



Hungry at Thanksgiving: A Fall 2020 Update on Food Insecurity in the U.S.

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TECHNICAL APPENDIX

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This technical appendix provides greater detail on the analysis in “[Hungry at Thanksgiving](#).”

Data Sources

CENSUS HOUSEHOLD PULSE SURVEY

Since April, the U.S. Census Bureau has fielded a rapid survey, the Household Pulse Survey (HPS), which is meant to track changes in household circumstances during the coronavirus pandemic. Additional documentation from the Census Bureau on the HPS can be found [here](#).

BROOKINGS SURVEY OF MOTHERS WITH YOUNG CHILDREN

The Survey of Mothers with Young Children (SMYC) was conducted and funded by two initiatives of the Brookings Institution, The Hamilton Project and The Future of the Middle Class Initiative. The Survey of Mothers with Young Children was developed by Lauren Bauer and Richard Reeves; Katherine Guyot and Emily Moss contributed substantially to the development of the survey and we acknowledge the contributions of The Hamilton Project, Future of Middle Class Initiative, and Economic Studies staff at the Brookings Institution. The purpose of the survey is to assess how mothers with children 12 and under have been affected by the COVID-19 pandemic, school closures, and the economic downturn.

The survey was fielded between April 27 and April 28, 2020 and between October 7 and November 5, 2020. These data were collected using SurveyMonkey Audience. Responses were collected from a national sample as well as an oversample

of households with incomes below \$25,000 annually (spring and fall) and an oversample of mothers with children five and younger (fall). The sample is limited to women over the age of 18 in the US who are the mother to at least one child age 12 and under. Information on how respondents are recruited to SurveyMonkey is available here: www.surveymonkey.com/mp/audience.

April SMYC: The final analytic sample is 1,095 respondents who are mothers with children under 12 nationwide. 98 percent of surveys were completed. After data collection, an iterative raking procedure was used to adjust for noncoverage and oversampling. Raking variables include mother age, child age, race/ethnicity, income, region. Demographic weighting variables were obtained from the 2020 Current Population Survey. The weighted data reflect the U.S. populations of mothers with children 12 and under. 212 respondents were excluded from the analysis: pregnant women, respondents who did not report the demographic variables used to reweight the data (who were given a weight of zero and therefore excluded from the analysis), respondents who did not report employment or student status, respondents who did not have a child aged 12 or under, and respondents who provided non-exclusive answers to household employment status questions were also excluded from the survey.

Fall SMYC: The final analytic sample is 1,397 respondents who are mothers with children under 12 nationwide. 84 percent of surveys were completed. After data collection, an iterative raking procedure was used to adjust for noncoverage and oversampling. Raking variables include mother age, child age, race/ethnicity, income, region. Demographic weighting variables were obtained from the 2020 Current Population Survey. 391 respondents were excluded from the analysis:

pregnant women, respondents who did not report the demographic variables used to reweight the data (who were given a weight of zero and therefore excluded from the analysis), respondents who did not report employment or student status, respondents who did not have a child aged 12 or under, and respondents who provided non-exclusive answers to household employment status questions were also excluded from the survey.

Measures

HOUSEHOLD FOOD INSECURITY

The HPS asks respondents whether, in the past seven days, its household was able to consume the quantity and types of food it wanted; was able to consume enough, but not of the type of food it wanted; sometimes was not able to eat enough; or often was not able to eat enough. This question is identical to that asked in the Current Population Food Security Supplement (CPS-FSS, December supplement).

Since the HPS does not ask the full battery of food security questions, Schanzenbach and Pitts (correspondence with authors) map CPS-FSS food insufficiency and food insecurity to the HPS food insufficiency question, following the approach in Bitler et al. (2020). They take the 2015 through 2018 CPS-FSS, limit to all households or families with school-aged children, calculate the share of food insecure households in each food insufficiency category by state, then multiply these rates for the HPS responses in order to obtain a state-by-week level measure of food insecurity. As shown in Bitler et al., 92 percent of the increase in household food insecurity from pre-COVID to transformed food insecurity post-COVID can be explained by increased unemployed, while only 65 percent of the increase in household food insecurity among households with children can be similarly explained. Their work both validates the technique of transforming the Pulse questions into the food insecurity concept and affirms that the loss of school meals and disproportionate loss of employment among women explain a higher share of elevated food insecurity among these families.

VERY-LOW FOOD SECURITY AMONG CHILDREN (VLFS-C)

There are differences across the surveys employed in this analysis to calculate the share of households, parents, or mothers who report that children do not have enough to eat. During the pandemic, HPS and SMYC either asked about food hardship in the prior week, the prior month, or since the pandemic began. I compare the HPS response for the prior week to the CPS-FSS annual numbers on the same question because the question text is comparable. This approach

underestimates the magnitude of the change in food security because it compares a short time period (7 days, 30 days, or since the coronavirus pandemic began) against a long period (past 12 months). The approach overestimates the magnitude of the change if the mode of the survey (live interview for the FSS, online for the COVID) accounts for some of the difference in affirmative response rates from pre- to post-COVID.

Using, as we do here, the limited questions asked on the HPS and SMYC, constrains the analysis to questions that are [validated](#) to screen for food insecurity among *children*.

- **HPS:** The HPS asks: “Please indicate whether the next statement was often true, sometimes true, or never true in the last 7 days for the children living in your household who are under 18 years old: “The children were not eating enough because we just couldn’t afford enough food.” I define VLFS-C as whether a respondent reports that the children in the household sometimes or often did not eat enough in the last seven days because the household could not afford food.
- **April SMYC:** Respondents were asked: “Below are two statements that people have made about their food situation. How often have these statements been true for your household since the coronavirus pandemic? The food that we bought just didn’t last, and we didn’t have enough money to get more. The children in my household were not eating enough because we just couldn’t afford enough food.” Households were defined as experiencing food insecurity if they responded “often true” or “sometimes true” to either question. The subset of those households reporting very low food security among children were those who responded “often true” or “sometimes true” to the second question.
- **Fall SMYC:** Respondents were asked: “Below are two statements that people have made about their food situation. How often have these statements been true for your household in the last 30 days? The food that we bought just didn’t last, and we didn’t have enough money to get more. The children in my household were not eating enough because we just couldn’t afford enough food.” As for April, households were defined as experiencing food insecurity if they responded “often true” or “sometimes true” to either question. The subset of those households reporting very low food security among children were those who responded “often true” or “sometimes true” to the second question.

INCOME LOSS

On the HPS, respondents were asked “Have you, or has anyone in your household experienced a loss of employment income since March 13, 2020? Select only one answer. Yes; No.” Note

that the recall period for income loss for each HPS is since March but, in contrast, the recall period for very low food security among children in the HPS is one week. As a result, the analysis shown in figure 3 may understate the relationship between income losses and VLFS-C.

FOOD SAFETY NET

On the Fall SMYC, mothers were asked “Since the coronavirus pandemic, many households have received income or assistance from a variety of sources. Please select ALL the sources of income or assistance that your household has received since March 1, 2020, when the coronavirus pandemic began. These sources of income or assistance could be earned or received by you, as well as by anyone else who lives with you.” The order of potential income sources was randomized for each participant. Those mothers who reported receipt of SNAP, WIC, Pandemic EBT, or school meals were considered to have participated in the food safety net.

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