

Pop quiz:

- What did you eat outside of the home this past week?
- Can you recall how many different food items you ate, and how much of each?
- What about drinks and snacks?

It's harder than you think, isn't it? It turns out that this tricky measurement also affects our understanding of poverty. But some solutions are on the way.

While it may be obvious that the type and quantity of food individuals consume in general can be an important metric of individual and family welfare, looking specifically at food individuals eat outside their home may not seem particularly important. But for policy makers, accurate knowledge about the amount of food consumed away from home (FAFH) can be essential to accurately understand trends in poverty and inform policy accordingly.

Consumption patterns are rapidly changing across the developing world, with prepared and packaged meals, and meals consumed outside the home, taking an ever-growing share of the households' food budget. And with rising incomes, urbanization, and women entering the labor force, consumption of FAFH – and figuring out how to accurately measure it – is becoming more important in poverty measurement work. Earlier work in Peru, for instance, found that the impact of excluding explicit measures of FAFH can be substantial – poverty rates were 16% lower when FAFH is accounted compared to when it's not.

But how well do we capture measures of FAFH in general across the world? Not well, it turns out. Many nationally representative household surveys collect very limited information on FAFH, in part due to the challenges involved – food consumed at home is likely to be more carefully tracked than FAFH, which can come from multiple sources, in multiple locations, and at multiple times. *After all, can you easily recall every snack you consumed in the last week outside your home?*

The Project

To understand how to capture best FAFH, together with the World Bank's Living Standards Measurement Study and responding to the UN Statistical Commission's call for improved guidelines on data collection, we designed an experiment that tested different methods of collecting FAFH consumption. We ran the experiment in Hanoi, Vietnam, in collaboration with the General Statistics Office of Vietnam (GSO), which collects the national household survey that is used to track poverty (the Vietnam Household Living Standards Survey, or VHLSS). We tested four different approaches:

- **A gold standard** (expensive and impractical, but one that gave us a benchmark). We provided a personal food diary to each adult member of the household which helped them track, item-by-item and day-by-day, consumption of all FAFH for seven days; trained enumerators provided directions and check-ins to ensure compliance.
- The **existing one-line approach**, which is what the GSO currently implements, asking one household informant (through a single question) to recall FAFH away from home for everyone in the household.
- **Individual recall**, designed to collect FAFH information directly from each adult in the household, and through a more detailed FAFH module (not just a single question!). By asking every individual separately about their own FAFH consumption rather than relying on a single household informant – and asking separately about various meal events – we hypothesized this would be more accurate than the single household informant, but less intensive than a food diary.
- **Targeting a household informant** and drawing from behavioral science and survey methodology literatures, we developed a simple worksheet tool to help one informant keep track total FAFH consumption for everyone in the house for one week. This approach also enabled us to implement in a first visit a run-down of the module, allowing the informant to know the information that was going to be collected later. Furthermore, the two visits (one at the start of the recall period and one at the end) made the recall period more salient for the informant.



The Results

Using the personal diary as the “gold standard benchmark,” we compared FAFH data collected across the different approaches.



The existing approach is the least accurate.

Unsurprisingly, the single household informants in the first arm, when asked in one question without any behavioral intervention to recall all household consumption, underestimated FAFH by 33% relative to the gold standard. After all, that’s a lot of information about a household to aggregate in a single question.



Individual recall is more reliable, but people still make mistakes.

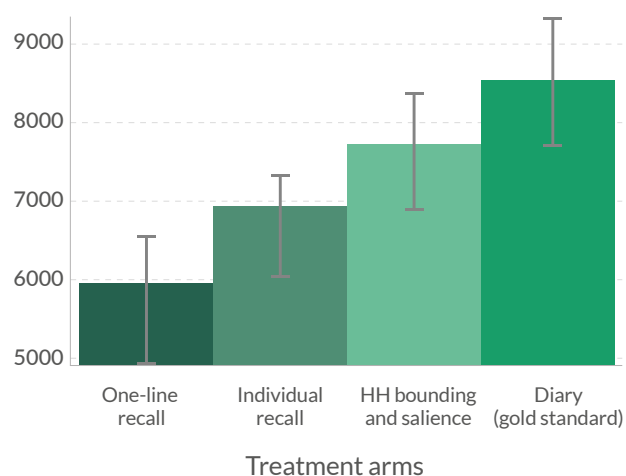
When we get more granular and ask each individual in the household to make their own recollections, FAFH measurement improves – it deviates by 22% from the “gold standard.”



The worksheet and bounding variation worked best.

Making FAFH salient by having a visible object like a simple worksheet helped individuals take notes during the week. In addition, creating “bounds” for our measurement over seven days by having enumerators visit households at the start and finish of the measurement period also helped with precision. Combined, using behavioral insights led to underestimating FAFH consumption by only 11%, a level that is actually not statistically different from the golden standard - a remarkable improvement from the existing methodology.

MEAN PER CAPITA FAFH
(in thousands of VND)



Policy Implications

While the implementation of a better-designed module combined with the application of behavioral techniques – in this case, salience through a worksheet and bounding combined – dramatically increased reliability of the measurement of FAFH, we recognize the factors at play that policy makers face when deciding what techniques to employ to improve measurement, including time commitment and cost. In this project, rough estimates suggest that the individual recall treatment was 7% more expensive than the status quo; the bounding and salience treatment was 33% as expensive; and the diary, or “benchmark” treatment, was twice more expensive. Time spent by enumerators visiting homes and gathering data also increases with more visits and reminders. At the end, the feasibility and costs of any of these options – or variations of them - will depend on the field structure and protocols that are already in place. But both new options

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tested seem promising in drastically improving FAFH measurement. So part of the challenge is to do a cost benefit analysis ex ante as to “how much mismeasurement” are we willing to accept.



Ultimately, the value of accurate food away from home data is essential for policy targeting, welfare tracking, and more. Understanding consumption patterns affects policymaking in critical areas of population welfare including poverty, food security, malnutrition, and non-communicable diseases. This work highlights the inaccuracy associated with collecting FAFH consumption from a single question in a survey, and the high potential value of using behaviorally-informed approaches to identify cost-effective alternatives that can better inform policy making over time. When considering approaches to measuring food away from home, policy makers should consider their own context, costs, and needs to decide on improved methods of data collection. This study provides useful insights into ways to go about it.

About eMBeD

The Mind, Behavior, and Development Unit (eMBeD), the World Bank’s behavioral science team in the Poverty and Equity Global Practice, works closely with project teams, governments, and other partners to diagnose, design, and evaluate behaviorally informed interventions. By collaborating with a worldwide network of scientists and practitioners, the eMBeD team provides answers to important economic and social questions, and contributes to the global effort to eliminate poverty and enhance equity.

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