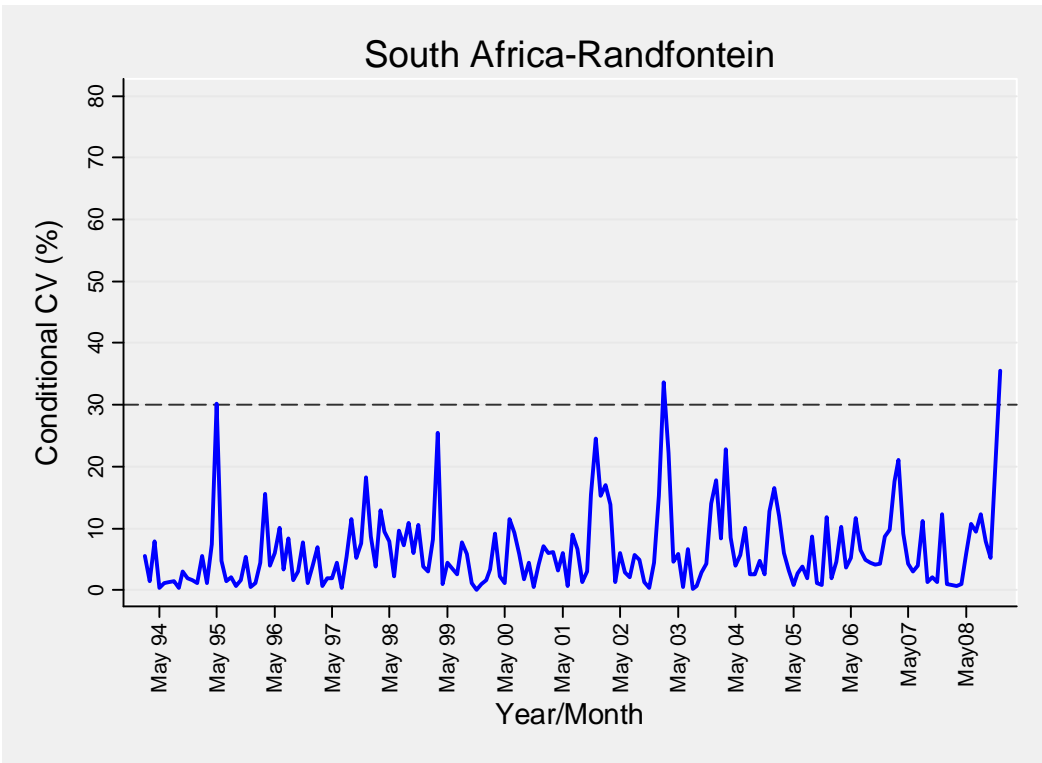


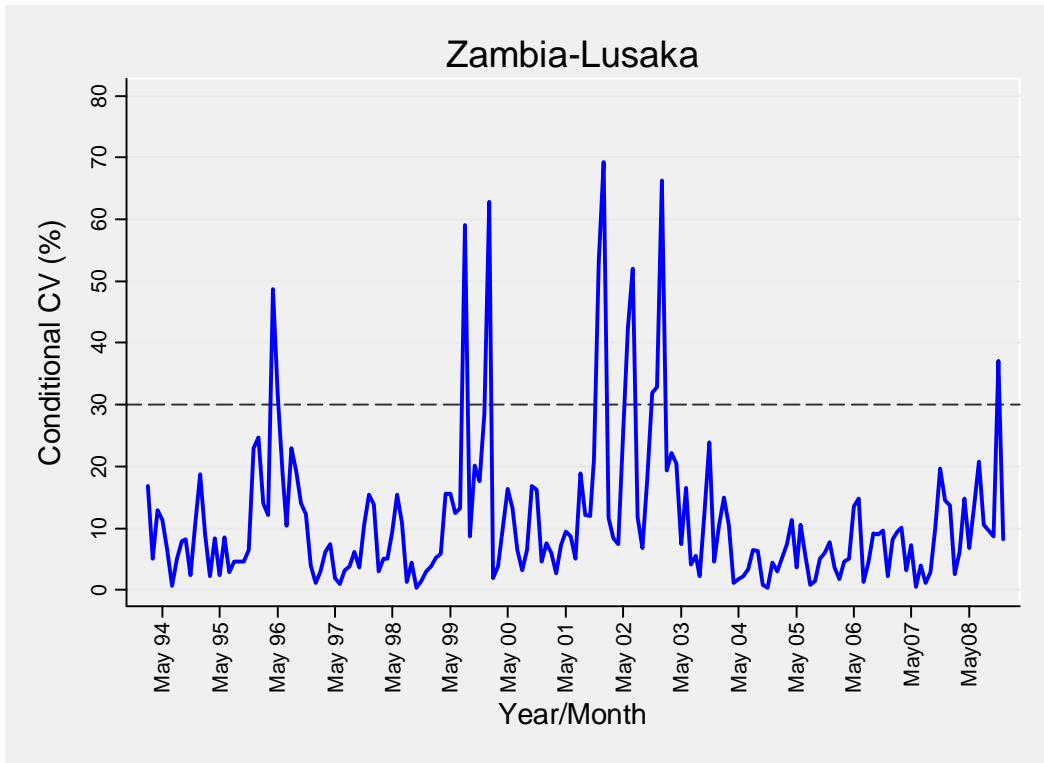
### Tanzania-Dar es Salaam



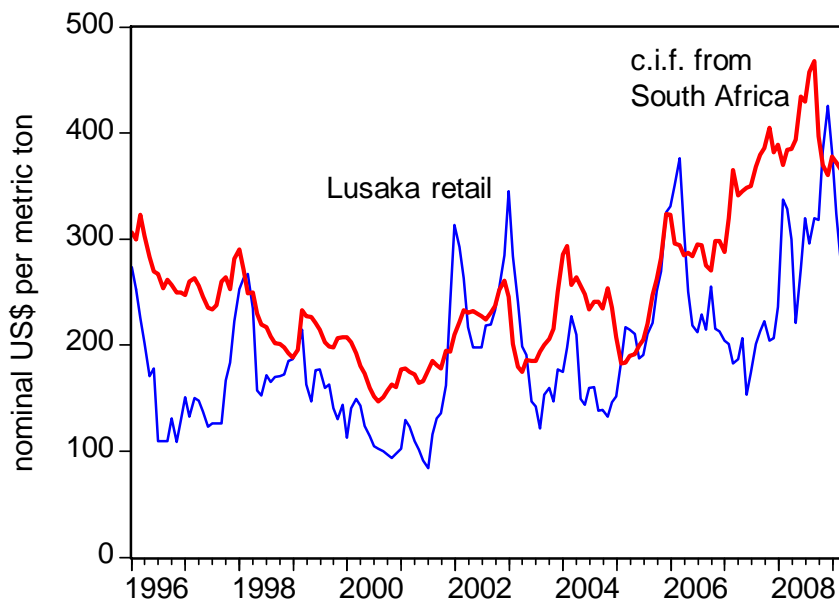
### Kenya-Nairobi







## Lusaka Maize Retail Prices



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## What Causes Such Price Spikes?

- Absence of trading activity – ‘market paralysis’
  - Various reasons:
    - Import restrictions
    - Export restrictions in source countries
    - Subsidy programs on imports or domestic supplies discourage private imports
    - Import programs delayed
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### Example:

#### The Zambian Maize Market in 2001/02

- July: Maize deficit of 200,000mt announced
  - Aug: Subsidized import program announced, 16 traders and millers selected as importers. Subsidy ~ \$70-100/mt
  - Sep-Nov: Imports delayed due to GRZ financial constraints. Market paralysis. Food shortages
  - Dec: Imports start arriving. Mealie meal prices remain high
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## Example:

### The Zambian Maize Market in 2005/06

- Jan: Import duty raised from 5% to 15%
- May: Maize deficit announced (85,000mt, private sector thinks 150,000mt)
- Aug: Import permits and duty waiver applied for
- Sep: Duty waived, private imports contracted
- Oct: FRA releases 50,000mt at \$60/mt below import cost – some import orders cancelled
- Nov: New phytosanitary rules cause delays
- Dec: Pressure to lower maize prices due to strong ZK
- Dec: Duty waiver to expire, extension applied for
- June import price: \$210 – Dec import price \$320/mt

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## Example:

### Maize Export Restrictions

- Export permits act as NTB
  - Export bans have been unpredictable in the past - anecdotal evidence:
  - Large traders have lost their export market
  - Domestic market prices have collapsed by as much as \$60/mt
  - Private sector losses have been substantial
  - Some large firms withdrew from Zambia as they could not hedge their risk
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## Conclusions

- Consequences:
    - Ineffective markets, leading to price volatility and food shortages, or surpluses
    - Lack of investment in agriculture, stifling growth
  - Need for predictability of government actions
  - Government actions to facilitate trade, not provide disincentives to trade
  - One last thought: Free trade requires a multi-country commitment...
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