

# Measuring US Food Insecurity Using Inexpensive Internet Surveys

## **NOPREN Food Security WG Webinar**

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# Measuring US Food Insecurity Using Inexpensive Internet Surveys

## **The gold standard in measuring food security is the numbers used by USDA**

- Administered as part of the Current Population Survey every December
- Costs \$670,000
- Cannot be administered quickly or cheaply at other times, like during Covid-19 in May.

## **During times like Covid-19, can we use inexpensive and nimble internet surveys instead?**

- My research suggests it provides decent estimates
- Costs \$5,000
- Can be administered easily whenever you like.
- Using such surveys suggests Covid-19 didn't increase food insecurity much, if at all.

Ahn, Sunjin and F. Bailey Norwood. 2020. "Measuring Food Insecurity During the Covid-19 Pandemic of Spring 2020." *Applied Economic Perspectives and Policy*. doi:10.1002/aepp.13069.

Sunjin, Ahn, Travis A. Smith, and F. Bailey Norwood. 2020. "Can Internet Surveys Mimic Food Insecurity Rates Published By The US Government?" *Applied Economic Perspectives and Policy*. 42(2):187-204.



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## How food security is measured by USDA

Preliminary Question. Which of these statements best describes the food eaten in your household in the last 12 months?

- Enough of the kinds of food I want to eat
- **Enough but not always the kinds of food I want to eat**
- **Sometimes not enough to eat**
- **Often not enough to eat**
- **Don't know or refuse to answer**

Below are several statements that people have made about their food situation. For these statements, please indicate whether the statement was often true, sometimes true, or never true for you.

1. "I was worried whether my food would run out before I got money to buy more." Was that often, sometimes, or never true for you in the last 12 months?

- **Often true**
- **Sometimes true**
- Never true
- Don't know or refuse to answer

2. "The food that I bought just didn't last, and I didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months?

- **Often true**
- **Sometimes true**
- Never true
- Don't know or refuse to answer

...

plus eight additional questions for households without children, sixteen additional questions for households with children.

**All 10-18 questions used in the Current Population-Food Security Supplement (CPS-FSS) survey used by the USDA.**

Household is assumed food secure (screened-out) if they answer 'enough of the kinds' on the preliminary question and earn income above 185% of the poverty threshold.

*However, it is known that some of these households would have been deemed food INsecure if they were asked the questions.*

For households that are asked the questions, they are deemed food insecure if the number of 'affirmative' answers exceeds a threshold.

**In 2016, the USDA deemed 12.3% of US households food insecure.**



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## How food security is measured by me in cheap internet surveys

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2. "The food that I bought just didn't last, and I didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months?

- **Often true**
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- Never true
- Don't know or refuse to answer

...  
plus eight additional questions for households without children,  
sixteen additional questions for households with children.

Use identical questionnaire as the (CPS-FSS) survey used by the USDA.

I ask all questions regardless of income and answers to the preliminary question (no screening). Should I mimic the USDA's screening process?

	USDA	Me, without screening	Me, with screening
2016 % of food insecure households	12%	43%	33%

For households that are asked the questions, they are deemed food insecure if the number of 'affirmative' answers exceeds THE SAME THRESHOLD used by the USDA



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**USDA survey (\$670,000 per year) versus my cheap internet survey (\$5,000 per year)**

Representation: does the sample “look like” the US?

- USDA survey: yes
- My survey: no, not even close, but I can use sample balancing to [somewhat] correct for my unrepresentative sample.

	USDA	Me, without sample balancing	Me, with sample balancing
2016 % of food insecure households	12%	43%	30%

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**What if I both mimic USDA's screening techniques and use sample balancing?**

	USDA	Me, without screening or sample balancing	Me, with screening and sample balancing
2016 % of food insecure households	12%	43%	26%

**What if I use a more stringent screening procedure?**

	USDA	Me, no adjustments	Me, with stringent screening procedure and sample balancing
2016 % of food insecure households	12%	43%	16%
2017 % of food insecure households	12%	32%	13%

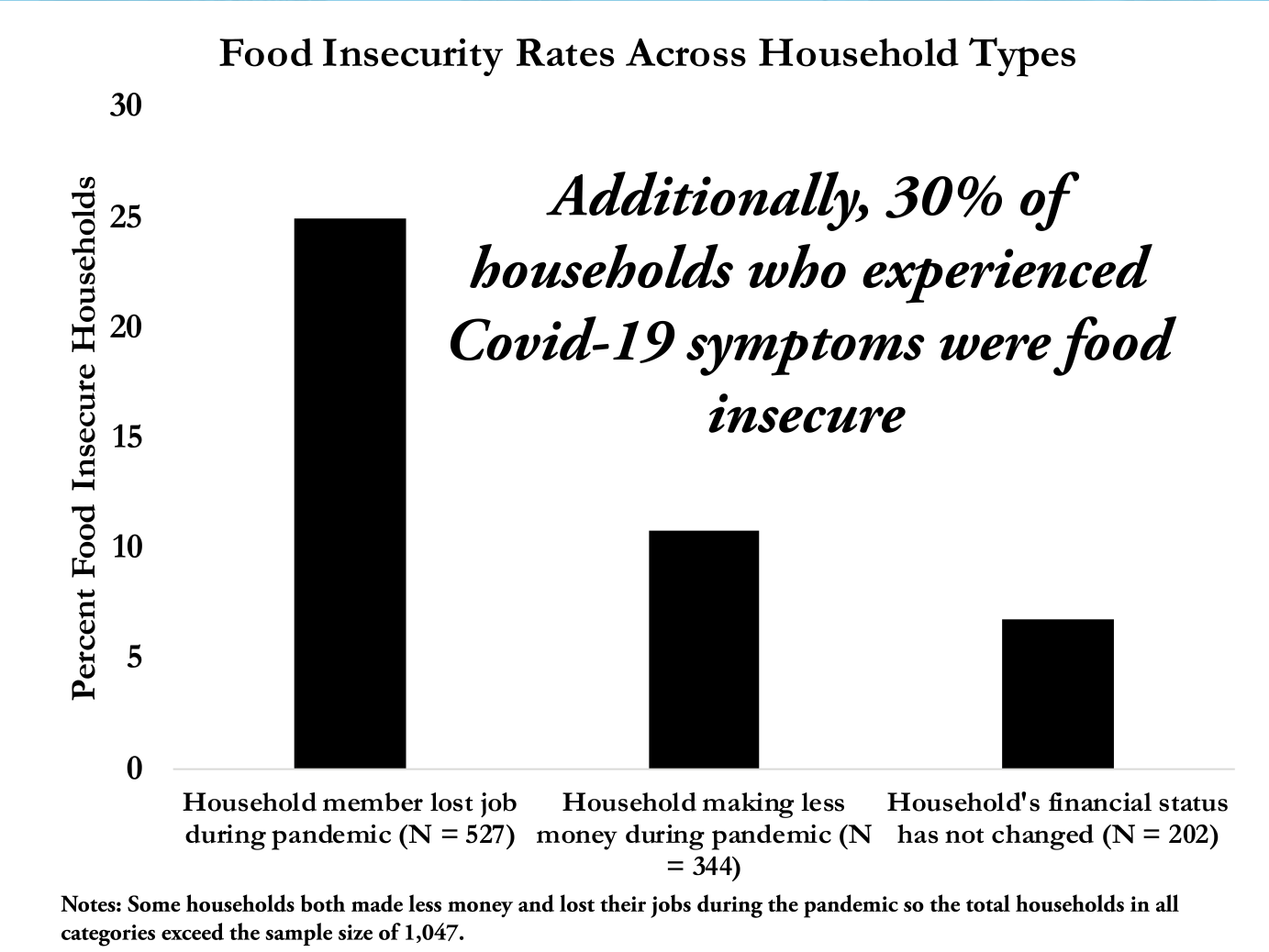
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**Application: how has Covid-19 impacted food insecurity?**

	% food insecure households in US
USDA in 2008	14.6%
USDA in 2018	11.1%
My cheap internet survey 2016-2017	13-16%
My cheap internet survey in May 2020 during Covid-19	15.4% $\pm$ 1.61%

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Application: how has Covid-19 impacted food insecurity?





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**Thank You!**

**Questions?**

