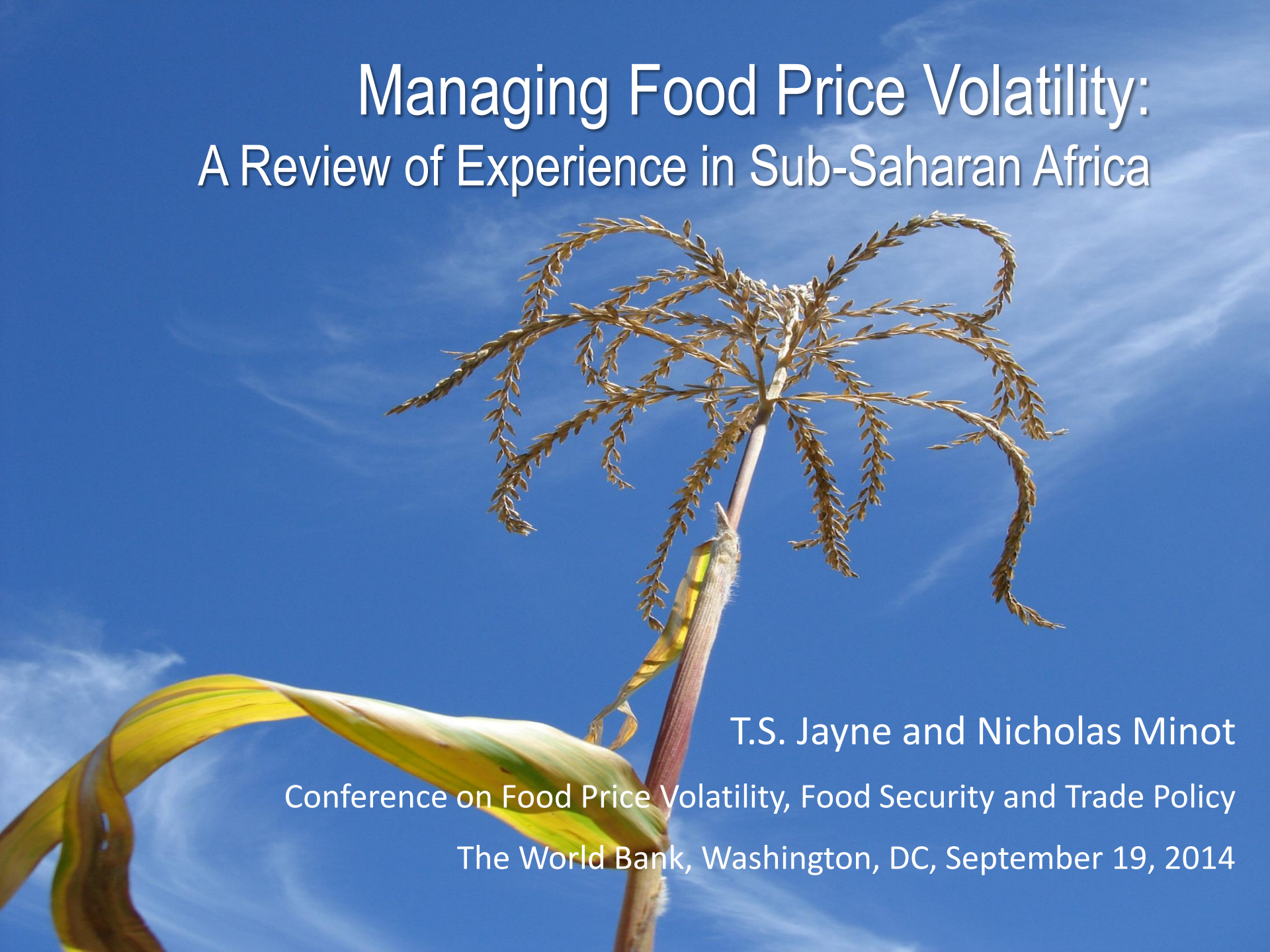
Managing Food Price Volatility:
A Review of Experience in Sub-Saharan Africa



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Conference on Food Price Volatility, Food Security and Trade Policy

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Organization

1. A few conceptual issues
2. Review of main findings
3. Implications for policy

Conceptual Issues

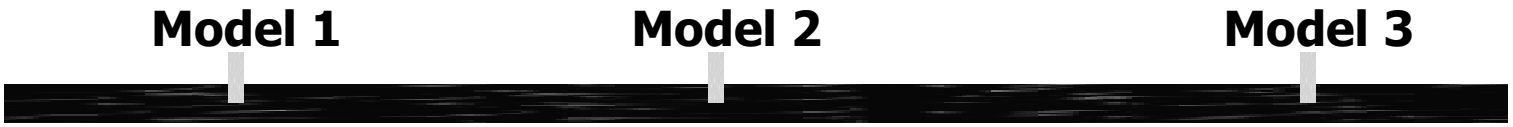
Galtier framework

	Stabilize prices	Reduce the effects of price instability
Market-based	A	B
Public interventions	C	D

Galtier framework

	Stabilize prices	Reduce the effects of price instability
Market-based	A • Investment in infrastructure • market information systems • Public goods investments to strengthen markets	B • Commodity exchanges • Forward contracting • Enabling environment to stimulate private investment in VCs
Public interventions	C • Price Stabilization policies (marketing board/buffer stock operations, trade restrictions)	D • Safety net programs • Cash/food transfers • subsidized inputs

Competing models of the role of state and private sector in food markets:



Rely on markets; state role limited to:

- Public goods investment
- Regulatory framework
- Strengthening of institutions / property rights

Primary reliance on markets

- but role for *rules-based* state operations

- e.g., buffer stock release to defend stated ceiling price
- Marketing board purchases at stated price announced in advance
- Transparent rules for initiating state imports

Role for markets and *discretionary* state intervention

- Trade policies and marketing board activities change unpredictably
- Justification for unconstrained role for state interventions to correct for market failures

Model #1

- Few countries adhere to this (at least when they can afford not to)
  - But quite a few African countries have either no or very limited buffer stocks: e.g., Uganda, Mozambique, DRC, Congo/Brazaville, CAR, Chad, Sierra Leone, Lesotho, Swaziland, Namibia, Guinea
  - May not be considered credible in a region where historically citizens expect governments to intervene when food prices veer substantially from "normal"

Model #2

- If prices are non-stationary, the equilibrium price and price band to be maintained after a transitory shock is not clear
- Requires fairly sophisticated technical skill to implement
- Requires restraint by policy makers to defer to established rules
- Requires deep financial pockets
- Requires fast-response bureaucratic procedures to enable the rules to be maintained (e.g., quickly importing or buying sufficient stocks)

Model #3

- *Ad hoc* nature of policy gives rise to strategic interactions between public and private sector actors → can create many unintended consequences
- Rules vs. discretion (Taylor, 1993)
- Shown to be associated with more volatile food prices

Review of findings

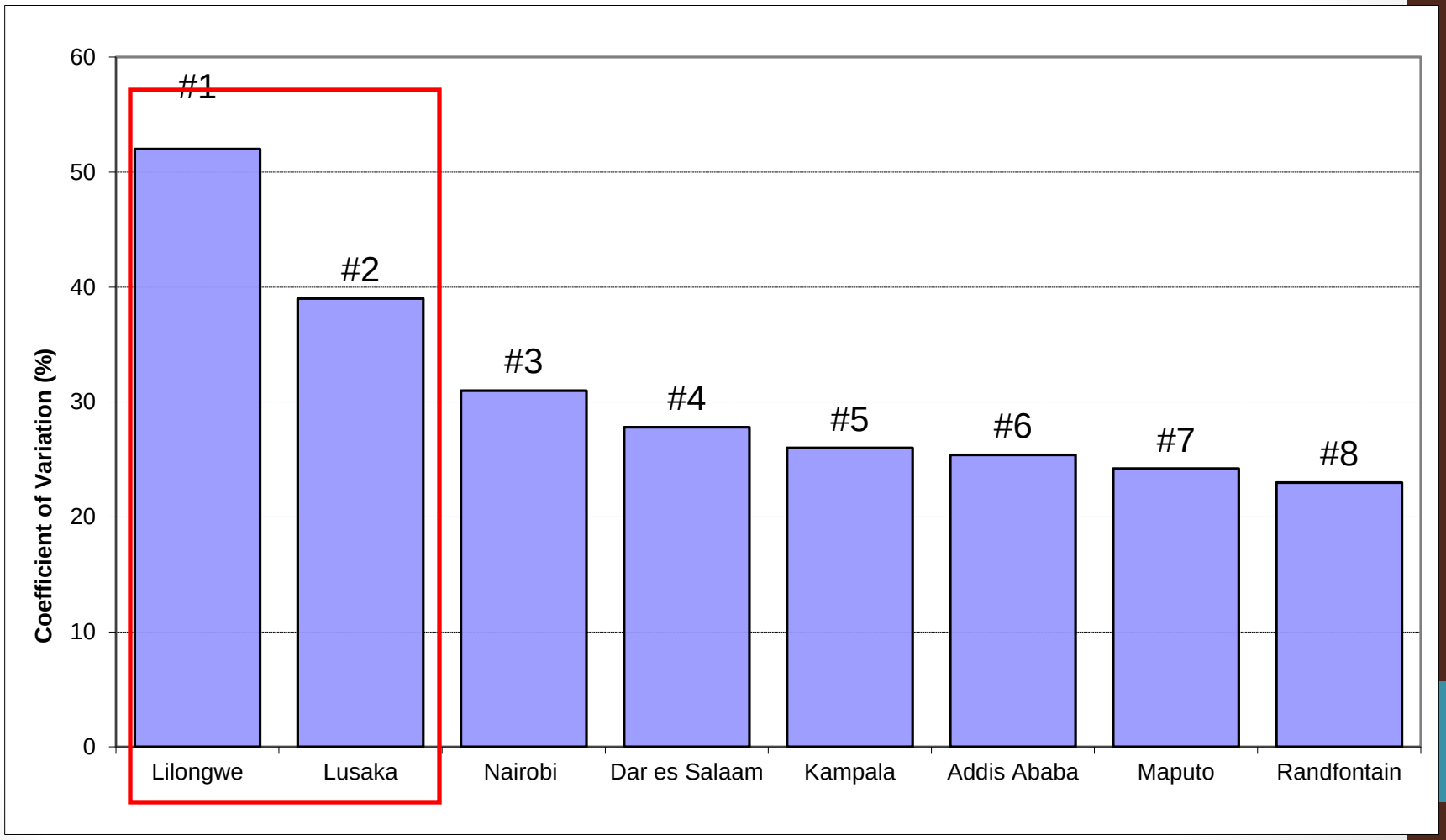
Review of findings

1. Price volatility is a major *economic* problem – price stability contributes to economic growth
2. Food price volatility is a major *political* problem. Policy analysts need to address these real problems to be taken seriously by policy makers
3. Strong evidence that price volatility adversely affects surplus-producing farmers and consumers
4. Little evidence that price stabilization policies (in African experience) contribute to price stability (Chapoto and Jayne, 2009; Minot, 2014; Mwanaumo et al., 2005)

Review of findings (ii)

5. Limited evidence of desired farmer/trader behavioral responses to price stabilization measures
6. Strong evidence of unintended adverse trader responses to price stabilization measures
   - Adversely affects market access conditions for smallholder farmers (Sitko and Jayne, 2013)
   - Countries most actively trying to stabilize prices tend to have the most volatile prices (Chapoto and Jayne, 2009; Minot, 2014)

Unconditional coefficient of variation in maize prices, 2000-2009)

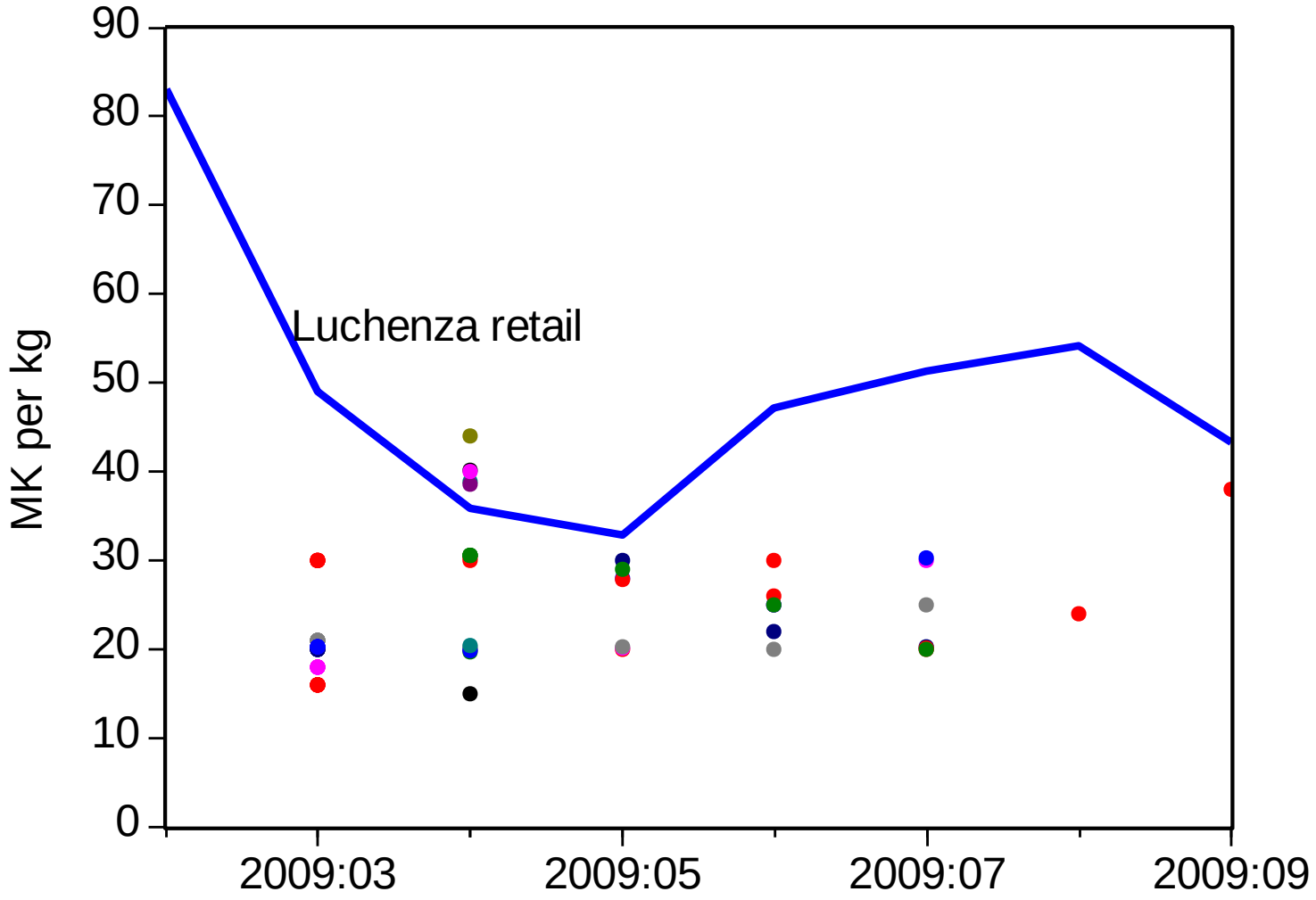


Source: Chapoto and Jayne (2009)

Review of findings (iii)

7. African unconditional grain price volatility 2-3x higher than world market volatility (2005-2011) (Minot, 2014)
8. While international grain prices became more volatile (2000-2005 vs. 2007–2010), food price volatility in Africa did not increase. This contrasts with the widespread view that food prices have become more volatile in the region since the global food crisis of 2007–2008 (Minot, 2014)
9. Farmers' view of the importance and magnitude of price risk is highly subjective
    - Perceptions of price risk vary greatly across farmers in same area
    - Found to be related to the price received in past seasons (Vargas-Hill, 2010)

Farm-gate maize prices compared to retail prices, Mulanje District, Malawi, 2009



Review of findings (iv)

9. Surveys of African's perception of changes in their food security after the 2007-2010 "food crisis" period highly variable, in general little change (Headey, 2009; Verpoorten et al, 2013)

10. Galtier's conclusion: Market-oriented mechanisms for addressing price volatility (CE's, forward contracting) have not been effective

    - The question is why?
    - Some category B mechanisms are undermined by govt. operations in market to stabilize prices
    - Evidence that the poor often do not benefit from consumer price stabilization efforts. Some attempts to subsidize consumers ends up subsidizing millers.

Do African countries export instability onto world markets?

- Spatial market efficiency: surprisingly high (14 published studies reviewed)
- Price transmission from world to domestic markets = low
  - Hard to interpret (e.g., weakly functioning markets vs. deliberate government efforts to insulate)
- In any event, most African countries have been "small country" cases – trade volumes too low to affect world markets
  - That is changing – Africa's share of world population is rising (Nigeria, Ethiopia, Uganda in top 15 by 2040)

Conclusions

Conclusion #1:

- Yes, price stability contributes to economic growth
- But price stabilization efforts don't necessarily contribute to price stability
  - African government's track record with stabilizing prices has been mixed at best
  - Massive costs – and foregone investment in productivity-enhancing public goods

Conclusion #2

- **Current policies generally not exporting instability to world markets**
  - Orientation of most African governments is *f*ood self-sufficiency
  - Strategy of limiting dependence on imports in a period of high world food prices not likely to export instability to world market
  - Most African government (~58% of total SSA population) not engaged in cereal price stabilization
  - This conclusion could change if return to low world prices

Conclusion #3:

- **Lack of academic consensus about who benefits from high food prices**
  - Some argue that high food prices benefit mainly larger/commercialized farms (Ivanic and Martin 2008; Jayne and Myers, 2008; Bellmare and Barrett, 2011)
  - Other studies correlate high food prices with poverty reduction (Headey, 2014; self-reported changes, e.g., Verpoorten et al, 2013)

Implications for Policy

What to do?

1. Strengthen annual crop forecasts
   - Over-estimated E(Q) → failure to import until the estimate is found to be wrong → food crisis
   - Jerven critique
2. Monitor cross-border trade more rigorously
   - Monitoring trade flows are important complement to prices
3. Farmer marketing extension training + better market information

What to do? (ii)

4. Support "nuts and bolts" strengthening of grain markets that will allow CEs to be successfully introduced
   - Collateral management services
   - Warehouse certification services
   - settlement services
   - contract dispute resolution processes
   - Provide the enabling environment to encourage new private investments in storage and transportation
   - CE's can function in Regimes 1 or 2, but not 3
5. Move toward more rules-based forms of market intervention

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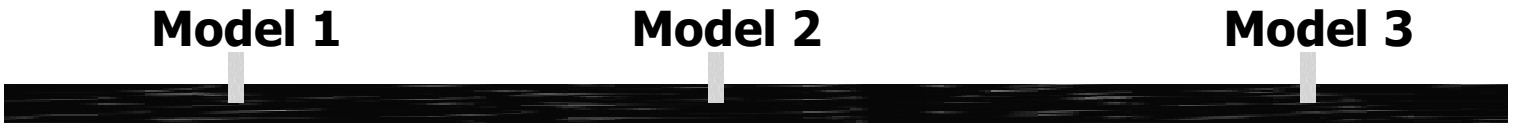

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What to do? (iii)

5. Eliminate restrictions on cross-border trade

What to do? (iv)

5. What about "international virtual reserves" proposals?
   - Requires much information that may not be available in real time
   - prone to default in extreme years,
   - requires major subsidy to get buy in.

Major Challenge in engaging with policy makers:

- How to obtain long-term commitment to under-provisioned public goods that will reduce price volatility but are not considered “demonstrative” enough

- Not sexy ≠ not effective

Important entry points

	Visible / “hot”	Not hot

Important entry points

	Hot	**Not hot**
Effective		
Not Effective		

Important entry points

	Hot	**Not hot**
Effective		• Accurate and timely crop forecasts, price information • marketing training for farmers • Infrastructural dev. • Crop science, R&D • etc.
Not Effective		

What *not* to do

- **Ad hoc discretionary policies** (Model 3)
  - Large-scale government procurement and buffer stock policies continue to cause more food crises than they avert
  - Zambia lost nearly 2% of its GDP in 2010, 2011, and 2012 on its maize operations
- **Stabilizing well could be good economics**
- **But stabilizing badly is *neither* good economics nor good politics**