Modernizing Africa's Fresh Produce Supply Chains without Rapid Supermarket Takeover

Towards a definition of Research and Investment Priorities

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MSU Food Security Group
Presented August 11, 2010 at Bill & Melinda Gates Foundation
Seattle

- Slow growth and long slog for supermarkets
  - So how to invest productively in the chaotic "traditional" sector?
- Farm level marketing
- Downstream structure and issues
- Prices
- Process of change

#1: Supermarkets will not dominate for many years

- Are present and will grow as economies modernize
- But growth in fresh produce market share has been very slow
  - Little if any apparent change in Nairobi from 2003 to 2009

Fresh produce market share of retail channels by income quintile, Nairobi 2009 & urban Zambia 2007/08

Per capita income quintile	Super-market Chains	Small Super-markets	Duka/ shop	Open Market	Kiosk	Butchery	Other minor outlets
	Kenya (Nairobi) 2009						
	% of total expenditure over 70 food items						
1 (lowest)	0.2%	0.1%	0.8%	37.8%	56.7%	0.0%	4.4%
2	0.1%	0.0%	0.5%	34.8%	60.9%	0.0%	3.7%
3	0.4%	0.0%	0.9%	35.9%	53.9%	0.0%	8.8%
4	0.9%	0.1%	0.8%	42.8%	39.2%	0.0%	16.2%
5 (highest)	15.6%	0.9%	0.1%	46.2%	30.3%	0.0%	6.8%
Overall	3.4%	0.2%	0.6%	39.5%	48.2%	0.0%	8.0%

Source: Tegemeo/MSU urban household expenditure survey, 2009

Per capita expenditure quintile	Mean per capita expenditure (USD)	Super-market Chains	Indep. Super-markets & Mini-marts	Grocers	Open Market	Ka Sector	Butchery	Other minor outlets
		Zambia (four cities) 2007/08						
		% of total expenditure over 80 food items						
1 (lowest)	256	0.4%	0.0%	0.2%	67.8%	29.0%	0.0%	2.6%
2	437	0.2%	0.0%	0.1%	69.4%	27.3%	0.0%	2.9%
3	638	0.7%	0.0%	0.6%	72.6%	23.9%	0.0%	2.2%
4	974	2.2%	1.1%	0.4%	63.4%	30.6%	0.0%	2.3%
5 (highest)	2,582	9.1%	3.1%	1.0%	57.7%	27.3%	0.0%	1.7%
Overall	977	3.1%	1.1%	0.5%	65.5%	27.6%	0.0%	2.3%

Source: Central Statistical Office/FSRP/MSU Urban Household Consumption Survey, 2007/08

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Top quintile!

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Still nearly 80% at top quintile

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Less dependent on top, but lower overall

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Still 85% at top quintile

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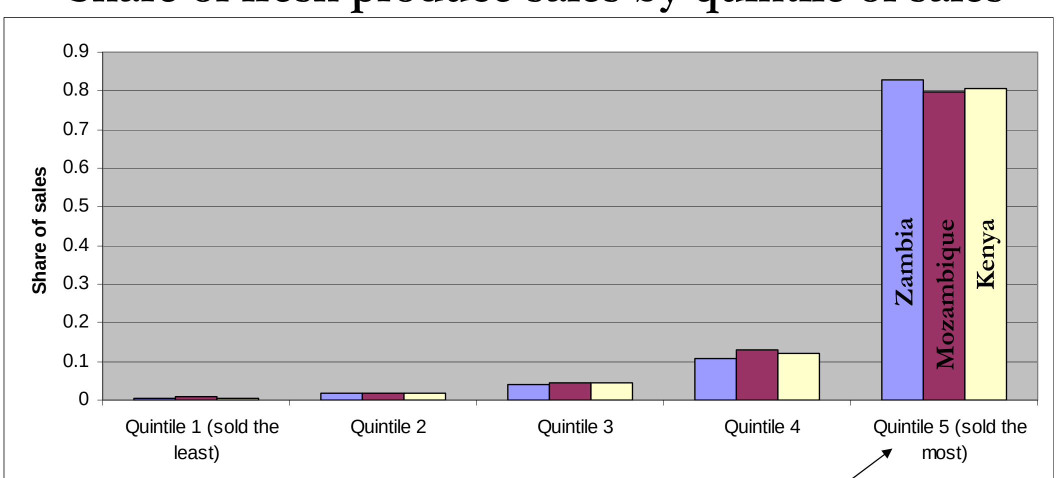
#1: Supermarkets will not dominate for many years

- The 20/20/20 Challenge
  - Across most of the continent, fresh produce sales by supermarkets will have to grow:
    - 20% in real terms
    - For 20 years
    - To reach a 20% market share
  - 14% per year in Zambia and Kenya
- So must focus on how to improve the currently chaotic "traditional" sector

#2: Sales are highly concentrated

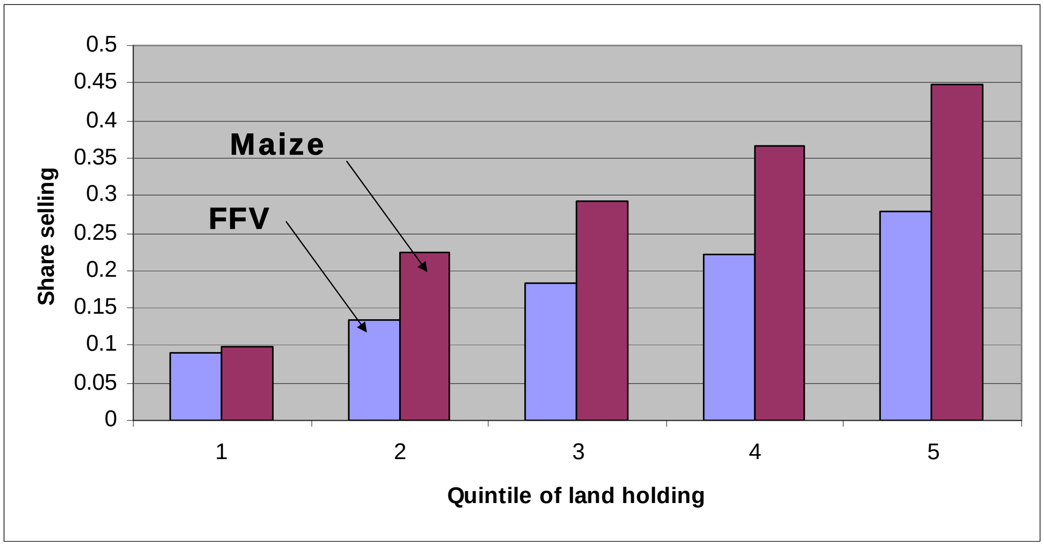
Share of fresh produce sales by quintile of sales



3%-4% of rural hhs in Zambia, Mozambique, 15% in Kenya

#3: Except for Kenya, hort not playing major role for land constrained farmers

Share selling ffv and maize, by quintile of land holding
ZAMBIA



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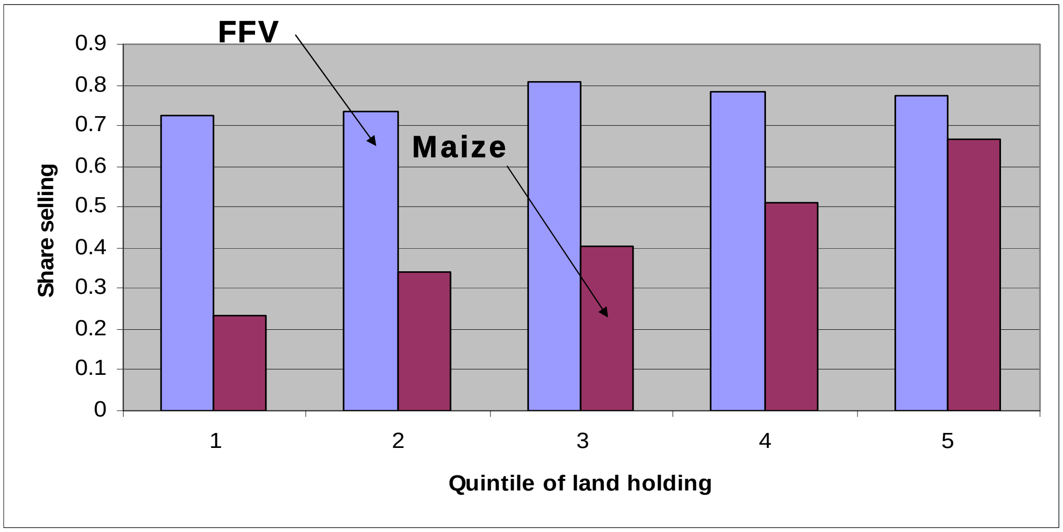
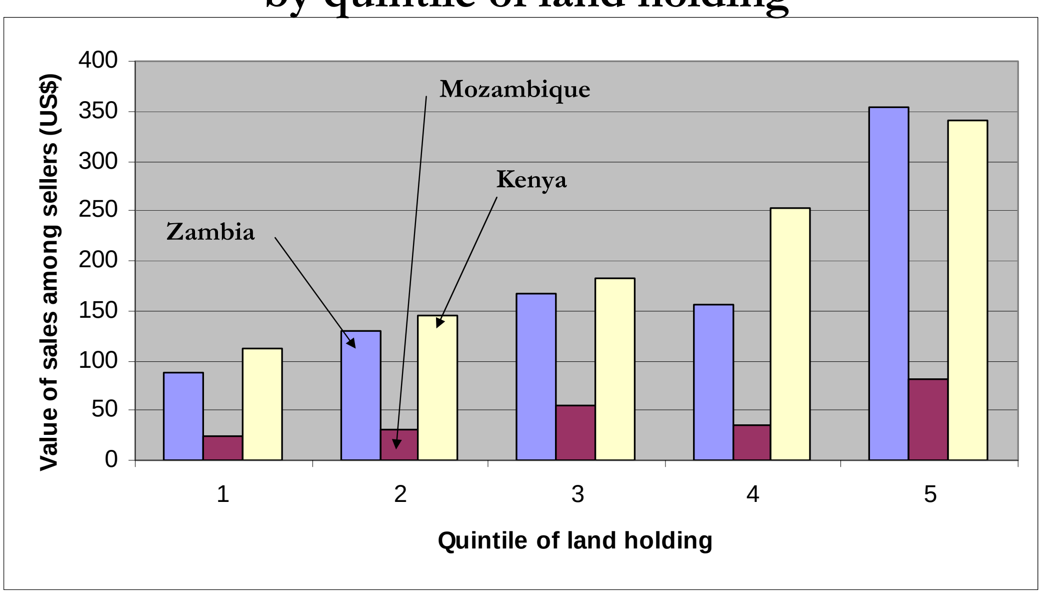


Mean earnings from FFV sales, among sellers, by quintile of land holding

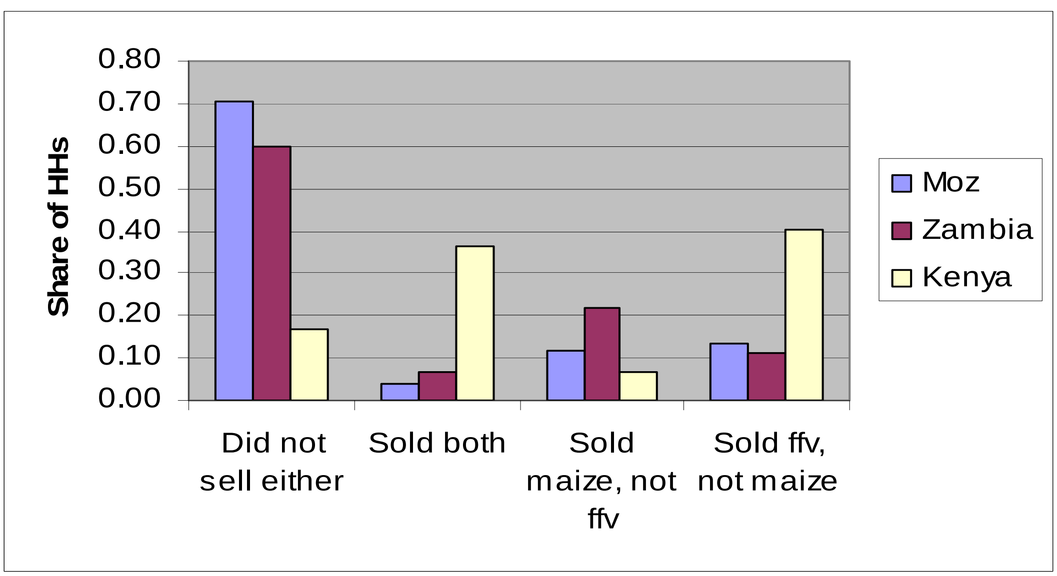


Why is Kenya different?

- Hypotheses
  - Population density
    - access to markets
  - More off-farm income
    - cash to finance inputs, absorb risk
  - Higher input use in general
  - Higher education

#4: Hort does play role for those not selling maize

HH classification by sales behavior on maize and FFV



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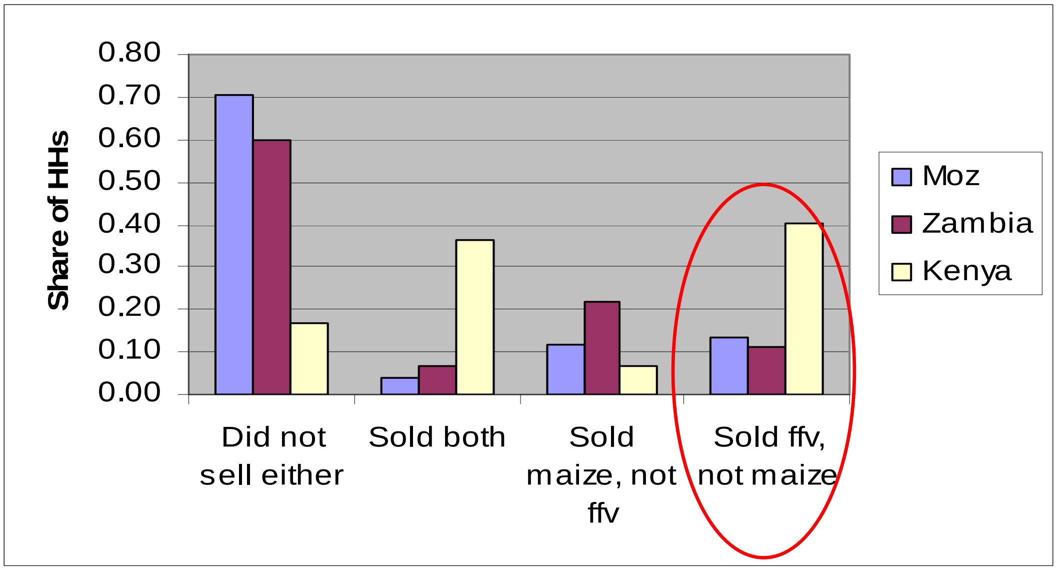

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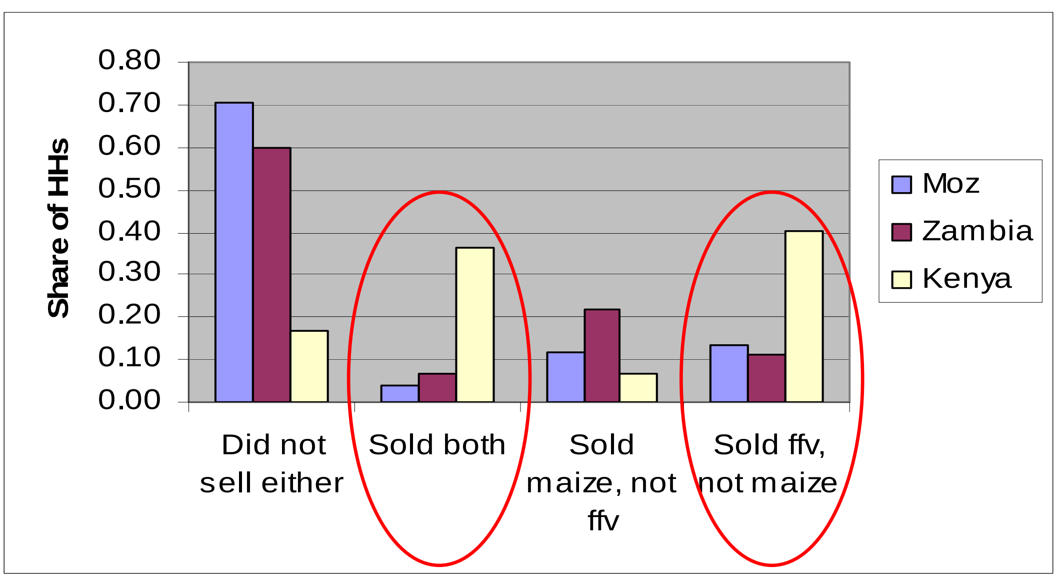
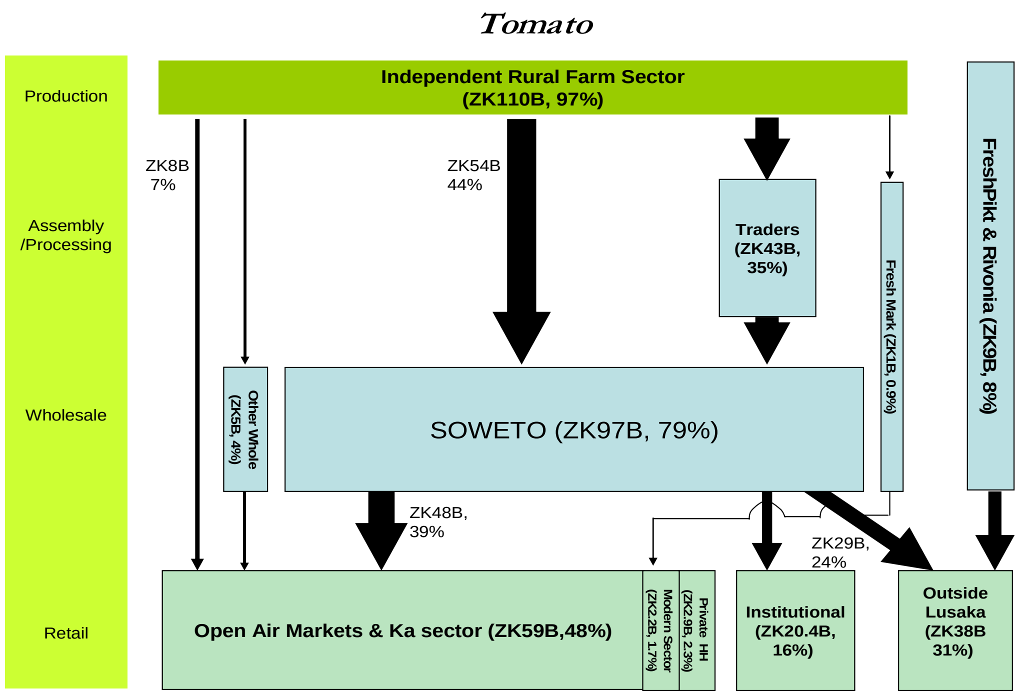


#5: Supply chains are short (illustrated by Zambia)



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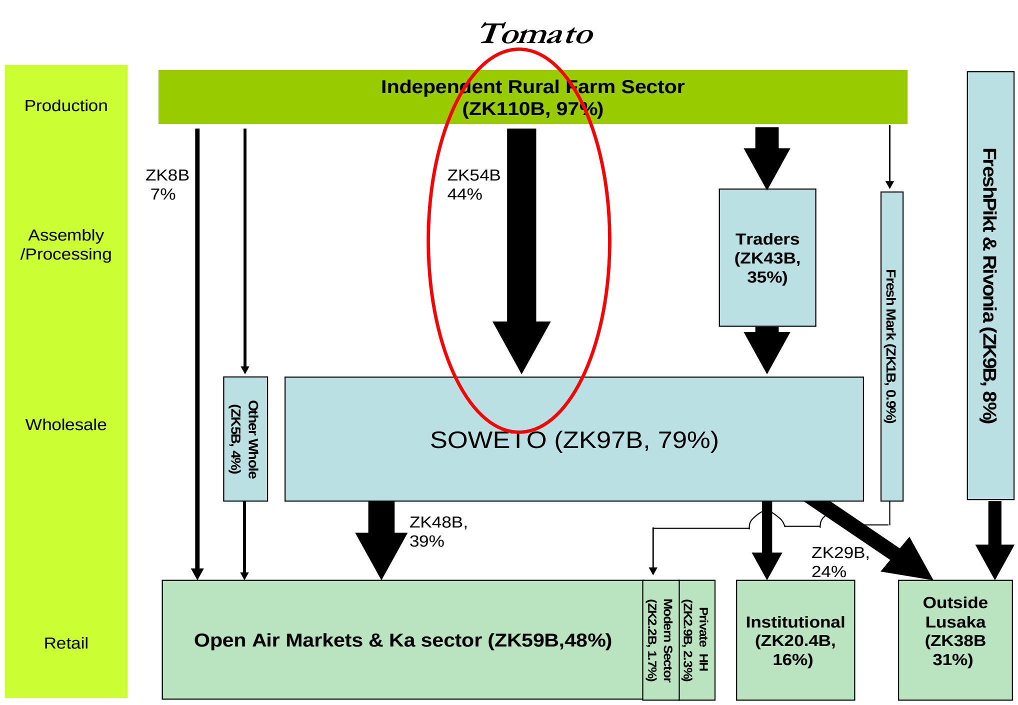

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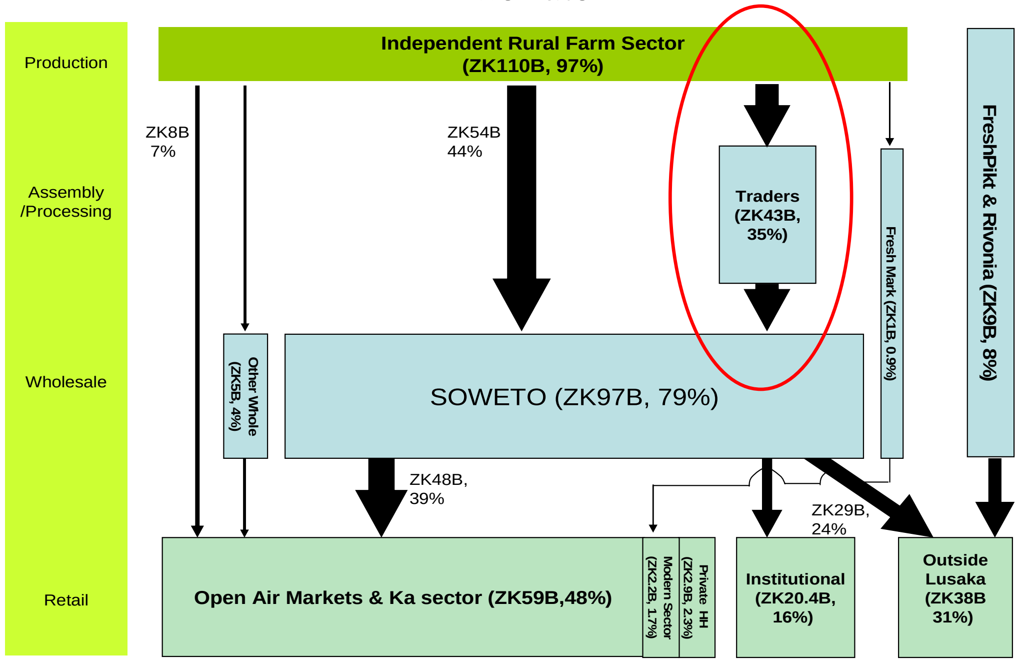
Tomato



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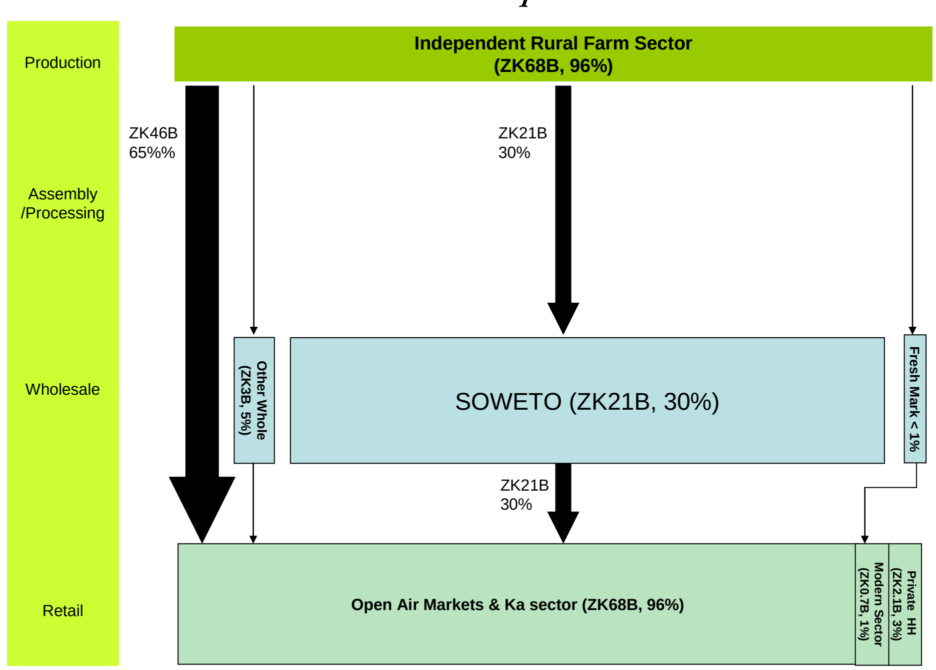
Rape



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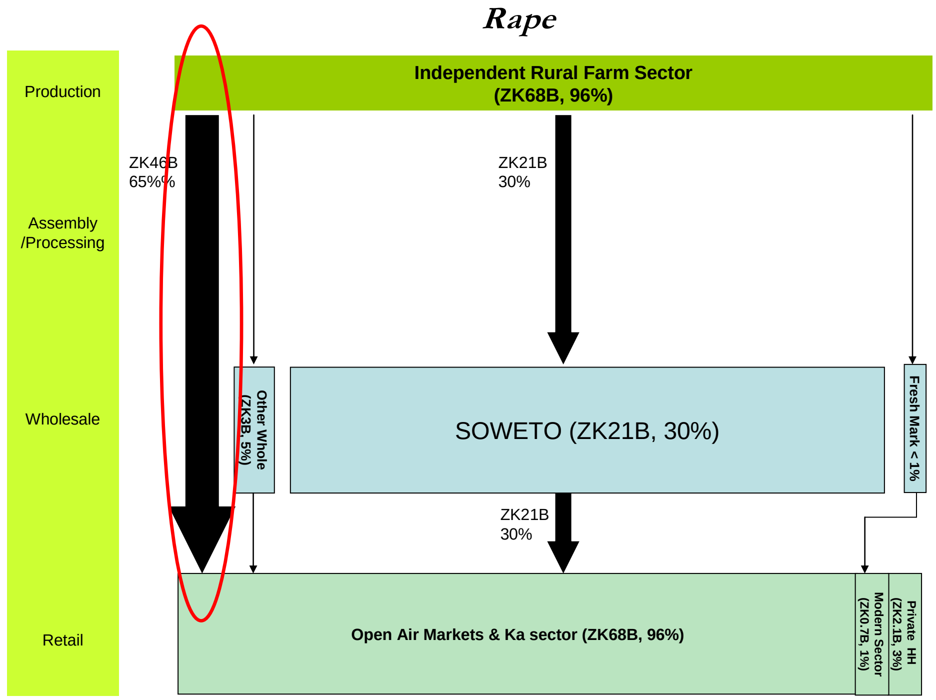

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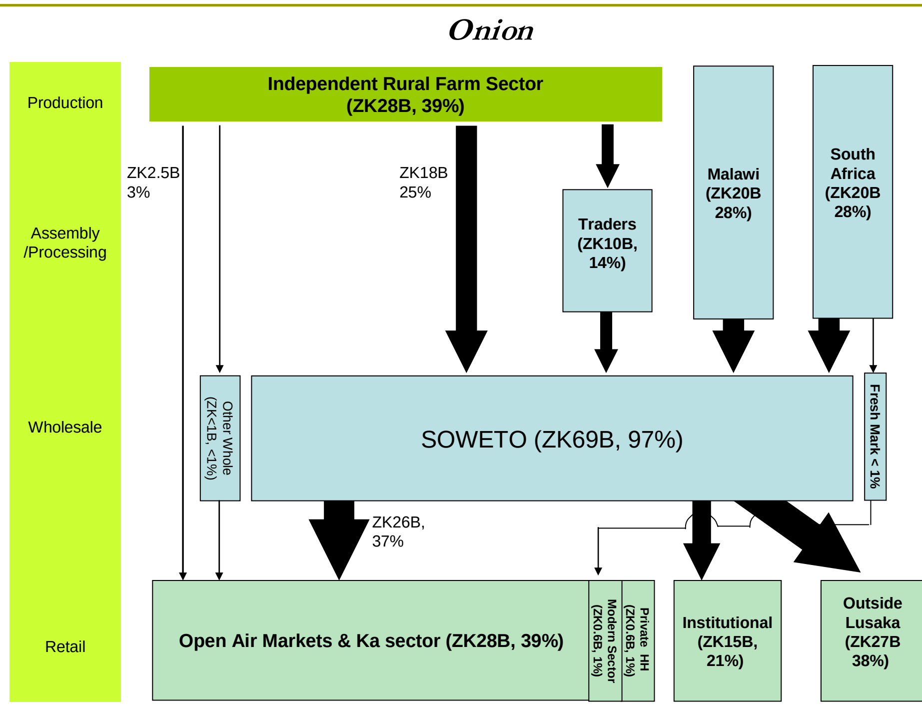

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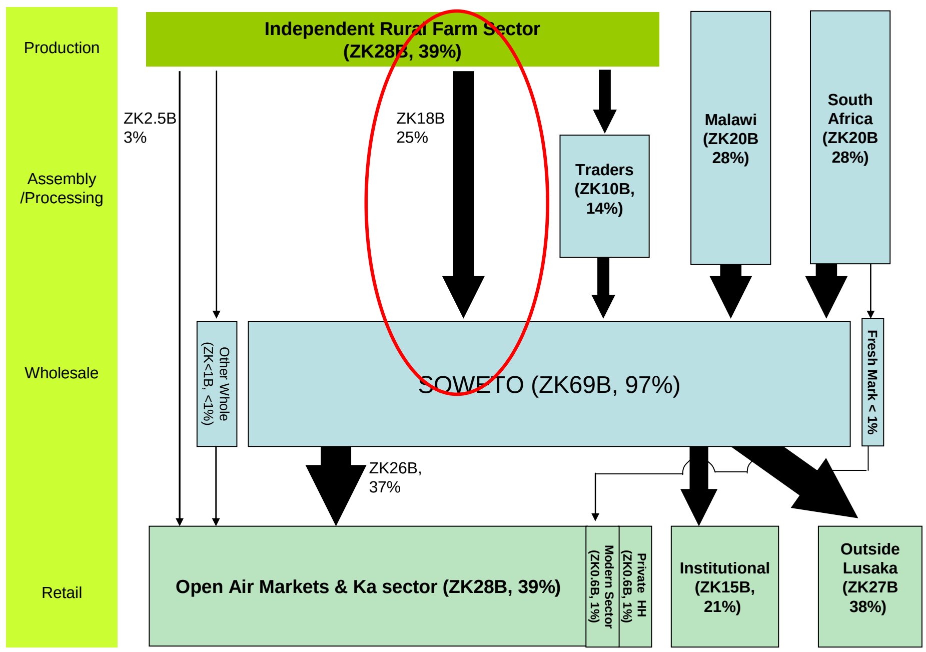
Onion



#5: Supply chains are short

- Chains are bit longer in Kenya
  - More rural assembly
  - So more scope for shortening chain

#6: Wholesaling has decentralized with no strategic vision

- And little or no investment
- Far too little consultation and use of empirical information in many investment that have been made
- Maputo a partial exception
  - Zimpeto market … but clear emerging problems
  - Possible emerging Matola market
- Kenya may be on verge of bucking the trend
- Possibly the very beginnings of a process in Zambia for better planning

#7: Prices are highly unstable, driven by even more unstable quantities

Measures of price variability at wholesale, Lusaka

	Tomato		Rape		Onion	
Variability measure	Price	Quantity	Price	Quantity	Price	Quantity
CV	0.51	0.31	0.48	0.41	0.41	0.47
Mean day-to-day absolute % change	20%	29%	30%	32%	7%	56%
Share of day-to-day changes > 20%	39%	51%	52%	56%	5%	64%

Source: FSRP Vegetable Market Volumes and Prices Monitoring Data January 2007 to January 2009.

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- Very poor information flows
- Issue of brokers, how they operate, lack of any regulation
- Address these issues <u>before</u> trying to put in cold chains

Emerging conclusions/recommendations

- Hort not a silver bullet for land constrained farmers
  - But it can reach farmers who either cannot or do not sell maize
  - Need to examine this group more carefully

Emerging conclusions/recommendations

- Where chains are short (Zambia, Mozambique), focus on efficiency of wholesaling
  - Where they are longer (Kenya), may be payoff to more directly linking farmers to wholesale traders
- Must improve information flow in system
  - Incoming quantities
  - Signs of pest problems seen in markets
  - Extension to farmers
  - Regulatory changes a necessary condition for technology platforms (sms) to add value

Emerging conclusions/recommendations

- Soft infrastructure 1st, hard infrastructure 2nd
  - Legislative and regulatory frameworks
    - Rethinking public vs. private roles and facilitating this legislatively
    - The role of brokers
  - Information systems
- Wholesale 1st, retail 2nd
  - The opposite of what's been done in Zambia
  - Maputo has some good lessons
    - But didn't deal sufficiently with ownership/mgmt issues

Thank you