





Hunger Among Adults Age 50-59 in 2017: An Annual Report

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EXECUTIVE SUMMARY

In this report, we provide a broad overview of the extent and distribution of food insecurity among individuals between the ages of 50 and 59 in the United States in 2017, along with trends over the past decade and a half using national, state-level, and metropolitan-level data from the December Supplements to the Current Population Survey (CPS). This study complements the annual report on senior hunger from Ziliak and Gundersen (2019).

We concentrate on two measures of food insecurity: food insecurity and very low food security (VLFS). These are based on the full set of 18 questions in the Food Security Supplement (FSS), the module used by the United States Department of Agriculture (USDA) to establish the official food insecurity rates of households in the United States. We define food insecurity by three or more affirmative responses and very low food security as eight or more affirmative responses in households with children or six or more in households without children.

Specifically, in 2017, we find that:

- 11.3% of persons between 50 and 59 are food insecure and 4.7% are very low food secure. This translates into 4.8 million and 2.0 million persons, respectively.
- From 2016 to 2017, there were no statistically significant changes in food insecurity or VLFS. This holds across almost all of the demographic categories as well.
- From 2014 to 2017 there was a statistically significant decline of 1.9 percentage points for food insecurity and 1.2 percentage points for VLFS.
- Compared to 2001, the fraction of food insecure and VLFS persons between ages 50 and 59 increased by 46% and 80%. The number in each group rose 95%, and 139%.
- We find that food insecurity is greatest among those who are racial or ethnic minorities, those with lower incomes, and those who are renters.
- State-level food insecurity rates range from a high of 18.6% (Kentucky) to a low of 4.1% (Colorado).
- Metro-level food insecurity rates range from a high of 19.6% (Hartford, Connecticut) to a low of 5.3% (Denver-Aurora, Colorado).
- Compared to persons ages 60+, rates of food insecurity among 50-59 year olds are higher, but the trend increase since 2001 is greater among seniors, especially VLFS. In addition, the number of food insecure seniors exceeds that of 50-59 year olds because of a larger population of those 60+ in America.

I. FOOD INSECURITY IN 2017

We document the state of food insecurity among adults between the ages of 50 and 59 in the United States spanning 2001-2017. This study complements our annual report on food insecurity of seniors ages 60+ (Ziliak and Gundersen 2019), and also updates analysis on 50-59 year olds from an earlier study (Ziliak and Gundersen 2011).

In December of each year, households respond to a series of 18 questions (10 questions if there are no children present) that make up the Food Security Supplement (FSS) in the Current Population Survey (CPS). The CPS is a nationally representative survey conducted by the Census Bureau for the Bureau of Labor Statistics, providing employment, income and poverty statistics. Households are selected to be representative of civilian households at the state and national levels, using suitably appropriate sampling weights. The CPS does not include information on individuals living in group quarters, including nursing homes or assisted living facilities. Each question on the FSS is designed to capture some aspect of food insecurity and, for some questions, the frequency with which it manifests itself. Respondents are asked questions about their food security status in the last 30 days, as well as over the past 12 months. Following the standard approach used by the USDA, we focus on the questions referring to the past year. The questions from the FSS are found in Appendix Table 1. Because our focus is on food insecurity among those between 50 and 59 years of age, in 2017, this results in 12,094 sample observations. Appendix Table 2 presents selected summary statistics for the CPS sample, adjusted using the FSS survey weight to make the sample nationally representative among 50-59 year olds.

Based on the full set of 18 questions in the FSS, the module used by the USDA to establish the official food insecurity rates of households in the United States, we concentrate on two measures: food insecurity (three or more affirmative responses) and very low food security (VLFS; eight or more affirmative responses in households with children; six or more in households without). One should note that all VLFS persons are also included in the food insecure category.

In Table 1, we present estimates of food insecurity among those between 50 and 59 in 2017. We find that 11.3% were food insecure (4.8 million) and 4.7% were VLFS (2.0 million). These rates are greater than those ages 60+ as reported in Ziliak and Gundersen (2019). Among seniors, we found that 7.7% were food insecure and 3.1% were VLFS. However, since the population of those 60+ is substantially greater than those ages 50-59, there are more seniors who are food insecure (5.5 million) and VLFS (2.2 million).

The table also presents estimates of food insecurity across selected socioeconomic categories. Here we see great heterogeneity across the population. For example, for those with incomes below the poverty line, 43.5% were food insecure and 21.1% were VLFS. In contrast, for those with incomes greater than twice the poverty line, these numbers fall to 5.1%, and 1.6%. Turning to race, White older adults have food insecurity rates that are almost half the rates for Black older adults. Similarly, Hispanics (of any racial category) have food insecurity rates that are higher than non-Hispanics.

| Table 1. The Extent of Food Insecurity | among 50-59 Year Old | ls in 2017 |
|---|----------------------|---------------|
| | Food Insecure | Very Low Food |
| _ | | Secure |
| Overall | 11.3% | 4.7% |
| By Income | | |
| Below the Poverty Line | 43.5 | 21.1 |
| Between 100% and 200% of the Poverty Line | 26.3 | 11.7 |
| Above 200% of the Poverty Line | 5.1 | 1.6 |
| Income Not Reported | 9.8 | 3.9 |
| By Race | | |
| White | 10.2 | 4.3 |
| Black | 19.5 | 8.5 |
| Other | 10.3 | 2.8 |
| By Hispanic Status | | |
| Hispanic | 16.3 | 4.1 |
| Non-Hispanic | 10.6 | 4.8 |
| By Marital Status | | |
| Married | 7.2 | 2.2 |
| Widowed | 21.6 | 9.9 |
| Divorced or Separated | 19.5 | 9.8 |
| Never Married | 18.1 | 9.0 |
| By Metropolitan Location | | |
| Non-Metro | 13.5 | 6.0 |
| Metro | 11.0 | 4.5 |
| By Age | | |
| 50-54 | 11.1 | 4.5 |
| 55-59 | 11.6 | 4.9 |
| By Employment Status | | |
| Employed | 7.3 | 2.3 |
| Unemployed | 30.7 | 10.0 |
| Retired | 8.1 | 3.4 |
| Disabled | 26.8 | 14.5 |
| By Gender | | |
| Male | 10.5 | 4.2 |
| Female | 12.1 | 5.2 |
| By Grandchild Present | | |
| No Grandchild Present | 10.7 | 4.6 |
| Grandchildren Present | 24.8 | 7.8 |
| By Homeownership Status | | |
| Homeowner | 7.6 | 3.0 |
| Renter | 23.5 | 10.2 |
| By Veteran Status | | |
| Veteran | 12.4 | 5.6 |
| | | |

Not a Veteran 11.2 4.6

Source: Authors' calculations from 2017 December Current Population Survey. The numbers in the table show the rates of food insecurity under two measures for various groups. The category of "other race" includes American Indian, Asian, and Pacific Islander.

Food insecurity among persons age 50-59 who are divorced or separated, widowed, or never married are two to three times greater than those who are married in this age range. As age increases, food insecurity rates actually increase slightly, from 11.1% to 11.6% for food insecurity and from 4.5% to 4.9% for VLFS. This is interesting because rates of food insecurity successively fall in five-year age increments after age 60 (Ziliak and Gundersen 2019). In terms of employment categories, the rates are much higher for persons who are unemployed or disabled in comparison to those who are retired or employed. Unlike most other categories where the ordering is the same for food insecurity and VLFS, here the food insecurity rates are higher among the unemployed than the disabled but the opposite holds for VLFS. For persons between the ages of 50 and 59 with a grandchild present, food insecurity rates for both measures are substantially higher than when no grandchildren are present. Those who are renters have rates of both food insecurity and VLFS that are three times higher in comparison to homeowners. Veterans have slightly higher food insecurity and VLFS rates than non-veterans.

Table 2 presents the distribution of food insecurity among those between 50 and 59. In other words, out of those who are food insecure (or VLFS), what proportion fall into a particular demographic category? As seen in the table, the majority in either food insecurity category have incomes above the poverty line. For example, out of those reporting income, over 60% of foodinsecure persons have incomes above the poverty line. Compared to those ages 60+, a larger share of the food insecure 50-59 year old population have incomes above 200% of the poverty line, even though the risk of food insecurity is lower (5.1% in Table 1). A similar story holds for race—while Black older adults are at greater risk of food insecurity under either measure than Whites, over two in three food-insecure or VLFS persons are White. Disabled persons between the ages of 50 and 59 have high proportions in both food insecurity and VLFS – 41.6% and 54.1%.

| Insecurity among 50-59 Year Olds in 2017 | | |
|--|---|--|
| Food Insecure | Very Low Food Secure | |
| | | |
| 28.5% | 33.3% | |
| 24.1 | 25.8 | |
| 25.2 | 19.5 | |
| 22.2 | 21.4 | |
| | | |
| 72.0 | 73.6 | |
| 21.0 | 21.9 | |
| 7.0 | 4.5 | |
| | | |
| 19.6 | 11.9 | |
| 80.4 | 88.1 | |
| | | |
| 41.4 | 30.2 | |
| | Food Insecure 28.5% 24.1 25.2 22.2 72.0 21.0 7.0 19.6 80.4 | |

| Widowed | 6.9 | 7.6 | |
|--------------------------|------|------|--|
| Divorced or Separated | 32.3 | 38.9 | |
| Never Married | 19.4 | 23.4 | |
| By Metropolitan Location | | | |
| Non-Metro | 17.0 | 18.3 | |
| Metro | 83.0 | 81.7 | |
| By Age | | | |
| 50-54 | 48.4 | 47.0 | |
| 55-59 | 51.6 | 53.0 | |
| By Employment Status | | | |
| Employed | 47.4 | 36.3 | |
| Unemployed | 6.6 | 5.2 | |
| Retired | 4.4 | 4.4 | |
| Disabled | 41.6 | 54.1 | |
| By Gender | | | |
| Male | 45.1 | 43.5 | |
| Female | 54.9 | 56.5 | |
| By Grandchild Present | | | |
| No Grandchild Present | 90.8 | 93.0 | |
| Grandchildren Present | 9.2 | 7.0 | |
| By Homeownership Status | | | |
| Homeowner | 51.7 | 49.5 | |
| Renter | 48.3 | 50.5 | |
| By Veteran Status | | | |
| Veteran | 8.2 | 8.8 | |
| Not a Veteran | 91.8 | 91.2 | |

Source: Authors' calculations from 2017 December Current Population Survey. The numbers in the table show the distribution of food insecurity under two measures for various groups. The category of "other race" includes American Indian, Asian, and Pacific Islander.

In Table 3, we present state-level estimates of food insecurity among those between 50 and 59 for 2017 based on averages of 2016-2017 data. The range for food insecurity spans from 4.1% in Colorado to 18.6% in Kentucky and, for VLFS, from 1.1% in Colorado to 9.2% in Arizona. This cross-state range of food insecurity and VLFS exceeds that found among seniors ages 60+, though adjusted for the differences in means, the level of cross-state inequality is comparable. ¹

| Table 3. Sta | Table 3. State-Level Estimates of Food Insecurity among 50-59 Year Olds in 2017 | | | | | | |
|--------------|--|-------------|----|----------|-------------|--|--|
| | Food Very Low Food Very Low | | | Very Low | | | |
| _ | Insecure | Food Secure | | Insecure | Food Secure | | |
| AL | 12.1% | 7.4% | MT | 10.2% | 3.6% | | |
| AK | 9.7 | 3.3 | NE | 10.3 | 4.7 | | |
| AZ | 14.8 | 9.2 | NV | 10.5 | 4.6 | | |
| AR | 13.3 | 6.7 | NH | 8.5 | 3.0 | | |
| | | | | | | | |

¹ This is determined by the coefficient of variation (CV), which measures the ratio of the standard deviation to the mean. The cross-state CV for food insecure 50-59 year olds is 0.29, while it is 0.39 for VLFS. Among those ages 60+ the respective CVs are 0.32 and 0.37.

| CA 10.7 4.8 NJ 6.3 2.1 CO 4.1 1.1 NM 14.0 6.8 CT 15.8 5.5 NY 9.8 4.4 DE 14.5 4.8 NC 13.9 6.0 DC 11.0 4.6 ND 5.1 1.8 FL 12.2 3.0 OH 15.0 6.4 GA 10.2 3.2 OK 14.0 6.4 HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 MO 15.7 4.4 | 0.4 | | | NII | | |
|---|-----|------|-----|-----|------|-----|
| CT 15.8 5.5 NY 9.8 4.4 DE 14.5 4.8 NC 13.9 6.0 DC 11.0 4.6 ND 5.1 1.8 FL 12.2 3.0 OH 15.0 6.4 GA 10.2 3.2 OK 14.0 6.4 HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 | CA | 10.7 | 4.8 | NJ | 6.3 | 2.1 |
| DE 14.5 4.8 NC 13.9 6.0 DC 11.0 4.6 ND 5.1 1.8 FL 12.2 3.0 OH 15.0 6.4 GA 10.2 3.2 OK 14.0 6.4 HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 | CO | 4.1 | 1.1 | NM | 14.0 | 6.8 |
| DC 11.0 4.6 ND 5.1 1.8 FL 12.2 3.0 OH 15.0 6.4 GA 10.2 3.2 OK 14.0 6.4 HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI | CT | 15.8 | 5.5 | NY | 9.8 | 4.4 |
| FL 12.2 3.0 OH 15.0 6.4 GA 10.2 3.2 OK 14.0 6.4 HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 | DE | 14.5 | 4.8 | NC | 13.9 | 6.0 |
| GA 10.2 3.2 OK 14.0 6.4 HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | DC | 11.0 | 4.6 | ND | 5.1 | 1.8 |
| HI 8.7 3.8 OR 13.0 3.1 ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | FL | 12.2 | 3.0 | ОН | 15.0 | 6.4 |
| ID 8.8 3.1 PA 9.3 2.8 IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | GA | 10.2 | 3.2 | OK | 14.0 | 6.4 |
| IL 10.5 4.9 RI 13.2 5.1 IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | HI | 8.7 | 3.8 | OR | 13.0 | 3.1 |
| IN 12.3 6.4 SC 10.5 4.2 IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | ID | 8.8 | 3.1 | PA | 9.3 | 2.8 |
| IA 11.8 3.9 SD 11.3 5.3 KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | IL | 10.5 | 4.9 | RI | 13.2 | 5.1 |
| KS 16.9 5.1 TN 12.4 7.1 KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | IN | 12.3 | 6.4 | SC | 10.5 | 4.2 |
| KY 18.6 8.9 TX 13.6 5.8 LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | IA | 11.8 | 3.9 | SD | 11.3 | 5.3 |
| LA 15.8 7.9 UT 9.0 4.5 ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | KS | 16.9 | 5.1 | TN | 12.4 | 7.1 |
| ME 15.1 5.0 VT 5.8 1.4 MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | KY | 18.6 | 8.9 | TX | 13.6 | 5.8 |
| MD 14.6 6.4 VA 9.8 5.7 MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | LA | 15.8 | 7.9 | UT | 9.0 | 4.5 |
| MA 8.8 3.4 WA 8.7 3.8 MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | ME | 15.1 | 5.0 | VT | 5.8 | 1.4 |
| MI 10.6 5.2 WV 16.0 7.4 MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | MD | 14.6 | 6.4 | VA | 9.8 | 5.7 |
| MN 5.0 2.6 WI 6.3 2.8 MS 16.0 8.0 WY 12.2 4.6 | MA | 8.8 | 3.4 | WA | 8.7 | 3.8 |
| MS 16.0 8.0 WY 12.2 4.6 | MI | 10.6 | 5.2 | WV | 16.0 | 7.4 |
| | MN | 5.0 | 2.6 | WI | 6.3 | 2.8 |
| MO 15.7 4.4 | MS | 16.0 | 8.0 | WY | 12.2 | 4.6 |
| | МО | 15.7 | 4.4 | | | |

Source: Authors' calculations. The numbers are two-year averages found by summing the number of food-insecure persons between 50 and 59 in each category by state across the 2016-2017 December Current Population Surveys and dividing by the corresponding total number of persons between 50 and 59 in each state across the two years.

In Table 4, we highlight the ten states with the highest rates of hunger among those between 50 and 59 in 2017. For food insecurity, five of the 10 are located in the South and Southwest. The ten-highest states for VLFS is even more concentrated – nine of the ten states are in those regions. There are some differences across categories, though. For example, Arizona has the highest rate for VLFS but the tenth highest for food insecurity.

| Table 4. Ten States with the Highest Rates of Food Insecurity among 50-59 Year Olds in 2017 | | | | |
|--|--------|-------------------|------|--|
| Food In: | secure | Very Low Food Sec | eure | |
| KY | 18.6% | AZ | 9.2% | |
| KS | 16.9 | KY | 8.9 | |
| WV | 16.0 | MS | 8.0 | |
| MS | 16.0 | LA | 7.9 | |
| CT | 15.8 | WV | 7.4 | |

| LA | 15.8 | AL | 7.4 |
|----|------|----|-----|
| MO | 15.7 | TN | 7.1 |
| ME | 15.1 | NM | 6.8 |
| ОН | 15.0 | AR | 6.7 |
| AZ | 14.8 | IN | 6.4 |
| | | | |

We now turn to food insecurity and VLFS rates by large metropolitan areas (i.e., more than 1 million in total population) for persons between the ages of 50 and 59. These are based on data from 2013 to 2017. This is found in Table 5. Like with state rates, there is a wide range of estimates. For food insecurity, the highest rate, in the Hartford, Connecticut metro area, is almost three times higher than the lowest rate, in Denver-Aurora, Colorado (19.6% versus 5.3%). For VLFS, the highest is, again, the Hartford, Connecticut metro area and the lowest is Raleigh (11.7% and 1.2%).

| | Food Insecure | Very Low Food Secure |
|--|---------------|----------------------|
| Atlanta-Sandy Springs-Marietta, GA | | |
| Austin-Round Rock, TX | 9.4% | 3.9% |
| Baltimore-Towson, MD | 6.9 | 3.7 |
| | 14.4 | 5.2 |
| Birmingham-Hoover, AL | 12.5 | 7.4 |
| Boston-Cambridge-Quincy, MA-NH | 8.3 | 3.9 |
| Buffalo-Niagara Falls, NY | 14.0 | 4.0 |
| Charlotte-Gastonia-Concord, NC-SC | 10.5 | 4.0 |
| Chicago-Naperville-Joliet, IL-IN-WI | 9.2 | 3.7 |
| Cincinnati-Middletown, OH-KY-IN | 13.1 | 5.2 |
| Cleveland-Elyria-Mentor, OH | 15.8 | 7.4 |
| Columbus, OH | 13.9 | 6.0 |
| Dallas-Fort Worth-Arlington, TX | 14.6 | 6.6 |
| Denver-Aurora, CO | 5.3 | 1.9 |
| Detroit-Warren-Livonia, MI | 13.1 | 4.7 |
| Hartford-West Hartford-East Hartford, CT | 19.6 | 11.7 |
| Houston-Baytown-Sugar Land, TX | 11.1 | 5.5 |
| Indianapolis, IN | 11.8 | 6.3 |
| Jacksonville, FL | 12.7 | 3.9 |
| Kansas City, MO-KS | 14.7 | 3.9 |
| Las Vegas-Paradise, NM | 11.9 | 4.6 |
| Los Angeles-Long Beach-Santa Ana, CA | 10.8 | 4.7 |
| Louisville, KY-IN | 16.0 | 7.7 |
| Memphis, TN-MS-AR | 15.2 | 6.7 |
| Miami-Fort Lauderdale-Miami Beach, FL | 11.9 | 3.7 |
| Milwaukee-Waukesha-West Allis, WI | 8.5 | 3.8 |
| Minneapolis-St Paul-Bloomington, MN-WI | 7.7 | 3.0 |

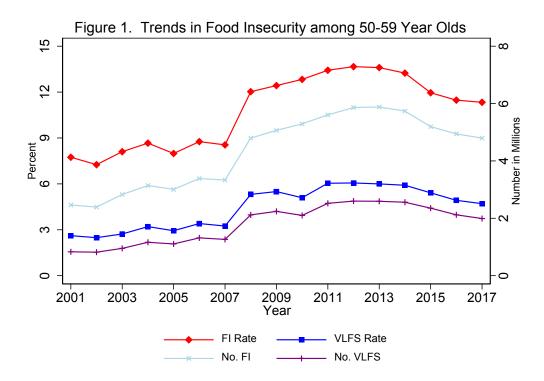
| 0.0 | 1.5 |
|------|--|
| | 4.5 |
| | 8.3 |
| 10.4 | 4.4 |
| 13.5 | 6.0 |
| 13.7 | 6.3 |
| 9.8 | 3.1 |
| 14.1 | 7.2 |
| 10.1 | 5.7 |
| 14.7 | 7.8 |
| 14.2 | 4.1 |
| 7.0 | 1.2 |
| 8.6 | 4.4 |
| 14.3 | 4.9 |
| 14.2 | 6.7 |
| 10.6 | 4.6 |
| 11.7 | 6.2 |
| 9.1 | 6.2 |
| 14.9 | 7.6 |
| 7.0 | 2.6 |
| 6.4 | 2.7 |
| 8.6 | 1.5 |
| 6.9 | 2.9 |
| 9.8 | 4.7 |
| 14.1 | 7.3 |
| 7.2 | 3.3 |
| | 13.7 9.8 14.1 10.1 14.7 14.2 7.0 8.6 14.3 14.2 10.6 11.7 9.1 14.9 7.0 6.4 8.6 6.9 9.8 14.1 |

Source: Authors' calculations. The numbers are five-year averages found by summing the number of food-insecure persons between 50 and 59 in each category by metro areas across the 2013-2017 December Current Population Surveys and dividing by the corresponding total number of persons between 50 and 59 in each metro area across the five years.

II. FOOD INSECURITY OVER TIME

To better understand how the 2017 food insecurity and VLFS estimates compare to prior years, in Figure 1 we provide estimated trends in food insecurity since 2001. In Figure 1, we display results for all those between 50 and 59 in terms of the percentage (left-hand axis) and number in millions (right-hand axis). The figure shows that there was a sharp increase in both food insecurity and VLFS with the onset of the Great Recession in 2008, and these rates continued to increase until 2012, before declining starting in 2014. From 2014 to 2017, there were statistically significant and substantive decreases of 1.9 percentage points in food insecurity and 1.2 percentage points for VLFS. Food insecurity rates remain higher than before the Great Recession, which is not true in the general population (Coleman-Jensen et al. 2018). The fraction experiencing food insecurity and VLFS has increased by 46%, and 80%. In terms of the number of food insecure persons, this rose in each group rose by 95%, and 139%. Interestingly, the

number of persons 50-59 who are food insecure is falling in tandem with the rates. This is not the experience of the 60+ population reported in Ziliak and Gundersen (2019), due to both the rising share of the population who are seniors and, at least in the case of VLFS, failure of that rate to decline.



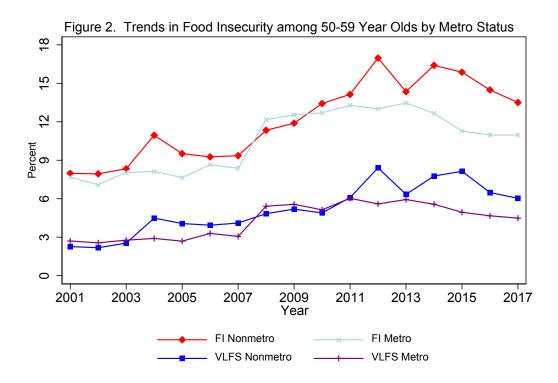
In Table 6, we take a deeper look into underlying changes in the composition of food-insecurity among 50-59 year olds from 2016 to 2017. The table presents percentage point changes in both categories of food insecurity by the same set of socioeconomic characteristics in Table 1. Consistent with the overall lack of statistically significant changes in food insecurity, there is only one statistically significant change in food insecurity. Namely, there was a statistically significant decline among Hispanics for VLFS.

| Table 6. Changes in the Composition of Hunger among 50-59 Year Olds from 2016 to 2017 | | | | | |
|--|---------------|----------------------|--|--|--|
| | Food Insecure | Very Low Food Secure | | | |
| Overall | -0.14 | -0.22 | | | |
| | | | | | |
| By Income | | | | | |
| Below the Poverty Line | -1.64 | -2.60 | | | |
| Between 100% and 200% of the Poverty Line | -1.49 | 0.03 | | | |
| Above 200% of the Poverty Line | 0.41 | 0.00 | | | |
| Income Not Reported | 0.80 | 0.53 | | | |
| By Race | | | | | |
| White | -0.06 | -0.08 | | | |
| Black | -1.48 | -0.88 | | | |

| Other | 1.59 | -0.38 |
|---|---|----------------------------|
| By Hispanic Status | | |
| Hispanic | 2.13 | -1.62* |
| Non-Hispanic | -0.51 | 0.00 |
| By Marital Status | | |
| Married | 0.01 | -0.14 |
| Widowed | 0.21 | -1.59 |
| Divorced or Separated | -1.48 | -1.32 |
| Never Married | 1.09 | 1.51 |
| By Metropolitan Location | | |
| Non-Metro | -0.98 | -0.45 |
| Metro | 0.00 | -0.18 |
| By Age | | |
| 50-54 | 0.24 | 0.09 |
| 55-59 | -0.52 | -0.52 |
| By Employment Status | | |
| Employed | 0.16 | -0.14 |
| Unemployed | 4.78 | -4.76 |
| Retired | 0.24 | -0.07 |
| Disabled | -0.71 | 0.86 |
| By Gender | | |
| Male | 0.18 | -0.17 |
| Female | -0.44 | -0.26 |
| By Grandchild Present | | |
| No Grandchild Present | -0.19 | -0.25 |
| Grandchildren Present | 1.73 | 0.63 |
| By Homeownership Status | | |
| Homeowner | 0.11 | 0.07 |
| Renter | -0.92 | -1.14 |
| By Veteran Status | | |
| Veteran | 2.56 | 1.04 |
| Not a Veteran | -0.35 | -0.32 |
| Source: Authors' calculations The numbers i | n the table reflect percentage point al | panges from 2016-2017. The |

Source: Authors' calculations. The numbers in the table reflect percentage point changes from 2016-2017. The asterisks denote statistical significance at the following levels: *** p<0.01; ** p<0.05; * p<0.1. The category of "other race" includes American Indian, Asian, and Pacific Islander.

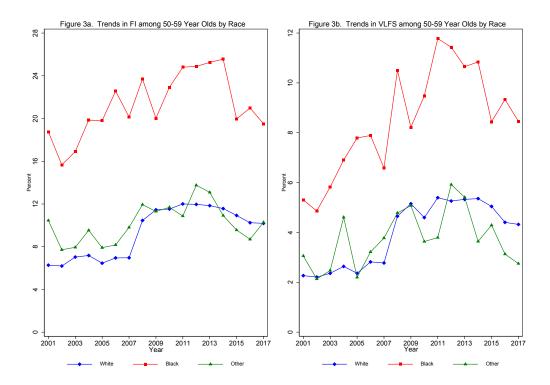
In the next set of figures, we examine trends in food insecurity since 2001 across a variety of subpopulations found in Tables 1 and 6. We begin in Figure 2 with trends in food insecurity for those living in metropolitan areas versus nonmetropolitan areas. The figure shows that, for most, but not all, years, food insecurity rates were higher in nonmetro areas, especially after the Great Recession. For VLFS, a similar pattern holds, albeit rates were higher in metro areas for six of the years.



Panel A of Figure 3 depicts trends in food insecurity across different races and panel B is for VLFS.² As discussed above, food insecurity and VLFS for Black older adults are substantially higher than Whites. These figures reveal that these differences were present in each year from 2001 to 2017. Of note, though, is that, looking at 2001 versus 2017, the food insecurity rates rose substantially for Whites but not Black older adults over this time period. Comparing Whites and the "other" category, rates are generally higher among the "other" category than among Whites in all years for both measures.

-

² Asians, Pacific Islanders, and Native Americans are combined into "other" race because their sample sizes are too small to depict separately.



In Figure 4, we present trends broken down by Hispanic status. For food insecurity, the rates are higher among Hispanics than non-Hispanics in all years. The trends in VLFS are similar, with the exception of 2017, which saw slightly higher rates among non-Hispanics. What is interesting here is that the post- Great Recession recovery in food insecurity among 50-59 year olds was led by the strong declines among Hispanics.

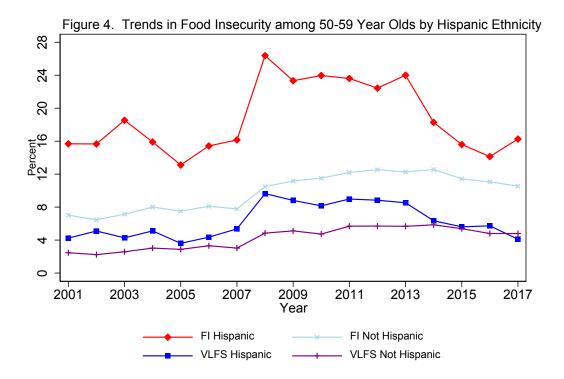
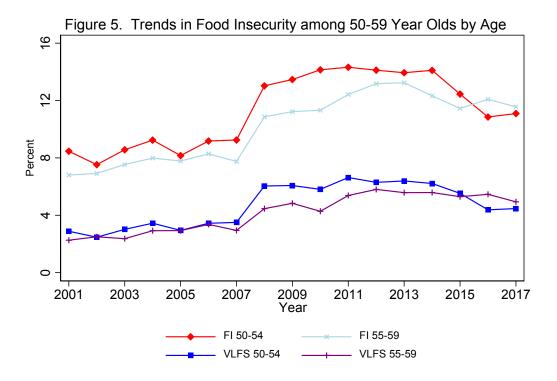


Figure 5 presents a parallel set of results broken down into two age groups—50-54 years old and 55-59 years old. As noted above, in 2017, food insecurity and VLFS rates were higher among the older group. This is a relatively new phenomenon – prior to 2016, the opposite held. In all years, the rates of food insecurity are highest for those between 60 and 69, followed by 70-79-year olds, and 80+-year olds. The patterns over time do show differences in trajectories and relative gaps between age categories.



III. CONCLUSION

This report demonstrates that food insecurity is an ongoing challenge among those between the ages of 50 and 59 in America. Almost 1 in 8 persons between the ages of 50 and 59 were food insecure in 2017, which is 46% higher than in 2001 and still exceeds the rate prior to the Great Recession of 2007-2009. Very low food security has grown at an even more rapid clip of 80% since 2001. Gundersen and Ziliak (2015) survey the research literature on the links between food insecurity and health outcomes in the United States. They note that compared to children and seniors there is comparatively less work on health outcomes of food insecure non-elderly adults, but there does appear to be evidence that food insecurity is associated with reduced nutrient intakes, heightened mental health challenges and depression, and risk of diabetes and related health outcomes. Many of these studies rely on data that pre-dates the stark rise of food insecurity during the Great Recession, suggesting more rigorous analyses on updated data are necessary to better inform public health policy on the consequences of rising food insecurity among older adults.

| Appendix Table 1: Questions on the Foot Food Insecurity Question | Asked of Households with | Asked of Households |
|--|--------------------------|---------------------|
| | Children | without Children |
| 1. "We worried whether our food would run out before we got money to buy more." Was that often, sometimes , or never true for you in the last 12 months? | Х | X |
| 2. "The food that we bought just didn't last and we didn't have money to get more." Was that often , sometimes , or never true for you in the last 12 months? | X | X |
| 3. "We couldn't afford to eat balanced meals." Was that often, sometimes , or never true for you in the last 12 months? | X | X |
| 4. "We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food." Was that often , sometimes , or never true for you in the last 12 months? | X | |
| 5. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn't enough money for food? (Yes/No) | X | X |
| 6. "We couldn't feed our children a balanced meal, because we couldn't afford that." Was that often, sometimes , or never true for you in the last 12 months? | X | |
| 7. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? (Yes/No) | X | X |
| 8. (If yes to Question 5) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? | X | X |
| 9. "The children were not eating enough because we just couldn't afford enough food." Was that often , sometimes , or never true for you in the last 12 months? | X | |
| 10. In the last 12 months, were you ever hungry, but didn't eat, because you couldn't afford enough food? (Yes/No) | X | X |
| 11. In the last 12 months, did you lose weight because you didn't have enough money for food? (Yes/No) | X | X |
| 12. In the last 12 months, did you ever cut the size of any of the children's meals because there wasn't enough money for food? (Yes/No) | X | |
| 13. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food? (Yes/No) | X | X |
| 14. In the last 12 months, were the children ever hungry but you just couldn't afford more food? (Yes/No) | X | |
| 15. (If yes to Question 13) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? | X | X |
| 16. In the last 12 months, did any of the children ever skip a meal because there wasn't enough money for food? (Yes/No) | X | |
| 17. (If yes to Question 16) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? | x | |
| 18. In the last 12 months did any of the children ever not eat for a whole day because there wasn't enough money for food? (Yes/No) | X | |

Notes: Responses in bold indicate an "affirmative" response.

| Appendix Table 2: Selected Characteristics of Americans between 50 and 59 in 2017 | | |
|---|------|--|
| Income Categories | | |
| Below the Poverty Line | 0.07 | |
| Between 100% and 200% of the Poverty Line | 0.10 | |
| Above 200% of the Poverty Line | 0.56 | |
| Missing Income | 0.26 | |
| Racial Categories | | |
| White | 0.80 | |
| Black | 0.12 | |
| Other | 0.08 | |
| Hispanic Status | | |
| Hispanic | 0.14 | |
| Non-Hispanic | 0.86 | |
| Marital Status | | |
| Married | 0.65 | |
| Widowed | 0.04 | |
| Divorced or Separated | 0.19 | |
| Never Married | 0.12 | |
| Metropolitan Location | | |
| Non-Metro | 0.14 | |
| Metro | 0.86 | |
| Age | | |
| 50 to 54 | 0.49 | |
| 55 to 59 | 0.51 | |
| Employment Status | | |
| Employed | 0.74 | |
| Unemployed | 0.02 | |
| Retired | 0.06 | |
| Disabled | 0.18 | |
| By Gender | | |
| Male | 0.49 | |
| Female | 0.51 | |
| Grandchild Present | | |
| No Grandchild Present | 0.96 | |
| Grandchild Present | 0.04 | |
| By Homeownership Status | | |
| Homeowner | 0.77 | |
| Renter | 0.23 | |
| By Veteran Status | | |
| Veteran | 0.07 | |
| Not a Veteran | 0.93 | |

REFERENCES

- Coleman-Jensen, A., M. Rabbitt, C. Gregory, and A. Singh. 2018. *Household food security in the United States in 2017*. Washington (DC): Department of Agriculture, Economic Research Service; Sep (Economic Research Report No. 256).
- Gundersen, C. and J. Ziliak. 2015. "Food Insecurity and Health Outcomes." *Health Affairs*, 34(11): 1830-1839.
- Ziliak, J. and C. Gundersen. 2011. *A Report on Food Insecurity among Adults Age 50+*. Report submitted to AARP Foundation.
- Ziliak, J. and C. Gundersen. 2019. *The State of Senior Hunger in America 2017: An Annual Report.* Report submitted to Feeding America.

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