

# Potential for Intra-Regional Maize Trade in Southern Africa: An Analysis For Zambia at the Sub-National Level

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Trying To Trade !



## Focus on Three Questions

- 1. Why care about food staples?
- Why intra-regional trade?
- Implications of improved regional trade in food staples – Zambia illustration.

### Value of Agricultural Production in Sub-Saharan Africa, 2000

	<b>Value</b> (\$US billions)	<b>Percent</b>
Ag. Exports	\$17	24%
<b>Domestic staples</b>	<b>\$50</b>	<b>73%</b>
Other	\$2	3%
Total	\$68	100%

Source: Diao and Hazell (2004)

## Growing Markets for Food Staples

- Urban population will double in next 15 years
- Urbanization → growing demand for purchased and prepared foods
- Rural specialization → growing rural food markets
- Important to the poor

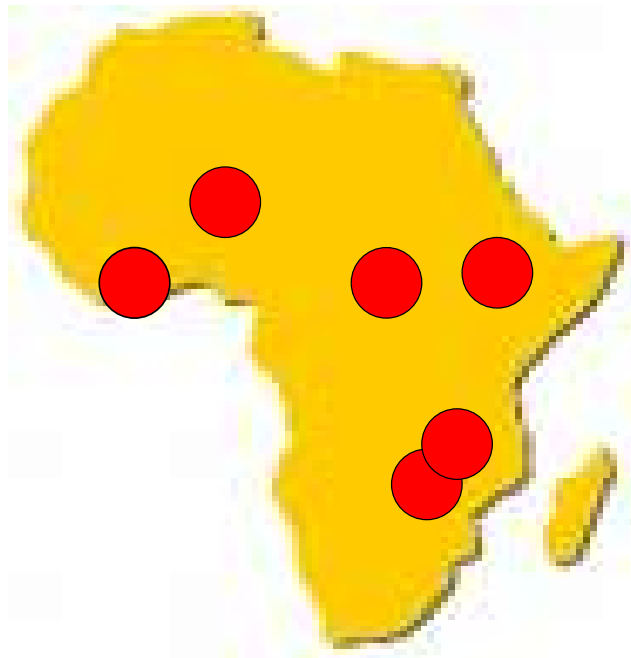
## Three Questions

- Why care about food staples?
- **2. Why intra-regional trade?**
- Implications of improved regional trade in food staples – Zambia illustration

# The Curse of the Nation State

- Africa's highly arbitrary political boundaries cut across natural market sheds.

## Deficit Markets



# Surplus Food Production Zones



## Mozambique



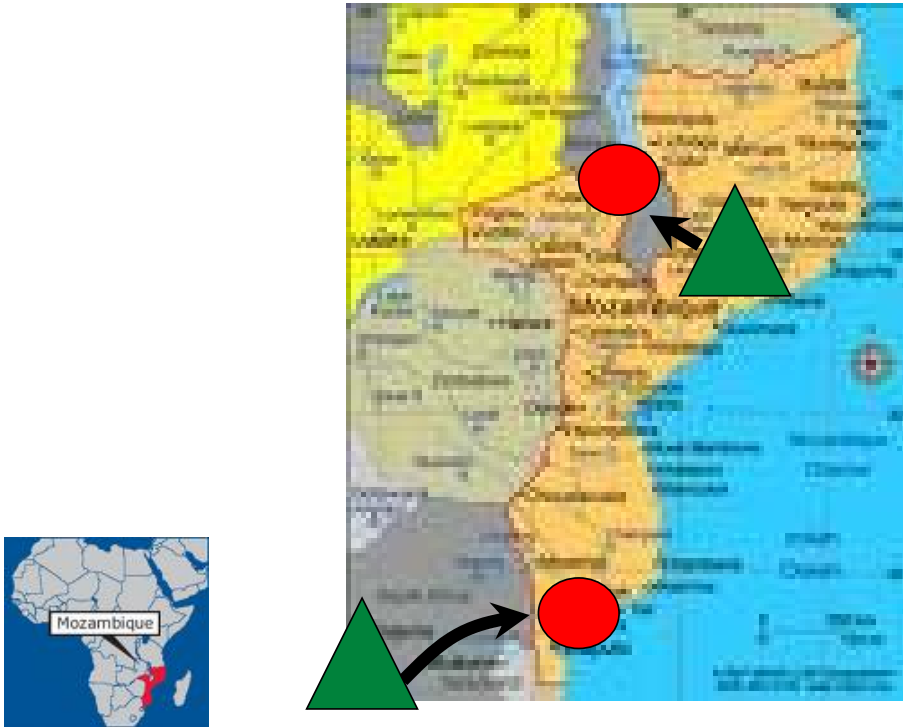
# Mozambique



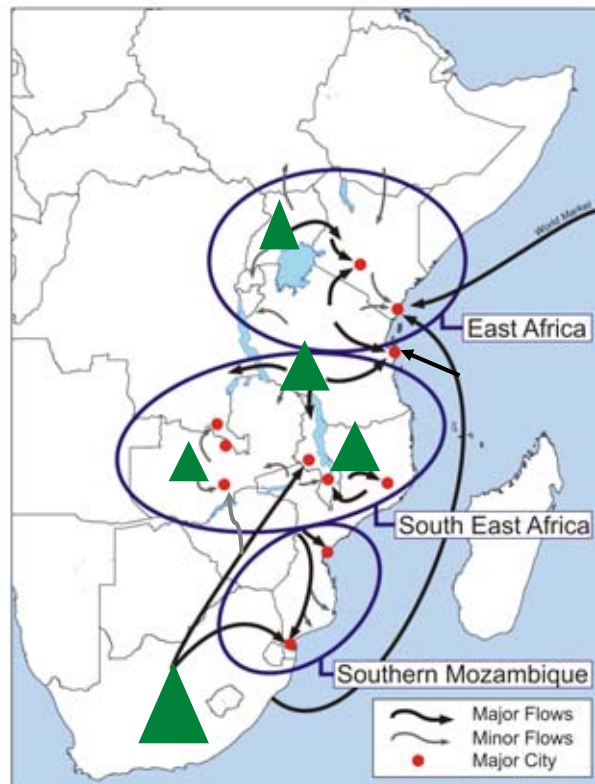
# Mozambique



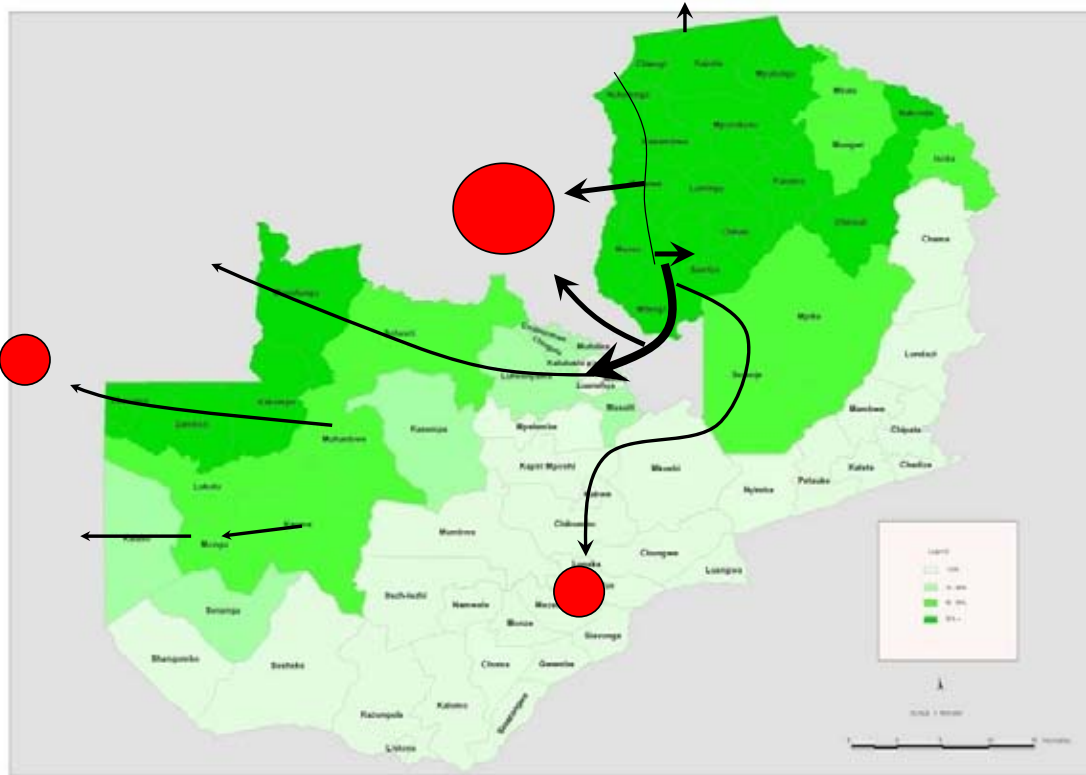
# Mozambique



# Maize Market Sheds in ESA



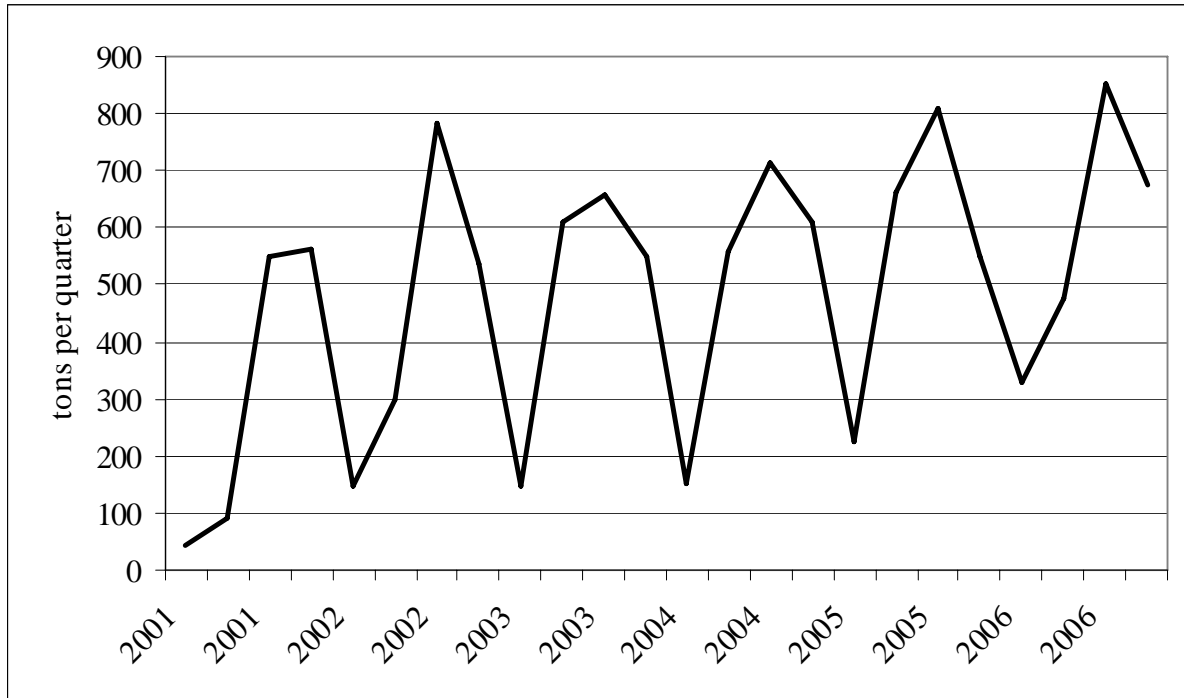
# Dried Cassava Trade Flows



## Dried Cassava Transiting The Chembe Border Post – Zambia



## Dried cassava exiting Zambia for the DRC



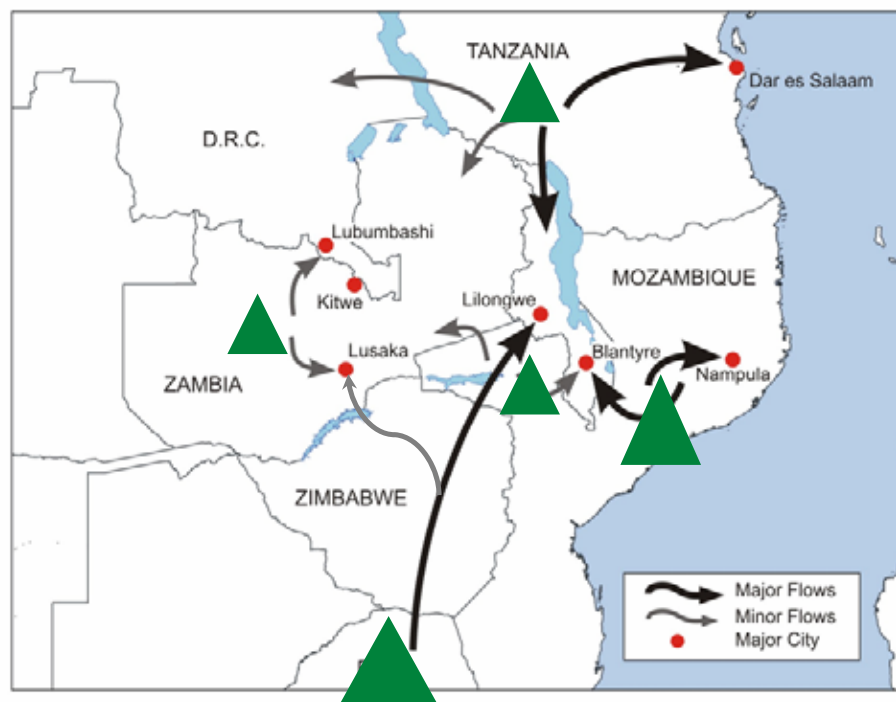
## Summary - Regional Trade in Food Staples:

- Improves food security in deficit zones
- Reduces price volatility
- Improves producer incentives in surplus zones
- Accelerates agricultural growth

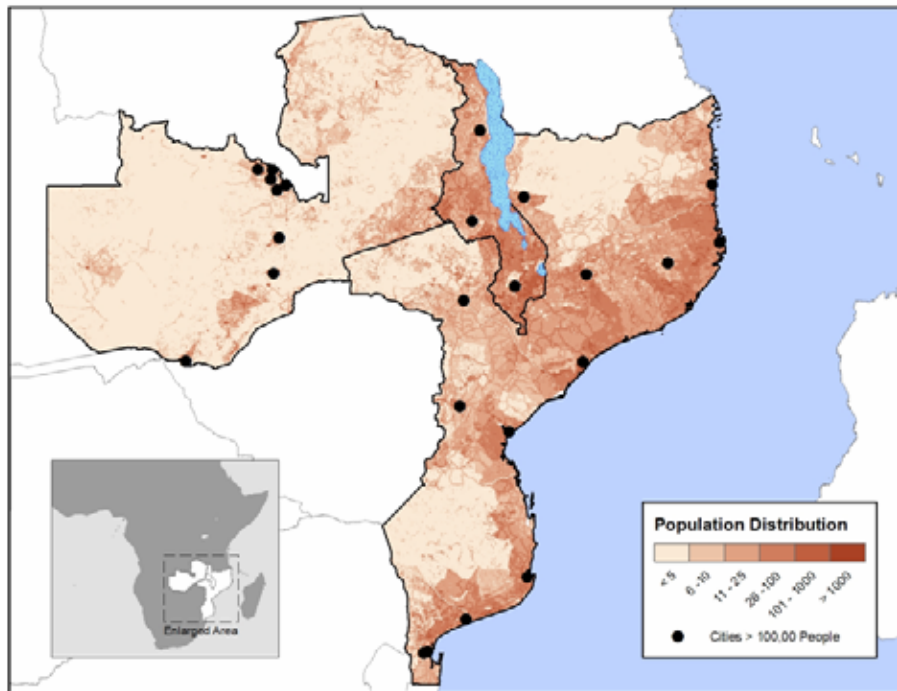
## Three Questions

- Why care about food staples?
- Why regional trade?
- **3. Implications of improved regional trade in food staples – Zambia illustration**

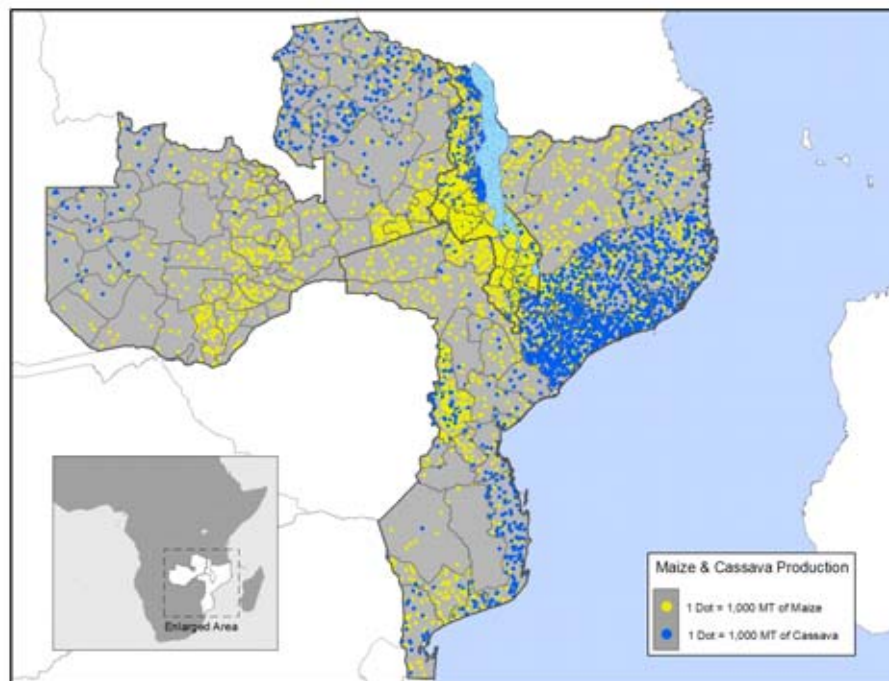
### South East Africa Market Shed



# Spatial Distribution of Population



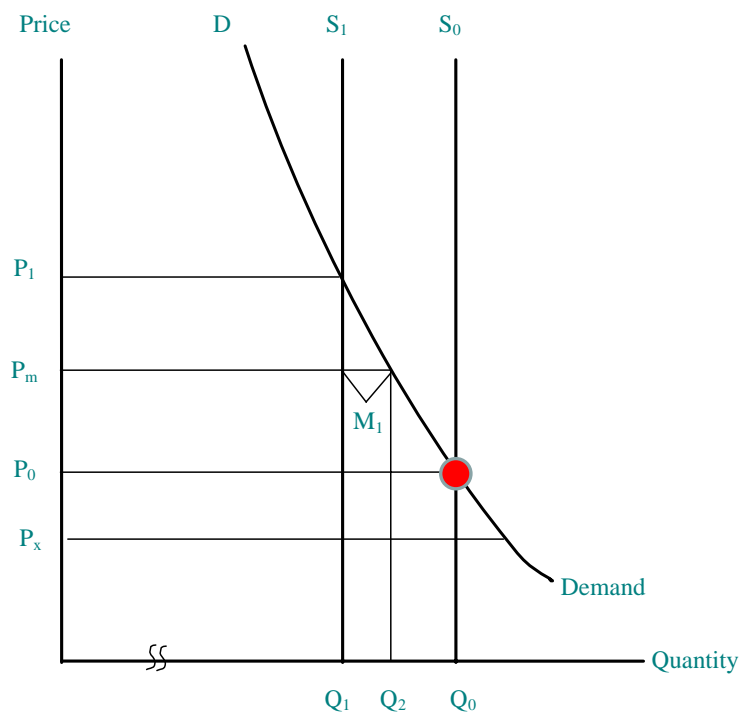
# Food Staple Production



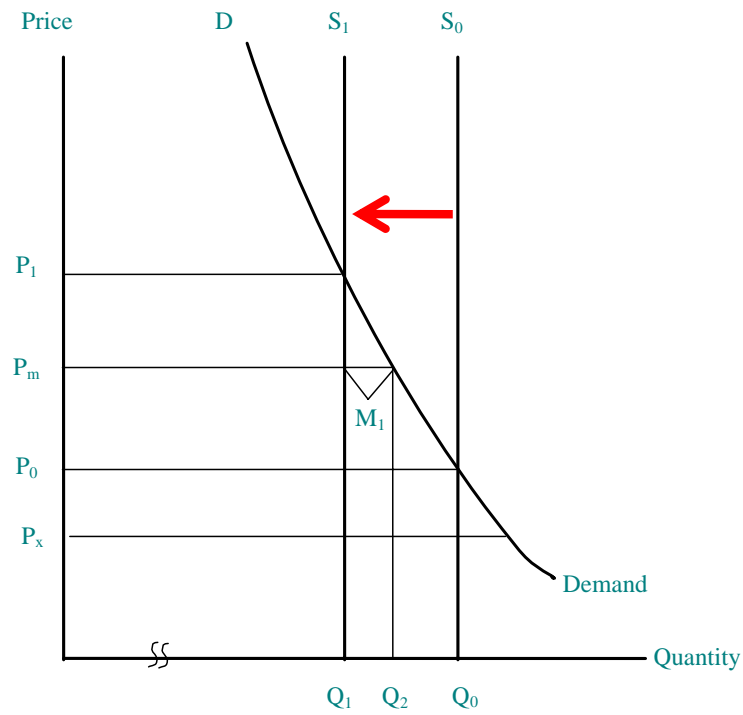
# Econometric Simulation

- Using 15 years of historical data;
- Using a simple 2-commodity model;
- Five household groups in each of;
- Two geographical regions of Zambia;
- Project the price impact of both drought & bumper harvest;
- Under both closed border and free trade options.

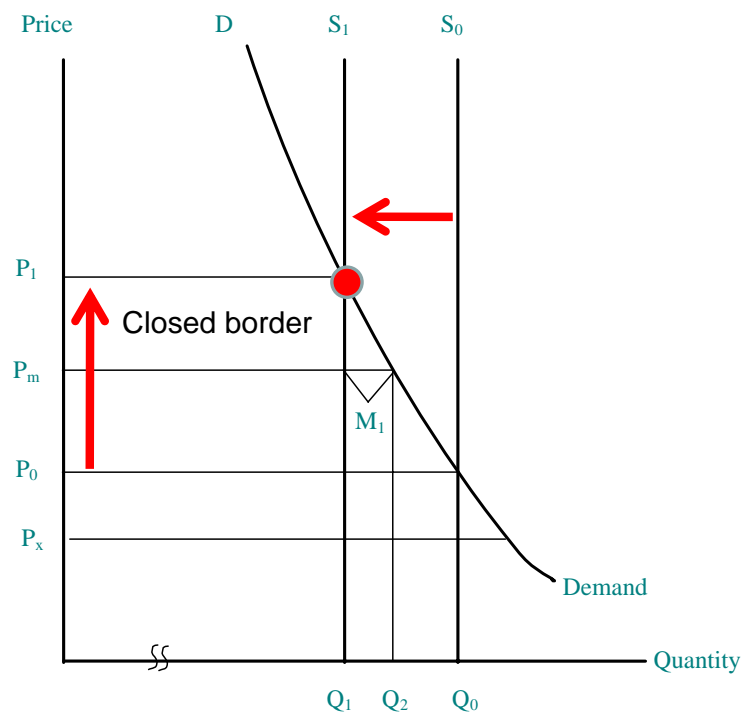
## Modeling the impact of trade



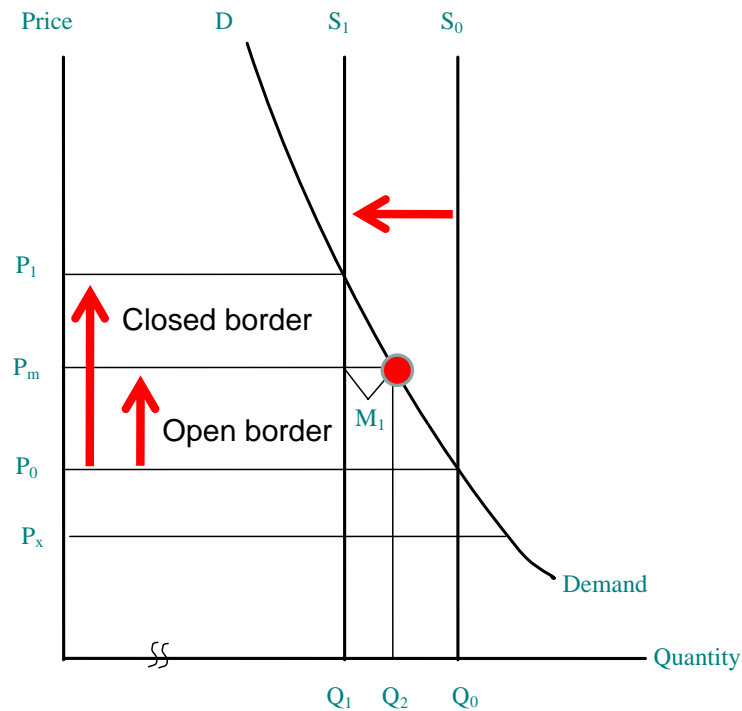
# Modeling the impact of trade



# Modeling the impact of trade



# Modeling the impact of trade



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## Trade Policy Impact on Maize Prices in Zambia

	Maize price under alternate trade regimes (% change from normal)	
Maize harvest	Closed border	Open border
Bumper harvest (30% above normal)		
Drought (30% below normal)	+ 163%	+ 36%

Source: Dorosh, Dradri and Haggblade (2007)

- a4 open border moderates price increases (by capping price increases at import parity) during a drought and also limits price fall during a bumper year (by allowing exports to cushion the price fall).  
aecsetup, 11/5/2007

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## Trade Policy Impact on Maize Prices in Zambia

Maize harvest	Maize price under alternate trade regimes (% change from normal)	
	Closed border	Open border
Bumper harvest (30% above normal)	-50%	-26%
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aecsetup, 11/5/2007

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## Impact of a Drought in Zambia

	Closed borders	Open borders	Traders scared
Maize prodn	-30%	-30%	-30%
Maize price			
Private imports			
Calorie consumption of poor households			
north			
south			
Cassava prodn			
Maize area next season			

- a1 Note the large volume of maize consumed in the cassava belt. Since households in this region consume both cassava and maize, they are willing and able to substitute one for the other when scarcity prevails.  
aecsetup, 11/5/2007

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## Impact of a Drought in Zambia

	Closed borders	Open borders	Traders scared
Maize prodn	-30%	-30%	-30%
Maize price	+ 163%		
Private imports	0		
Calorie consumption of poor households			
north	-2%		
south	-19%		
Cassava prodn	+ 24%		
Maize area next season	+ 34%		

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aecsetup, 11/5/2007

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Maize prodn	-30%	-30%	-30%
Maize price	+ 163%	+ 36%	
Private imports	0	155,000 T	
Calorie consumption of poor households			
north	-2%	-3%	
south	-19%	-9%	
Cassava prodn	+ 24%	+ 6%	
Maize area next season	+ 34%	+ 10%	

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Maize prodn	-30%	-30%	-30%
Maize price	+ 163%	+ 36%	+ 115%
Private imports	0	155,000 T	0
Calorie consumption of poor households			
north	-2%	-3%	-2%
south	-19%	-9%	-15%
Cassava prodn	+ 24%	+ 6%	+ 19%
Maize area next season	+ 34%	+ 10%	+ 26%

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aecsetup, 11/5/2007

## Conclusion: Regional Trade in Food Staples

- Improves producer incentives in surplus zones
- Accelerates agricultural growth
- Reduces price volatility
- Improves food security in deficit zones

## Notwithstanding Research & Outreach Insights, Still Mostly Trying To Trade- Why?

