The rise of processed foods in Africa: Evidence from three cities in Tanzania

David Tschirley, Tom Reardon, Jason Snyder, and Claire Ijumba

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Outline

- Background
- What we did
- What we found: big picture
- How this varies over space
  - Expected
  - Realized

Background

- Rising incomes and urbanization
- Expected and demonstrated effects on diet
  - Rural consumption commercialization
    - Reardon et. al. for Asia; Tschirley et. al. for ESA, Hollinger and Staatz for WCA
  - Bennett's Law
  - Rise of processed foods
    - Pingali for Asia, Reardon et. al. for Asia; Tschirley et. al. for ESA, Hollinger and Staatz for WCA

What we did

- Processed foods inventory at retail in three cities of Tanzania
  - Mega coastal city: Dar es Salaam, ~ 4-5 million population
  - Smaller interior cities: Arusha, Mwanza – both < 1 million, not port cities
- Data
  - Milled grain products, rice, dairy, juices, poultry
  - All retail segments
  - Company name, product name, packaging material, place of manufacture … no volumes
    - **Photographs**
  - Much more to come: stacked value chain surveys

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What we found: big picture

- Dramatic change
  - At retail
  - Huge expansion of micro- and small processors
  - Explosion of (incipient) branding
  - Rise of health orientation(“Dona”, “Lishe”)
  - Dominance of local firms, not imports
- How does this vary over city type?
  - Expected and observed

Variability over city type

- Expect more processed food consumption in megacity
  - Demand for convenience driven by
    - Higher opportunity cost of time
    - Higher income
- So more structural change in megacity related to rise of processed foods

Structure:
Expected and observed changes

Change at retail

- From both past experience and theory, expect greater change at retail in mega city
- **We find this**
- The news is the rate of change over past decade

Change at retail (2)

- Mega city
  - Early 2000s: 3-4 large format outlets across two chains
  - Today: over 30 large format outlets, at least 12 supermarket chains (and growing)
  - At least 2 regional, 1 global (Game/Massmart/Walmart)
    - Mostly local but with mixed capital (China, South Africa, perhaps others)
  - Dozens of small-format supermarkets
  - Rapidly growing number of “new format retail clusters”
  - Many gas-station convenience stores

Change at retail (3)

- Intermediate cities
  - 2 local companies with 2 outlets in one
  - 3 companies (1 regional) with 4 outlets in other
  - Many small-format supermarkets in each
  - No evidence of new format retail clusters
  - Few convenience stores
- Overall pattern <u>not new</u>
- NEWS: the supermarket revolution, much talked about but little seen in most of Africa 15 years ago, is far more visible now

Change in firm size

- The **J** curve in concentration (Reardon, 2015)
- Evidence so-far from Africa:
  - long left tail on the **J** (Sandefur 2010; Li and Rama 2013, 2015; Biesebroeck 2005; Nichter and Goldmark 2009)
  - An implication that somehow Africa might be different
    - (long-lived but slow) “elephants” and (short-lived) “mice”, few “gazelles” (Li and Rama, 2013; 2015)
  - Do we find this?

Change in firm size (2)

- Evidence <u>in support</u> of “elephant” and “mice” model
  - Bakhresa/Azzam may be losing local market share in maize meal and is not in “lishe” market
  - Huge surge in number of firms in Dar
    - About triple the number of companies in maize meal compared to intermediates
    - Double in “lishe”
    - Packaging on average *less* sophisticated in Dar
      - More use of polypropylene and clear plastic sacks
      - Latter especially suggesting micro/small firms

Change in firm size (3)

- Evidence against “elephant” and “mice” model
  - Elephants on the move regionally
    - SAB / Miller, Tiger Brands, Zambeef
    - Tanzanian firms: Bakhresa and MeTL have major (and currently growing) regional presence
      - Bakhresa just acquired Blue Ribbon of Zimbabwe
  - Locally in Tanzania:
    - Bakhresa sales up 10x in 10 years
    - MeTL sales up 40x in 15 years

Change in firm size (4)

- Evidence <u>against</u> “elephant” and “mice” model (cont’d)
  - Consolidation may be starting
    - Most successful medium-size firm (Power Foods) started micro in Dar
    - Others that appear to be medium-size, starting small
    - Indications of some very small brands gaining market share
- Upshot: Tanzania in early (but rapid) phase of transformation
  - Substantial proliferation in megacity, **but may be near the rising portion of the J**
  - Incipient proliferation in intermediate cities

Conduct: Expected and observed changes

Role of imports

- Typical expectation: more in megacity
  - Cost side
  - Demand side
  - Western exposure
- We do **NOT** find this
- Megacity: 29 international (non-regional) companies vs. 140 local
- Intermediate: 18 international (non-regional) companies vs. 114 local
- **Note we have shown that import share in urban areas does NOT rise with total expenditure level**

Branding

- Massive increase in number of brands in past 5 years
- Maize meal
  - Little visual differentiation – nearly identical poly sacks with name, address, contacts, some kind of logo
  - **Inherently unstable, ripe for consolidation**
- “Lishe”
  - More expensive product
  - Far more brand differentiation
    - Packaging from clear plastic to paper to colored plastic with photography

Maize meal product mix

- Stylized progression (with rising income / transformation)
  - Rural hand pounding ➔
  - urban purchase of grain & custom milling of whole meal ➔
  - urban purchase of grain & custom milling of refined meal ➔
  - urban purchase of refined meal ➔
  - increasing urban purchase of whole meal and other healthier products

Maize meal product mix (2)

- Stylized progression (cont'd)
  - We see this clearly
    - Mwanza (lowest income, most interior): Still much custom milling of whole meal; Purchases are of refined
    - Arusha (higher incomes, more "cosmopolitan"): dominance of purchased refined
    - Dar: emergence of <u>purchased</u> whole meal
  - Exception" "Lishe" products seen everywhere
    - And with most sophisticated "average" labeling in Arusha, not Dar

Summary

- Dramatic change
- Still early days
- Potential for very rapid consolidation over next decade
  - Many issues here
    - Better food safety and quality?
    - What about employment?
      - Sequencing