Cost and Affordability of Nutritious Diets Globally

Background paper to the SOFI 2020
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PART 1
FOOD SECURITY AND NUTRITION AROUND THE WORLD IN 2020
1.1 Progress towards hunger and food insecurity targets
1.2 Progress towards global nutrition targets
1.3 The critical link between food security and nutrition outcomes: food consumption and diet quality
1.4 Conclusions

PART 2
TRANSFORMING FOOD SYSTEMS TO DELIVER AFFORDABLE HEALTHY DIETS FOR ALL
2.1 The cost and affordability of healthy diets around the world
2.2 The hidden health and environmental costs of what we eat
2.3 What is driving the cost of nutritious foods?
2.4 Policies to reduce the cost of nutritious foods and ensure affordability of healthy diets

Vision:
Food price measurement to match this aspiration

*Food security is...*

*when all people, at all times, have physical and economic access to sufficient, safe, nutritious food to meet dietary needs* and food preferences for an active and healthy life.

-- World Food Summit, 1996
Aim

• If you went to an average market in any country, how much would it cost to obtain a diet that satisfies dietary guidelines? Nutrient requirements?

• How many people could not afford this cost?
We estimate the cost of three diets

• Cost of Calorie Adequacy (CoCA)
  • minimum cost to meet energy requirements using the least cost available starchy staple food in each country

• Cost of Nutrient Adequacy (CoNA)
  • minimum cost to meet energy and nutrient requirements (23 macro and micro-nutrients, with upper as well as lower bounds)

• Cost of Recommended Diet (CoRD)
  • Minimum cost to meet food-based dietary guidelines, based on food group classifications
The stairway of affordability, from subsistence to health

- Energy sufficient diets (meet needs for short-term subsistence)
- Nutrient adequate diets (meet required levels of all essential nutrients)
- Healthy diets (meet food group recommendations)
Why focus on least-cost diets?

• Diet cost in each place is based on the most affordable combination of foods that meets the criteria for the diet

• No standard set of items in the least-cost basket: Food items chosen would vary by time and place, drawing on locally-available or seasonal items

Our estimates provide a lower bound on the cost per day of meeting each dietary standard.

• Adding food preferences and convenience would raise the estimated costs, and raise the number of people who cannot afford the diet
  • CoRD-FP (food preferences) is a variant which is the cost of a diet meeting food-based dietary guidelines that accounts for local food preferences within each food group
Global food price dataset

• We use the World Bank’s International Comparison Program (ICP) dataset from 2017
  • Unique dataset
  • Main purpose: establishing purchasing power parity (PPP)
  • Published every few years (2005, 2011, 2017)
  • Global and regional lists for 2017 include 680 foods & non-alcoholic beverages in 173 countries
  • Items limited to standard products sold in multiple countries
Limitations

• ICP data is sourced from national governments; food prices collected may not include all low-cost food items
• Data at national level; does not allow for sub-national analysis
• Does not include cost of home production of food; market cost only
Main results: Global average costs

• $0.79 per day to meet daily energy needs using the most affordable starchy staple
• $2.34 per day to meet all essential nutrient requirements
  • no requirement for proportionality/palatability
• $3.75 per day (range $3.29 to $4.58) to meet dietary recommendations
  • we use 10 different definitions of a healthy diet published by UN member states (no single definition of a healthy diet)
Healthy diets by any definition are far more expensive than the entire international poverty line of $1.90...let alone the upper bound portion of the poverty line that can credibly be reserved for food of $1.20.
The cost of nutrient adequacy exceeds the poverty line in most countries, let alone the cost of healthy diets.
Other affordability comparisons

1. Comparison to national average expenditures on food by country

2. Comparison to 63% of income, using World Bank estimated 2018 income distributions across 164 countries
   • 63% is the mean proportion of expenditures on food among the bottom consumer segment in LICs (calculated from the World Bank Global Consumption Database)
Average expenditures are almost always above calorie adequacy, but the cost of nutrient adequacy exceeds food expenditures in many African countries.

The cost of recommended diets exceeds food expenditures in most countries in Africa and Asia.
Calorie affordability is still a problem in some countries.

Most people in sub-Saharan Africa cannot afford nutrient adequate diets.

Most people in sub-Saharan Africa and South Asia cannot afford recommended diets.
Widespread unaffordability

• 3 billion people globally lack sufficient income to purchase the *least-cost* form of healthy diets recommended by national governments.

Compare to:
• 2 billion people who experience moderate or severe food insecurity as measured by the FAO Food Insecurity Experience Scale (FIES)
• 690 million hungry: FAO Prevalence of Undernourishment indicator
High cost of diverse foods
Starchy staples and oils account for only 16% of the cost

Fruits and vegetables account for 40% of the cost of the recommended diet ($1.50)
Conclusions

• The cost of nutritious diets in the market is more than many people can afford.

• Existing food systems and assistance programs do not fulfill longstanding aspirations for global food security.

• Implications for poverty, social protection, and agriculture
Food poverty line is based on kcal equivalent of common diet among the poor

Need to allow for the cost of nutritious / recommended diet

Need to reconsider poverty lines
What is needed in Agriculture?

• Social protection: include assistance for home production?

• Investment, Research, Development:
  • Public and private actions needed to lower cost will vary by location and type of food...
    Production, distribution, storage, trade
# How to reduce the cost of nutritious food?

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>By lowering agricultural and food worker wages</td>
<td>❌</td>
</tr>
<tr>
<td>By intensive animal production that discounts animal welfare and water quality</td>
<td>❌</td>
</tr>
<tr>
<td>By cutting down forests to produce more food</td>
<td>❌</td>
</tr>
<tr>
<td>Trade protectionism</td>
<td>❌</td>
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<tr>
<td>By investing in research and development of vegetable, fruit, and legume seeds:</td>
<td>✓</td>
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<td>increase diversity in the food supply, and viable opportunities for farmers</td>
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<tr>
<td>By investing in environmentally and socially sustainable ways to produce animal</td>
<td>✓</td>
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<td>source foods targeted to the poor</td>
<td></td>
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<tr>
<td>Innovations for cold chains and other means of preservation</td>
<td>✓</td>
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<tr>
<td>Market infrastructure to allow movement of products</td>
<td>✓</td>
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</tbody>
</table>

By diversification and connection, not by externalizing true costs!
Thank you

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