



FEED THE FUTURE

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



Early actions for bending the curve in Africa's nutrition transition

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Washington, DC

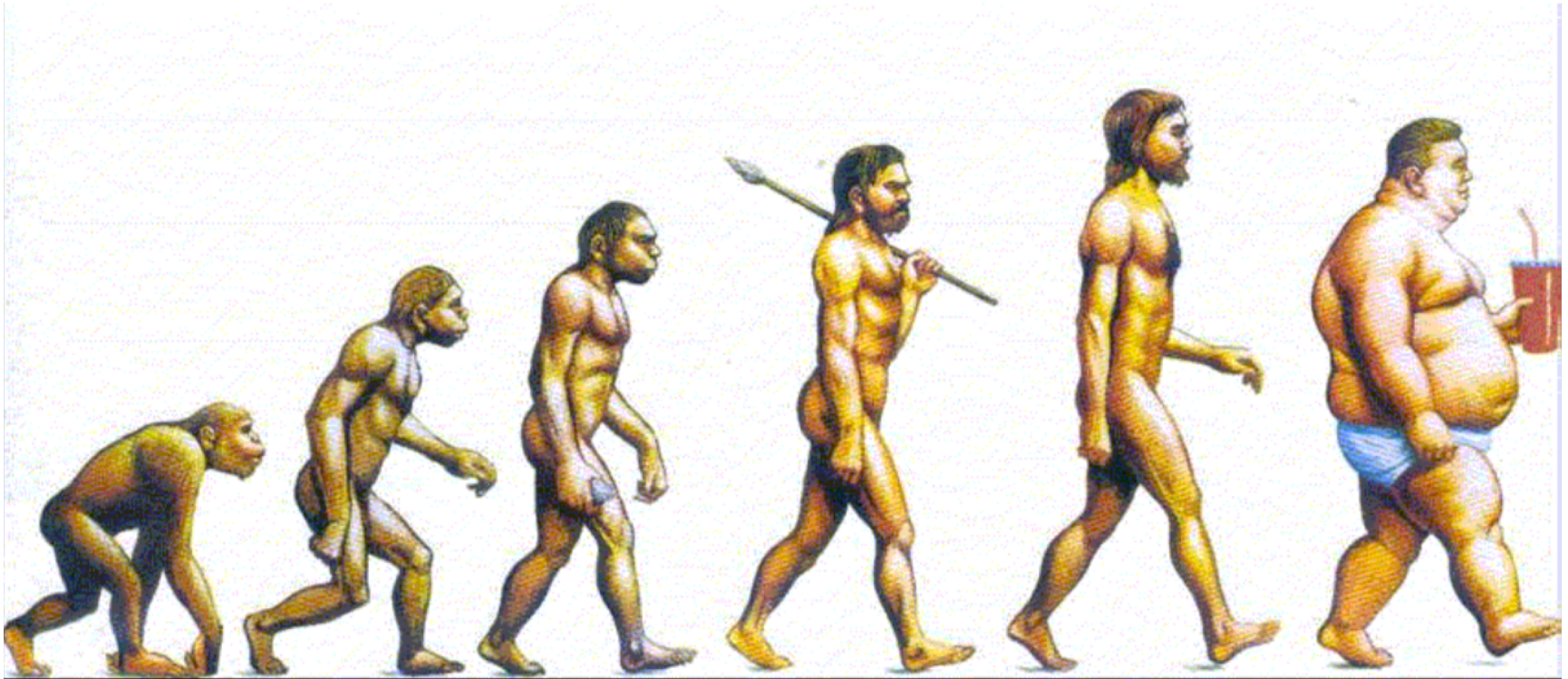
March 6, 2019



Outline

1. Nutrition transition
2. Africa's late-mover advantage
3. Research methods
4. Early actions for bending the curve

Worldwide nutrition transition

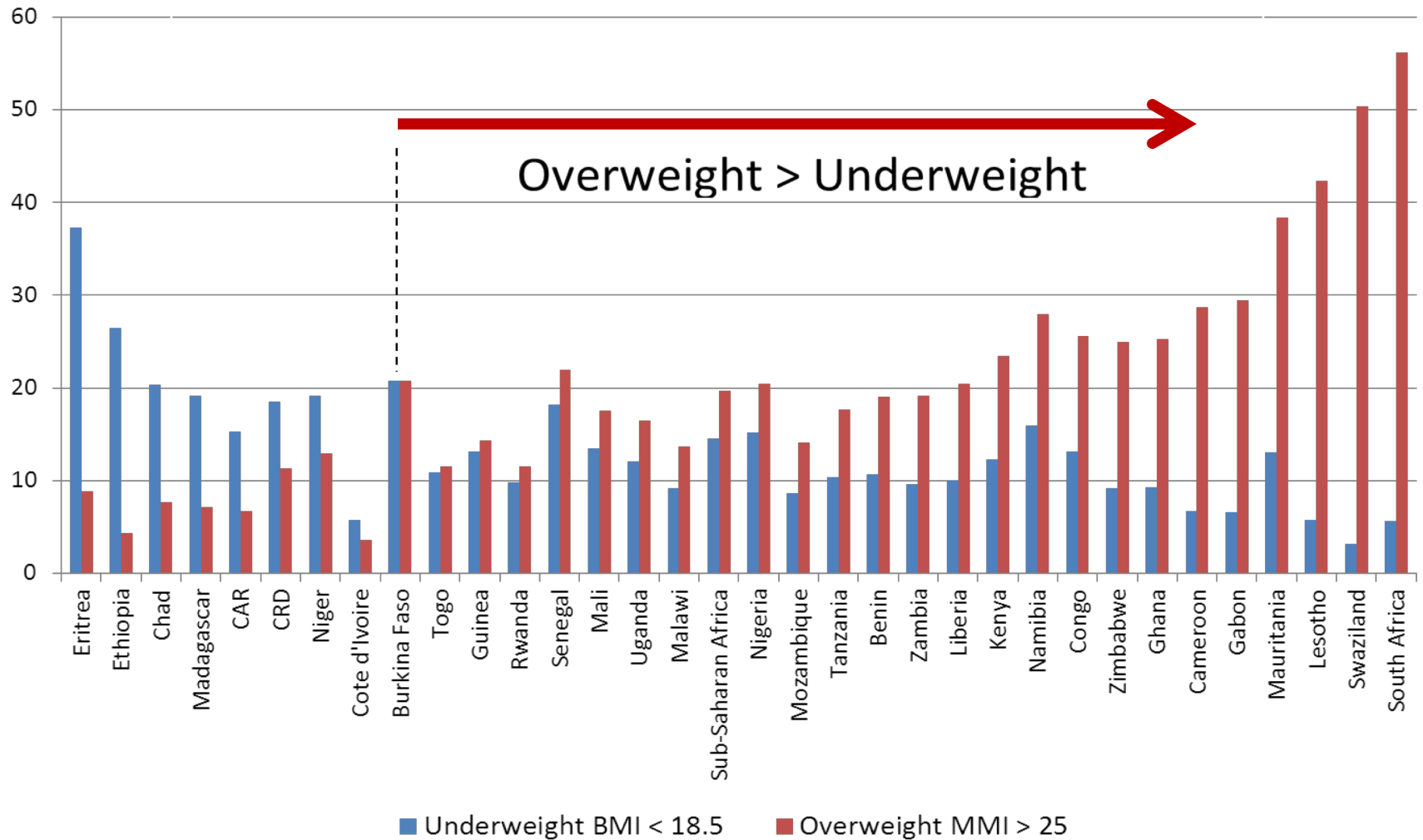


Worldwide nutrition transition

- **Global malnutrition**
 - overweight > underweight since 2007
- **In developing countries**
 - Undernutrition and overnutrition coexist
 - Even in Africa!
 - And faster in Africa!!!

Africa's double burden:

Percent of adult females under- and overweight



Causes of the nutrition transition

Income growth

→ large calorie increases

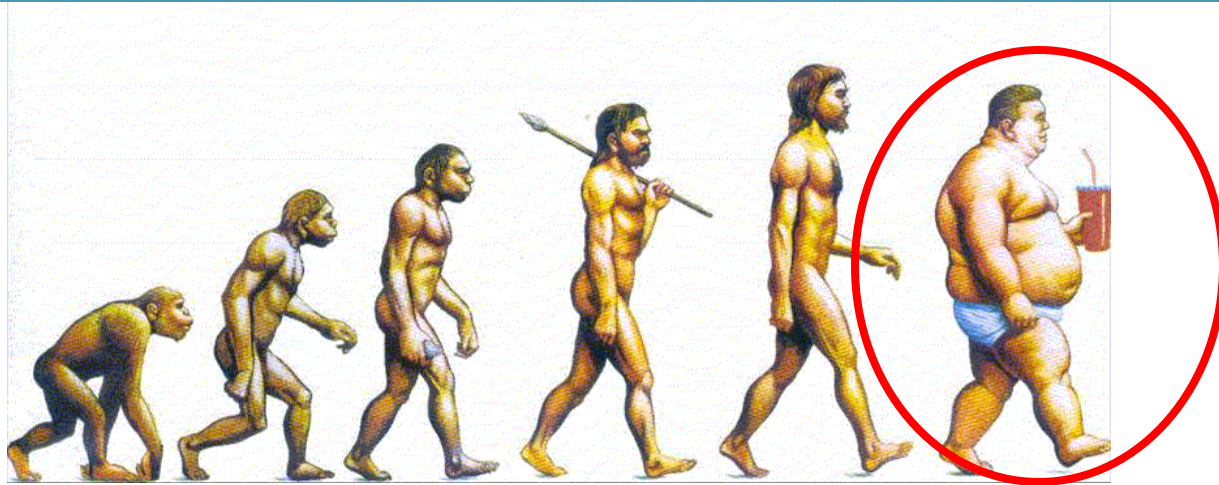
→ higher red meat and fat consumption

Urbanization

→ less physical activity

→ increased processed foods

Role of processed foods



- Survival instincts: humans hard-wired to crave sugar, fat and salt
- In excess,
 - salt → hypertension
 - sugar → obesity, diabetes
 - fat → cardiovascular diseases
- Food processing technology
 - Salt → food preservation, taste enhancer
 - Sugar → preservative qualities, taste enhancer
 - Fat sells

Consequences of over-nutrition

- Obesity
- Hypertension
- Heart disease
- Diabetes
- Reduced life expectancy
- Lower worker productivity
- Rising public health system costs
- Dental disease

Rapid rise of dental disease

Rural El Salvador, 1980



2000



Source: Sokal-Gutierrez (2012).

Africa's choices



Source: Sokal-Gutierrez (2012).

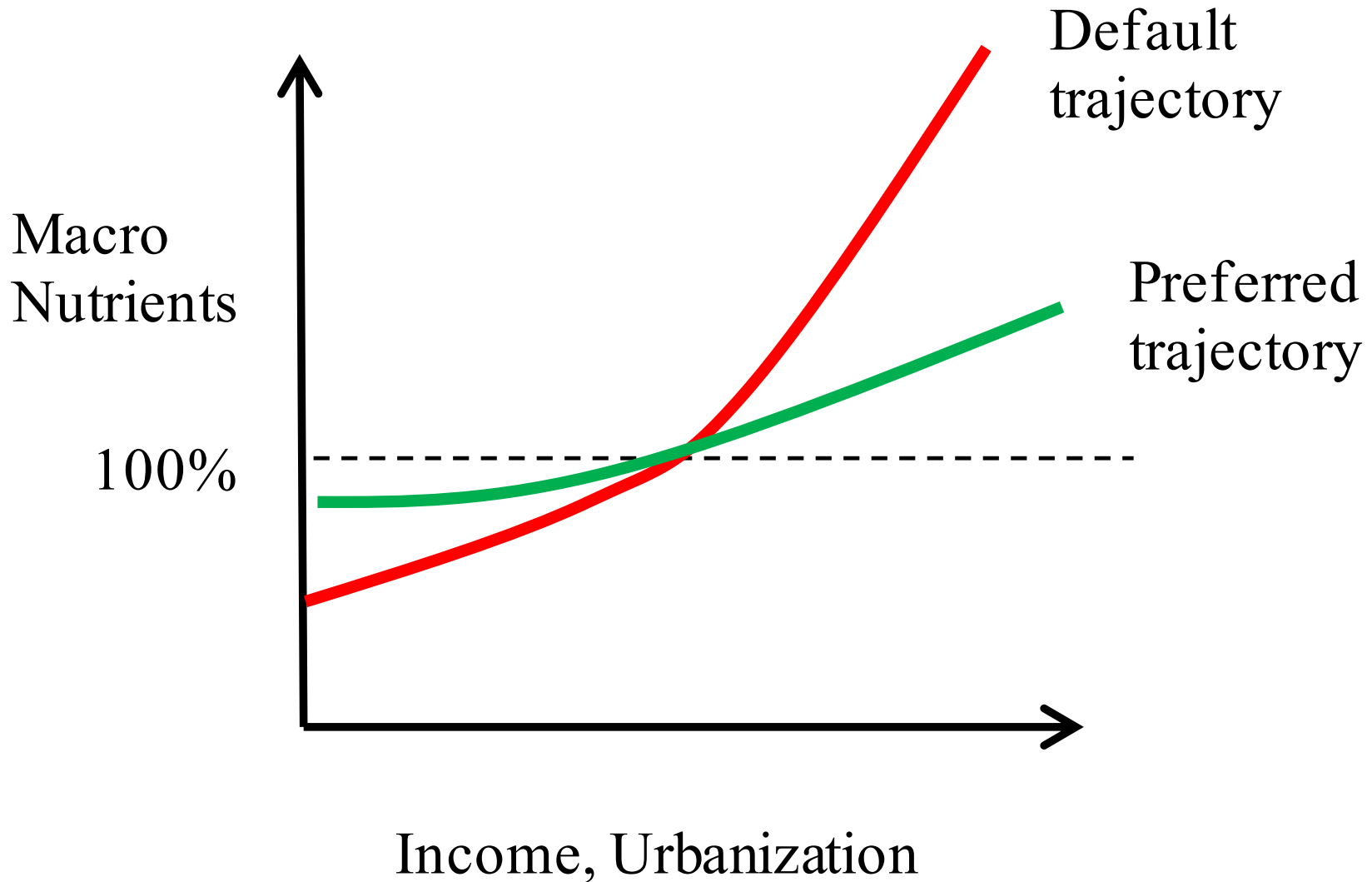
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Africa's latecomer advantages

- Last continent to urbanize
- Poorest continent
- Last continent to undergo the nutrition transition
- African can learn from the experiences and mistakes of wealthier countries

Bending the curve



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1. Nutrition transition
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- 3. Research methods**
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Research methods

1. African countries

Food system transformation	Countries	Case study selections
Top tier	6	South Africa
Middle	20	Ghana
Bottom	17	Uganda

2. International experience

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- 4. Early actions for bending the curve**

Early actions

Food demand	Food supply	Health outcomes
<ul style="list-style-type: none">• Nutrition education• Advertizing restrictions• Taxes on junk food• MCH feeding & supplementation• Oral health education• Breastfeeding	<ul style="list-style-type: none">• Regulations (salts, fats, ultra-processed foods)• Fortification• Bio-fortification• School feeding• School vending controls• Food industry entrepreneurship• Wholesale market improvements• New generation food technology professionals	<ul style="list-style-type: none">• Exercise-promoting insurance premiums• Urban planning, walkability

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Early actions: unconventional

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Maternal child health

- **Observation:** Undernutrition → overnutrition
in mothers in children
- **Why?** Thrifty phenotypes:
metabolic changes in utero → propensity for weight gains as adults
- **The public health response?** Supplementation programs for pregnant women, adolescent girls, infants.
- Combatting *undernutrition* in mothers = combatting *obesity* in their children!

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Oral health education

Oral decay: same causes as obesity (sugars, fats, processed foods)

Easier to motivate behavioral change

- Parents need sleep
- School attendance and performance drops

Refs: Sokal-Gutterez

New gen food professionals

Food technology curriculum reform:

- Food processing
- Public health
- Human nutrition

Food industry entrepreneurship:

- Indigenous vegetables (cassava and pumpkin leaves)
- Insects
- Healthy, local processed foods

Ref: Amanda Minnar

Conclusion

- Many tools exist for bending the curve
- Concerted collective action required
- Champions required
- Need better M&E going forward



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