
Tools for Market Evaluation in Emergency Needs Assessment

*Presentation to SETSAN/FEWSNET
based on work for World Food Programme,
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with

Megan McGlinchy on Price analysis and

Steven Haggblade and Paul Dorosh

on Multi-Market Models

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Markets: Key Questions for an ENA

- What is the nature of the food insecurity?
 - Are market failures or weaknesses part of the threat to the availability and accessibility of food?

 - Which set of alternatives will ensure food security
 - Short run needs
 - Longer term role that markets can play in food security

 - If only second-best response alternatives available, what are the consequences
 - Functioning of markets –
 - Impact consumers, producers and other actors
-

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A Typical Emergency Needs Assessment

- Dependency on markets for household food supply
 - Source of food
- Prices for basic consumption commodities in local markets
 - Main staple
 - Fuel for cooking
- Distance to market
- Consumer price index (also local “food basket cost”)

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Current Draft Tools

- Tool 1: Checklist of Information/Analysis Needed
- Tool 2: Rapid appraisal through market survey
- Tool 3: Comparison Table of Response options:
 - When an option is good from a market perspective
 - When an option is bad from a market perspective
- Tool 4: Basic price analysis spreadsheet
 - Temporal and spatial
- Tool 5: Food Balance Sheet assessment
- Tool 6: Multi-market model (Haggblade/Dorosh)

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Checklist for Emergency Assessment

1. Production trend and stocks
2. Regional trade routes and areas of potential surplus
3. Exchange rates, Import/export parity prices
4. Margin analysis between main markets, main commodities
5. Market integration evaluation
6. Price trends, seasonality

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Checklist EFSA (2)

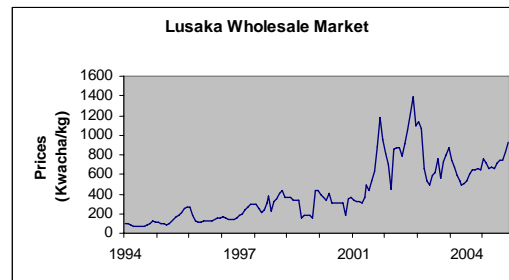
7. Terms of trade for key income/consumption goods
8. Trader reflections on past and impact of shock (or possible shock), current expectations and intentions
9. Identification of policy actions (border and trade policy, food safety nets, etc.)
10. List of sources of information and contacts as well as database

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Price analysis

How to set up a simple spreadsheet of prices over time, create graphs, evaluate trends and seasonality

Year	Month	kabwew	chipataw	chomaw
1994	1		85.53	83.04
1994	2	92.63	89.71	109.81
1994	3	61.49	97.09	95.63
1994	4	60.68	97.09	72.37
1994	5	62.14	63.11	53.4
1994	6	65.13	55.83	44.01
1994	7	74.43	54.61	48.14
1994	8	82.12	52.91	47.25
1994	9	85.56	51.27	46.52
1994	10	101.13	54.61	58.66
1994	11	125.82	60.68	69.58

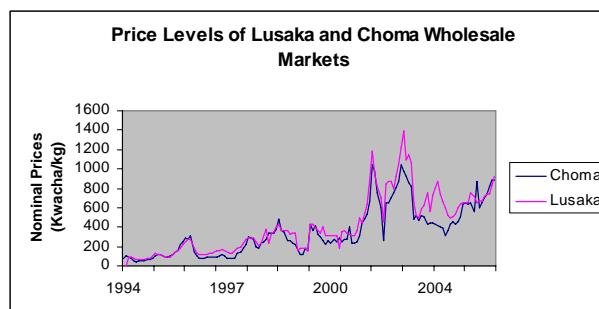


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Price analysis (continued)

Create seasonal indices

Avg. Seasonal Index	Month
1.296	Jan
1.221	Feb
1.169	Mar
1.020	Apr
0.844	May
0.863	Jun
0.852	Jul
0.859	Aug
0.823	Sep
0.921	Oct
0.951	Nov
1.051	Dec



Compare prices across markets

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Food Balance Sheets

- Issues:
 - Data reliability and timely availability
 - Difficulty with accurate parameters for consumption
 - Trade estimation
 - Informal trade
 - Trade of consumption substitutes
 - Trade policy shifting trade regimes
 - Lack of relationship between prices and market supply/demand

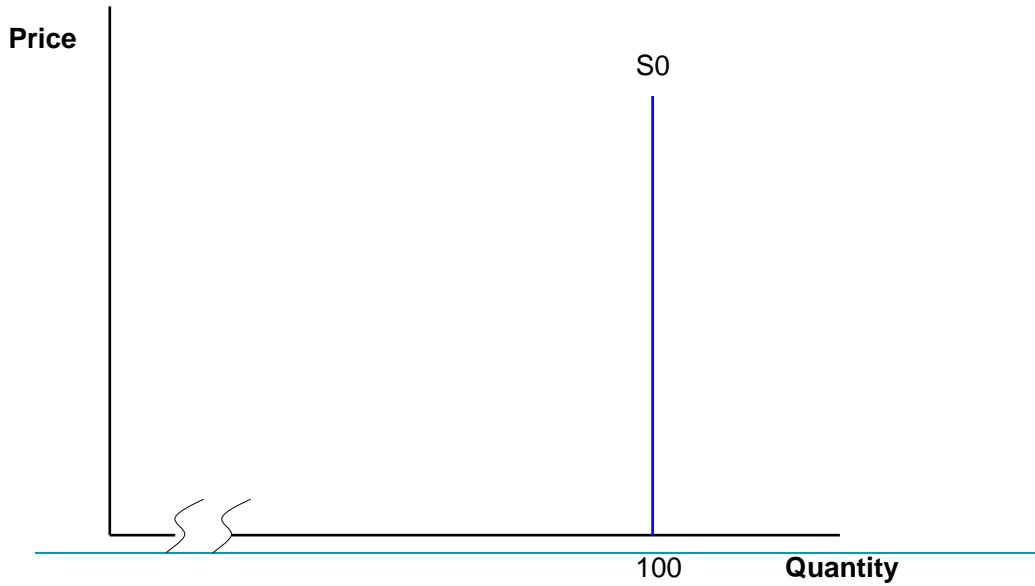
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Market Models (MM): FBS linked to prices, market supply and demand

- MM can demonstrate how trade and markets may shift with a drought or other shock, and
- Scenarios developed to indicate what happens to prices and consumption as food aid enters a system, or as imports increase
- Consumption issues can be addressed, evaluating substitutes (perfect and imperfect)
- MM to be presented in more detail by Haggblade

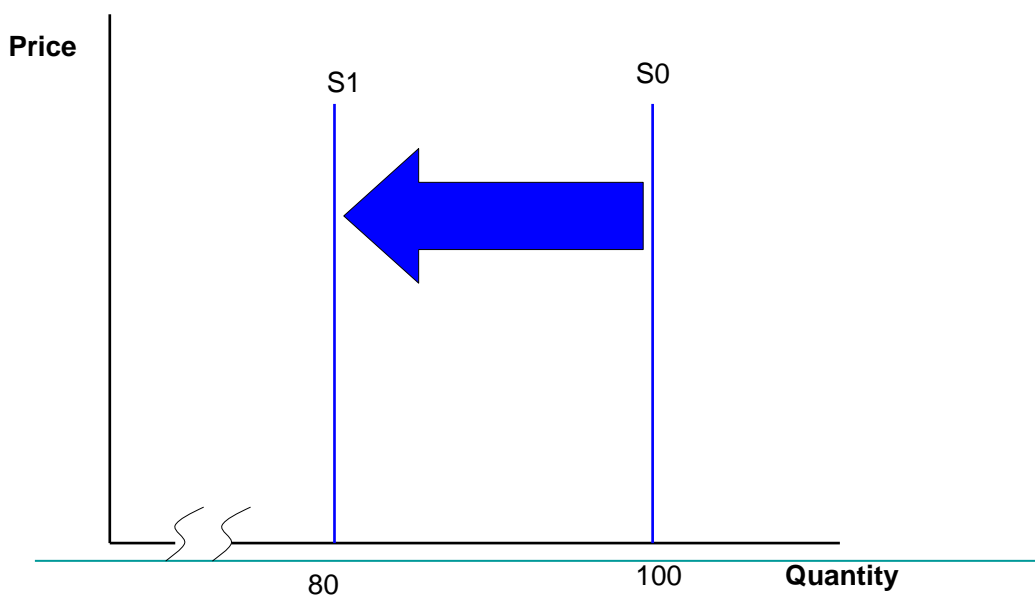
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Maize market shock: drought



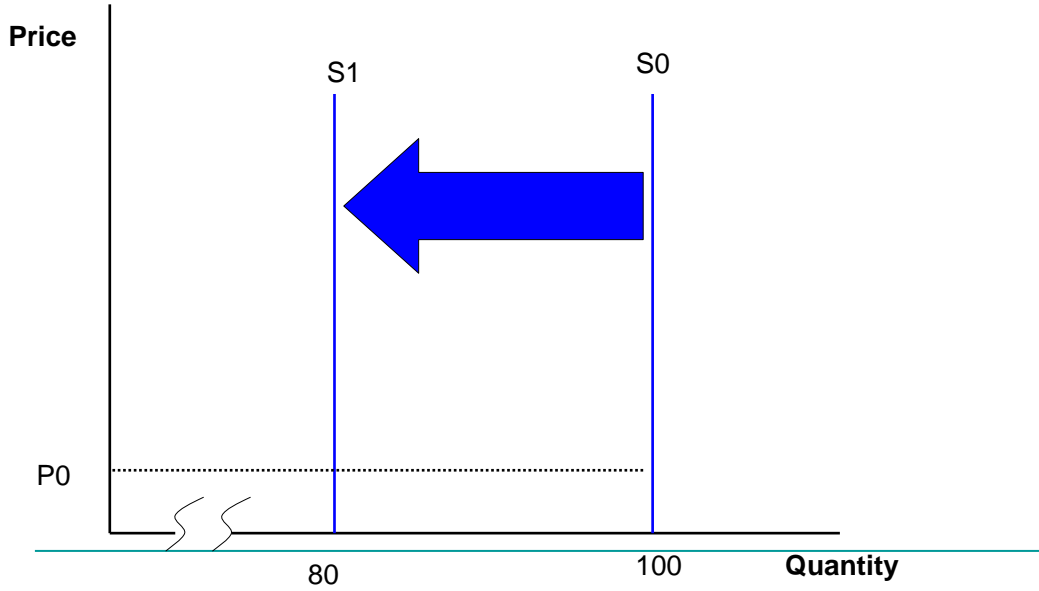
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Maize market shock: drought



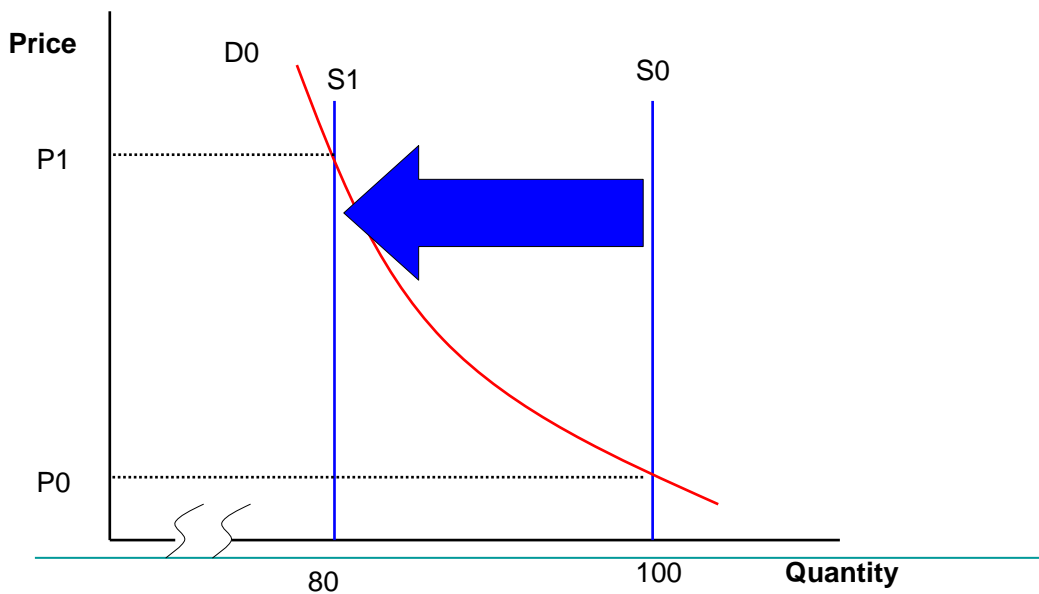
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Maize market shock: drought



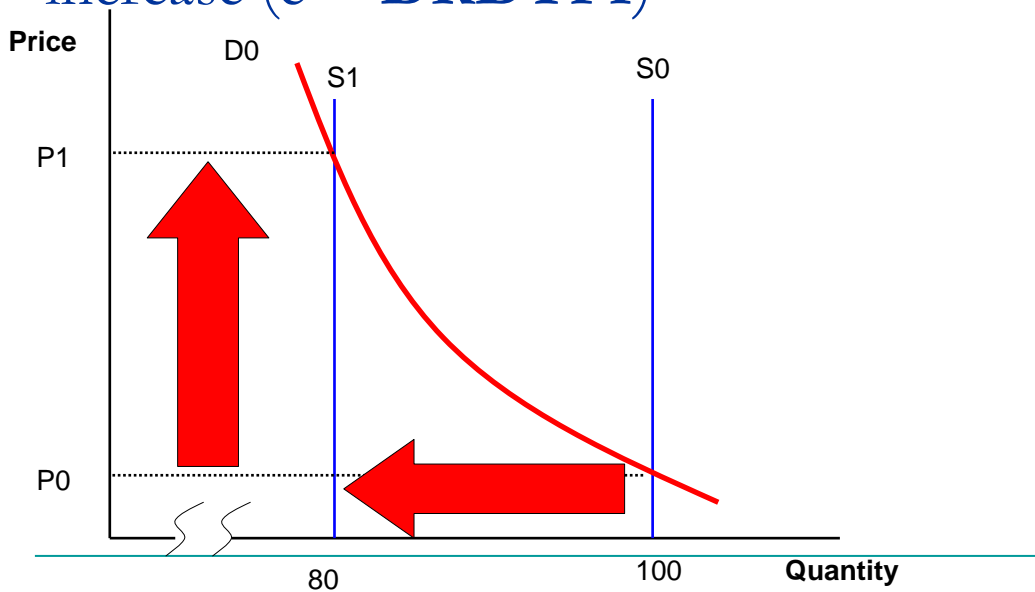
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Maize market shock: drought



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Demand reduction due to price increase ($e = \mathbf{DRDTPI}$)



1. Consumer substitution among food staples



maize



cassava

Consumption shortfall

- Maize consumption down 20
- Shortfall estimate #1 = 20

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Consumption shortfall

- Maize consumption down 20
- Shortfall estimate #1 = 20
- Cassava consumption up: how much?

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Private sector price responses to food emergencies

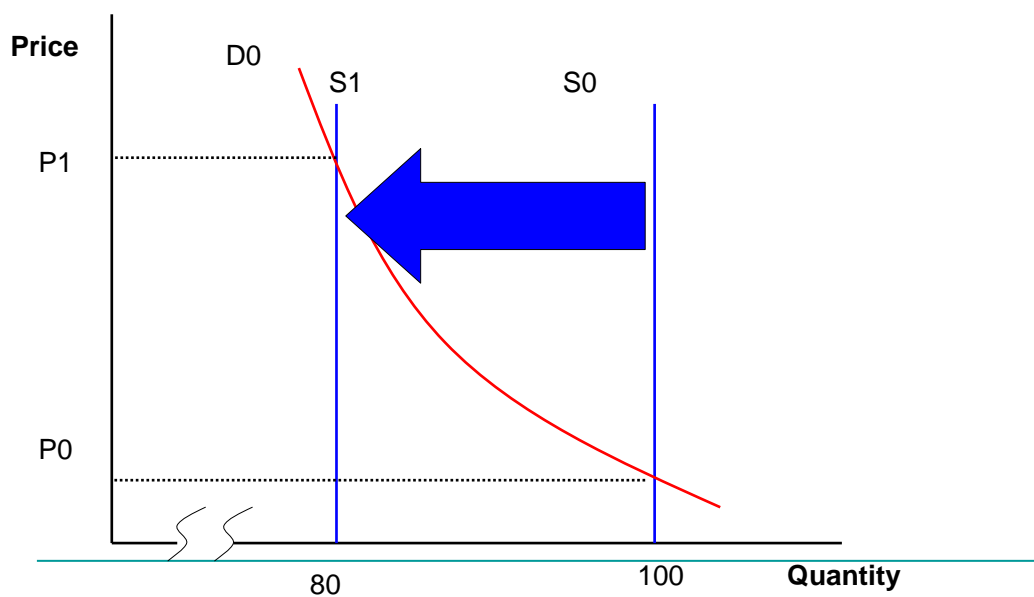
1. Consumer substitution among food staples

2. Private import



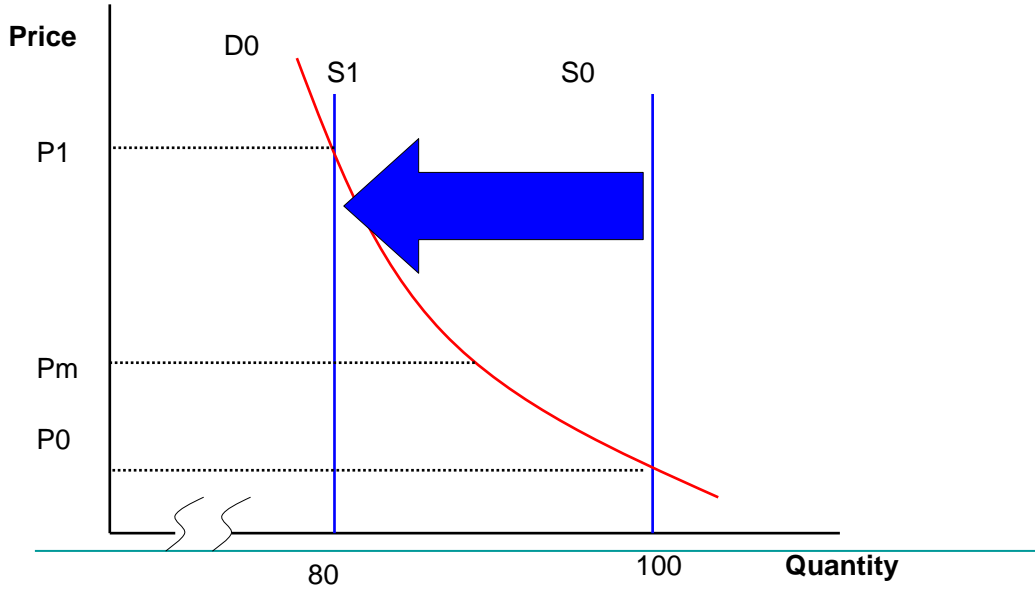
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Maize market drought



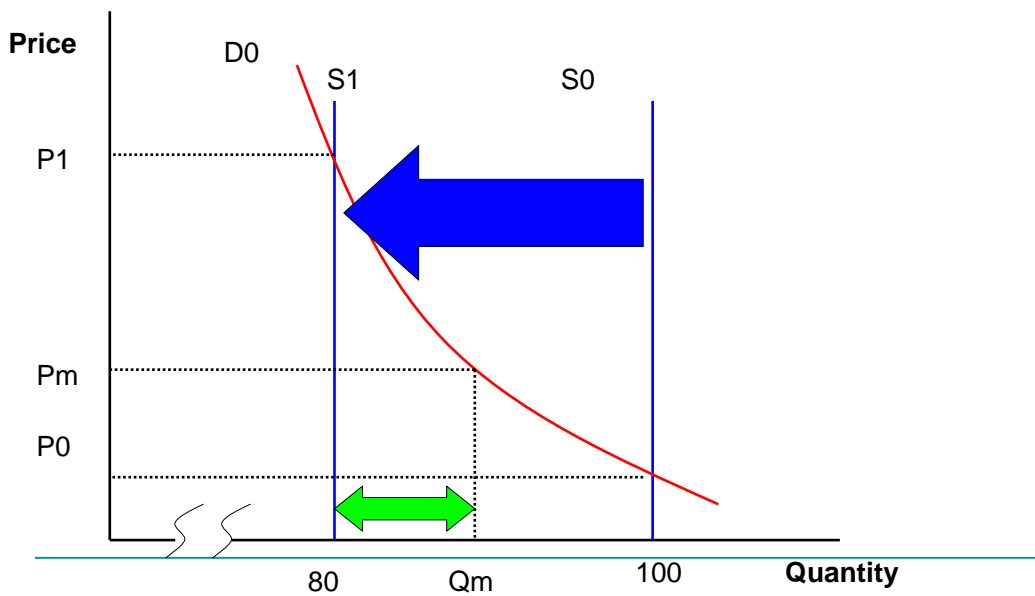
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Maize market drought



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Maize market drought

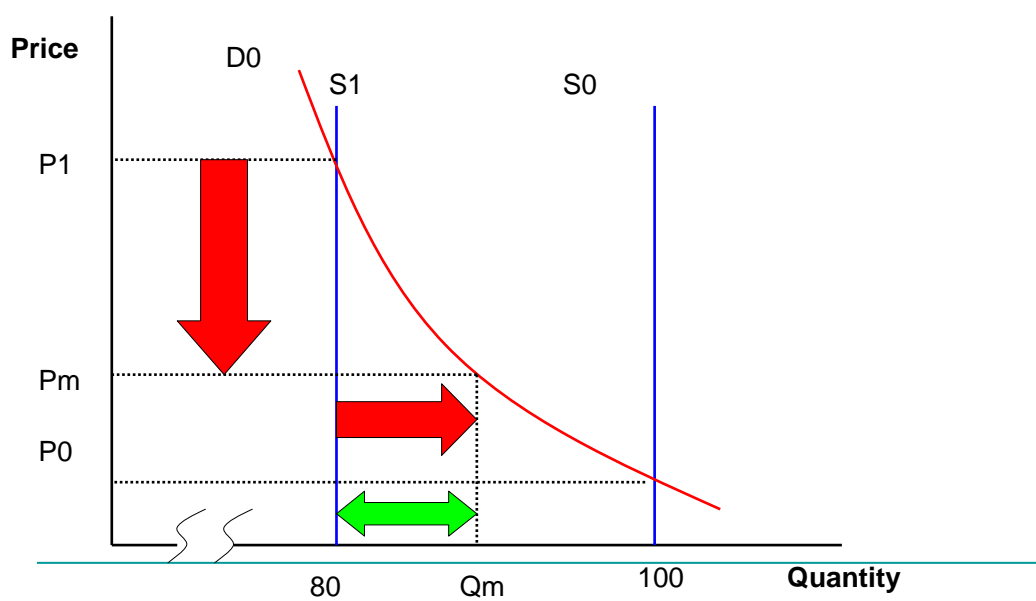


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What determines the volume of private imports?

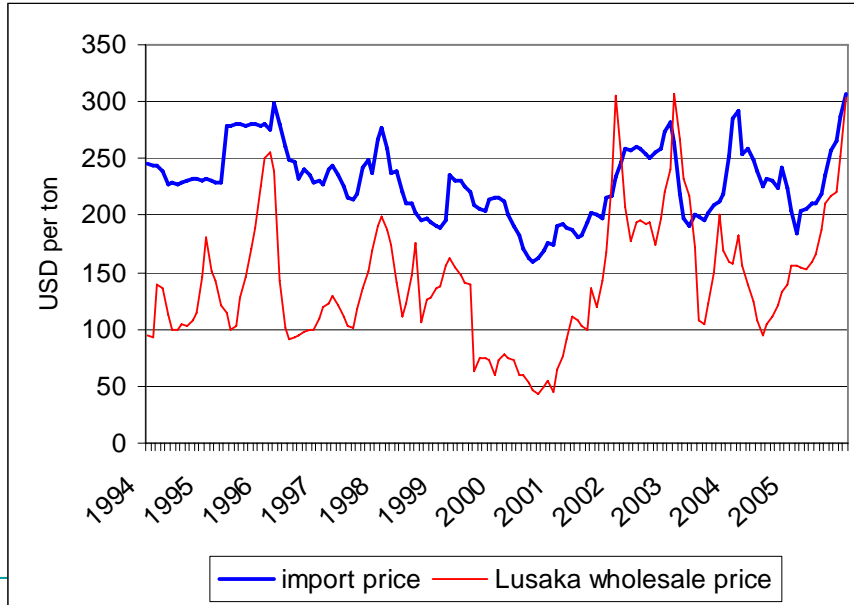
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$$e = DRDTPI$$



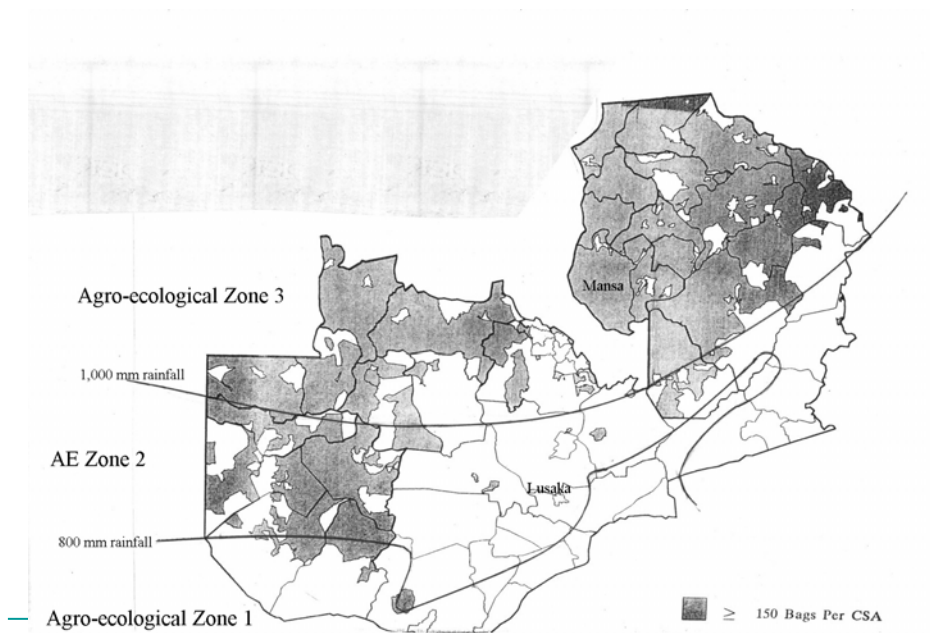
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Import prices



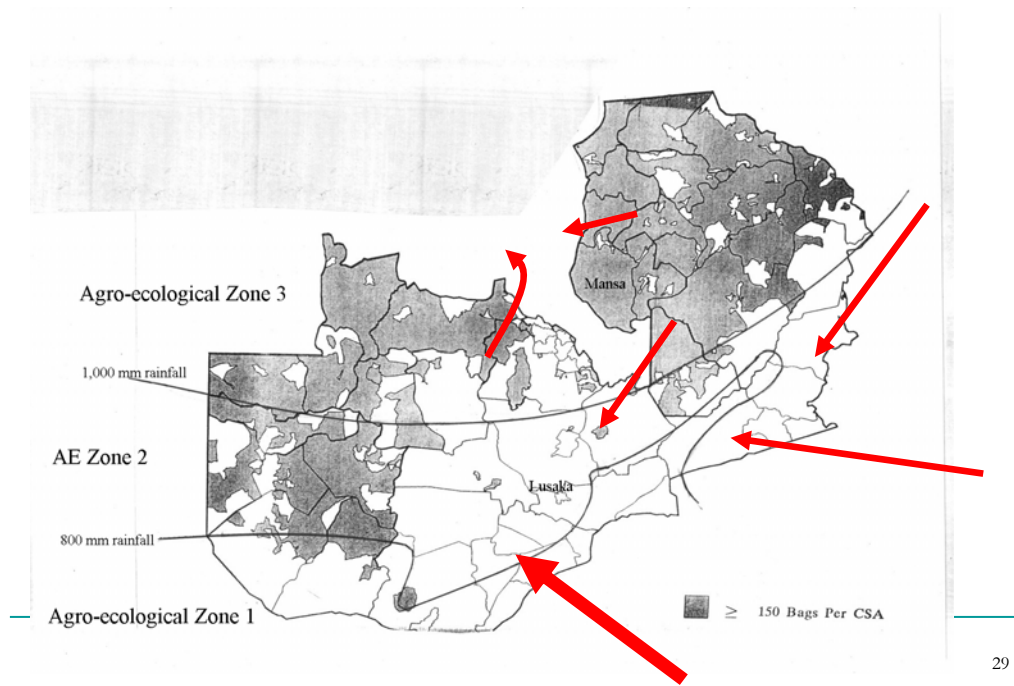
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Areas of heavy cassava production



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Maize trade flows



Zambia spreadsheet model

- 2 commodities

Zambia spreadsheet model

- 2 commodities: maize, cassava

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Zambia spreadsheet model

- 2 commodities: maize, cassava
- 2 household groups: poor, nonpoor

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Zambia spreadsheet model

- 2 commodities: maize, cassava
- 2 household groups: poor, nonpoor
- 2 user-determined shocks: drought, food aid

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Zambia spreadsheet model

- 2 commodities: maize, cassava
 - 2 household groups: poor, nonpoor
 - 2 user-determined shocks: drought, food aid
- impact on: $P1_{(maize)}$, $D1_{(maize)}$, $D1_{(cassava)}$, $Qm_{(maize)}$, consumption shortfall (in maize equivalents)

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Simulation 1: Drought

	Base	Simulation 1.		
		1a. drought	1b. cassava	1c. Private imports
Production ('000 tons)	1,015			
P(maize)(K/kg)	1,136			
Poor household consumption ('000 tons, maize equivalents)				
maize	507			
cassava	119			
total	687			
shortfall	0			35

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Production ('000 tons)	1,015	- 20%		
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maize	507	384		
cassava	119	119		
total	687	503		
shortfall	0	123		

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Poor household consumption ('000 tons, maize equivalents)				
maize	507	384	384	
cassava	119	119	151	
total	687	503	535	
shortfall	0	123	91	

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maize	507	384	384	
cassava	119	119	151	
total	687	503	535	
shortfall	0	123	91	41

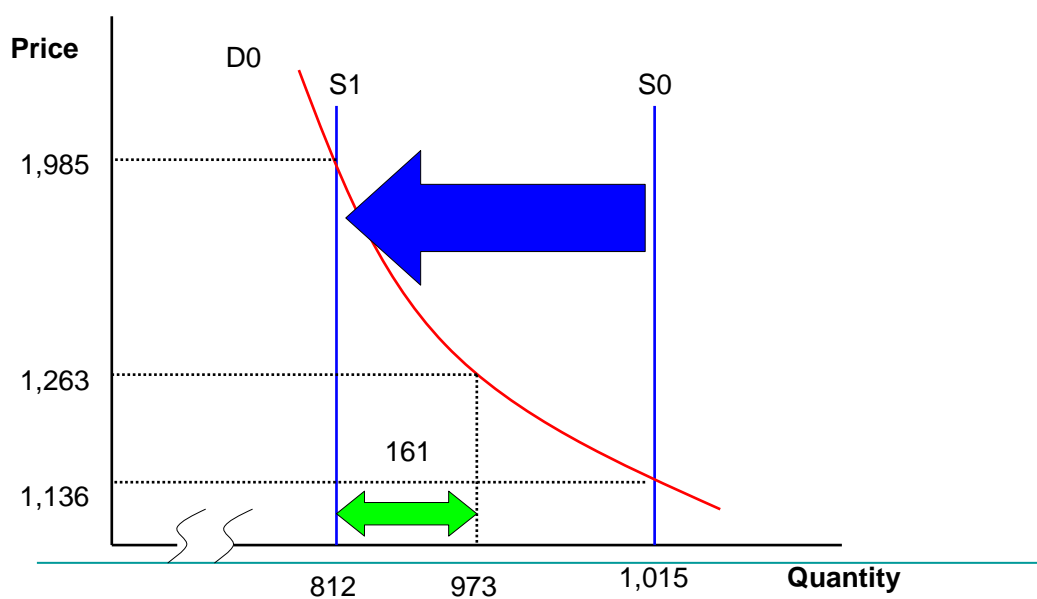
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Production ('000 tons)	1,015	- 20%	-20%	-20%
P(maize)(K/kg)	1,136	+75%	+75%	+11%
Poor household consumption ('000 tons, maize equivalents)				
maize	507	384	384	
cassava	119	119	151	
total	687	503	535	
shortfall	0	123	91	42

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Production ('000 tons)	1,015	- 20%	-20%	-20%
P(maize)(K/kg)	1,136	+75%	+75%	+11%
Poor household consumption ('000 tons, maize equivalents)				
maize	507	384	384	481
cassava	119	119	151	124
total	687	503	535	606
shortfall	0	123	91	20 ⁴³

Maize market drought



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