CHANGING FOOD SYSTEMS AND NUTRITION: DO WE HAVE THE CONCEPTS AND DATA TO UNDERSTAND, TRACK, AND ANTICIPATE THE LINKS?

3rd International Conference on Global Food Security: Global Challenges, Local Solutions and Connected Pathways
3-6 December 2017 | Cape Town, South Africa
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<th>Panelists</th>
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<tr>
<td>Dr. Victor Ajieroh</td>
<td>Senior Nutrition Advisor, Bill &amp; Melinda Gates Foundation, Nigeria (Discussant)</td>
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<tr>
<td>Dr. David Tschirley</td>
<td>Professor, International Development, Dept. of Agricultural, Food, &amp; Resource Economics, MSU, and Co-Director, Food Security Group</td>
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<td>Dr. Anna Herforth</td>
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<td>Dr. Jessica Fanzo</td>
<td>Bloomberg Distinguished Professor of Global Food &amp; Ag Policy and Ethics, Bloomberg School of Public Health, Johns Hopkins University</td>
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PROGRAM

8:30-10:00  Introduction (5 min)
            Four presentations (15 min + 5 min questions of clarification)
10:00-10:15 Coffee / tea break
10:15-11:45 Final presentation (15 min + 5 min)
            Discussant (15 min)
            Audience engagement (50 min)
            Wrap-up (10 min)
African (and other) food systems are changing rapidly
Big impacts on diets and nutrition
But our data (and to some extent our concepts) are inadequate to:
- Describe and track the relevant changes and
- Link them with confidence to nutrition outcomes
This situation needs to change, and can change
THE SITUATION CAN BE CHANGED

Erratic, non-standardized national surveys ➔ LSMS
LSMS ➔ LSMS-ISA

We should be able to do something similar for diets and nutrition

Existing related efforts

▪ Global Dietary Database (GDD), FAO Global Individual Food consumption data Tool (GIFT), Tufts’ Indicators of Affordability of Nutritious Diets in Africa (IANDA), International Dietary Data Expansion Project (INDDEX)

▪ Anna Herforth to speak to these
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ATTENTION IS BEING BROUGHT TO THE ISSUE

Global Nutrition Report’s “Nourishing the SDGs” (2017)
- “we must fill (data) gaps and change the way we analyse and use data”

The Global Panel’s “Metrics Brief” (2015)
- Improvement needed in six areas, among them food intake and food environment

- Emphasize need for data on (a) food intake and (b) food environment metrics
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The internal and external environment in which a consumer makes their decisions about food acquisition and consumption
Food System
Food System

Food Environment

Consumer
Food System

Food Environment

- Mental constructs
- Income
- Prices
- Messages (advertising)
- Foods & their attributes

Consumer
THIS SYMPOSIUM

Review what we know about changing food systems from farm to midstream to retail to diets

Highlight knowledge gaps and emerging issues

Review data efforts underway

Generate additional input on priorities for research - and for data generation and consolidation - to allow routine examination of changes in the food environment and its impact on food choices and nutritional outcomes
FOOD SYSTEMS AND THE DIET TRANSFORMATION IN AFRICA:
WHAT DO WE KNOW? WHAT DO WE NEED TO KNOW?

David Tschirley, Michigan State University
Presented at the Symposium “Changing food systems and nutrition: do we have the concepts and data to understand, track, and anticipate the links?”
CCICT Convention Center, Cape Town
3 December 2017
Acknowledgements: The work highlighted here is jointly funded through the generous support of the American people through the United States Agency for International Development (USAID) under the Food Security Policy Innovation Lab Grant to MSU.
Based on joint work with Thomas Reardon, Steven Haggblade, Saweda Liverpool Tasie, Titus Awokuse, Bart Minten, Michael Dolislager, Christine Sauer, Jason Snyder, Laura Medwid, Sarah Chase-Walsh
What do we know?
#1: DIETS ARE TRANSFORMING IN THREE WAYS

Food is becoming more purchased

- About 50% in rural areas of Africa (by value)
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Perishable

- Non-cereals/pulses are 50% to 70% of diets in value terms
#1: DIETS ARE TRANSFORMING IN THREE WAYS

**processed and prepared**

- **Processed**: 50% to 65% of all food; 70% to 80% of purchased food
- **Food away from home**: exceeds 15% in some countries of ESA
- Growing everywhere more rapidly than any other category
Upshots

(1) The post-farm segment of the agrifood system is becoming ever more important

(2) Markets are now the dominant shaper of the food environment and thus of food choices
The transformation is **broad**

- In rural and urban areas
- Across the income distribution (not just the middle- and upper classes)
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.

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Dramatic diet change has already occurred by the time a household rises up to the international poverty line

Source: Author calculations from LSMS data sets
Kernel regression results on purchased food budget shares, additionally weighted by population across 5 countries of ESA.

So there is enormous pressure on the agrifood system, NOW, to respond.

Source: Author calculations from LSMS data sets
Urban demand now over 50% of all food demand through markets in East and Southern Africa
- The least urbanized area of the continent
- Up to 70% and 80% elsewhere
- Huge agribusiness opportunities
- Growth up to 8x over 30 years for some processed & perishable foods
- Especially secondary and tertiary cities
- About 60% of urban population, growing rapidly
#5: LOCAL DEMAND AND SUPPLY DOMINATE

- About 90% of all food is from local production
- And reliance on imports is not systematically rising, even in Africa
#6: CITIES ARE NOT ADEQUATELY PREPARED
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#6: SUPERMARKETS ARE NOT SOLVING THE PROBLEM

- Cleaner, safer cheaper …
- Rapid growth …
  - from a small base
  - And in an urban planning vacuum wrt food (Battersby, 2017)
- More processed: large impacts on consumption of processed food (Rischke et al, 2016) …
- … and on negative nutritional outcomes (Demmert et al., 2017)
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The African food environment is increasingly characterized by purposeful manipulation of the food environment by private sector combined with absent or dysfunctional public investment.
What we need to know
(an incomplete list!)
#1: HOW ARE LOCAL SMES RESPONDING TO THE HUGE AGRIBUSINESS OPPORTUNITIES?

- What is the level, structure, and spatial distribution of the local agribusiness response?
- Major implications for level and location of employment
  - Among Tanzanian millers:
    - smallest 20% of grain millers employ 15x more labor per unit output
    - Next smallest employ 6x as many
#2: ARE THESE SMES BAD FOR FOOD SAFETY AND QUALITY?

How does nutritional quality and food safety vary by:

- Imported vs. local products?
- Firm size among locals?
- Some concerned that SMEs are a major problem for food safety

A conundrum:
- how to promote greater employment growth in agrifood system while safeguarding food quality and safety?
#3: How rapidly are supermarkets taking over market share?

- Currently low in Africa and S Asia, higher in E and SE Asia
- The sector can grow very rapidly in total sales while growing very slowly in market share
- Continuing role, for a long time, for the so-called traditional marketing system
#4: WHAT ARE THE OBESOGENIC FOODS AND HOW ARE THEY REACHING CONSUMERS?
We may be accustomed to thinking about the degradation of developing country diets as a product only of FDI, and packaged foods
Traditional prepared foods, and traditional market outlets, can be major elements of this problem.
#5: HOW ARE AFRICAN FOOD ENVIRONMENTS CHANGING AND WHAT CAN BE DONE ABOUT IT?

Very little quantitative data
- This has to change in an ongoing way

Many helpful and potentially reasonable suggestions
- Global Panel, HLPE, others

Most of which depend on public investment and regulation
- Poorest countries (already experiencing the nutrition transition) least able to do this
A strong expressed preference in Africa for local, healthy, even organic foods
  ▪ a completely casual observation!

Some of the key suggestions are in a sense narrow interventions that can have broad effect, especially if they can leverage latent demand
  ▪ Mandatory labeling, public campaigns

Others are far more complex
  ▪ Improving the built environment, regulating trade
None of these “solutions” are easy

The battle is primarily in the political economy and in people’s minds, and needs to be fought there

What lessons to take from Ghana, Brazil?
Thank you