FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Innovation Lab for Food Security Policy

USAID
FROM THE AMERICAN PEOPLE

MICHIGAN STATE UNIVERSITY

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
IFPRI

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

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

David Tschirley, Michael Dolislager, Jason Snyder, Thomas Reardon

Presentation at MSU/IFPRI conference on “Agricultural Public Investments, Policies, and Markets for Mozambique’s Food Security and Economic Transformation”

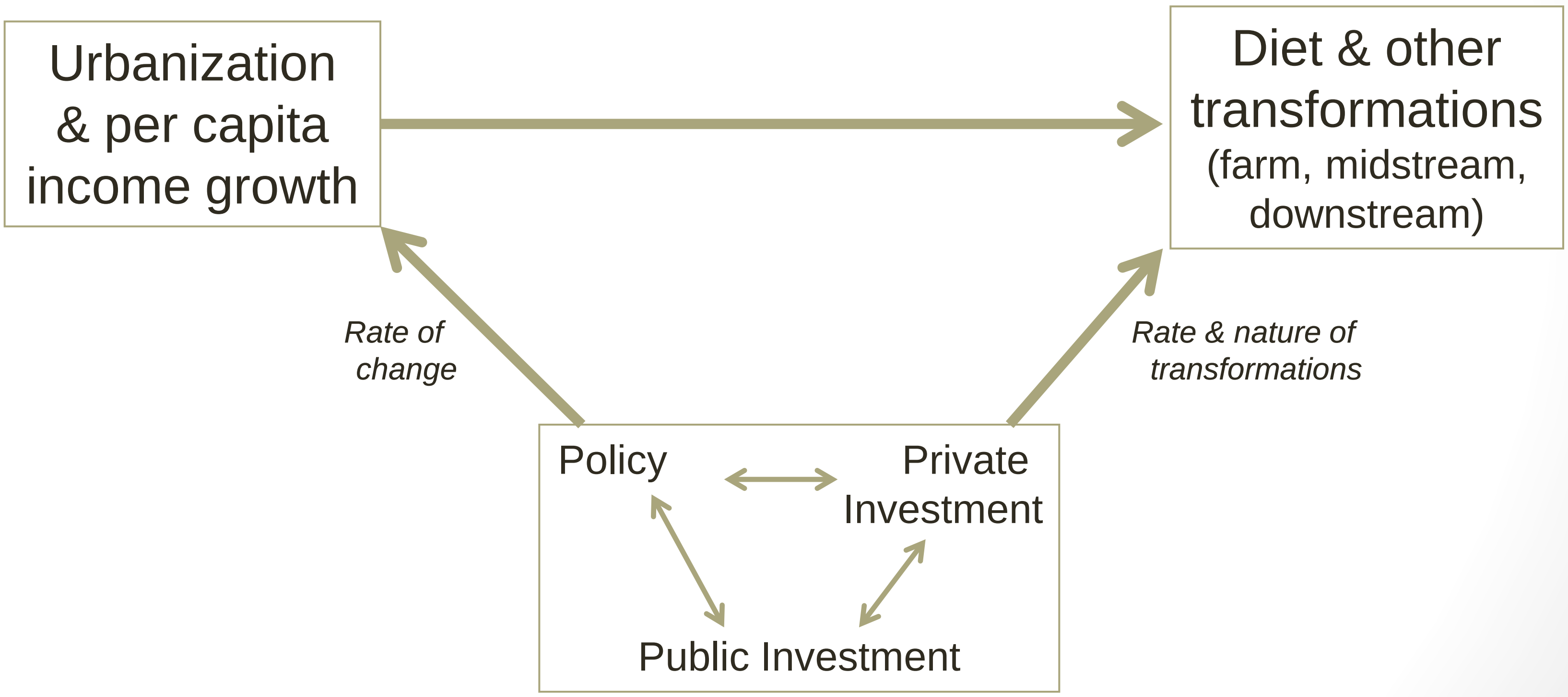
Maputo, Mozambique

20 November 2014

Approach

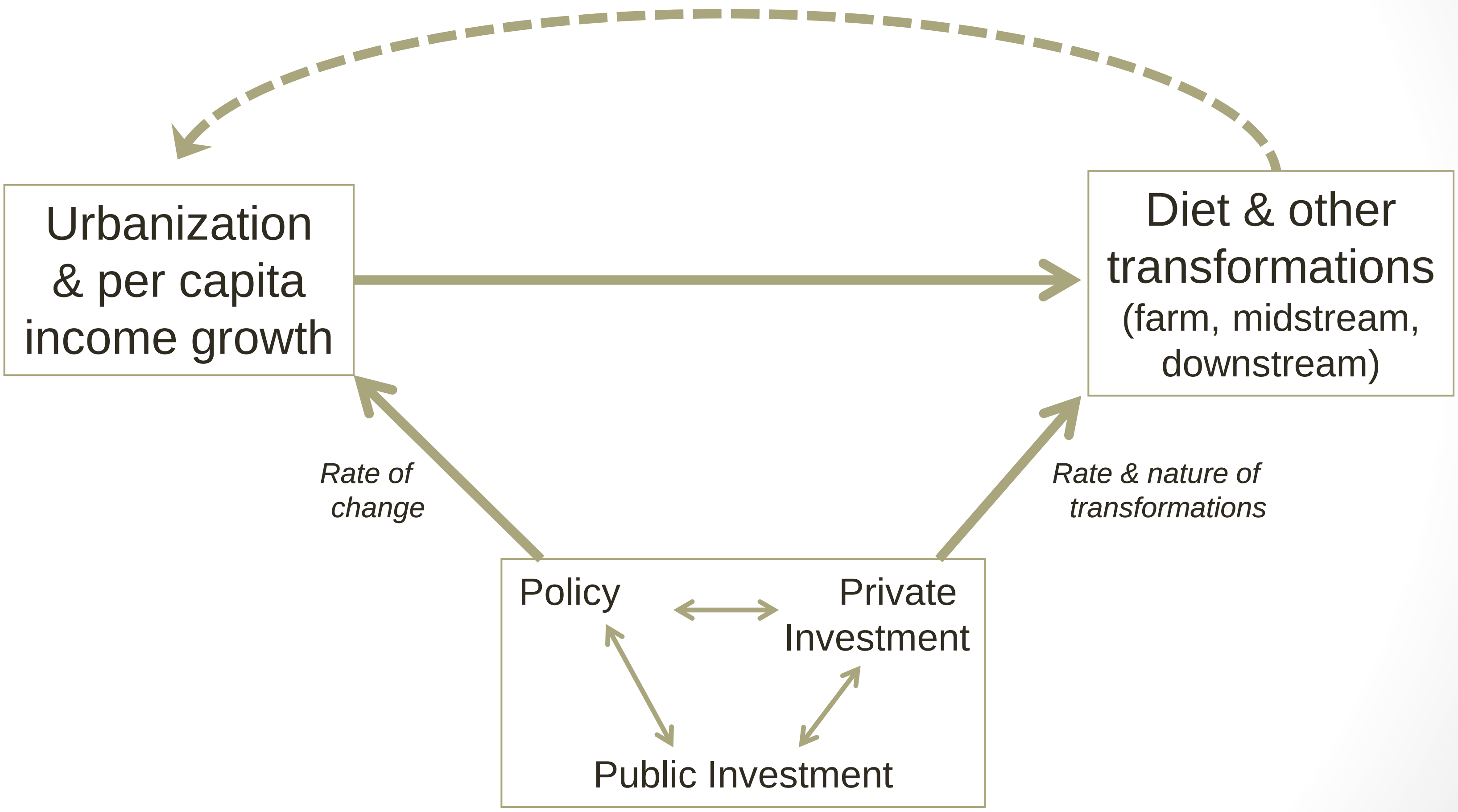

Urbanization & per capita income growth
Diet & other transformations (farm, midstream, downstream)

Approach



Urbanization & per capita income growth
Diet & other transformations (farm, midstream, downstream)
Rate of change
Rate & nature of transformations
Policy
Private Investment
Public Investment

Approach


Urbanization & per capita income growth
Diet & other transformations (farm, midstream, downstream)
Rate of change
Rate & nature of transformations
Policy
Private Investment
Public Investment

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

Focus

- African urbanization
- Is African income growth being captured by a small elite?
- Diet change is a major driver of agrifood system transformation, and it starts ***very early*** in the income distribution
    - Important implications for the pace of change over the <u>next decade</u>
- How can <u>Africa</u> capture booming African demand for food?

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

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%
Poor ($0-$2)	72.5%		19.3%
Vulnerable middle ($2-$4)	19.9%		28.7%
Lower middle ($4-$10)	6.5%		33.9%
Upper Middle ($10-$20)	0.9%		12.0%
Upper (>$20)	0.2%		6.1%

Source: Author calculations from PovcalNet

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%
Poor ($0-$2)	72.5%		19.3%
Vulnerable middle ($2-$4)	19.9%		28.7%
Lower middle ($4-$10)	6.5%		33.9%
Upper Middle ($10-$20)	0.9%		12.0%
Upper (>$20)	0.2%		6.1%

Source: Author calculations from PovcalNet

Focus

- African urbanization
- Is African income growth being captured by a small elite?
- Diet change is a major driver of agrifood system transformation, and it starts very early in the income distribution
    - Important implications for the pace of change over the next decade
- How can Africa capture booming African demand for food?

Focus primarily on East and Southern Africa

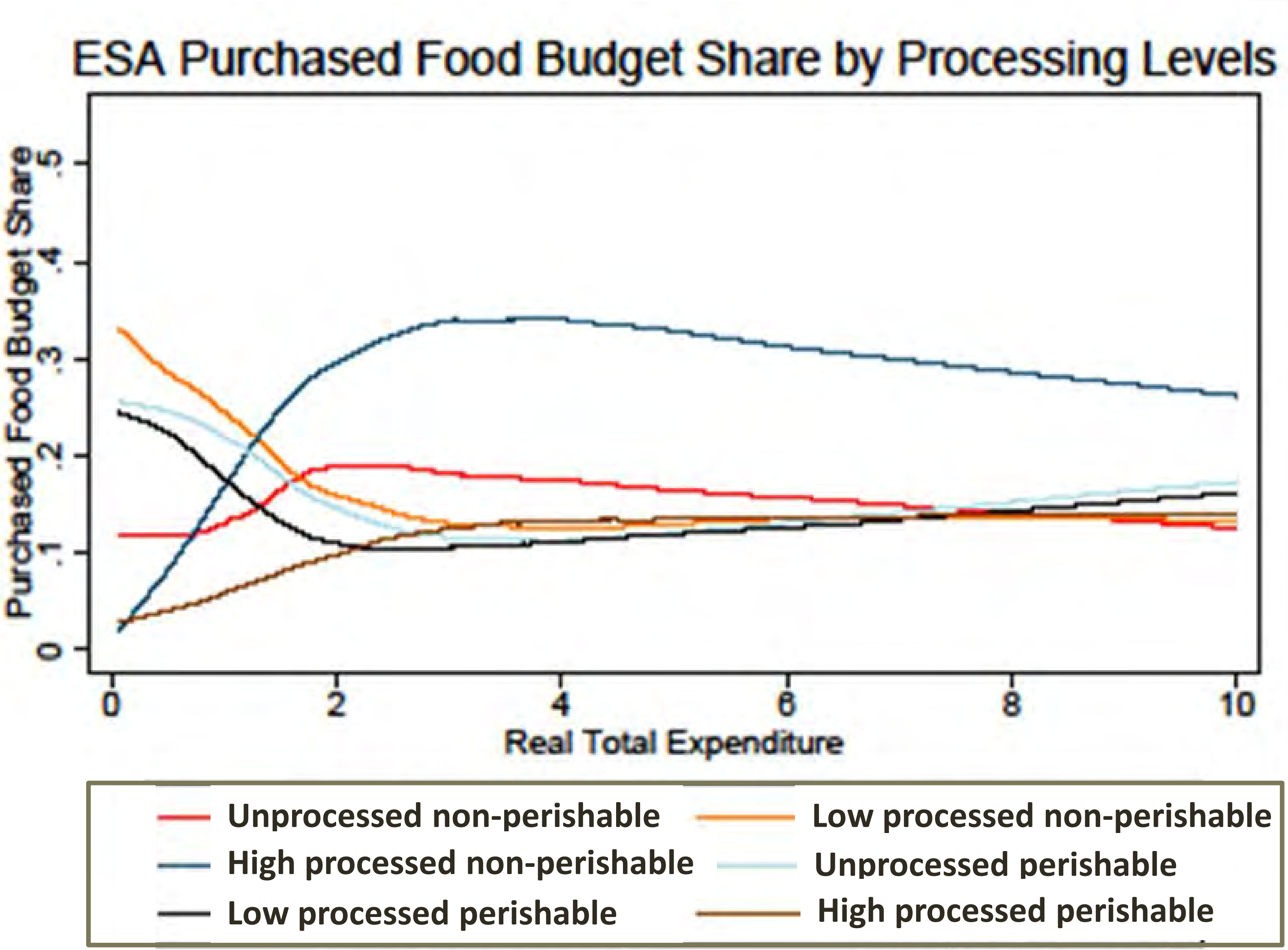
The rise of processed foods

	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

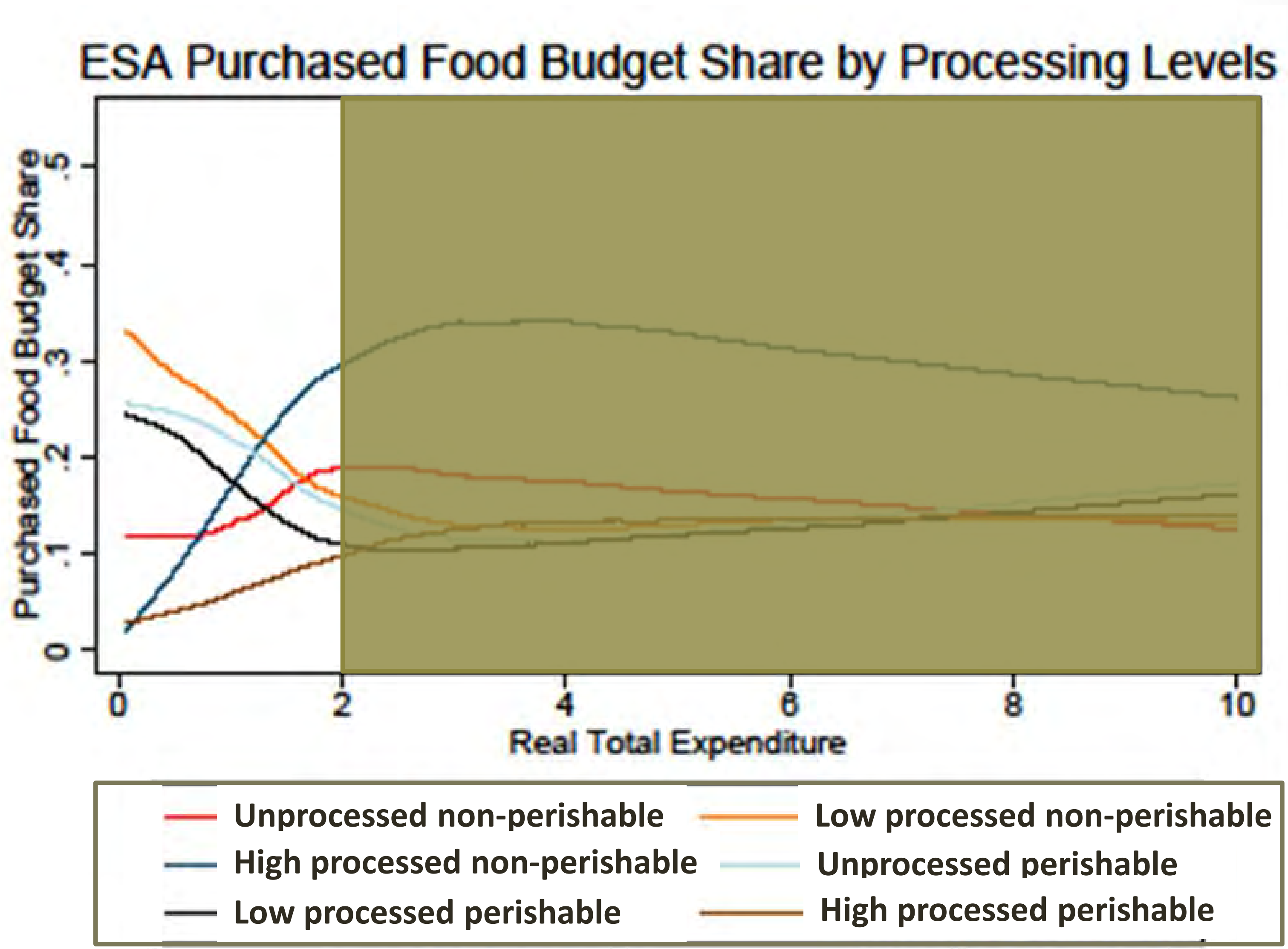
- Processed foods have penetrated
  - Deeply (69% share of all purchased food)
  - Broadly
    - comparable in rural- and urban areas,
    - among poor and upper class
- Dramatic change in consumption patterns below the international poverty line

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



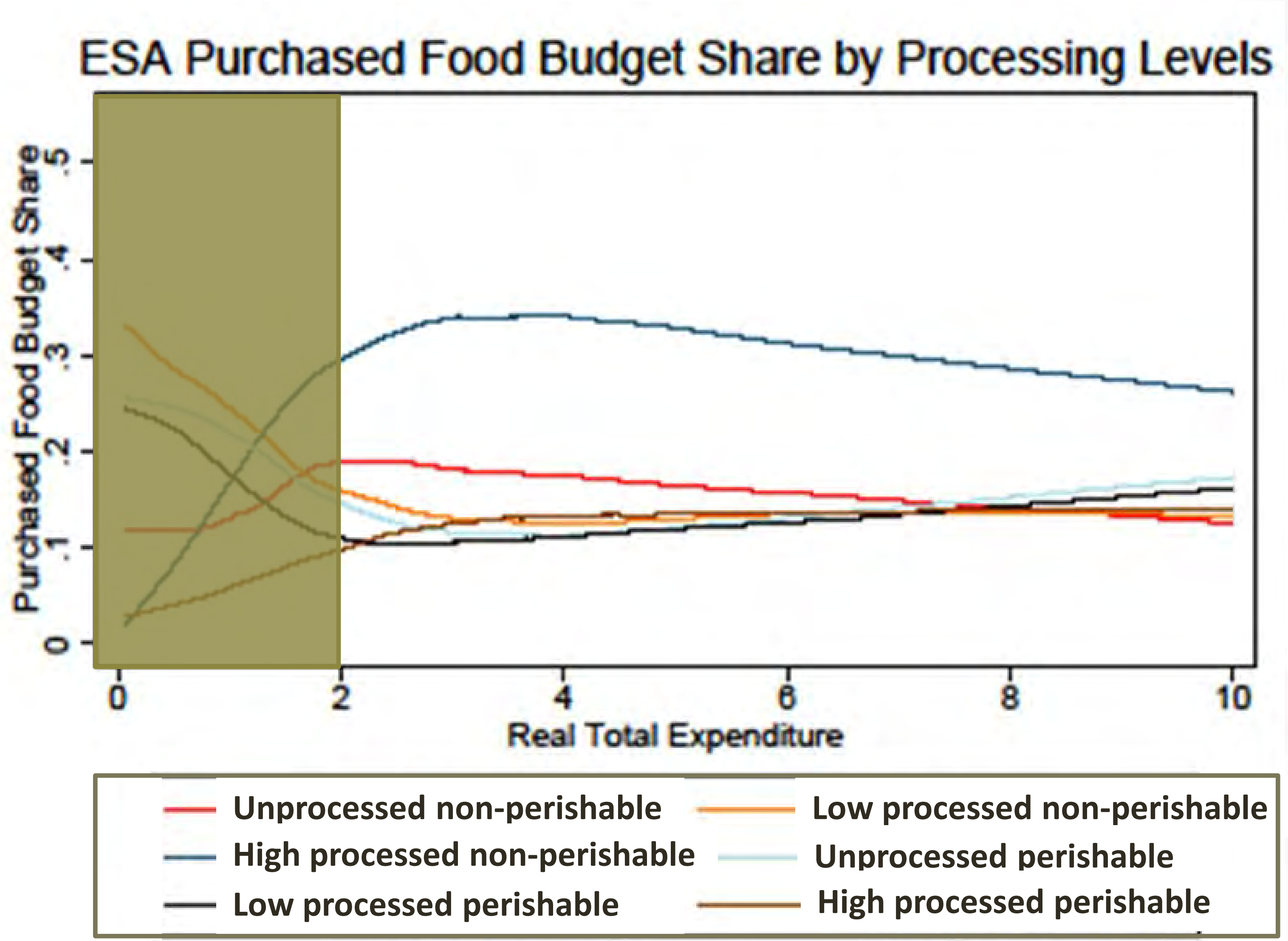
Source: Author calculations from LSMS data sets

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



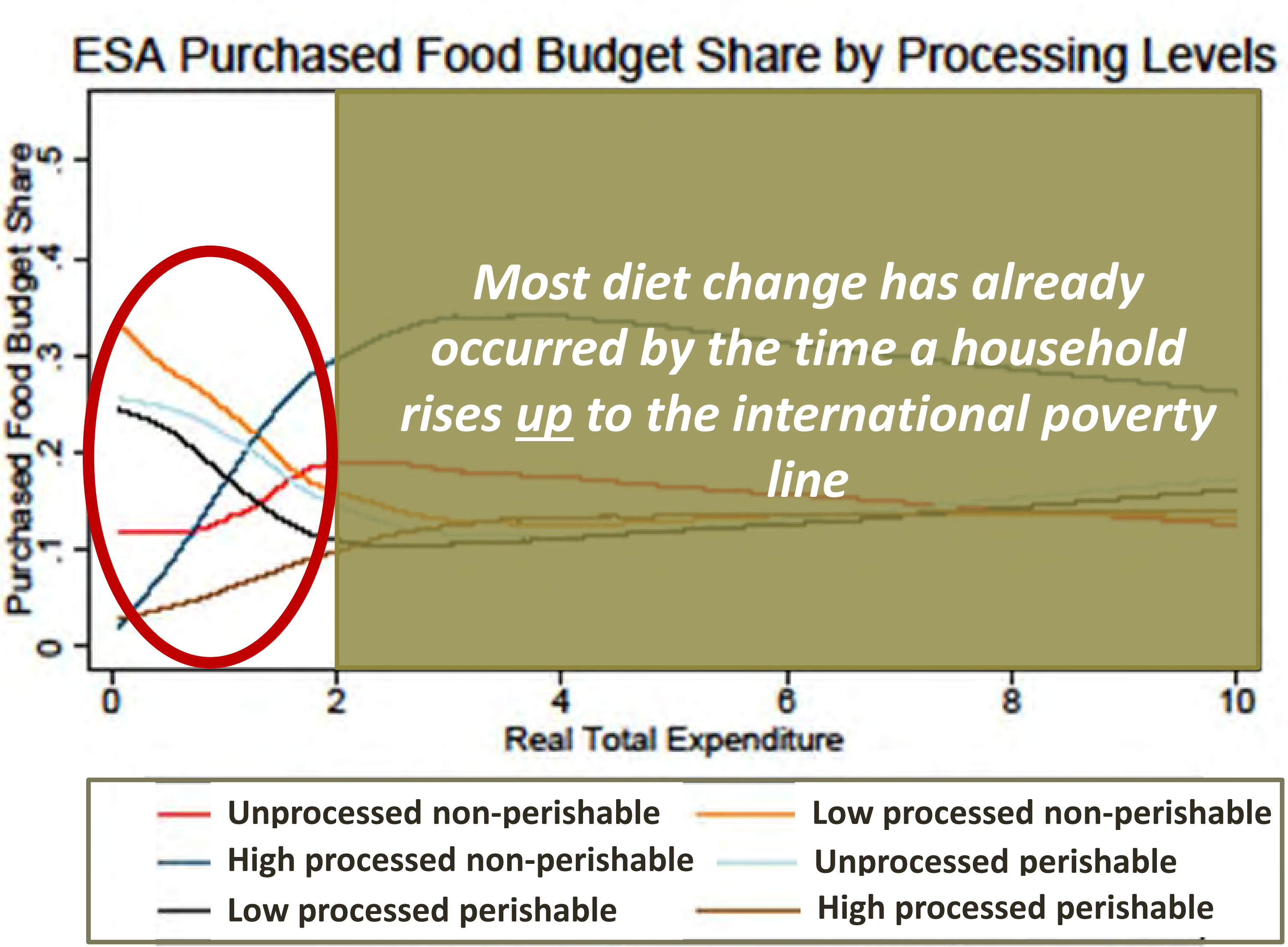
Source: Author calculations from LSMS data sets

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



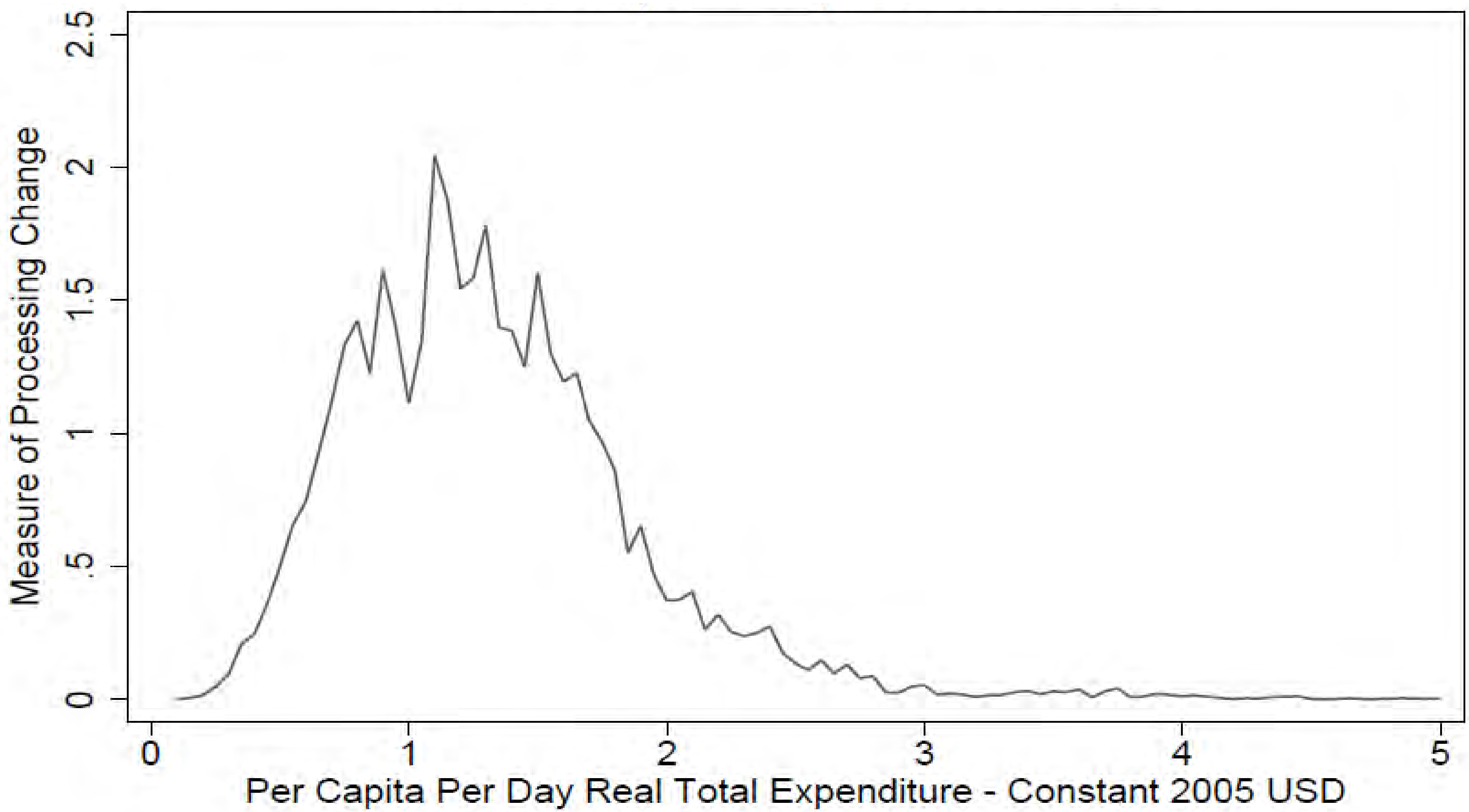
Source: Author calculations from LSMS data sets

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



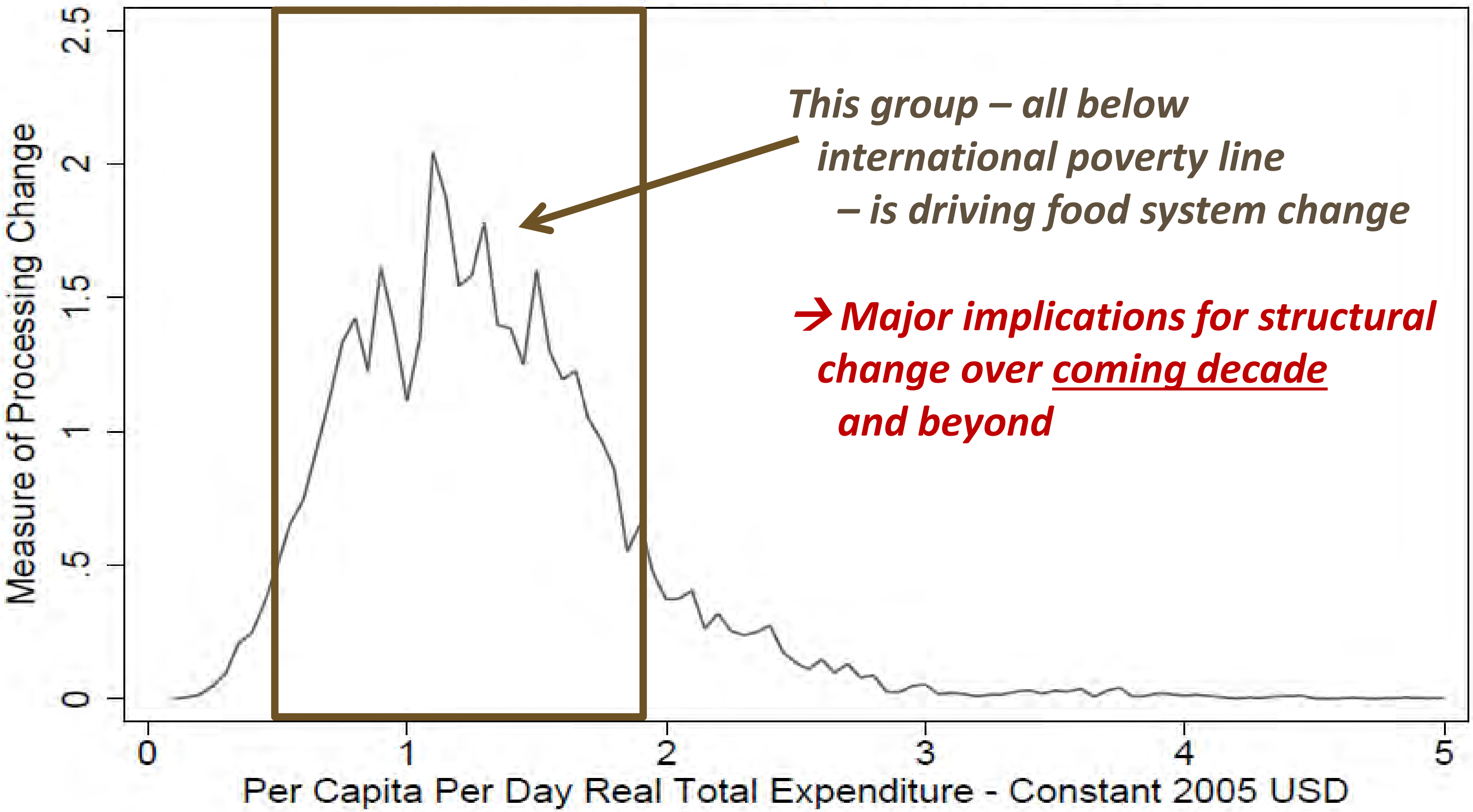
Source: Author calculations from LSMS data sets

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



Source: Author calculations from LSMS data sets

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



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

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

Focus

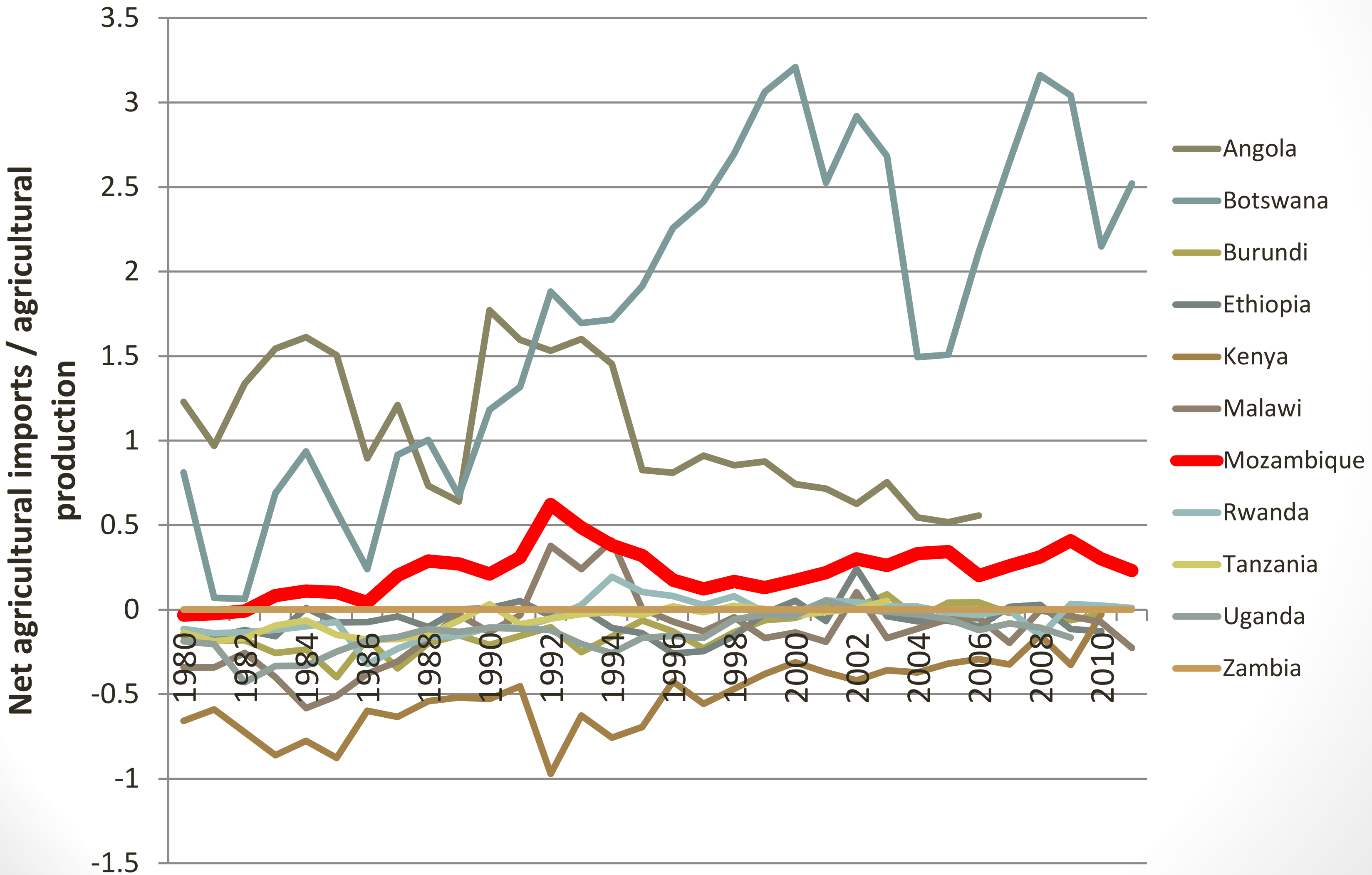
- African urbanization
- Is African income growth being captured by a small elite?
- Diet change is a major driver of agrifood system transformation, and it starts very early in the income distribution
  - Important implications for the pace of change over the next decade
- How can Africa capture booming African demand for food?

Focus primarily on East and Southern Africa

Will imports capture the surge in demand?

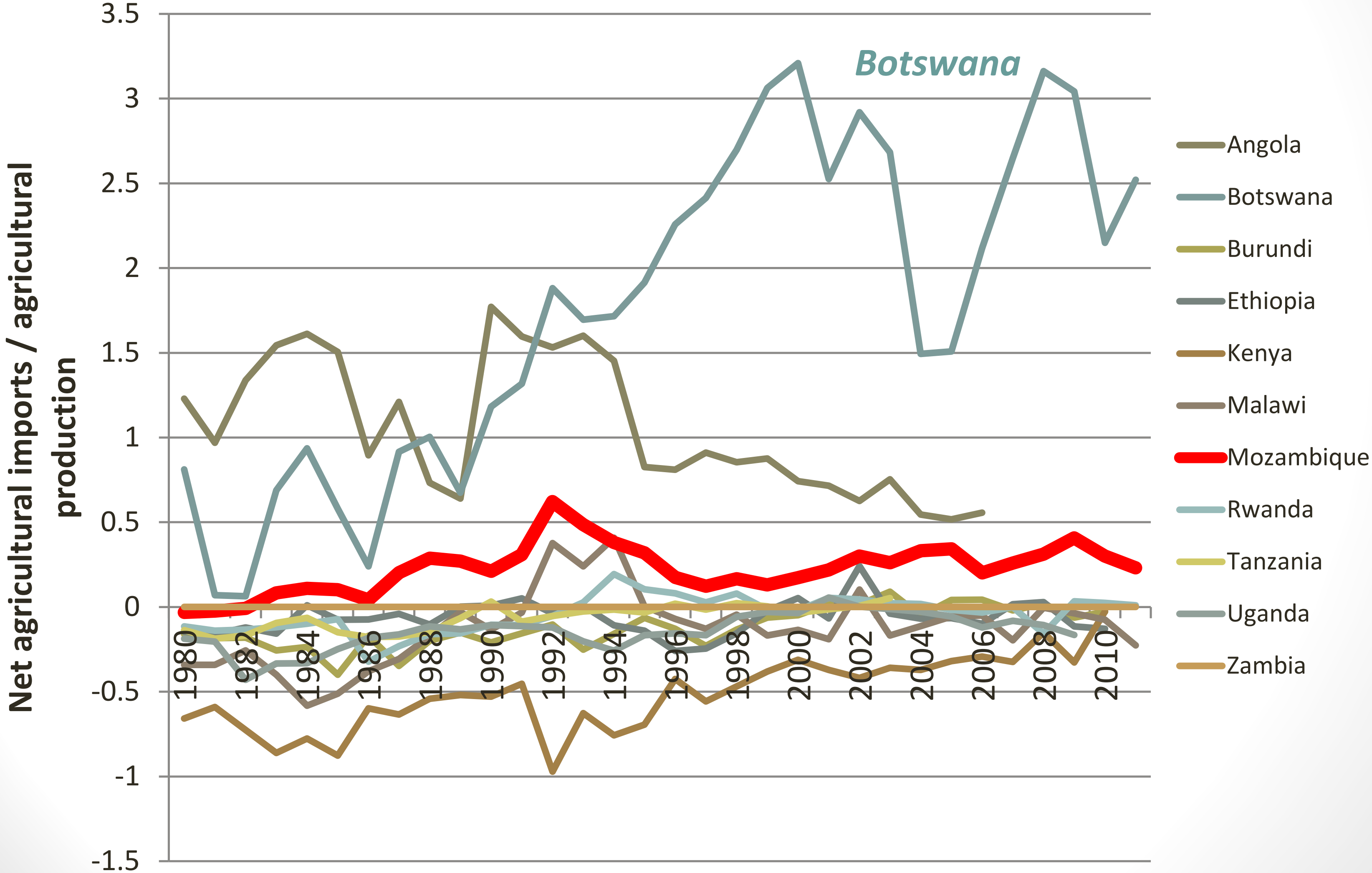
- We found in the region that net import shares in food consumption *fall* with income in urban areas
- Why?
  - Local cereals → imported cereals, BUT
  - Bennett's Law: Cereals → meat, dairy (also fresh produce)
    - all largely locally produced
- But Mozambique may be very different

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



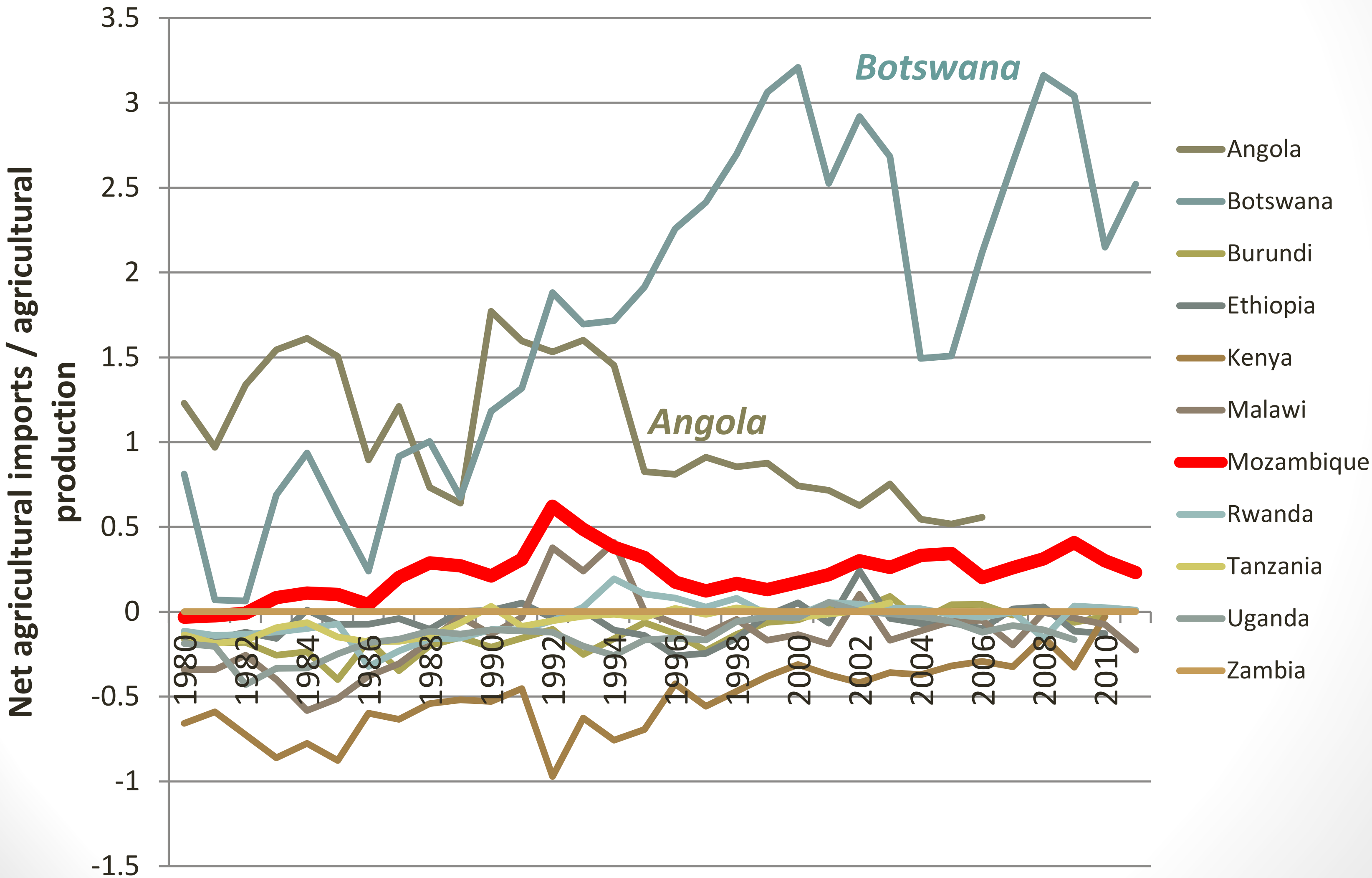
Source: Author calculations from FAOSTAT

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



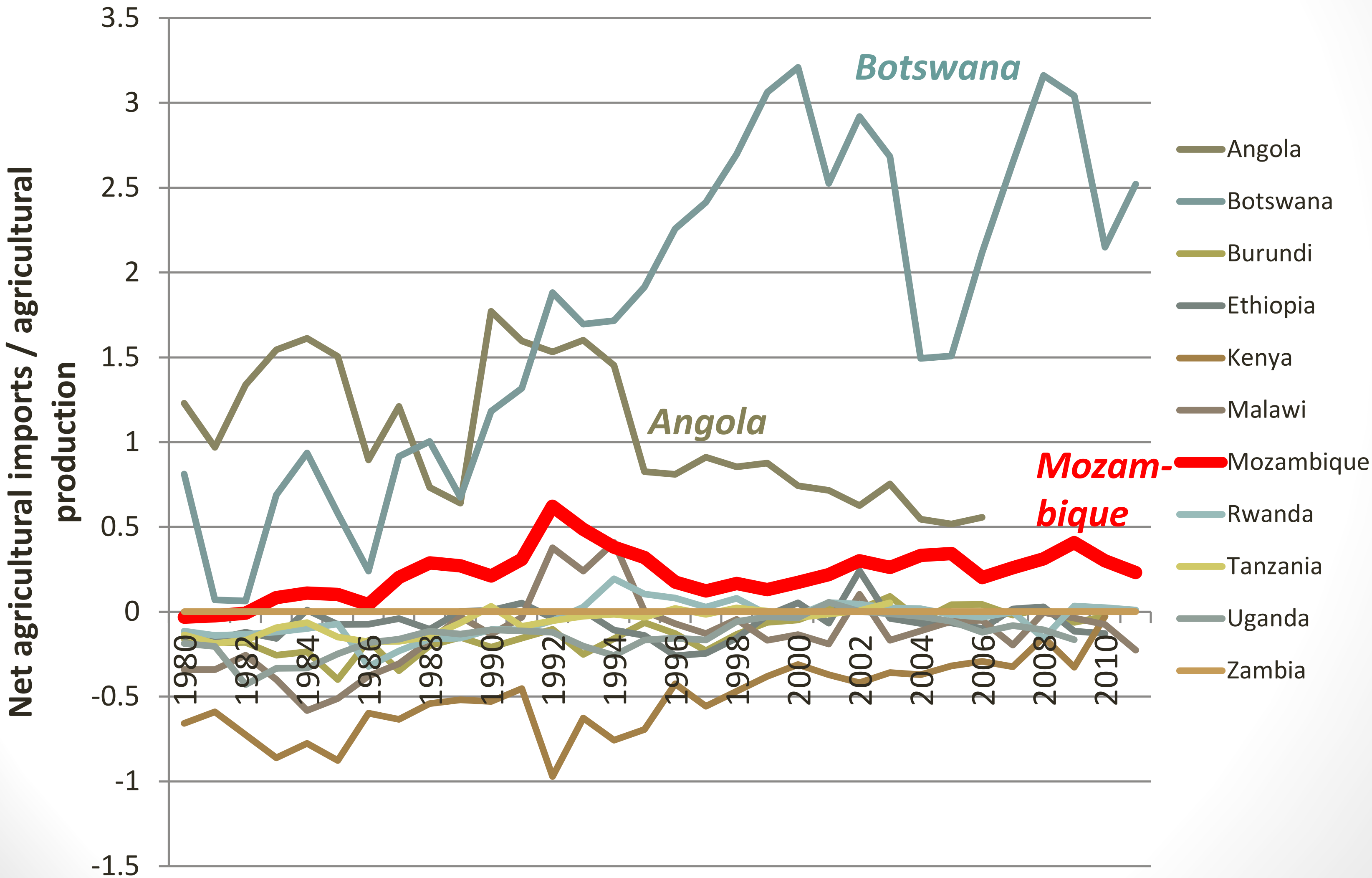
Source: Author calculations from FAOSTAT

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



Source: Author calculations from FAOSTAT

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



Source: Author calculations from FAOSTAT

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

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

Implications (3)

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

“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?