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The Emerging "Quiet Revolution" in African Agrifood Systems: Challenges for Mozambique

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Presentation at MOZEFO, Agro-Industry in Mozambique
Maputo, Mozambique
19 March, 2015

Approach


Urbanization & per capita income growth
Diet & other transformations (farm, midstream, downstream)

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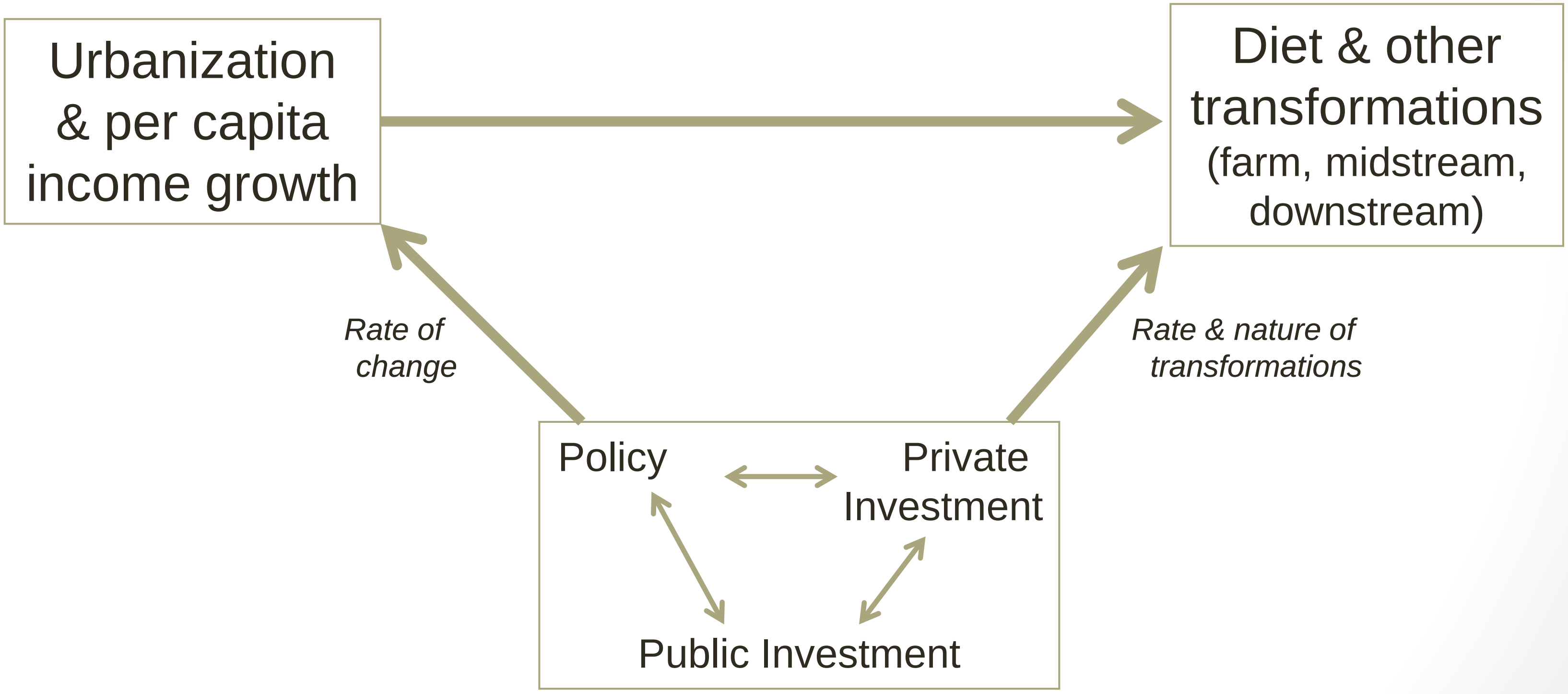
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Diet & other transformations (farm, midstream, downstream)
Rate of change
Rate & nature of transformations
Policy
Private Investment
Public Investment

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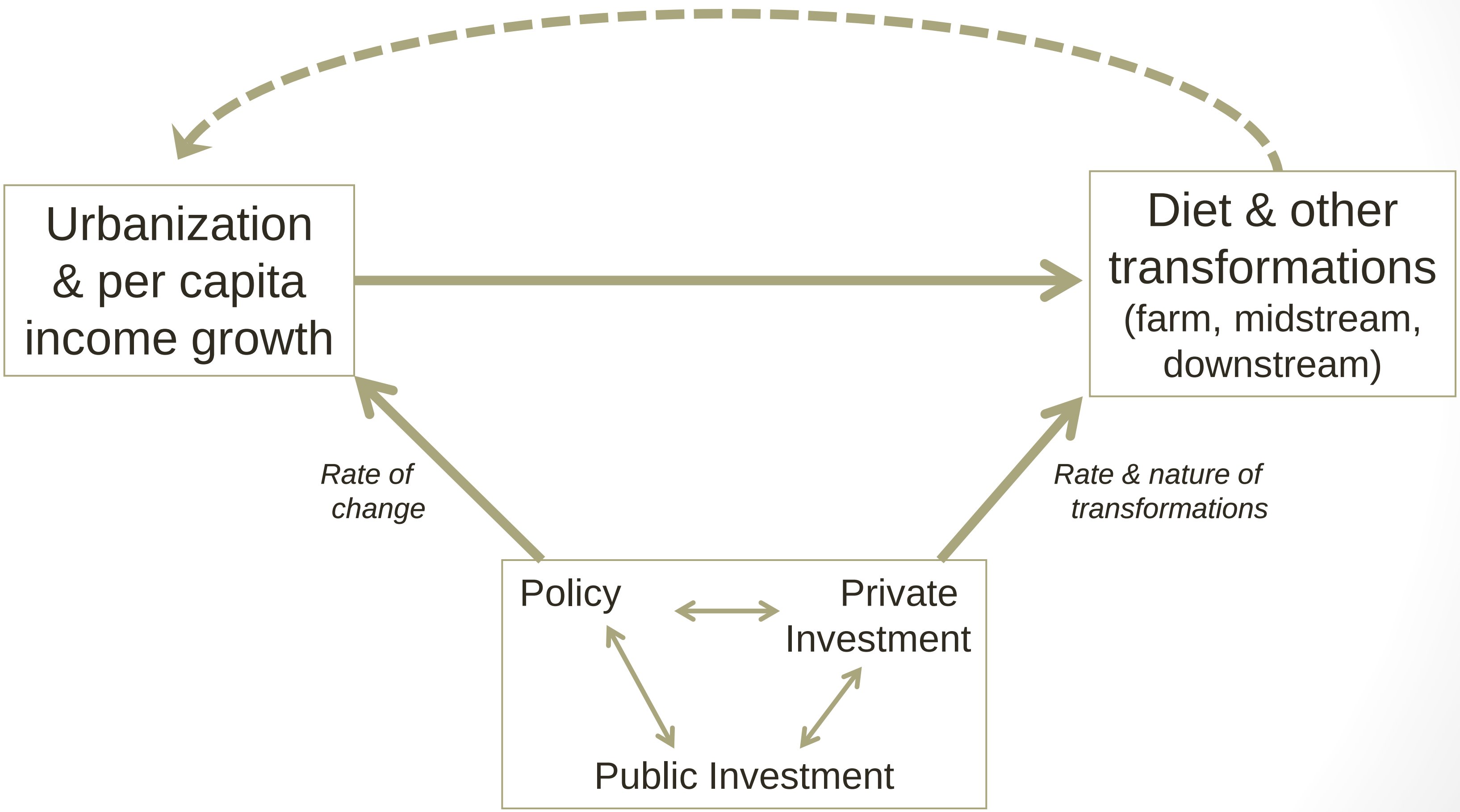
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Approach (2)

- Focus primarily on East and Southern Africa
  - LSMS data from Ethiopia, Uganda, Tanzania, Mozambique, Malawi, Zambia
- Mozambique’s characteristics fit very well into the regional picture
- Possible exceptions / differences
  - Pattern of urban population settlement
  - Import dependence now and moving forward
  - Effects of <u>resource boom</u>

Focus

- African urbanization and income growth
  - *Although unequal, african income growth is not being captured just by an urban elite*
- Agribusiness opportunities
  - *Growing and changing demand <u>among the poor</u> is driving major agrifood system change <u>now</u>*
- Imports
  - *The story in SSA is <u>very mixed</u> but <u>trends in Mozambique are worrisome</u>*
- Jobs
  - *Much depends on how the <u>natural resource boom</u> is managed*

Primarily focused on East and Southern Africa

Urbanization

- Africa is urbanizing rapidly
- Occurring more rapidly in smaller cities and towns than in large cities
  - Good for rural-urban linkages
  - Mozambique has the <u>most deconcentrated</u> urban population distribution in SSA
    - ***Major potential advantage***
- Urban demand is already > 50% of the food market in ESA
- ***Food security – including rural – is increasingly about rural-urban supply chains***

Income growth

- Widely known that growth has been much faster over past 15 years
- Its distribution across HHs in ESA – the equity of growth in the region - has been:
  - Generally unequal, but
  - Highly variable, and
  - Overall, broad enough to drive rapid transformation if it continues
    - ***Mozambique is right in the middle in terms of inequality of growth***

If growth continues like this …

Populations and shares by income class in East and Southern Africa, 2010 and 2040 assuming continuation of rate and distribution of recent GDP growth

	2010		2040
Income Class (per capita PPP income)	Share		Share
ESA-wide	100%		100%
$0-$2 (poor as per int'l poverty line)	72.5%		19.3%
$2-$4	19.9%		28.7%
$4-$10	6.5%		33.9%
$10-$20	0.9%		12.0%
>$20	0.2%		6.1%

Source: Author calculations from PovcalNet

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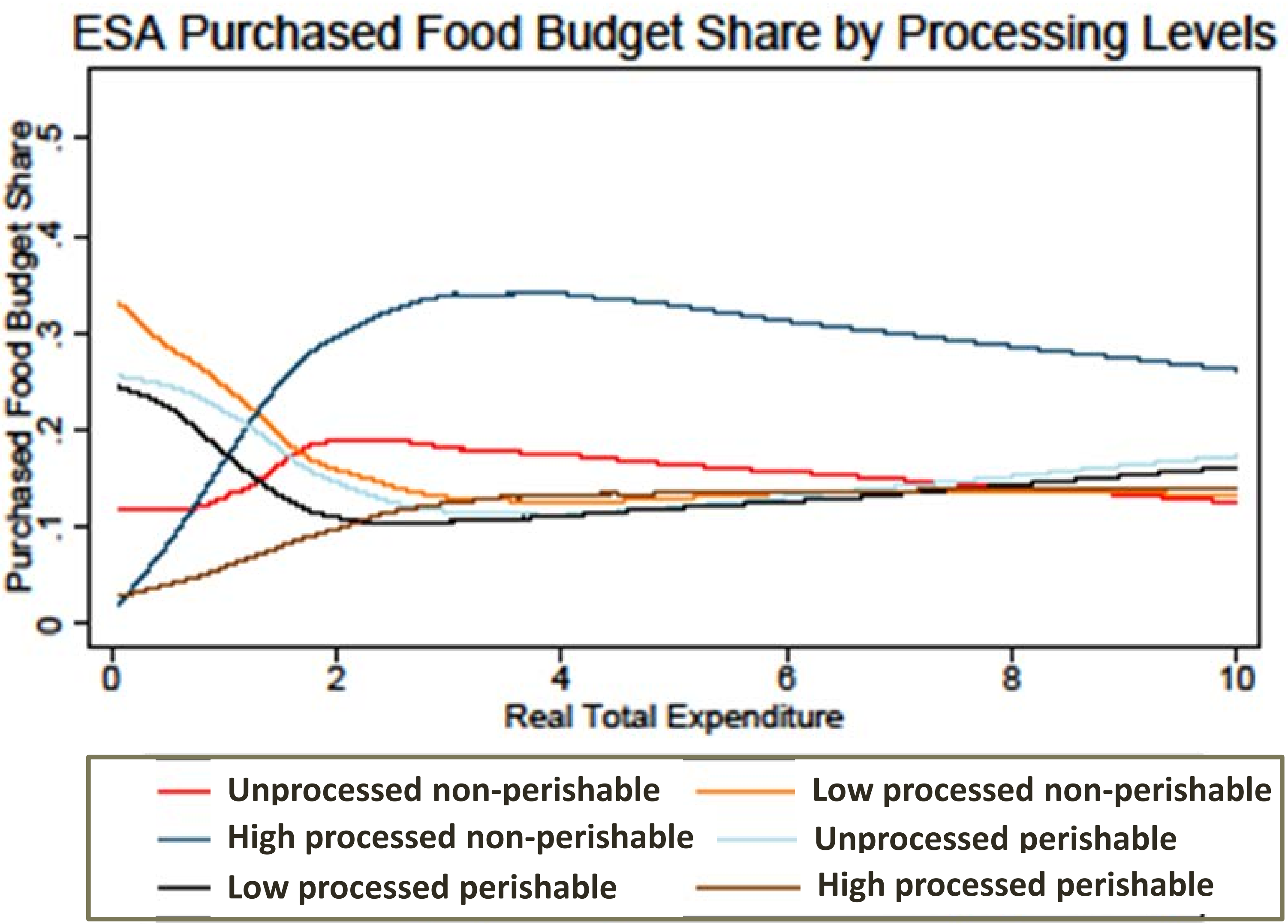
The rise of processed foods

	Unprocessed	Processed, Low Value Added	Processed, High Value Added
Non-perishable	Legumes Maize grain others	Maize meal Milled Rice Sugar Others	Veg oils Breads Food away from home Others
Perishable	Vegetables Fresh fish Fruit Others	Beef Other meat (incl. poultry) Dried/pkgd fish Others	Food away from home Dairy Others

The rise of processed foods

- Processed foods have penetrated
  - Deeply (69% share of all purchased food)
  - Broadly
    - comparable in rural- and urban areas,
    - among poor and upper class
- Dramatic change in consumption patterns <u>below</u> the international poverty line

Kernel regression results on purchased food budget shares, additionally weighted by population across 5 countries of ESA



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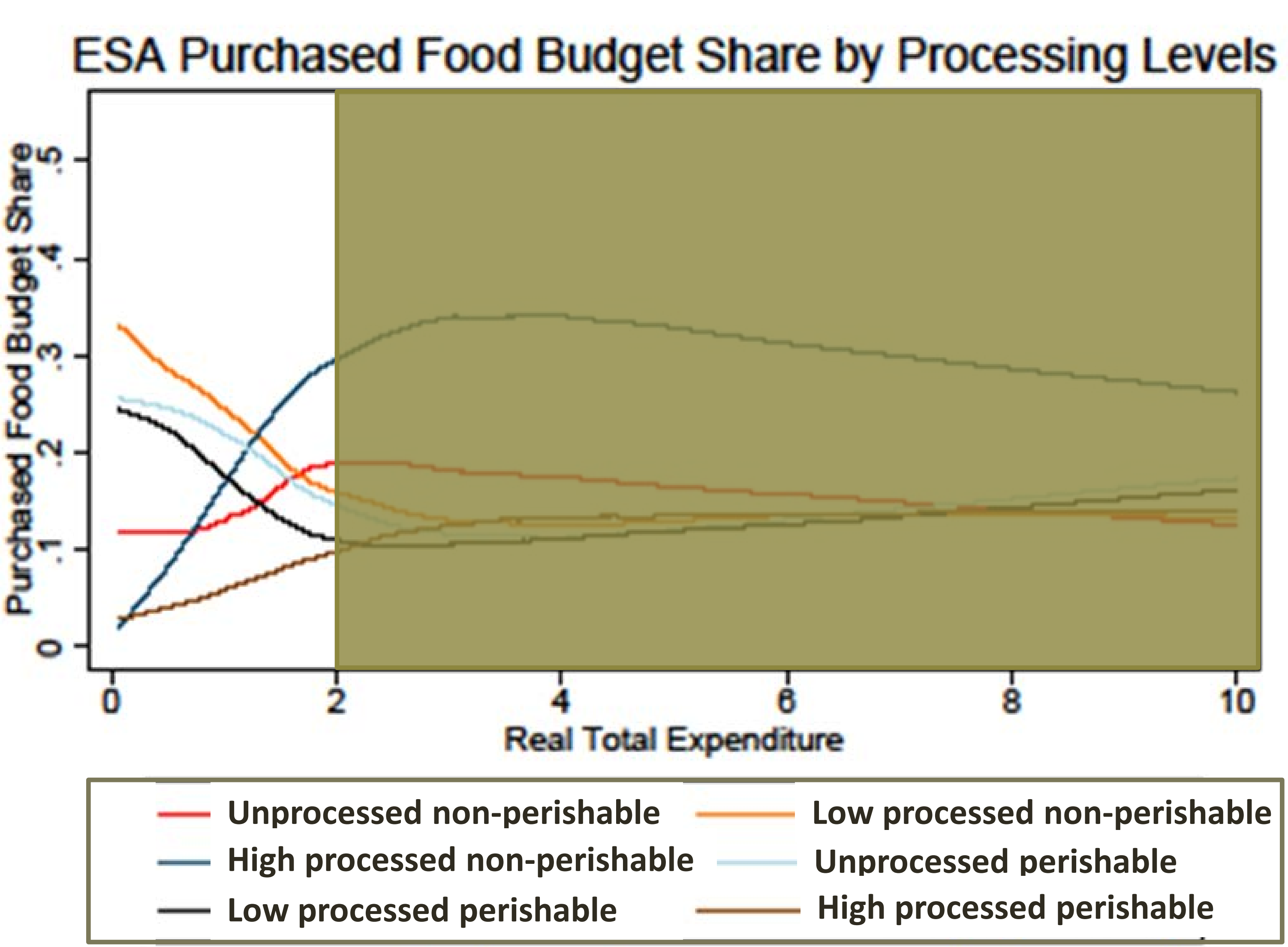

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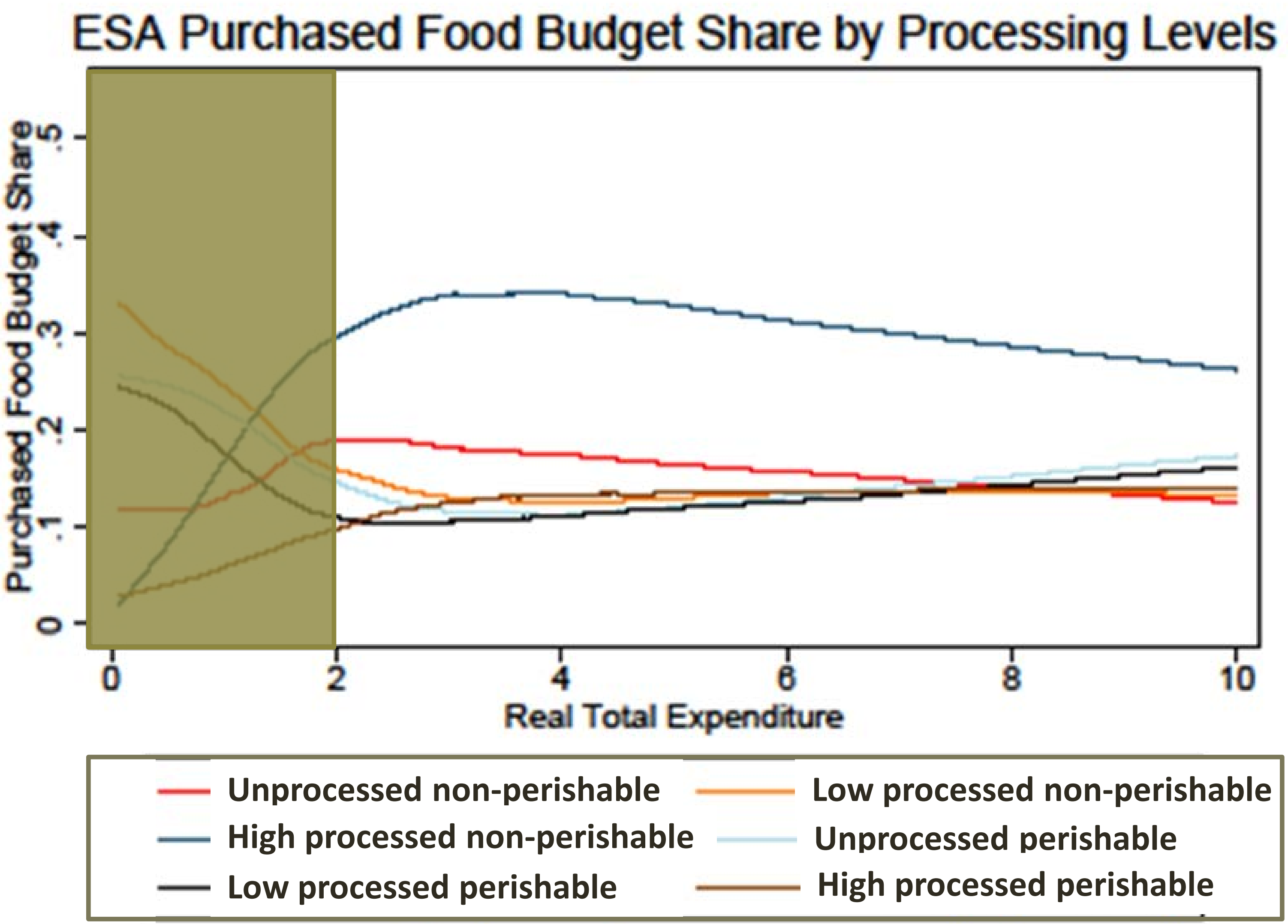

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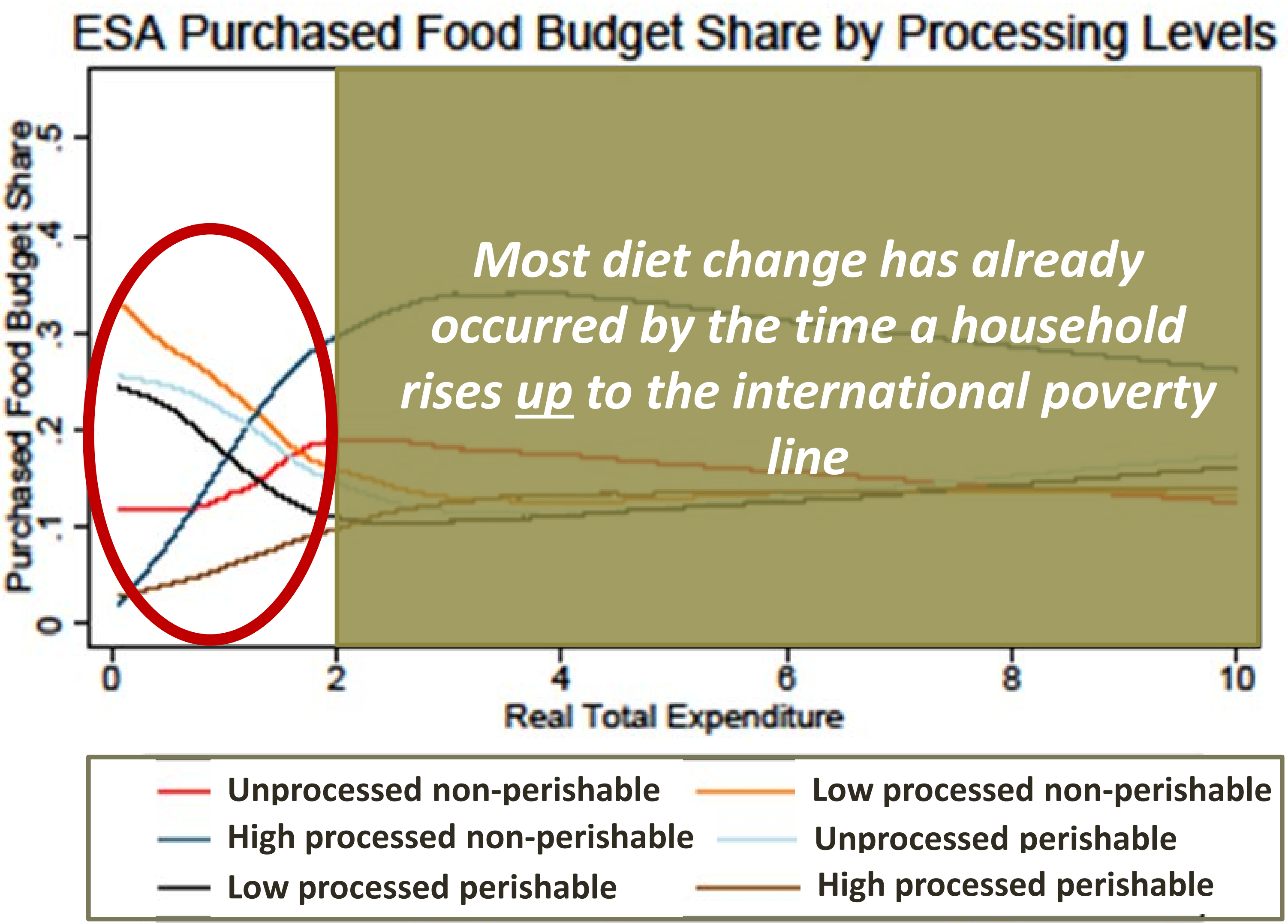

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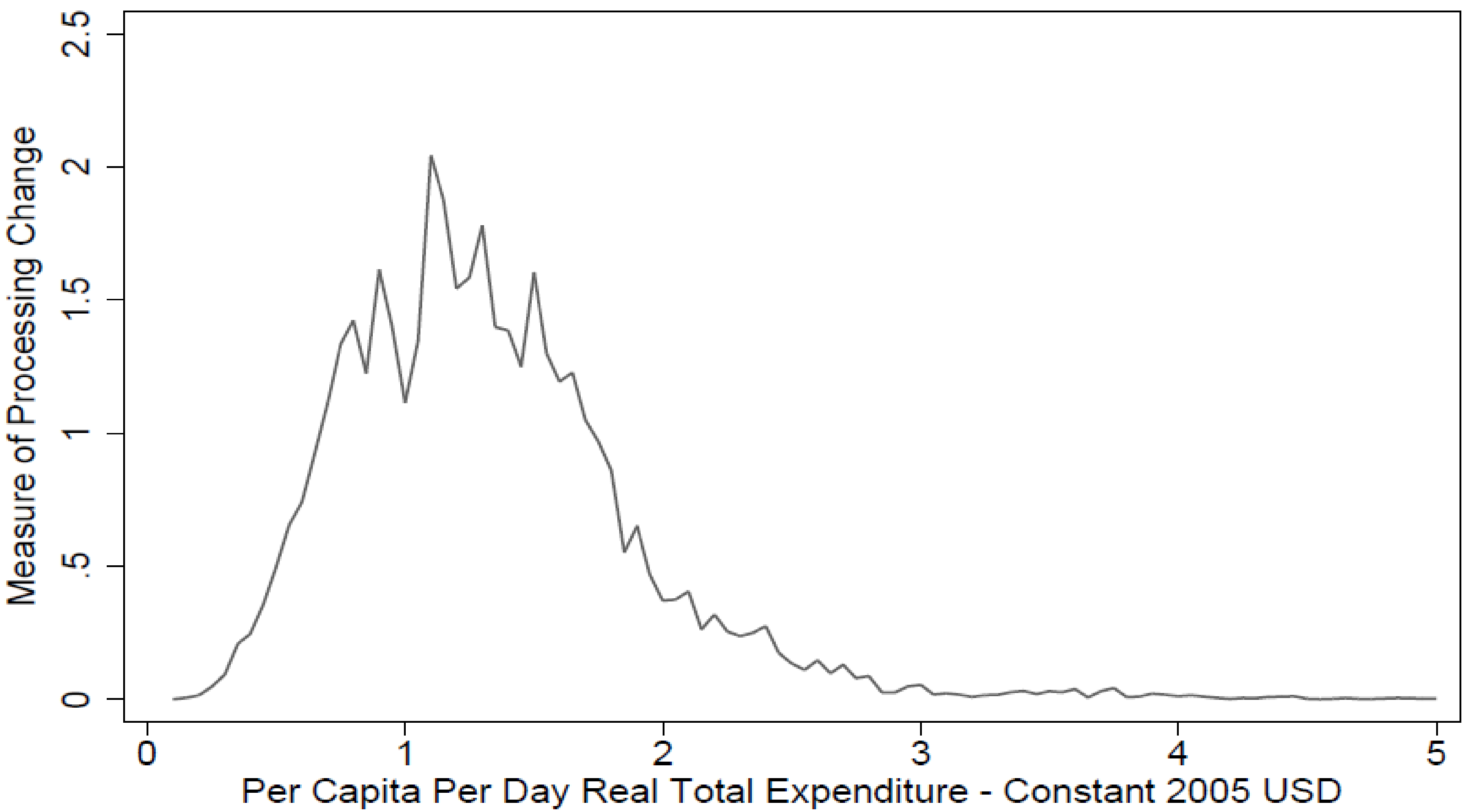
Measure of impact

- Velocity of diet change (V)
  - Sum of squares of slopes of the six budget share lines
- Total food expenditure (E)
- Each measured all along the total expenditure distribution
- Impact on food system change = V*E

ESA measure of total impact on food system change by level of income



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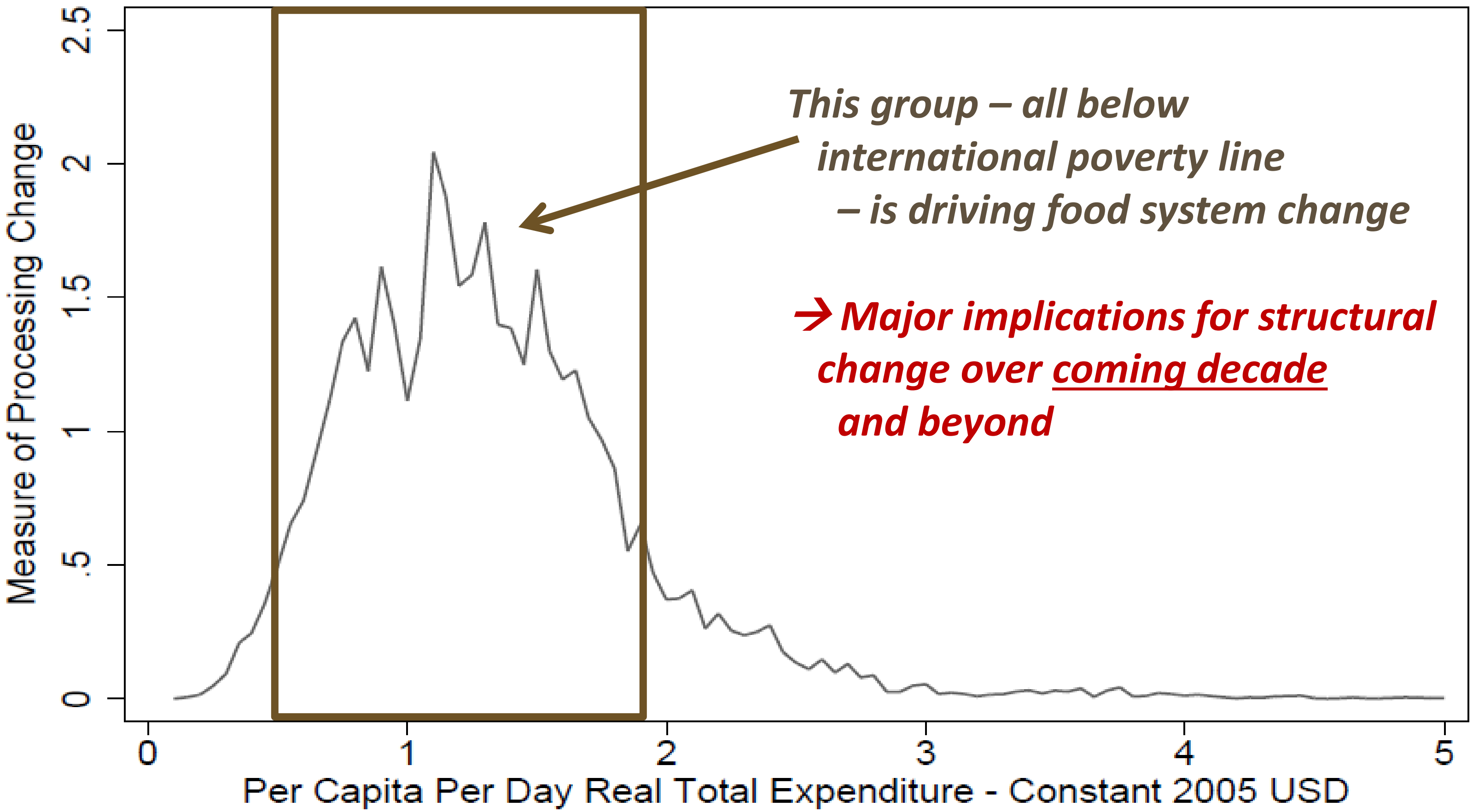

Source: Author calculations from LSMS data sets

Expenditure elasticities by perishability and processing classification, income class, and rural/urban (2010)

Food Category	Rural	Urban	ESA-Wide
Consumed own production	0.95	0.39	0.82
Non-perishable			
Unprocessed	0.81	0.55	0.75
Processed Low	0.87	0.70	0.83
Processed High	1.07	1.00	1.05
Perishable			
Unprocessed	0.73	0.80	0.75
Processed Low	1.20	1.18	1.19
Processed High	1.36	1.28	1.34

Source: Author calculations from LSMS data

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The rise of processed foods

Projected market growth, 2010-2040
(estimated purchased food budget share, 2040)

	Unprocessed	Processed, Low Value Added	Processed, High Value Added
Non-perishable	4x (8%)	5.5X (17%)	7X (23%)
Perishable	6.5X (20%)	8X (18%)	10X (15%)

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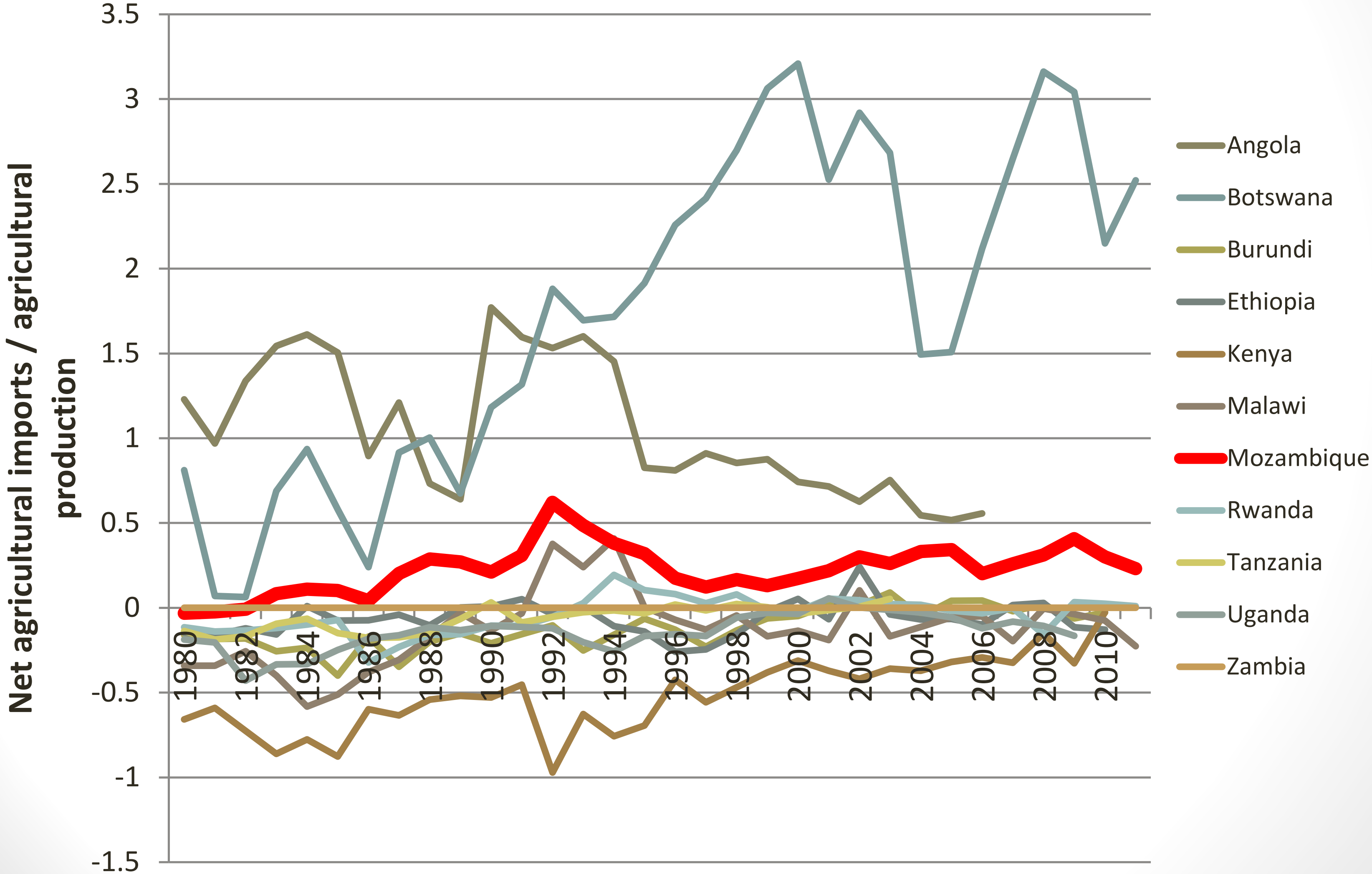
Will imports capture the surge in demand?

- We found in the **region** that net import shares in food consumption *fall* with income in urban areas
- Why?
  - Local cereals → imported cereals, BUT
  - Bennett's Law: Cereals → meat, dairy (also fresh produce)
    - all largely locally produced
- But **Mozambique** may be very different

Net Agricultural Imports as Share of Agricultural Production, Countries of ESA, 1980 - 2011



Source: Author calculations from FAOSTAT

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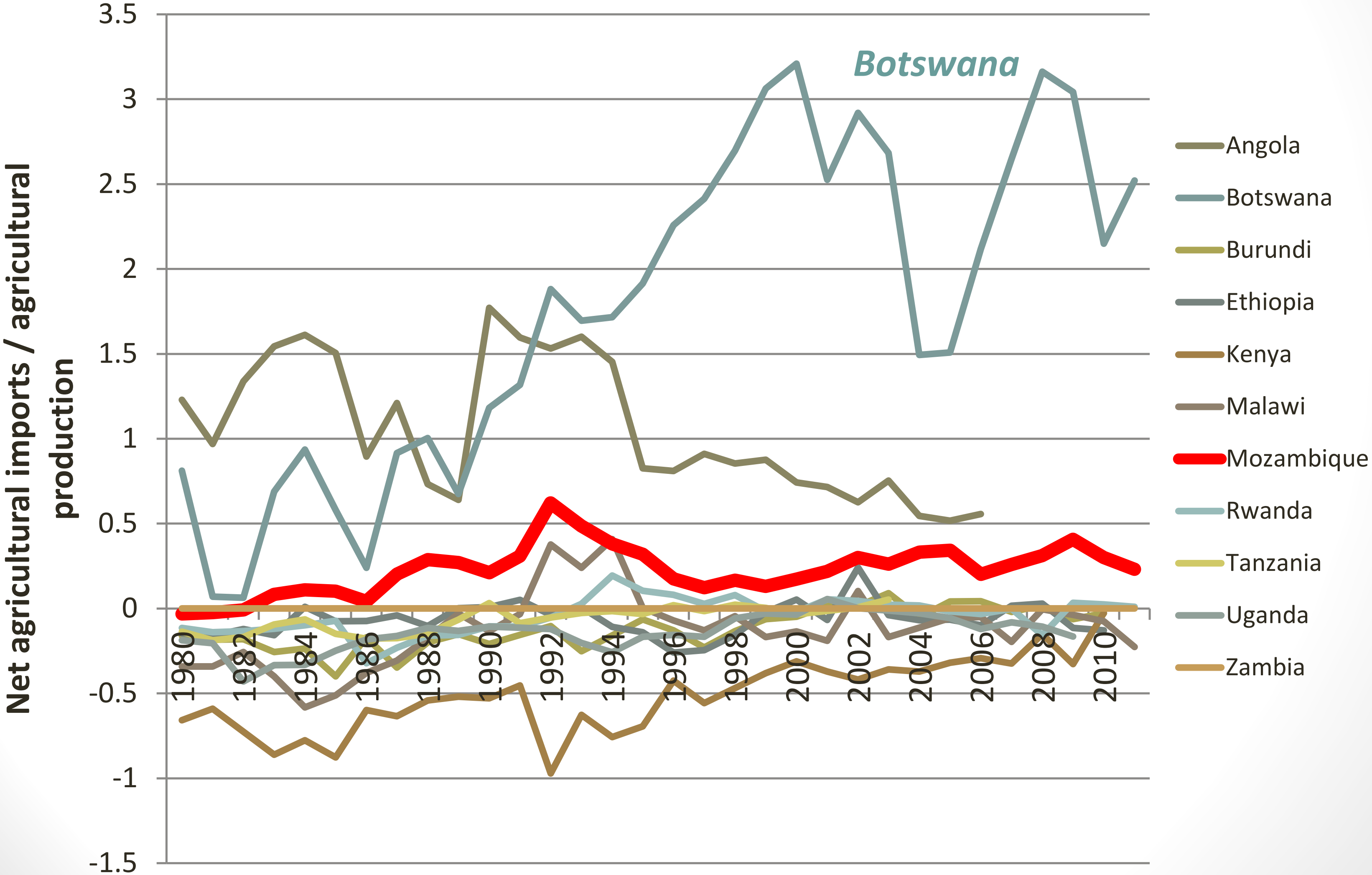

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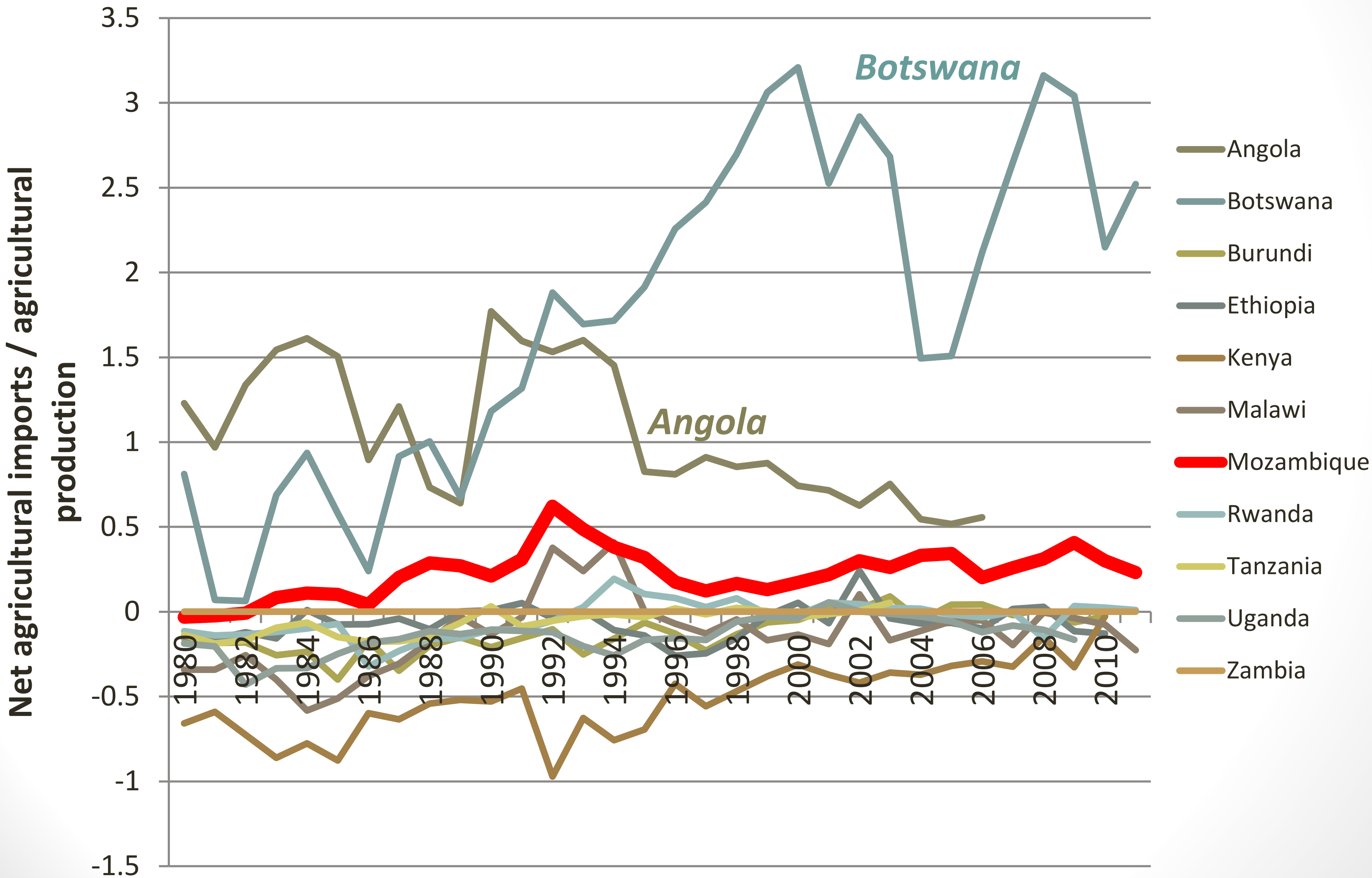

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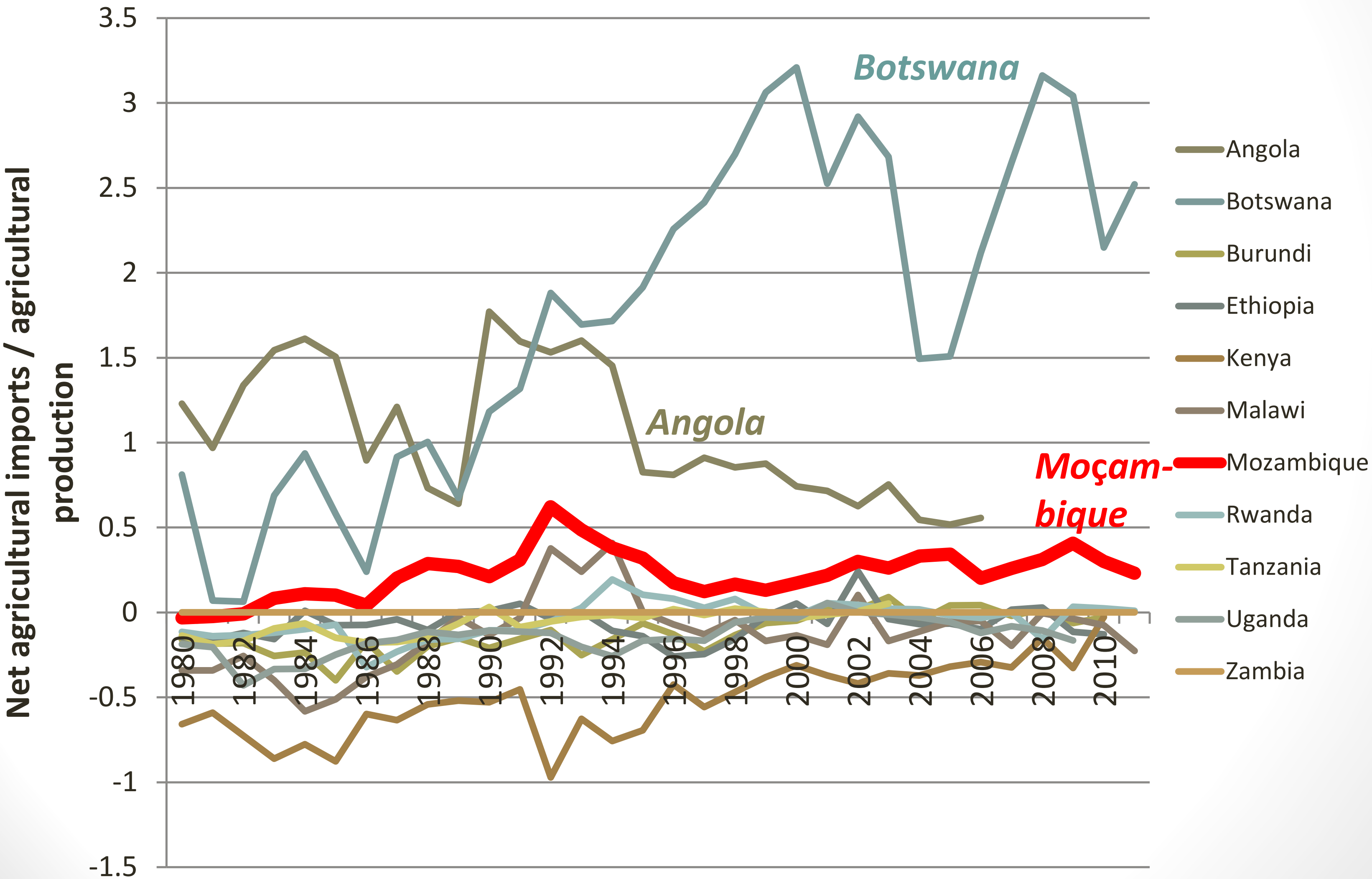

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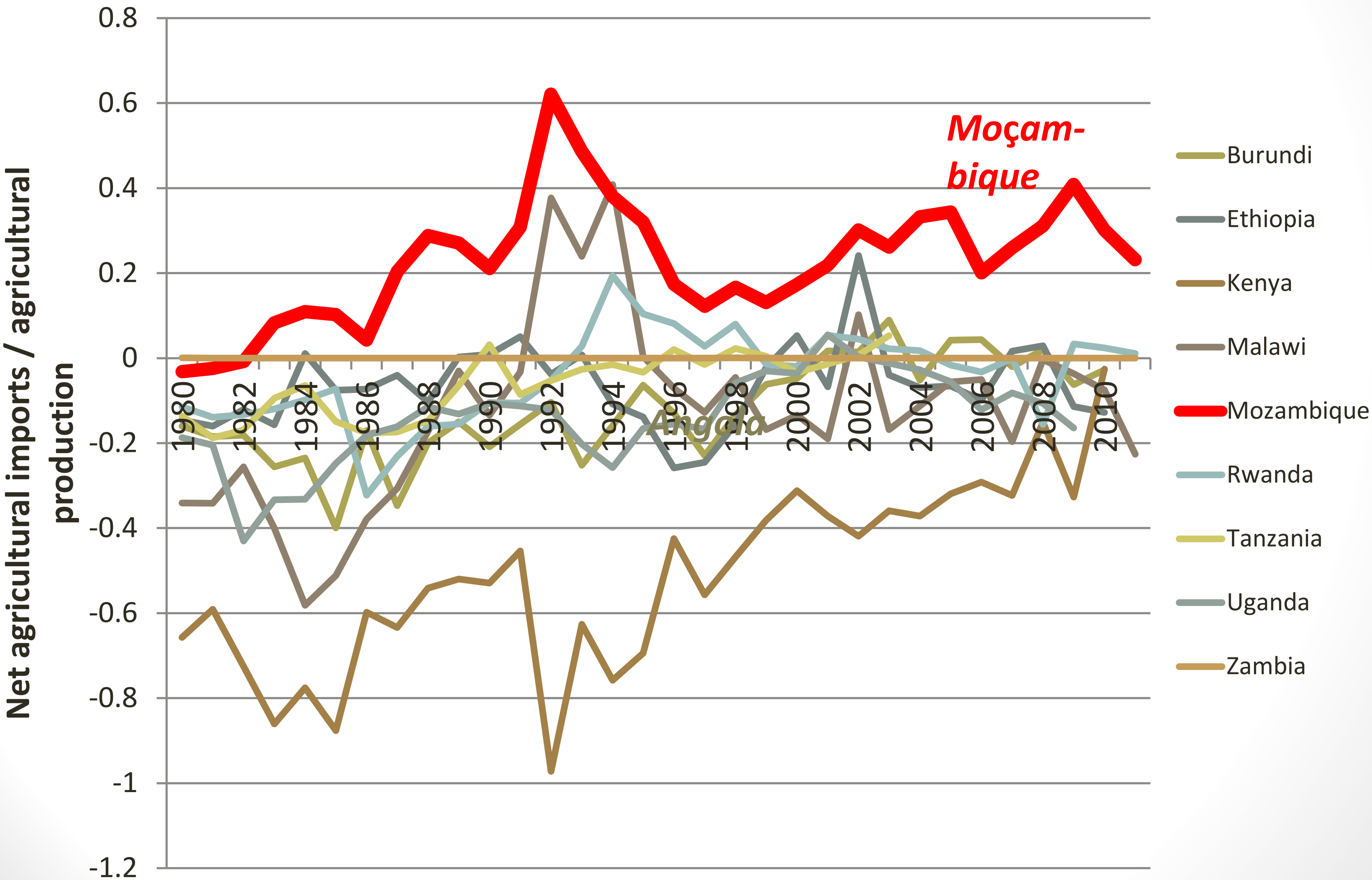

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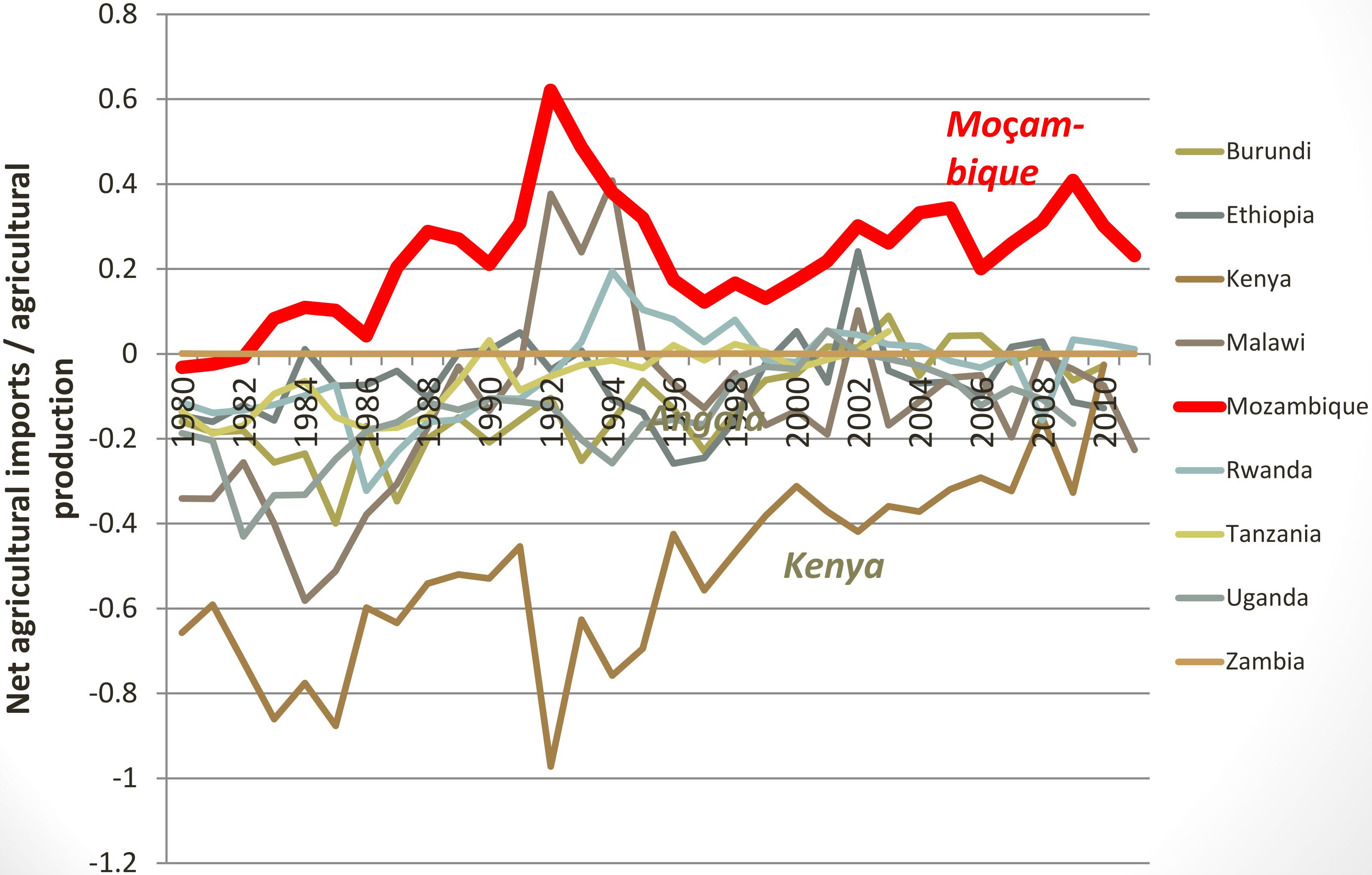

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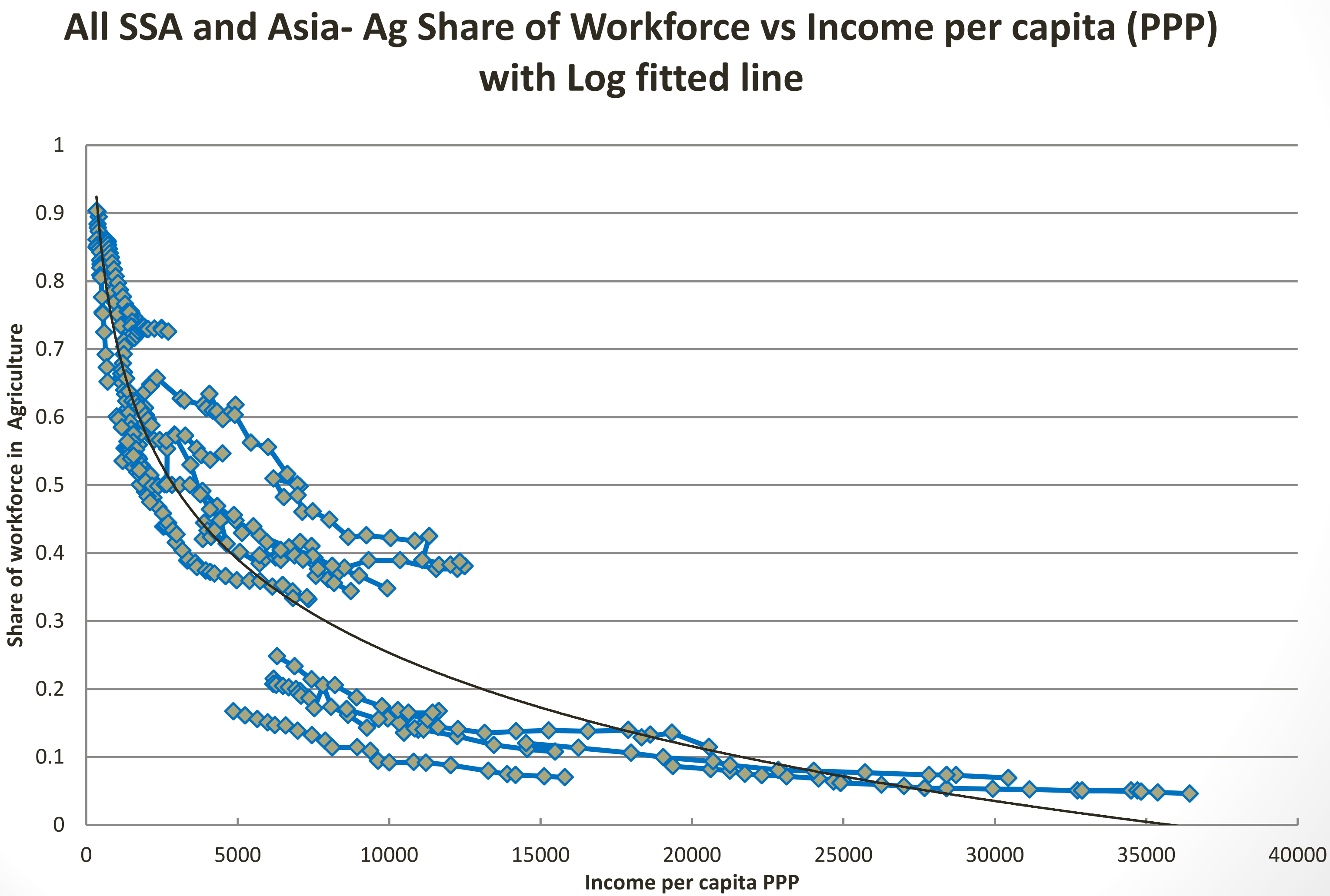
The structural transformation
Exit out of farming



The structural transformation

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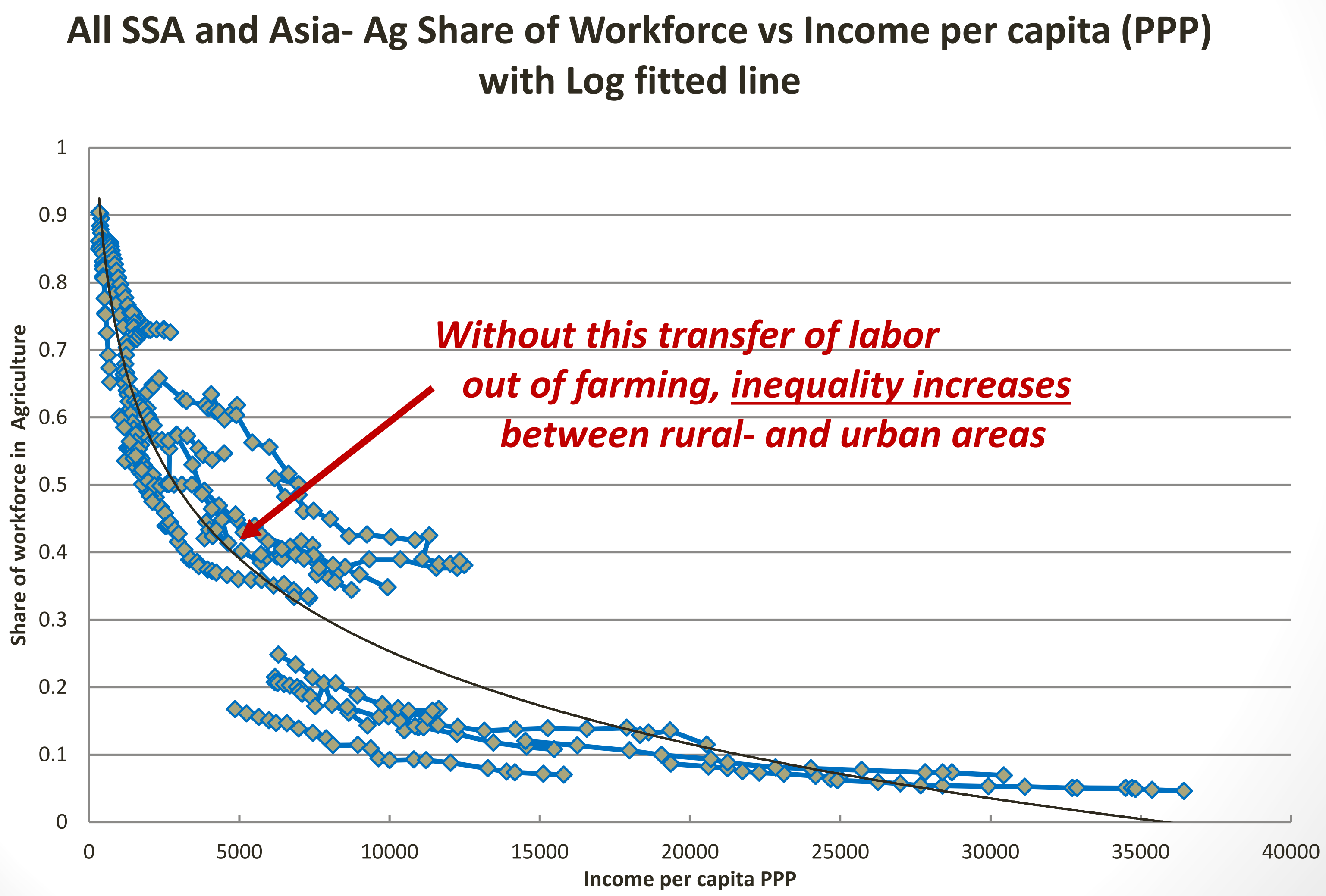
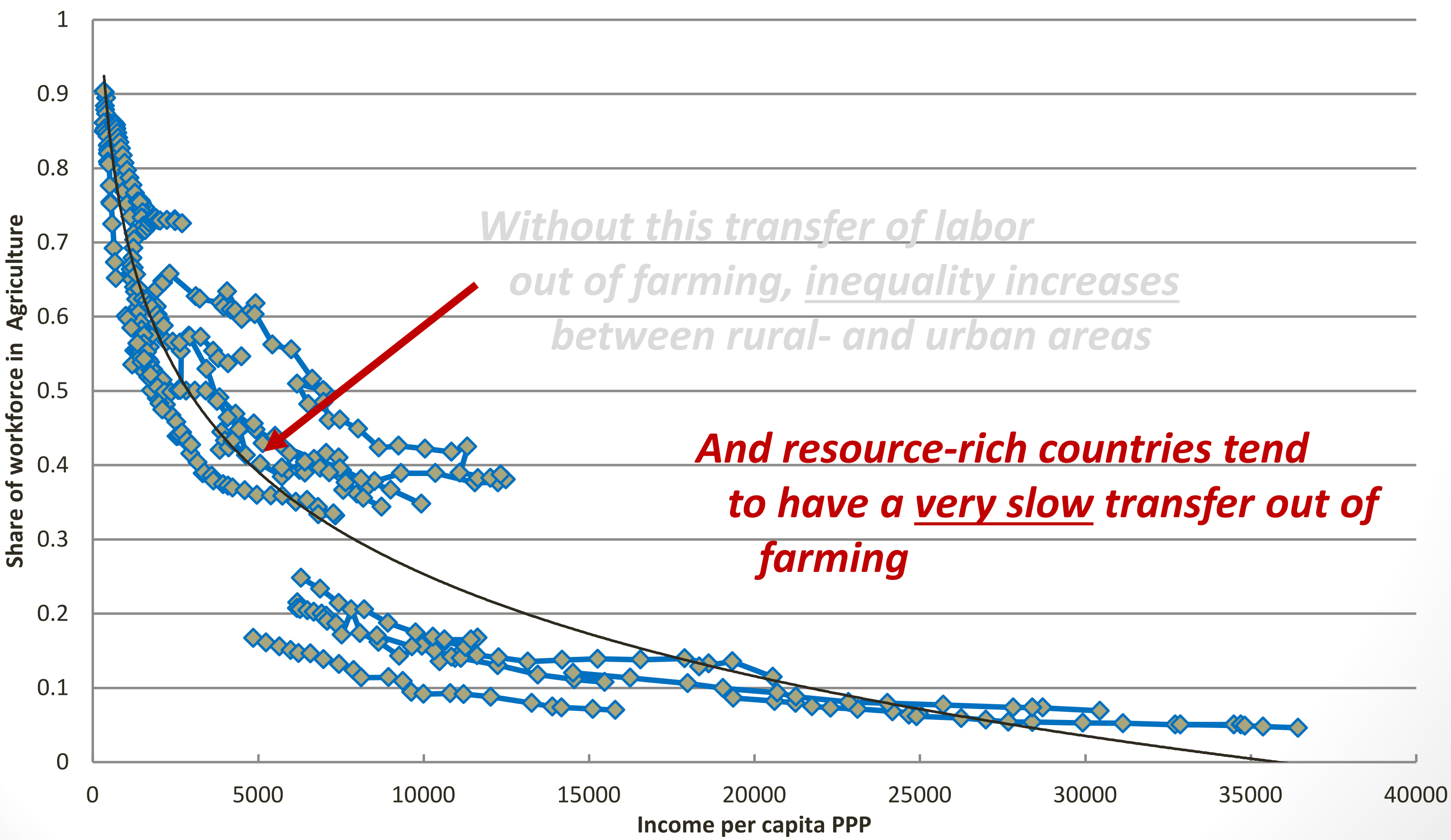


The structural transformation

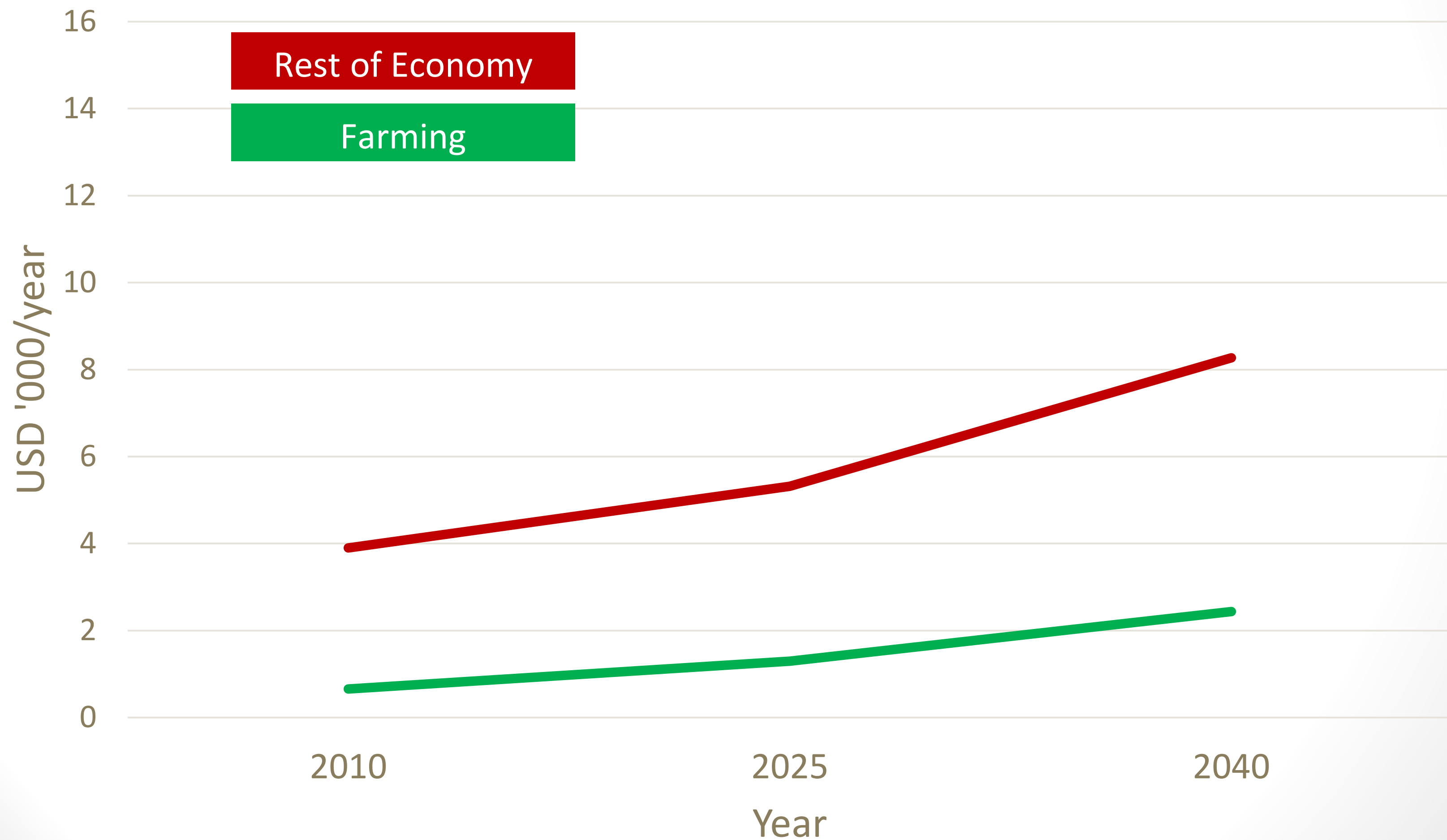
Exit out of farming

All SSA and Asia- Ag Share of Workforce vs Income per capita (PPP) with Log fitted line



The structural transformation

Average labor productivity by sector
No natural resource effect (4.5% growth)



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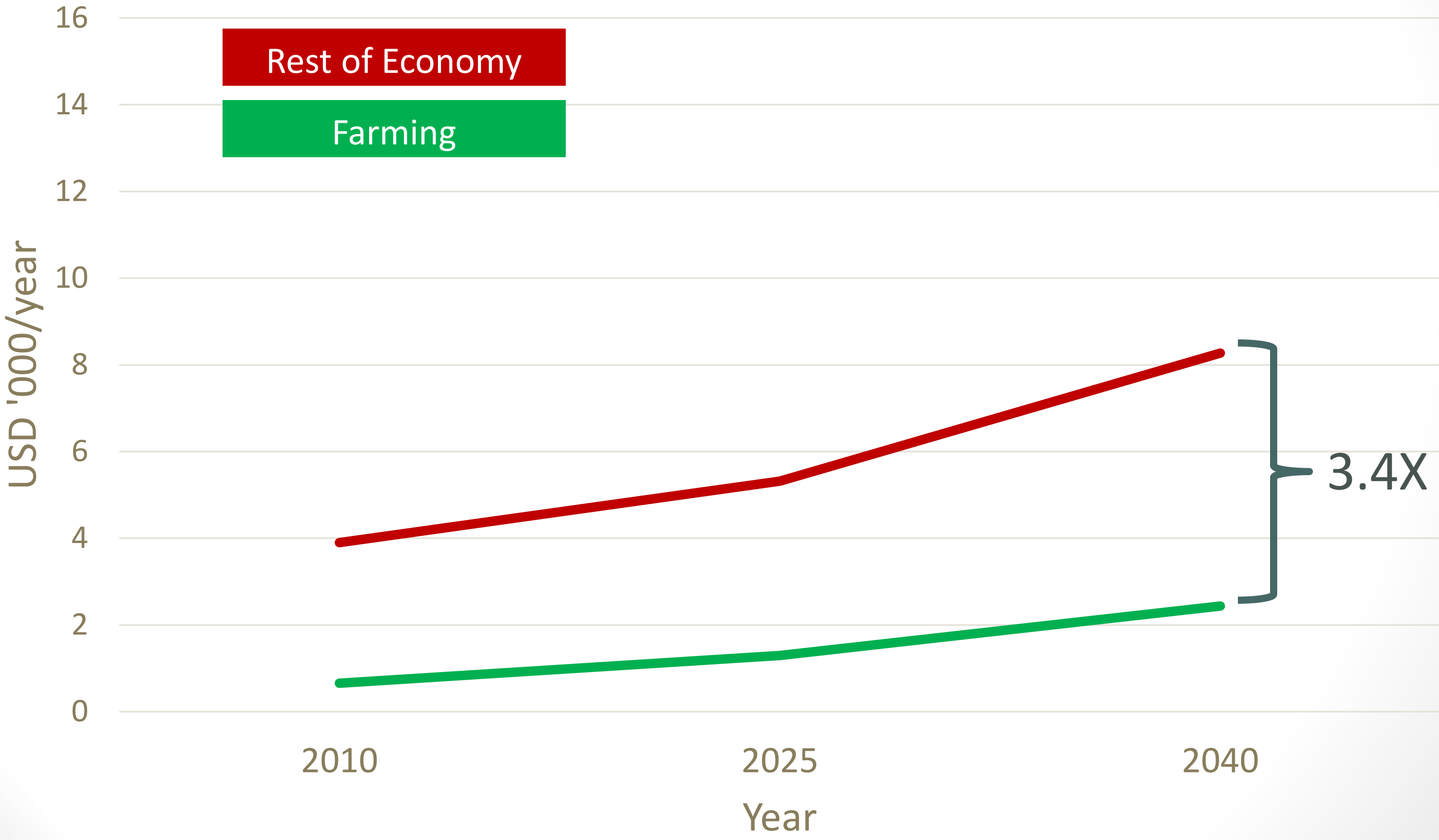
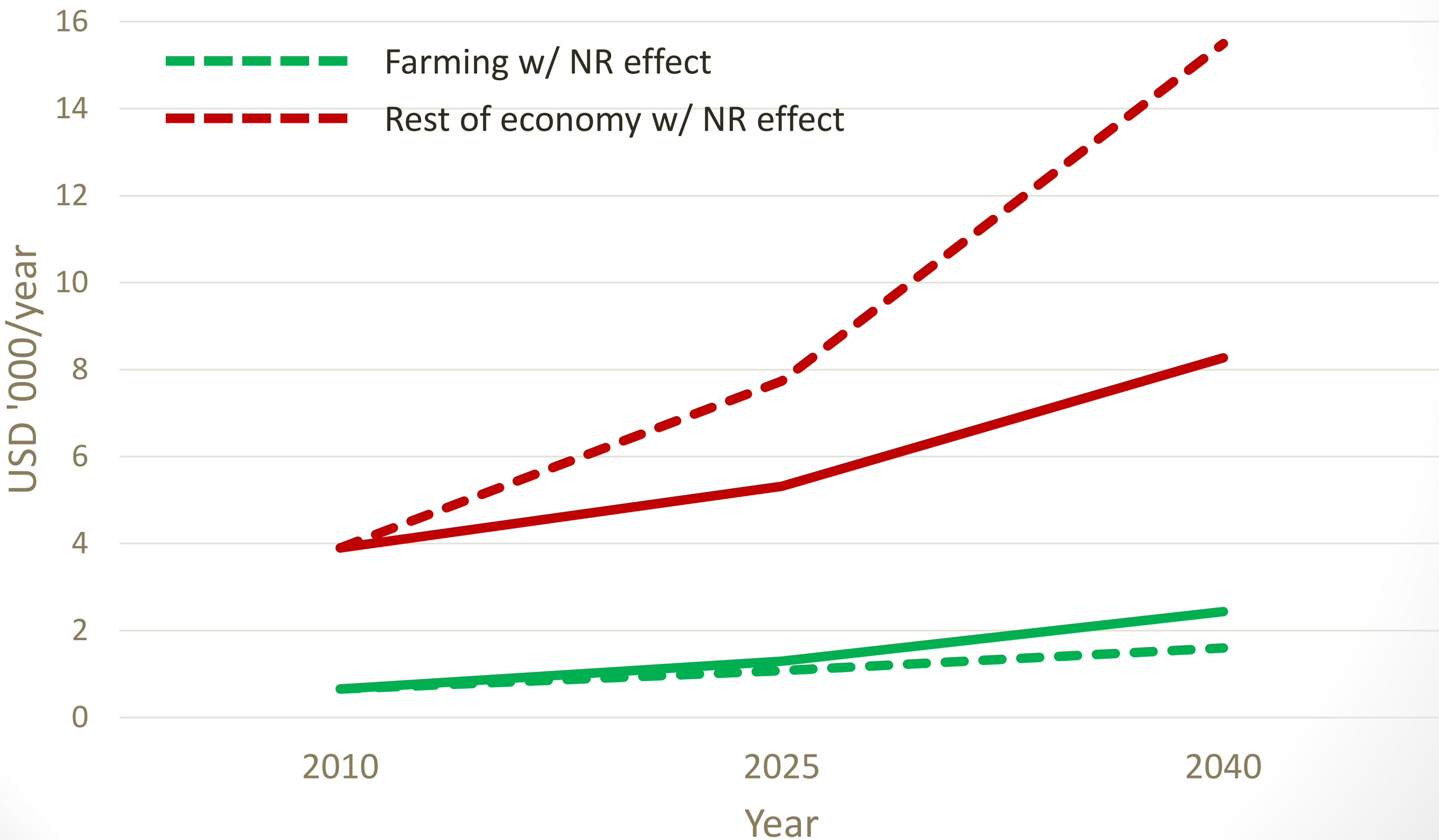


The structural transformation

Average labor productivity by sector
With & w/o natural resource effect (4.5% growth)



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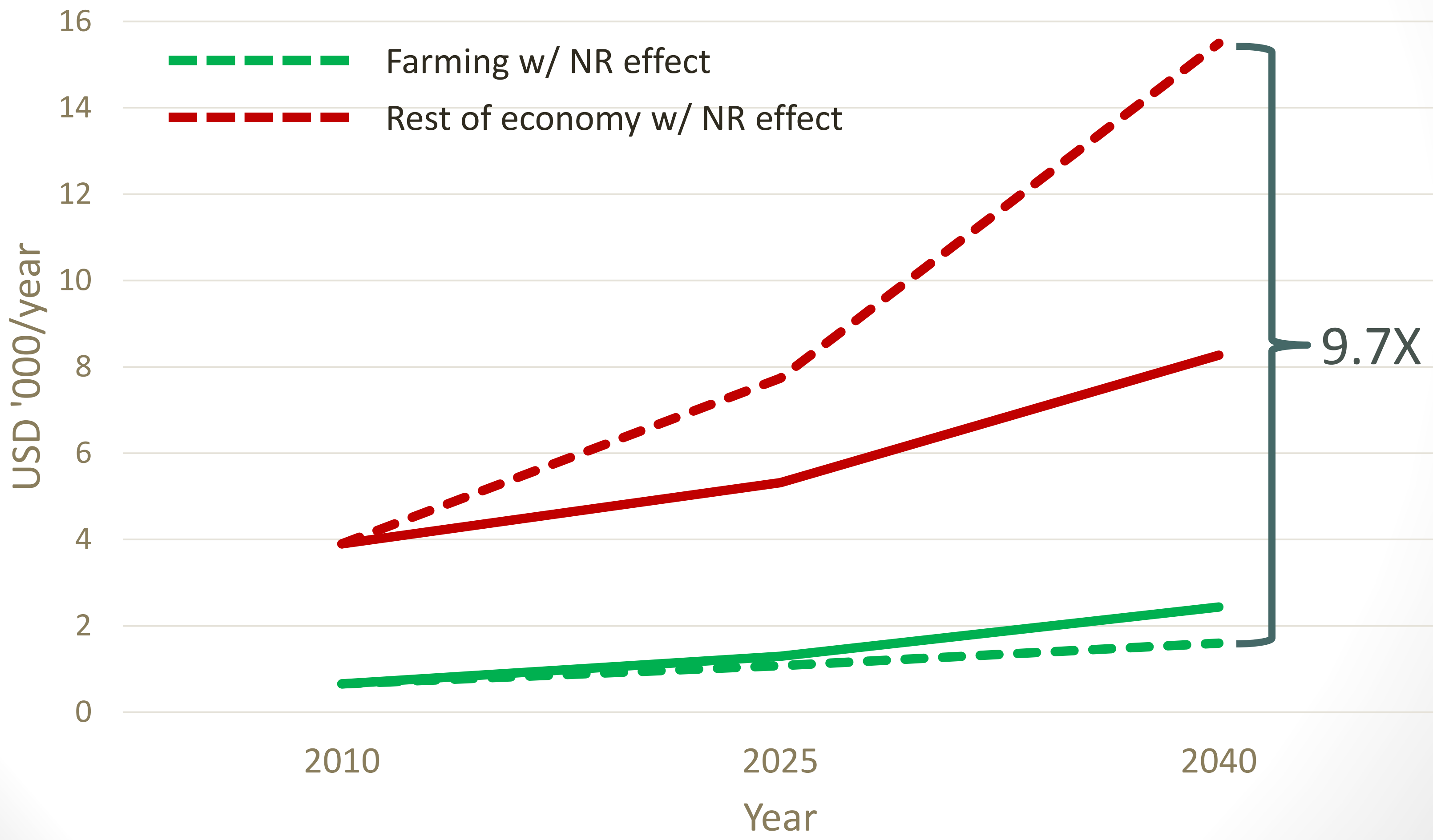

Poor management of a natural resource boom can lead to a rural sector that is <u>larger</u> and <u>more impoverished</u> than without the resource boom

Summary & Implications

- Change is happening very rapidly <u>now</u>
  - Driven by rapid diet change <u>*among the poor*</u>
  - Huge opportunities for farmers, traders, transporters , processors
- How can Mozambique get the <u>whole agrifood system</u> productivity growth needed to capture these opportunities?
  - Benefit its own farmers and entrepreneurs rather than those in other countries

Summary & Implications (2)

- The emerging Quiet Revolution
  - Local micro-small-medium businesses
- Non-western multi-nationals becoming major players
  - OLAM, Export Trading Group, others
  - South Africans (Shoprite/Checkers, Tiger Brands, others)
- Also well known players such as Walmart, Carrefour, Nestle, Parmalat

Summary & Implications (3)

- Can micro, small, and medium local firms compete?
  - What packages of assistance can be effectively delivered?
- Can farmers respond?
  - Ag investment needs to increase dramatically and move away from subsidies towards productivity enhancers

“Take Home”

Mozambique’s spatially dispersed urban settlement pattern should be a <u>huge help</u> in building rural-urban supply chains to capture these opportunities

But its low productivity, current high import dependence, and coming resource boom present <u>huge challenges</u> for doing so

Public <u>policy</u> (enabling environment) and productivity enhancing public <u>investment</u> will be <u>crucial</u>

Questions?