Tell me where you eat: the impact of food away from home on poverty and inequality in Peru

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Improving Food Consumption Measurement in National Household Surveys
Side Event at the 46th Session of UN Statistical Commission
New York, March 4, 2015
Why measure FAFH?

- FAFH on the rise

% from energy intake coming from FAFH

% of food consumption coming from FAFH
Definitions - What is FAFH?

What to measure?

Food prepared away from home
  (meals and snacks)

consumed at home

consumed away from home

purchased
  - grocery store
  - local market
  - take-out

received in-kind
  - social program
  - another household

purchased
  - commercial establishment
  - school
  - work

received in-kind
  - employer
  - social program
  - another household

Measurement issues to consider

• Recall period
• Respondent
• What information to collect (frequency, quantity, cost)
• Locations (restaurant, school)
• Events (lunch, dinner, snack)
• Uniformity of content (not all meals are created equal)
• Seasonality

Source: adapted from Smith and Frankenberger 2012
State of the world

- 90 out of 100 surveys collect some information on FAFH (Dupriez et al. 2014)

Out of the 90 surveys with FAFH:

- 81% capture FAFH in one line
- 76% ask about more than one question
- 54% include in-kind
- 35% include snacks
- 33% provide information on content
- 23% capture multiple places of consumption
- 17% capture individual level
- 10% capture quantities
State of the world

- **90 out of 100** surveys collect some information on FAFH (Dupriez et al 2013)

Out of the 90 surveys with FAFH:

- **35%** account for snacks
State of the world

- **90 out of 100** surveys collect some information on FAFH (Dupriez et al 2013)

Out of the 90 surveys with FAFH:

- 0.81
- 0.76
- 0.54
- 0.35
- 0.33
- 0.23
- 0.17
- 0.1

**17% collect information at individual level**
Open research agenda

1) Importance of accounting for FAFH in welfare analysis

2) How to best measure FAFH in household surveys?

Evidence from Peru
1) Accounting for FAFH in welfare analysis

NATIONAL HOUSEHOLD SURVEY (ENAHO)

- Detailed module on FAFH collected since 2004
- Each adult reports about FAFH in the last 7 days
  - Meal occasion: breakfast, lunch, dinner, snack
  - Place of consumption: street vendor, restaurant, work
  - Frequency and cost
1) Accounting for FAFH in welfare analysis

- Detailed module on FAFH collected since 2004
- Each adult reports about FAFH in the last 7 days
1) Accounting for FAFH in welfare analysis

Ignoring FAFH >>> Accounting for FAFH

a. Poverty rates

*consumption effect*

- poverty falls
  - original
  - w/FAFH

*poverty line effect*

- poverty falls
  - poverty increases
1) Accounting for FAFH in welfare analysis

a. Impact on poverty rates, Peru 2010

1.1 pp represents: 17% increase in the poverty rate (337,500 individuals)

5.8 pp represents: 16% decrease in the poverty rate (1,725,500 individuals)
1) Accounting for FAFH in welfare analysis

## Ignoring FAFH  >>>>  Accounting for FAFH

### a. Poverty rates

<table>
<thead>
<tr>
<th></th>
<th>Extreme poverty, Peru 2010</th>
<th>Moderate poverty, Peru 2010</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Including FAFH</td>
<td>Including FAFH</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>non-poor</td>
</tr>
<tr>
<td>Only at-home meals</td>
<td>poor</td>
<td>1,520,463</td>
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<tr>
<td></td>
<td>non-poor</td>
<td>393,285</td>
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<tr>
<td></td>
<td>730,765</td>
<td>26,979,752</td>
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</table>

### b. Poverty classification

- Extreme poverty, Peru 2010:
  - Poor: 1,520,463
  - Non-poor: 730,765
- Moderate poverty, Peru 2010:
  - Poor: 8,748,740
  - Non-poor: 353,034
1) Accounting for FAFH in welfare analysis

Ignoring FAFH >>> Accounting for FAFH

- a. Poverty rates
- b. Poverty classification
- c. Consumption inequality
1) Accounting for FAFH in welfare analysis

Ignoring FAFH >>>>> Accounting for FAFH

a. Poverty rates
b. Poverty classification
c. Consumption inequality

Notes: calculated at the individual level, taking into account sampling weights
2) How to measure FAFH

SURVEY TO MEASURE THE NUTRITIONAL COMPOSITION OF MAIN FOODS CONSUMED AWAY FROM HOME

TARGET POPULATION: Set of most frequently consumed meals
## MAIN FEATURES

### GOAL

- Determine the nutritional composition of the meals most frequently consumed away from home in Metropolitan Lima and Callao, offered to the public in commercial facilities.

### Coverage

| Metropolitan Lima and Callao |

### Execution Period

| May to December 2013 |

### Population under study

| Facilities that sell menu |

### Unit of Analysis

| Meals most frequently consumed in different facilities |

### Informants

<table>
<thead>
<tr>
<th>Owner</th>
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</thead>
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<tr>
<td>Manager</td>
</tr>
<tr>
<td>Authorized Person</td>
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</table>

### Sample Design

| Probabilistic, area, stratified |
**MAIN FEATURES**

**Implementation stages**

**First stage: Registration and Inventory**
- Identify the menu most frequently consumed, by day of the week
- Collect general information on these menus
  - Sample size: 1,738 facilities

**Second stage: Application of the survey**
- Collect the ingredients used in the most frequently consumed preparation (menu) by facility
  - Information collected by professionals in nutrition
  - Interviewers weighted raw food and cooked food
  - Lab analysis of subsample of menus

**Third stage: Development of the Table of Nutritional Composition**
- Make a Nutritional Composition Table (macronutrients) of each of the preparations (menus) mostly frequently consumed away from home
  - 520 components (appetizer, main dish, drink, dessert)
<table>
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<tr>
<th>ESTRATO</th>
<th>Código Alimento</th>
<th>Nombre del alimento</th>
<th>Energía &lt;ENERG&gt; kcal</th>
<th>Proteinas &lt;PROCN&gt; g</th>
<th>Grasa total &lt;FAT&gt; g</th>
<th>Carbohidratos disponibles &lt;CHOAVL&gt; g</th>
<th>Fibra dietaria &lt;FIBTG&gt; g</th>
<th>Zinc &lt;ZN&gt; mg</th>
<th>Hierro &lt;FE&gt; mg</th>
<th>b carotenol equivalentes totales &lt;CAROTBQ&gt; µg</th>
<th>Retinol &lt;RET&gt; µg</th>
<th>Vitamina A equivalentes &lt;VITA&gt; µg</th>
<th>Vitamina C &lt;VITC&gt; mg</th>
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Source: National Institute of Statistics and Informatics - Survey to Measure Nutritional Composition of Food Consumed away from Home
2) How to measure FAFH (preliminary)

Current poverty methodology
(kcal per 100 grams)

<table>
<thead>
<tr>
<th></th>
<th>Street vendor</th>
<th>Restaurant</th>
<th>At work</th>
</tr>
</thead>
<tbody>
<tr>
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<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Lunch</td>
<td>85</td>
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<td>85</td>
</tr>
<tr>
<td>Dinner</td>
<td>332.5</td>
<td>172</td>
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<tr>
<td>Snack</td>
<td>50</td>
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</table>

=200
2) How to measure FAFH (preliminary)

Impact of updating calorie content of FAFH on poverty rates, Peru 2010

- **Extreme poverty**
  - Official: 7.6%
  - Updated: 6.5%

- **Moderate poverty**
  - Official: 30.7%
  - Updated: 27.19%
Closing remarks

• FAFH is rapidly growing, but proper measurement in household surveys is lacking

• Evidence from Peru suggests that accounting for FAFH can have important implications in welfare analysis

• Little is known about how to best measure these consumption patterns

• More methodological research is called for to address this information gap