

Can Horticulture Pull African Smallholder Farmers Out of Poverty?

Insights from Kenya, Mozambique, and Zambia

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Outline

- Export compared to domestic/regional systems
- “Modern” compared to “traditional” systems
- What farmers are taking advantage of opportunities offered by hort?
- Commonly ignored priorities

Export compared to domestic/regional horticulture

- Domestic/regional systems much larger
 - Even in Kenya: 4-5 times larger
 - > 20 times larger in nearly all other countries
- Domestic/regional system will also contribute most to growth over (at least) next 20 years
 - Based on urbanization, income growth, income elasticities ...
 - Current relative sizes of two systems
 - Optimistic assumptions about growth of exports
 - *So 20 years is a conservative figure*

“Modern” or “organized” retail compared to “traditional”

- Supermarket chains are present and will grow as economies modernize
- But growth in fresh produce market share has been very slow
 - Little growth in market share in Nairobi from 2003 to 2009

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

Kenya (Nairobi) 2009

Per capita income quintile	Super-market Chains	Small Super-markets	Duka/shop	Open Market	Kiosk	Butchery	Other minor outlets
----- % 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

Zambia (four cities) 2007/08

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
----- % 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%

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Still nearly 80% at top quintile Kenya (Nairobi) 2009

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Less dependent on top, but lower overall

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“Modern” or “organized” retail compared to “traditional”

- The 20/20/20 Challenge
 - Across most of the continent, fresh produce sales by supermarkets will have to grow:
 - 20% per year in real terms
 - For 20 years
 - To reach a 20% market share
 - 14% per year in Zambia and Kenya

Takeaway

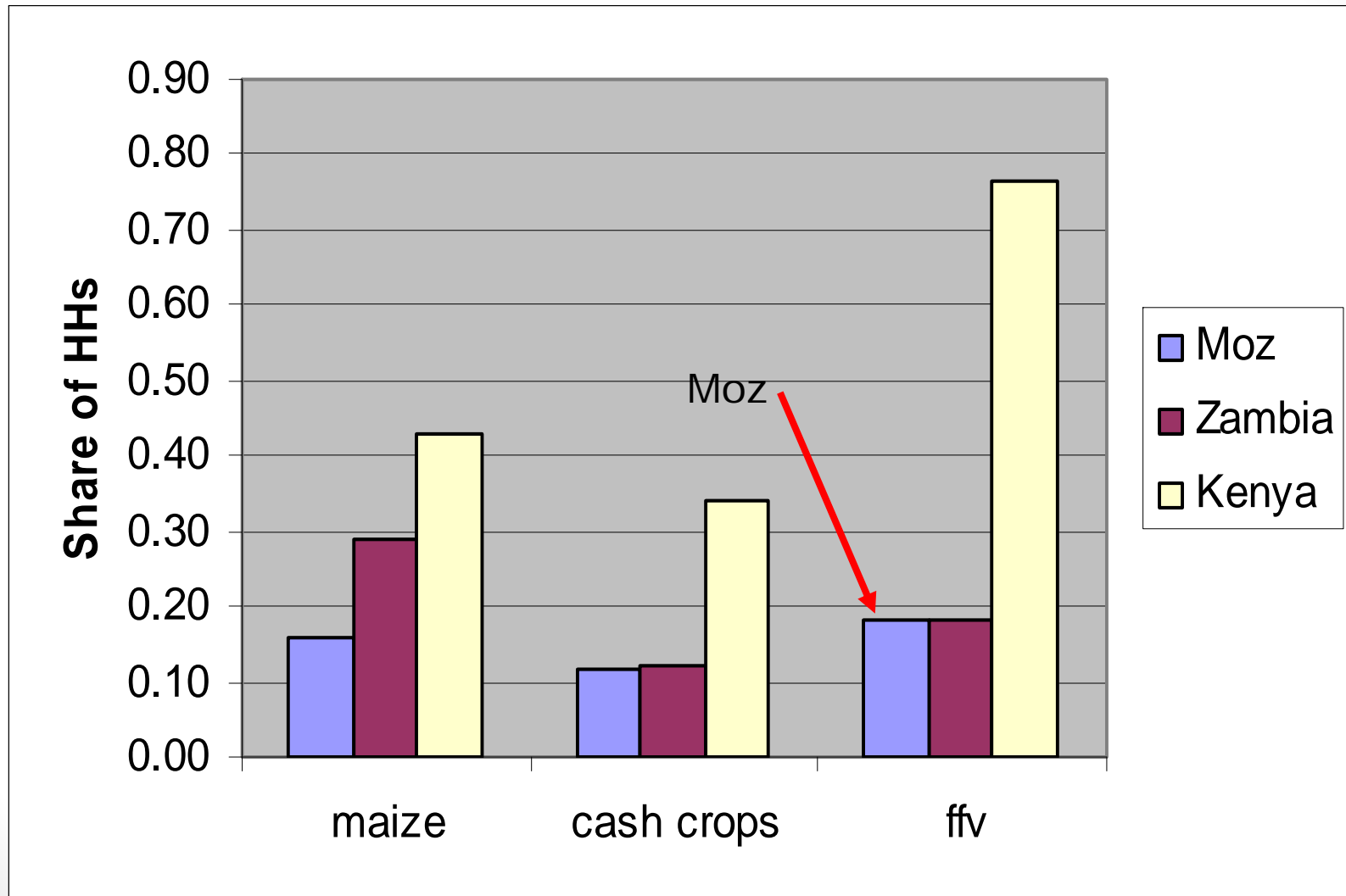
- Poverty reduction at scale through horticulture, if it is to occur, must take place:
 - Through traditional channels
 - Serving domestic and regional markets
- Major implications for
 - Investment in these systems
 - Process by which investment decisions are made
 - Needed revisions in legal and regulatory systems governing “traditional” markets

Opportunities presented by hort for smallholder farmers

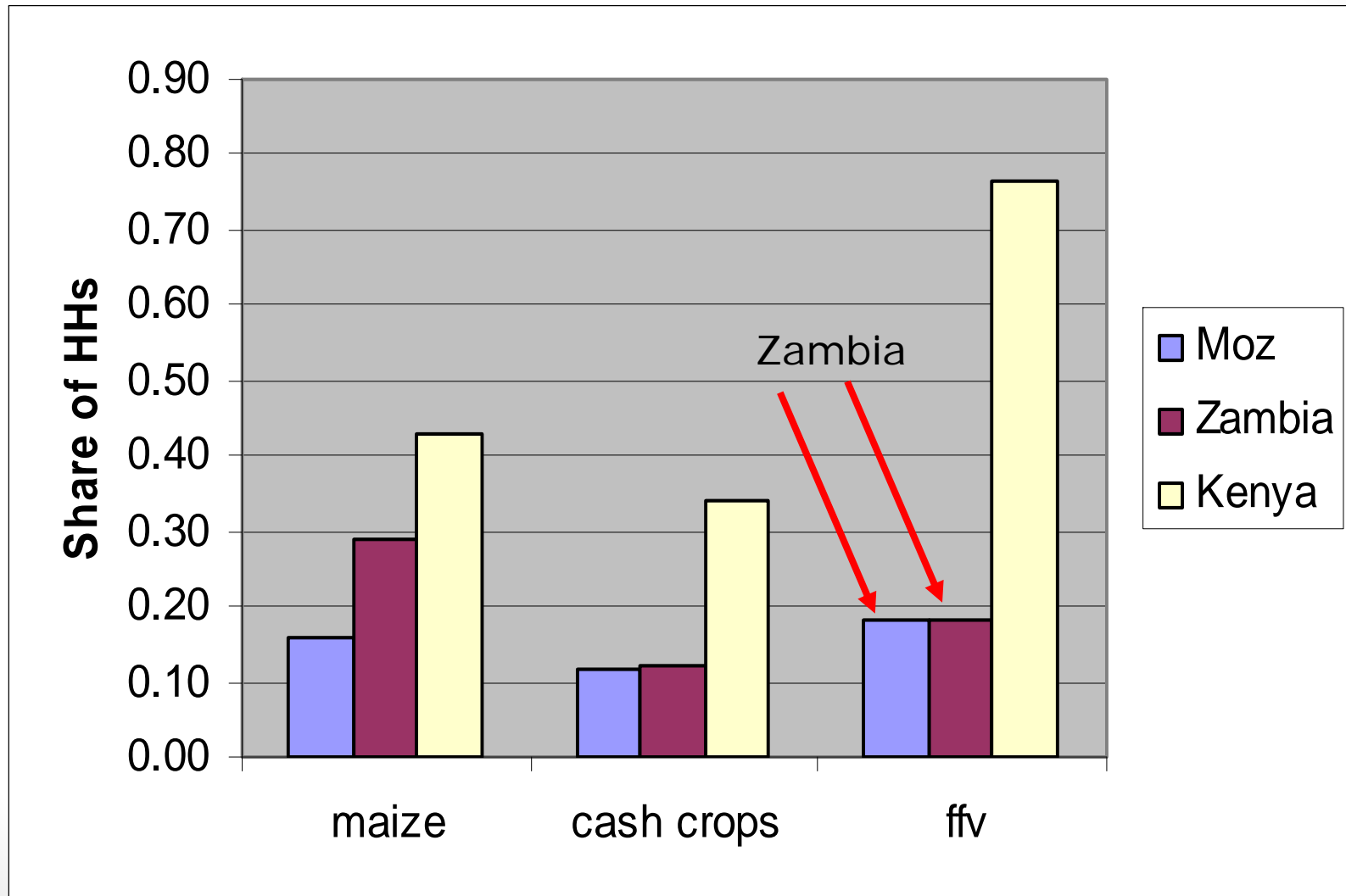
- Possible high earnings per unit of land
- Labor intensive
- So in principle, an avenue for poverty reduction through ag for land-constrained farmers
- BUT, land constrained farmers tend to be poor in income and assets (including education)
- And hort production requires high use of inputs
 - Cash inputs
 - Knowledge
- How do these countervailing forces play out?

Who is taking advantage of these opportunities?

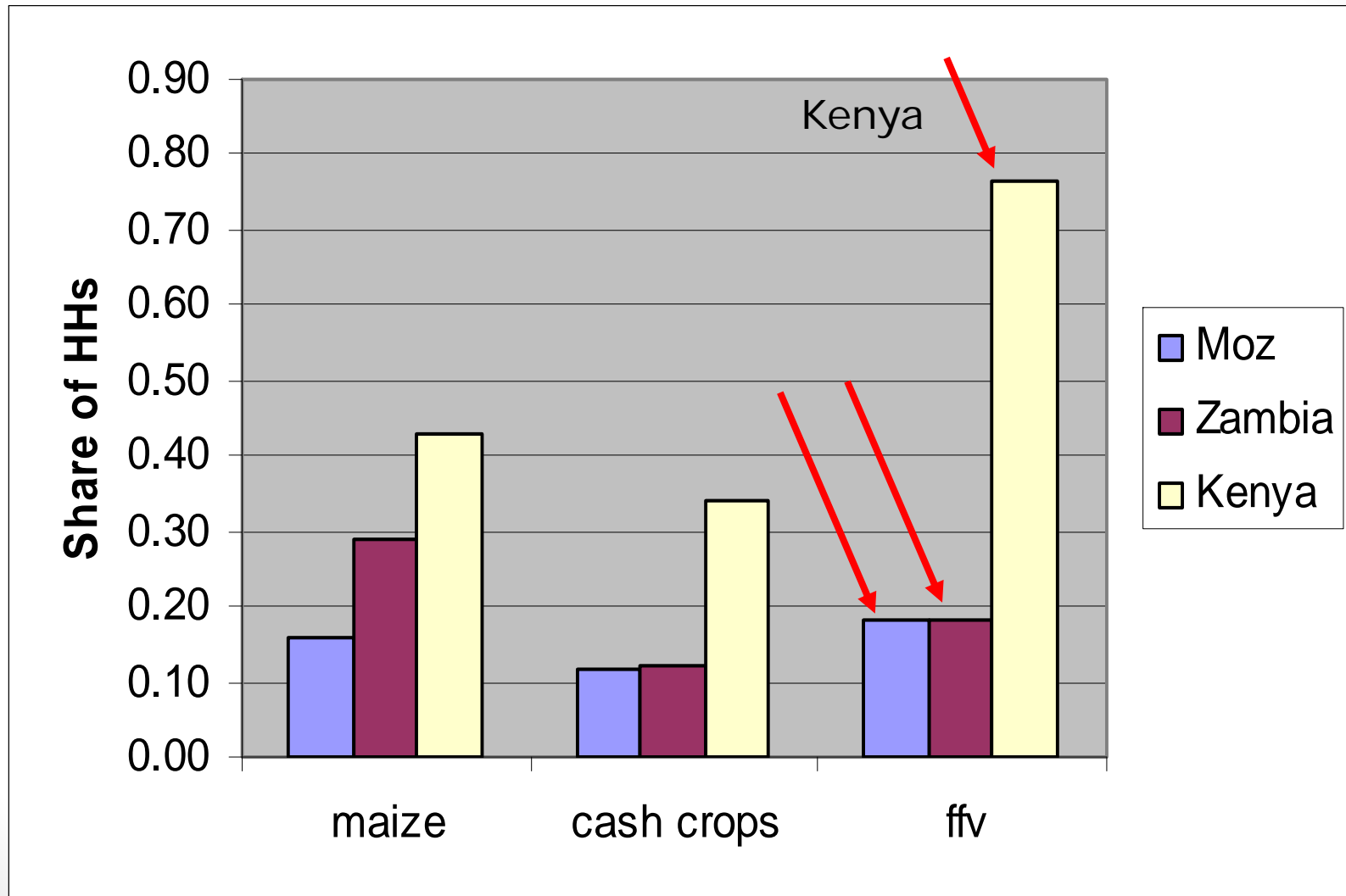
Small shares of households sell fresh produce (except in Kenya)



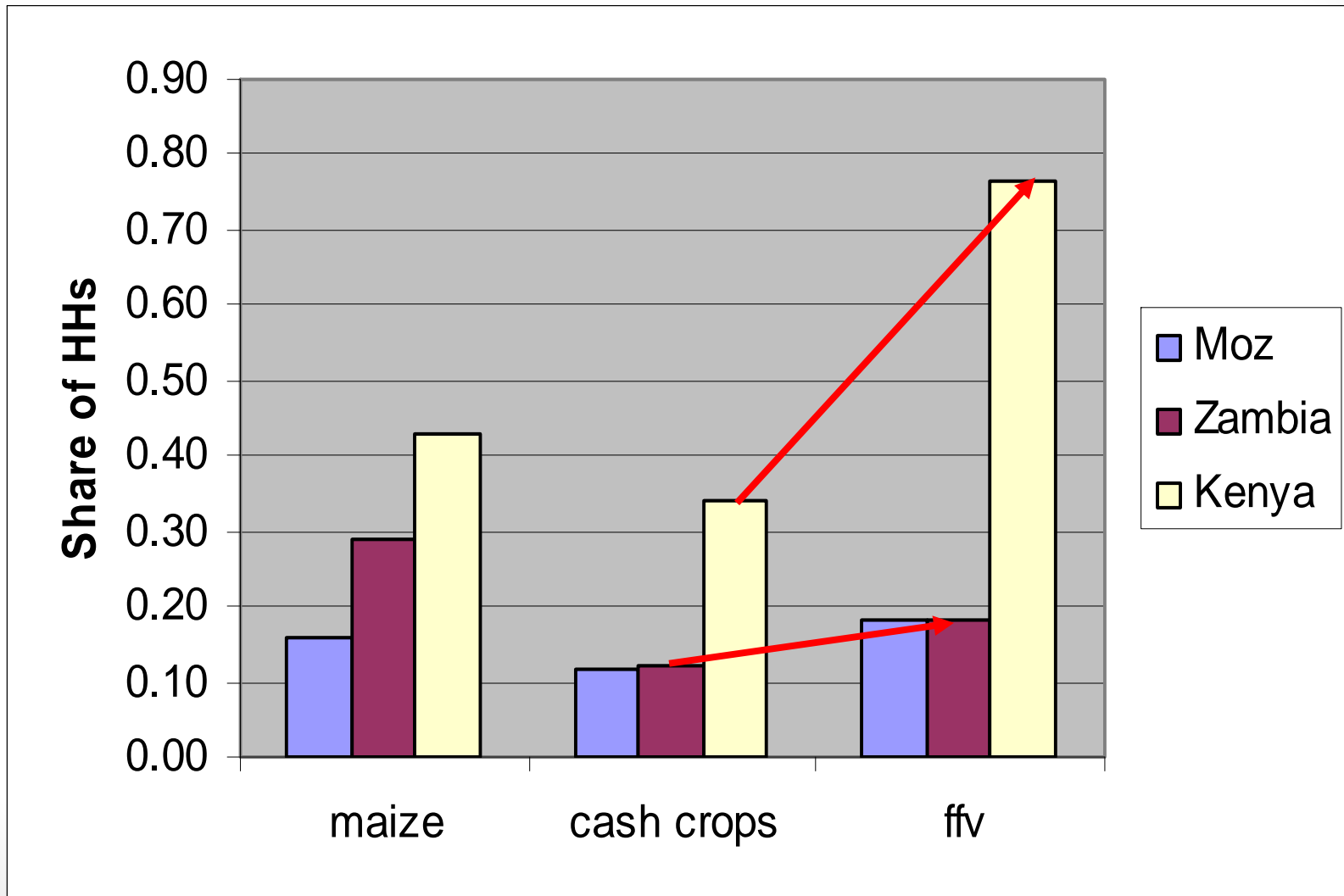
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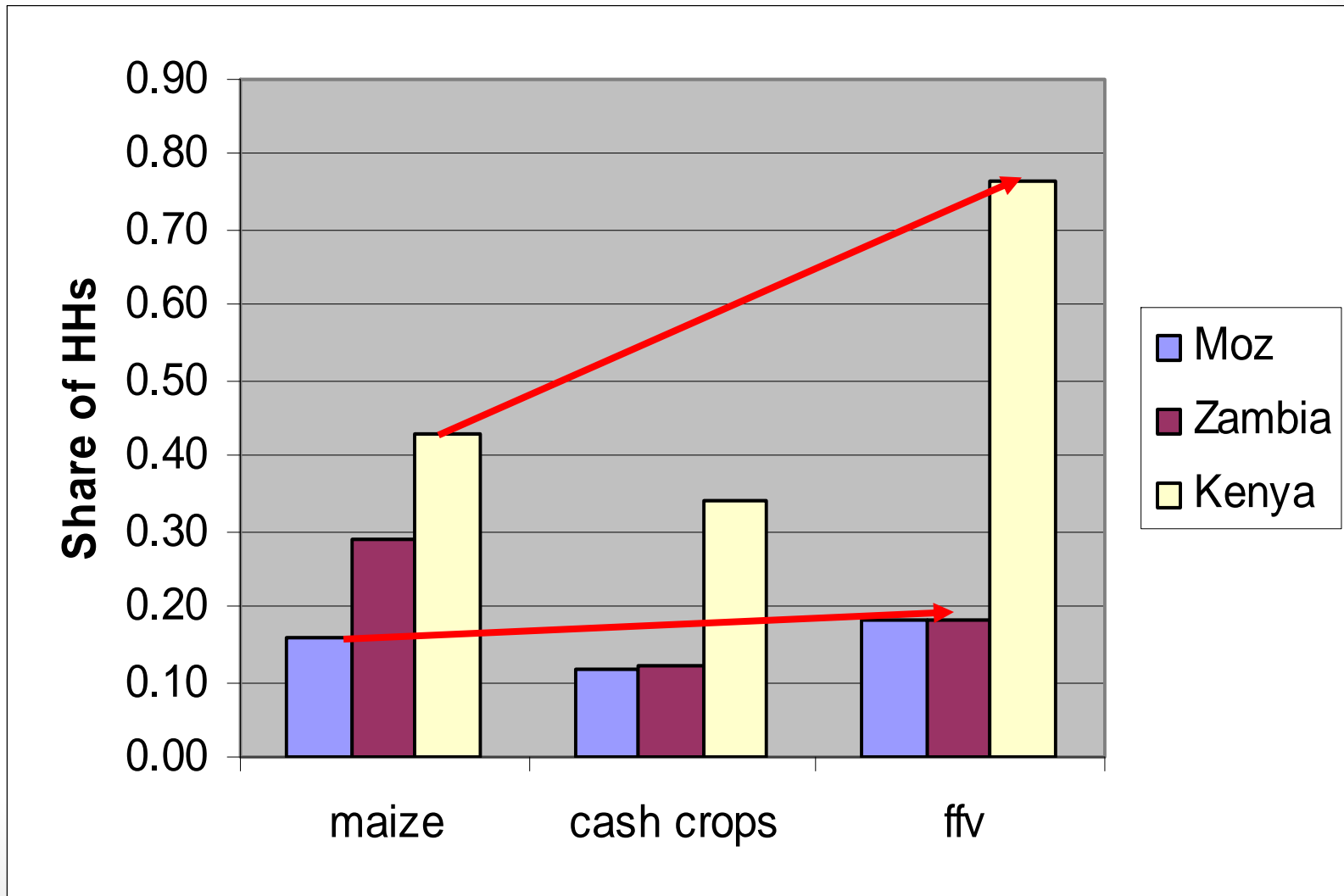
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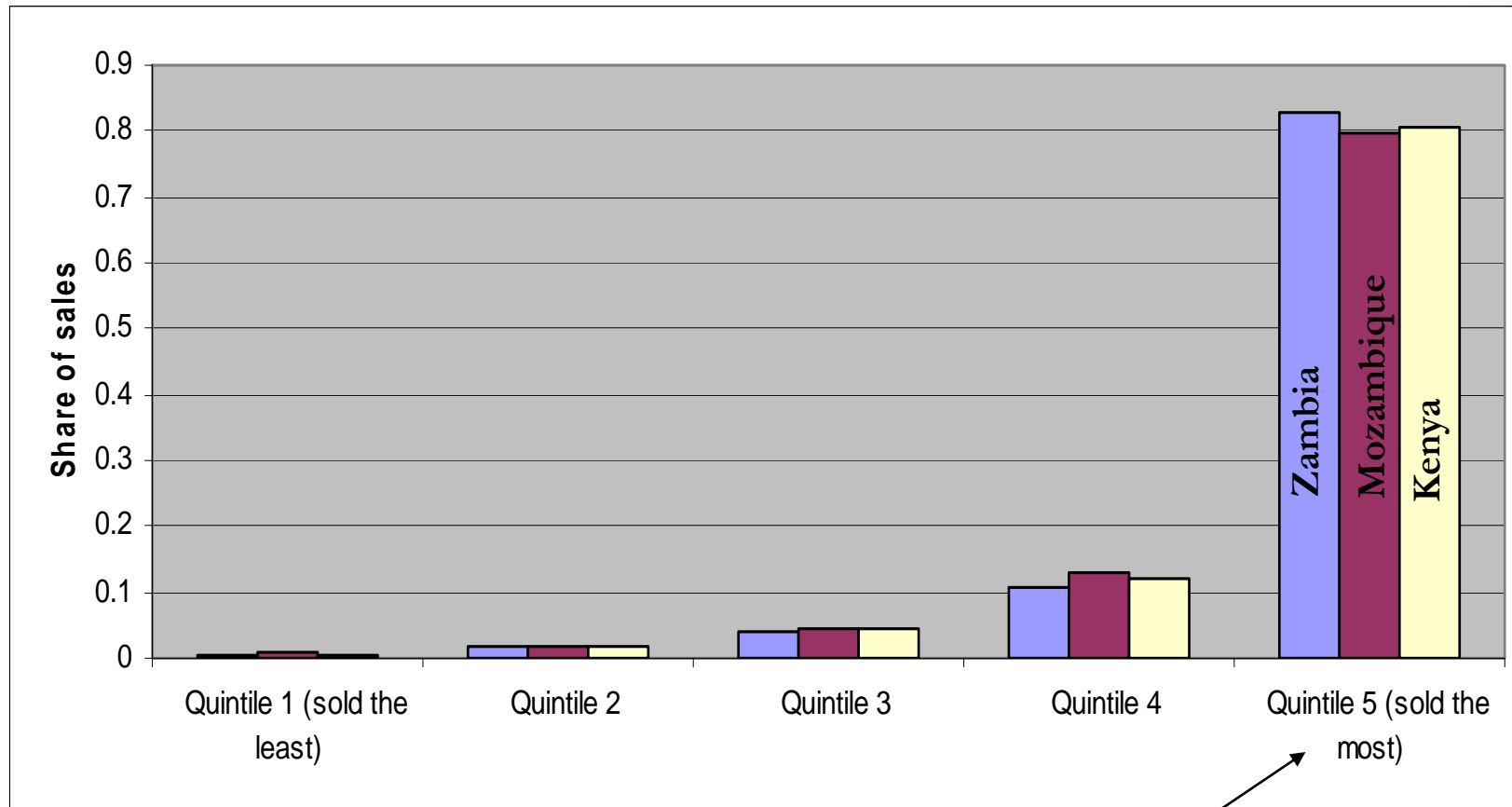
More households sell FFV than sell cash crops



More households sell FFV than sell maize (except in Zambia)



Sales are highly concentrated

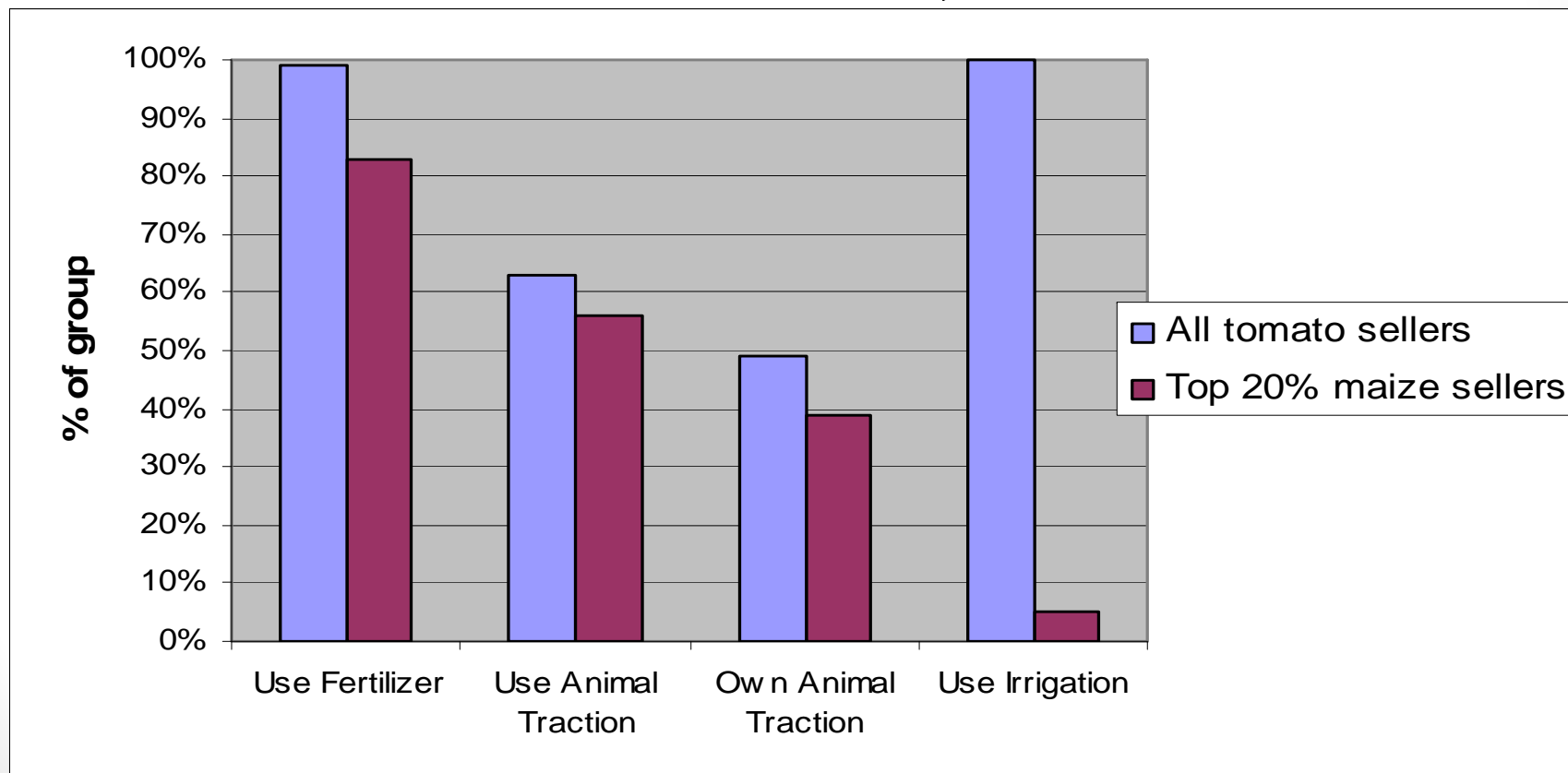


3%-4% of rural hhs in Zambia,
Mozambique, 15% in Kenya

Top sellers:

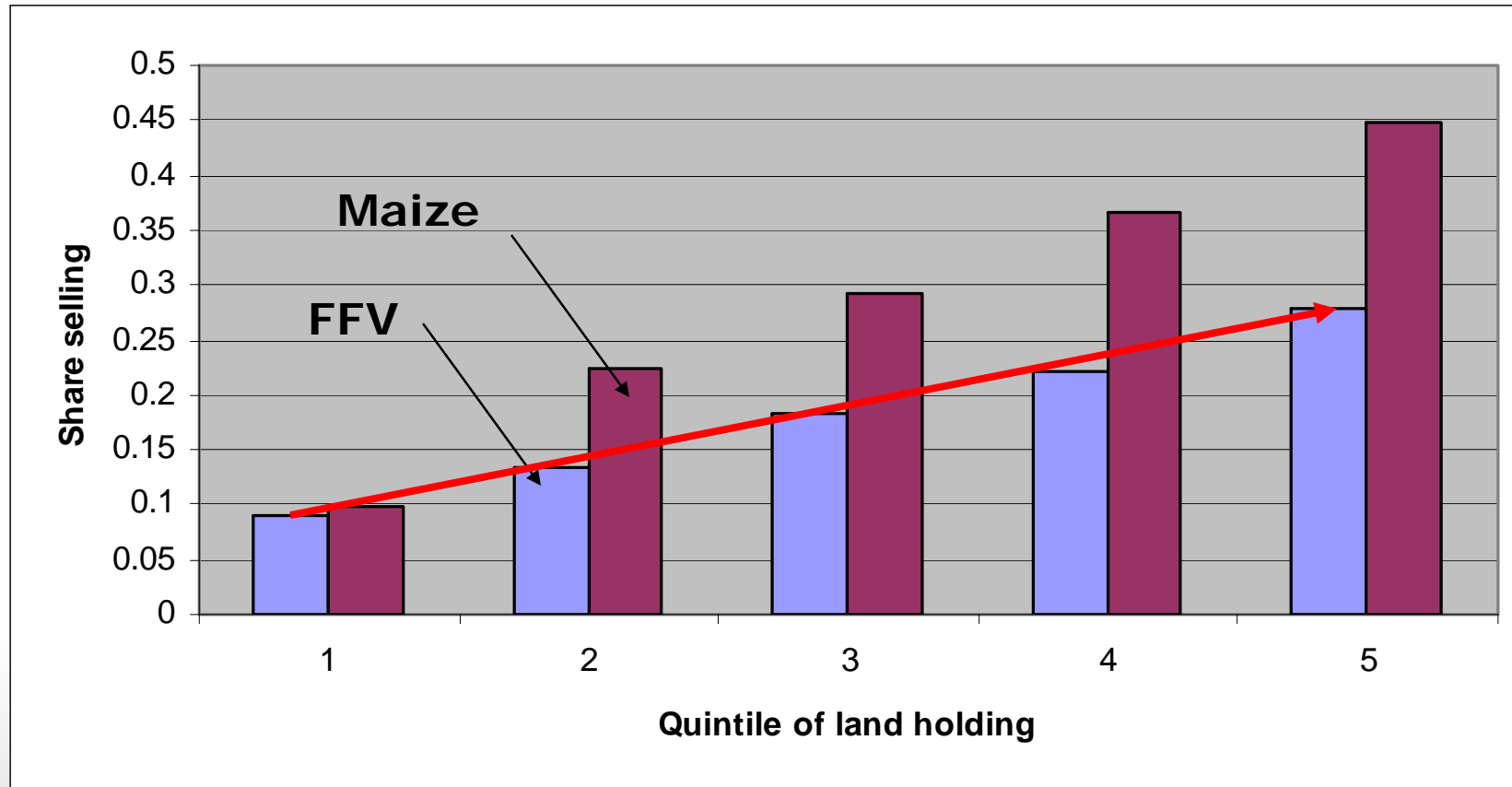
- Have more land
- Better educated (stronger relation than for other crops)
- Less likely to be female headed
- Use more inputs even than top 20% of maize sellers

% using inputs among tomato sellers in Lusaka market and top 20% of maize sellers, Zambia



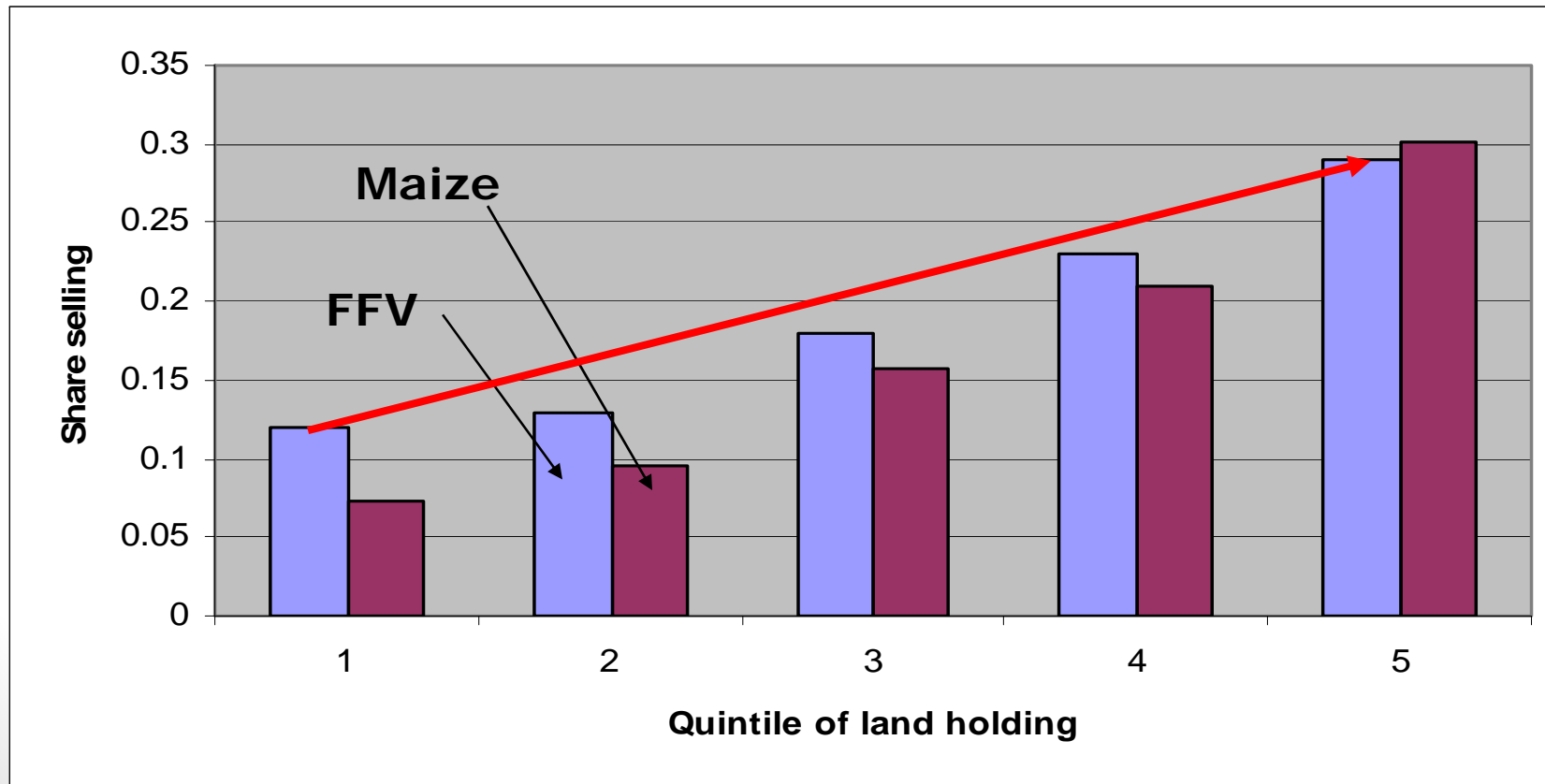
Land constrained farmers not taking advantage of hort (except in Kenya)

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



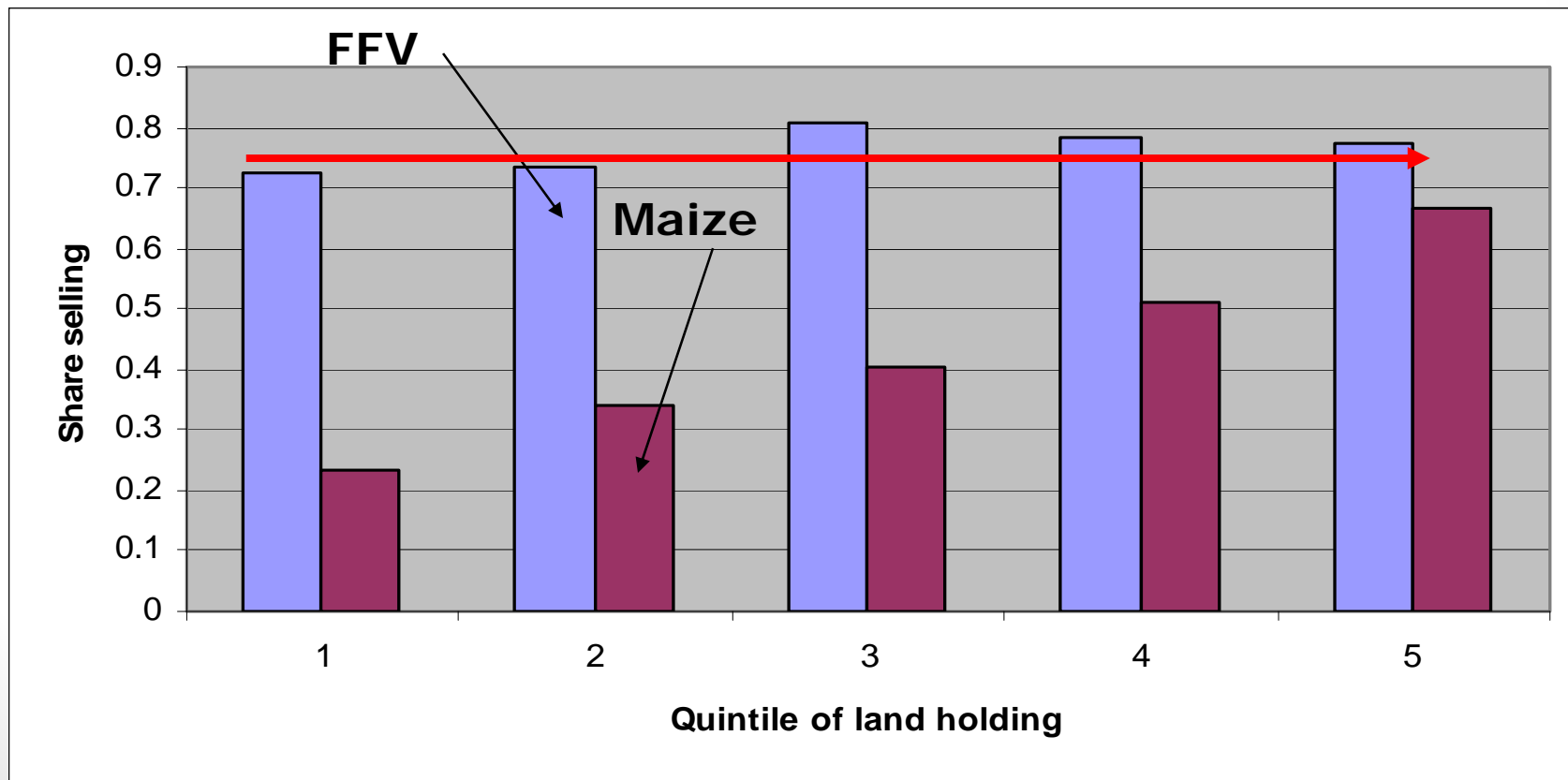
Land constrained farmers not taking advantage of hort (except in Kenya)

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



Land constrained farmers not taking advantage of hort (except in Kenya)

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

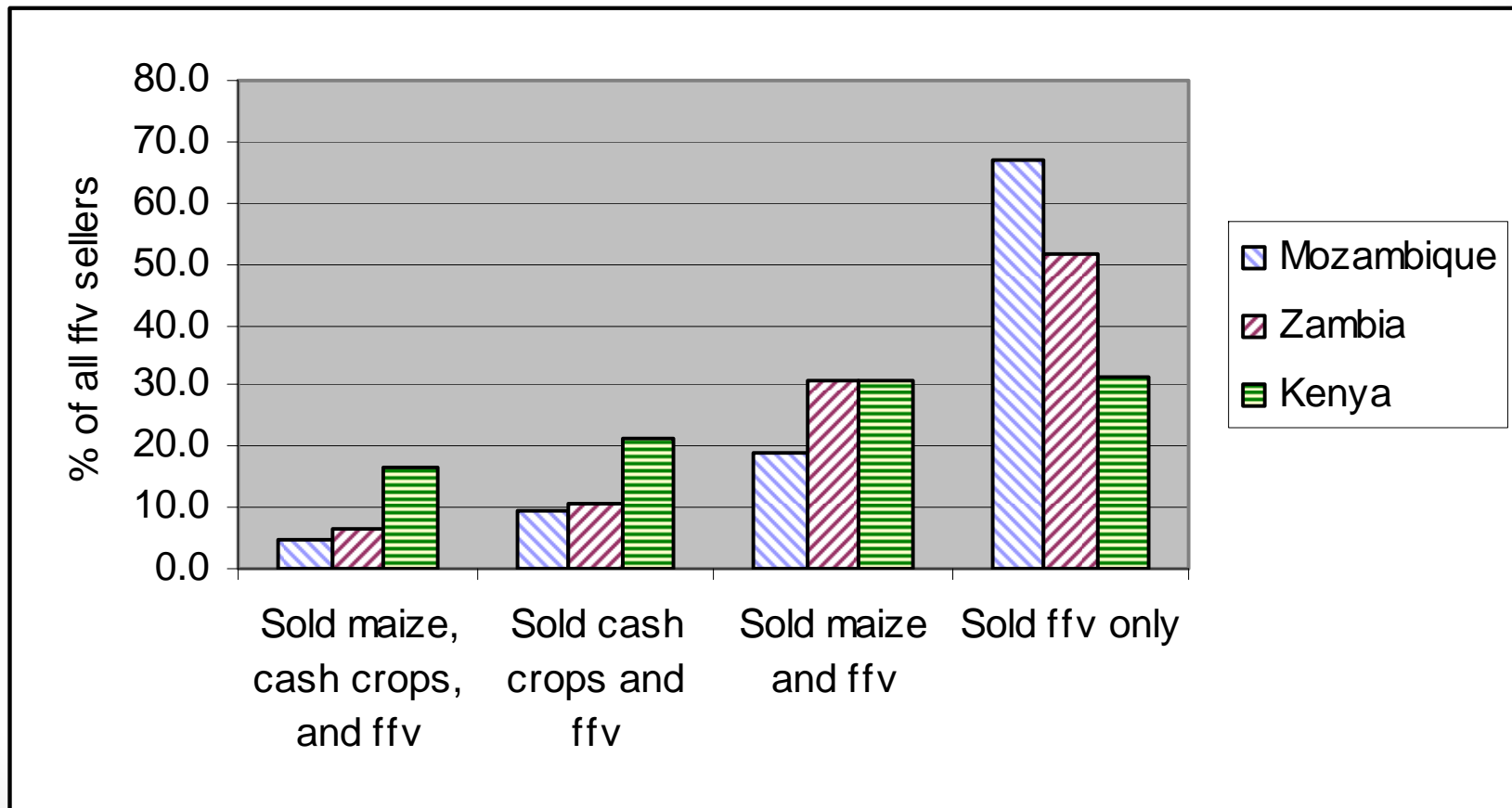


Why is Kenya different?

- Agroecology
 - More highland (= cooler) areas
- Population density
 - access to markets
- More off-farm income
 - cash to finance inputs, absorb risk
- Higher input use in general
- Higher education

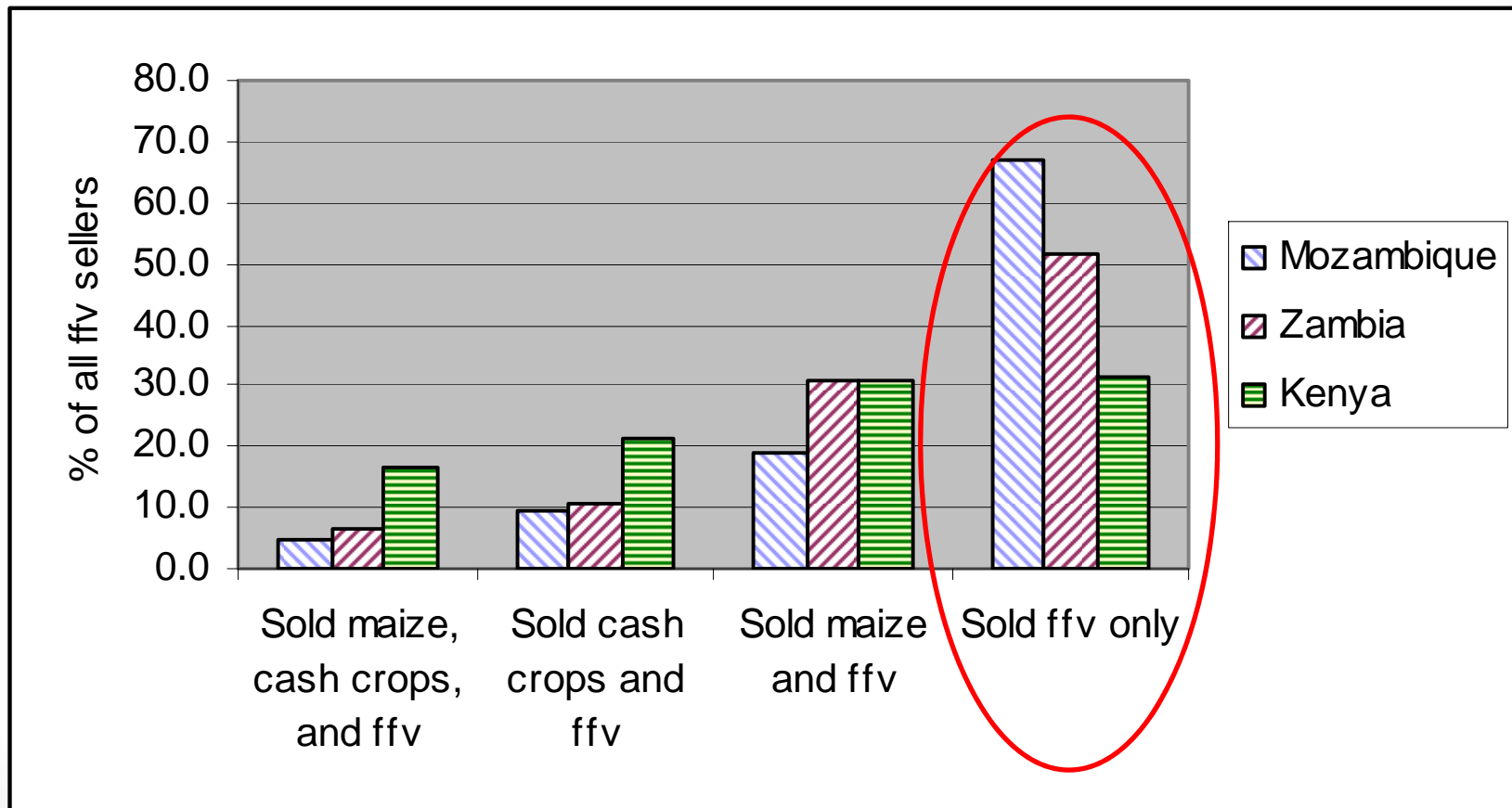
Hort does provide incomes for farmers not selling maize or cash crops

Distribution of fresh produce sellers by broader crop marketing behavior



Hort does provide incomes for farmers not selling maize or cash crops

Distribution of fresh produce sellers by broader crop marketing behavior



Recap on farmers taking advantage of hort

- Small shares of hhs, except for Kenya
- But more than sell maize and cash crops
- Highly concentrated sales
- Land-constrained farmers not especially taking advantage, except in Kenya
- But hort does provide cash income to farmers not selling maize or cash crops

Emerging conclusions
*(drawing on additional research not
presented here, including Malawi)*

Hort not a silver bullet for land constrained farmers

- But it can reach farmers who either cannot or do not sell maize or cash crops
- Irrigation is crucial for vegetable production in southern Africa
 - Vegetables not adapted to hot wet climates
 - Cool season = dry season
 - Most economical time to produce, but only with irrigation

A rapidly growing problem?

- Environmental and human health implications of horticultural production for rapidly growing African cities
 - Hot, wet season production requires very high use of plant protection chemicals
 - Major problem in coastal areas with poor transport
 - Peri-urban production of green leafy vegetables, with contaminated irrigation water
 - Very weak regulatory systems in most countries, paired with limited information for farmers re environmental and human health risk

Horticulture presents a tougher organizational challenge

- Unlike cash crops (cotton, tobacco), not as easy to do contract farming
- Perishability means that government purchases or minimum prices not an option
- Must improve the existing diffuse marketing arrangements
 - Where are the entry points?

Commonly ignored priorities

- Wholesale 1st, retail 2nd
 - Wholesale is linchpin for systemic improvements
 - The opposite of what's been done in Zambia
 - Maputo has some good lessons
 - But didn't deal sufficiently with ownership/mgmt issues
- Soft infrastructure 1st, hard infrastructure 2nd
 - Legislative and regulatory frameworks
 - Rethinking public vs. private roles
 - Role of brokers
 - Improved information flow

Commonly ignored priorities

- Building decision making processes that emphasize
 - Broad stakeholder participation
 - Learning
 - Applied research and on-going outreach
 - Learning from neighbors
 - Iterative decision making on basis of this learning

Thank you