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Why Did Food Insecurity Increase from 2019 to 2022 in the United States?

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March 2024

In 2022, the United States witnessed a notable rise in household food insecurity, reversing a decade-long decline. Some observers have argued that the expiration of government relief efforts stemming from the COVID-19 pandemic caused the one-year spike. However, the household food insecurity rate was higher in 2022 than in 2019, the year before the pandemic started. We explore several potential reasons for the household food insecurity increase from 2019 to 2022. We find that neither changes in the social safety net nor underlying economic factors, such as unemployment, could explain this trend. Instead, we attribute the increase to a rise in food price inflation during this period, compounded by changes in the survey methodology for food insecurity assessment. The increase in food insecurity would likely have been larger without expansions to the social safety net during this time. We conclude with several recommendations to keep food price inflation low.

After peaking during the Great Recession, food insecurity rates in the United States had been falling dramatically since 2010. For all households in the United States, food insecurity rates declined from 14.5 percent in 2010 to 10.2 percent in 2021 (a 29.4 percent decline), with an even greater fall of 38.0 percent for households with children (from 20.2 percent to 12.5 percent). Moreover, these declines occurred for every demographic category (Gundersen 2023a). In 2022, however, food insecurity rates went up sharply, reversing some of the progress made over the past decade. The food insecurity rate rose to 12.8 percent for all US households and to 17.3 percent for households with children (Rabbitt et al. 2023). These rates represent the highest food insecurity rates in the US since 2014.

The one-year reversal in food insecurity rates has received attention from scholars and policymakers, with some implying that the expiration of certain pandemic-era safety-net expansions, including the expanded child tax credit (CTC), was behind the rise.[1] While the expiration of some pandemic-related safety-net expansions coincided with the food insecurity rate increases in 2022, food insecurity rates also increased from 2019 to 2022, making the end of pandemic-relief an unlikely culprit for this rise. This raises an important policy question: After more than a decade of declines, why did food insecurity rates

1 For example, US Department of Agriculture Secretary Thomas Vilsack wrote: "The uptick in food insecurity also occurred at a time when significant safety-net enhancements that helped people through the worst of the pandemic began to end, including the expanded child tax credit, universally free school meals, and, in a number of states, higher SNAP benefits" (USDA 2023a).

increase so sharply from 2019 to 2022? By comparing food insecurity trends for 2019 and 2022, we eliminate most of the short-term pandemic-related financial assistance as a potential reason for the rise in food insecurity.[2]

Understanding the reasons behind the increase in food insecurity from 2019 to 2022 remains relevant to contemporary policy debates. If the reasons relate to cuts to government programs, as some commentators have suggested, then this finding would inform discussions over safety-net program reforms. However, if the reasons lie elsewhere, alternative approaches might be in order.

To answer the question of what contributed to the food insecurity rate increases from 2019 to 2022, we structure this report as follows. First, we define food insecurity and describe how the federal government measures it. As part of this description, we also explain the "resource gap" as another potential determinant of food insecurity trends during this time. Next, we describe the data we use, the December Food Security Supplement of the Current Population Survey (CPS).

In the third section, we explore several potential explanations for the rise in food insecurity rates from 2019 to 2022. After documenting changes to the composition of the food-insecure population, we examine five possible factors that the literature has linked to changes in food insecurity rates: changes to safety-net programs, the measure itself, economic conditions (e.g., unemployment, income, poverty rates, and disability status), food prices, and the resource gap. In the final section, we summarize the results and offer some preliminary policy conclusions based on these results.

Our central findings are fivefold. First, we find that changes to some of the standard predictors of food insecurity, such as unemployment and poverty rates, did not change in a way that would explain a rise in food insecurity over this period. As such, it is unlikely that a reduction in household resources led to this increase.

Second, changes to the social safety net likely did not contribute to the rise in food insecurity, mostly because the tremendous pandemic-related expansions to the safety net had largely expired by 2022. Furthermore, those changes that had not expired made the social safety net more generous, which should have lowered food insecurity rates. In support of this view, we found that food insecurity rates actually fell among Supplemental Nutrition Assistance Program (SNAP) participants over this period.

Third, we found that changes made to the structure of the survey used to establish food insecurity rates were possibly responsible for up to a third of the increase from 2019 to 2022.

Fourth, and most importantly, we found that food price inflation explains almost all the increase that was not due to survey instrument changes. The increase was consistent with what we would expect based on previous analyses of the impact of food prices on food insecurity. In fact, the increase in food insecurity rates was less severe than these estimates would predict, suggesting the continued effectiveness of the safety net.

Fifth, the increase in food insecurity rates given food price increases was expected, but less understood is why the resource gap increased so dramatically. We offer potential reasons for and implications of this finding. This increase may help further explain the changing composition of the food-insecure population over this period.

Methodology and Data

The following summarizes the data we used to assess food insecurity rates and our methods for assessing the potential factors that led to the increase from 2019 to 2022.

Data. The official measure of food insecurity in the United States, as established by the US Department of Agriculture (USDA), uses data collected from the Food Security Supplement (FSS) to the CPS, which is a household survey conducted by the US Census Bureau. The CPS is also the official data source for poverty and unemployment rates in the US. Since 1995, the CPS has been used as the official data source for food insecurity rates in the US (e.g., Rabbitt et al. 2023). The questions assessing food insecurity have been largely unchanged since 1995; however, only since 2001 has the Census Bureau conducted the FSS in December of each year as a supplement to the monthly CPS. Additionally, the FSS included

2 For a discussion of the impacts of these programs and other factors on food insecurity during COVID-19, see Gundersen (2023b).

minor modifications to the wording and ordering of food security questions and screener questions in 2008 and again in 2022 (Coleman-Jensen and Rabbitt 2023). These changes should be kept in mind when interpreting trends over time.

Along with being the official source for food insecurity rates in the US, the CPS has other advantages, including a sample size of about 50,000 households per month that allows for comparisons across a number of categories of interest. It has been widely used in many other studies, and food security data are collected annually, allowing for year-by-year comparisons and the aggregating of data across years. However, data limitations also exist, including underreporting of income and government benefit receipt that sometimes makes interpreting long-term trends difficult (Meyer, Mittag, and Goerge 2022).

Food Insecurity Measurement. To assess food insecurity, the FSS includes a series of 18 questions about food hardships due to financial constraints.[3] High-income households that do not respond affirmatively to a question about food insufficiency screen out of the FSS, with all other households answering FSS questions. Survey questions vary by severity. For example: "Was it often, sometimes, or never true that we worried whether our food would run out before we got money to buy more?" "Did you or the other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?" "Were you ever hungry, but didn't eat, because there wasn't enough money for food?" "Did any of the children ever skip a meal because there wasn't enough money for food?"[4]

For most questions in the FSS, respondents simply answer "yes" or "no." In other cases, the survey asks respondents whether a particular instance of food-related hardship occurred "never," "sometimes," or " often" over the past year. A response of "yes," "sometimes," or "often" counts as an affirmative response. Other questions ask respondents if something happened "almost every month," "some months but not every month," or "in only one or two months." A response of "almost every month" or "some months but not every month" counts as an affirmative response.

Based on these responses, households are delineated into three categories: food secure if they respond affirmatively to two or fewer questions, low food secure if they respond affirmatively to three to seven questions (three to five questions for households without children), and very low food secure if they respond affirmatively to eight or more questions (six or more questions for households without children).[5]

Resource Gap. In addition to questions concerning food insecurity, the CPS includes a series of questions about household food spending. Households reporting a positive amount of usual spending on food are asked: "In order to buy just enough food to meet (your needs/ the needs of your household), would you need to spend more than you do now, or could you spend less?" For those indicating that they need more resources, they are asked: "How much more would need to be spent each week to buy just enough food to meet household needs?"

The resource gap is the reported amount the household would need to spend each week to buy just enough food to meet household needs and is further restricted to include only food-insecure households. If they report needing "less" or the "same," the resource gap is zero.[6] This question precedes the 18-item scale in the FSS. Resource-gap questions have not changed over time; however, the concept of need could have changed over time, which might affect trends in resource gaps. This is important to consider given how the COVID-19 pandemic in 2020 and 2021 might have changed perceptions of household needs.

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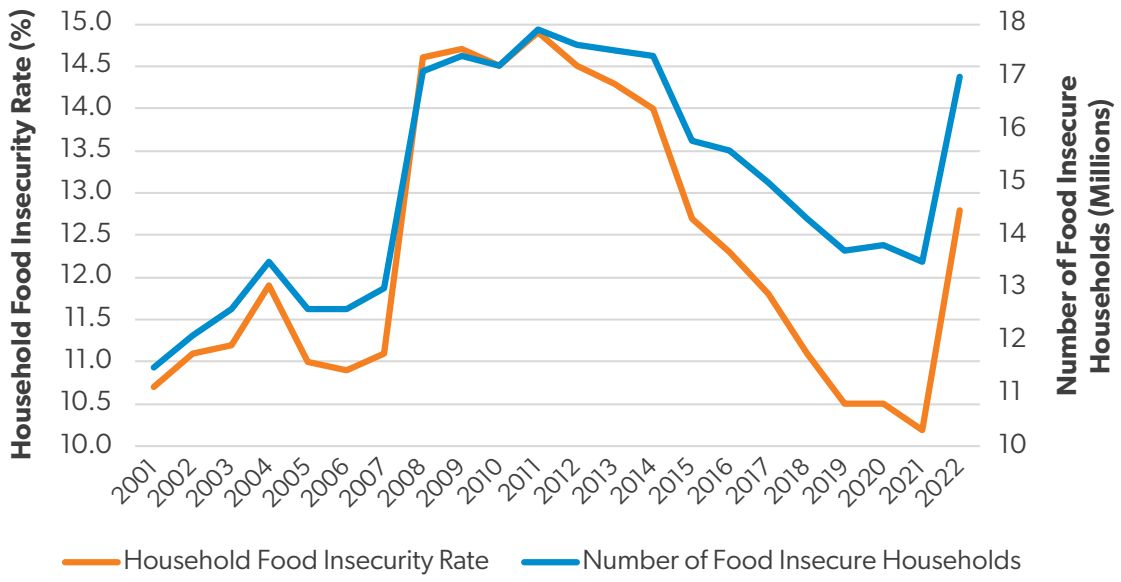
3 There are 10 questions for households without children and 18 for households with children.

4 Rabbitt et al. (2023) shows the complete set of questions.

5 Research has consistently shown that the Food Security Supplement has strong internal validity, meaning that it assesses well the condition of food insecurity, giving us confidence that the measure itself accurately represents food insecurity, at least as respondents perceive it. However, concepts of food insecurity differ across respondents and time, which is important when interpreting long-term trends and for understanding the implications of changes to food insecurity rates. Since we are looking at changes over a three-year period, these potential long-term trends are not as relevant for this report.

6 Work using the resource gap includes Gundersen and Ribar (2011), Gundersen et al. (2018), and Gundersen (2021).

Figure 1. Trends in Food Insecurity, All Households, 2001–22



Source: US Census Bureau (2010–22), USDA (2023b).

Results

Below we describe trends in food insecurity rates, followed by an exploration of the possible factors explaining these trends.

Trends. Figure 1 displays the household food insecurity rate and the number of food-insecure households in the US from 2001 to 2022. Over this period, there were two large increases from the previous year. The first was from 2007 to 2008 due to the Great Recession. The second was from 2021 to 2022. In between, after peaking in 2010, food insecurity rates started to decline, especially after 2014, reaching a record low in 2021.

The increase in 2022 led to a food insecurity rate that was higher than in 2015 but below rates from 2008 to 2014. Generally, these patterns reflect changes to the business cycle, with food insecurity rates fluctuating with unemployment conditions. While the increase from 2021 to 2022 was the largest since 2009, the more relevant increase is from 2019 to 2022, given the factors associated with the pandemic in 2020 and 2021 that likely confounded the one-year trends.

In Table 1, we provide a breakdown of food insecurity rates for selected demographic groups in 2019 and 2022 along with the percentage changes in these rates. With one exception, every group saw increases in food insecurity. The one exception is for SNAP recipients, who saw a decline in their food insecurity rates over this period. Only households below the poverty line and those living in the West had increases in food insecurity of less than 10 percent. The following groups had increases above 30 percent: Hispanics, homeowners, married persons, and persons over age 65.

Potential Reasons for Increases in Food Insecurity. We now turn to several potential reasons for the increase in food insecurity rates from 2019 to 2022. We explore changes to safety-net programs, the survey, economic conditions, food prices, and the resource gap.

Changes to Safety-Net Programs. One potential reason for the increase in the food insecurity rate involves cuts to safety-net programs that might have reduced available resources for food within households. However, policy changes from 2019 to 2022 suggest the opposite effect. In response to the pandemic, federal lawmakers made several changes to safety-net programs, offering substantial financial assistance to households to help them withstand the challenges posed by the crisis.

Table 1. Changes in Food Insecurity Rates from 2019 to 2022 by Selected Demographics

	2019	2022	Percent Change from 2019 to 2022
Child Present	12.9%	16.8%	30.0
No Children Present	9.7%	11.4%	18.0
White Non-Hispanic	7.9%	9.2%	16.8
Black Non-Hispanic	19.0%	22.4%	17.6
Other Non-Hispanic	9.5%	11.0%	16.1
Hispanic	15.6%	20.8%	32.8
Below Poverty Line	34.9%	36.7%	5.2
Between 100 and 200 Percent of Poverty Line	21.9%	26.0%	18.7
Above 200 Percent of Poverty Line	4.9%	6.1%	25.7
Income Missing	8.4%	10.6%	26.7
SNAP Recipient	50.4%	47.7%	–5.3
Non-SNAP Recipient	7.3%	9.2%	26.9
Homeowner	6.0%	7.9%	32.2
Renter	19.4%	22.5%	15.9
One-Person Household	12.9%	14.5%	12.4
Two- to Four-Person Household	8.8%	11.2%	27.6
Five-Person Household or Larger	14.9%	18.2%	22.3
Less Than High School Degree	24.1%	28.2%	17.0
High School Degree or More	9.2%	11.5%	24.8
Married	5.8%	8.1%	37.7
Single	14.9%	17.2%	15.5
Disability in Household	19.4%	21.7%	12.0
No Disability in Household	8.2%	10.4%	26.4
Respondent Between Age 18 and 64	11.9%	14.3%	20.0
Respondent over Age 65	6.7%	8.9%	32.0
Nonmetro Area	12.1%	14.7%	21.8
Metro Area	10.3%	12.5%	21.5
Northeast	9.5%	11.6%	22.2
Midwest	10.5%	12.4%	17.3
South	11.2%	14.5%	29.5
West	10.2%	11.2%	9.9

US Census Bureau (2010–22), 2019 and 2022 data.

These changes primarily expanded resources available to households during the pandemic, with much of the assistance taking on a temporary nature, set to expire by 2022. This included economic stimulus payments, emergency SNAP allotments, and the expanded CTC. However, the effects of some of these changes lingered into 2022. For example, households received the lump sum portion of the 2021 CTC expansion in early 2022, and some changes to SNAP did not expire fully until, depending on the state, the early the early part of 2023. Federal lawmakers waived SNAP work requirements, provided emergency allotments, and increased benefits, with higher benefits lingering into 2022.

Additionally, the USDA permanently increased SNAP benefits through a reevaluation of the Thrifty Food Plan (a low-cost food basket used to set the value of SNAP) in October 2021 by an average 25 percent, making the benefits in real terms more generous in 2022 compared to 2019 (USDA 2021; Gersten-Paal 2021). In sum, policy changes from 2019 to 2022 likely resulted in a more generous safety net for most households in 2022. Therefore, changes in safety-net benefits did not diminish resources to households in a manner that could account for the increase in food insecurity observed from 2019 to 2022.

Safety-net changes that lingered into 2022 would have affected demographic groups differently. For example, households with children in 2022 likely had access to more safety-net resources in 2021 than in 2019 due to the CTC expansion, and SNAP participants received higher benefits in real terms in 2022 than in 2019. The comparison of food insecurity rates by demographic group found in Table 1 fails to show a pattern suggestive of a relationship between food insecurity rate increases and safety-net cuts. If anything, the lingering effects of the expanded safety net during the pandemic should have put downward pressure on food insecurity rates during this time.

Perhaps the best evidence that the increase in food insecurity rates was not due to changes to the social safety net is that the group most closely tied to the safety net—SNAP recipients—saw a decline in food insecurity rates from 2019 to 2022, while non-SNAP participants experienced an increase.[7] This occurred at the same time that the number of SNAP participants increased by 16 percent from 2019 to 2022,[8] suggesting that more people received SNAP during this time and, among those who did, the food insecurity rate declined.

Changes to the Structure of the Questions. Changes made to the structure of the survey in 2022 offer another plausible explanation for the substantial surge in food insecurity rates between 2019 and 2022. As described in Rabbitt et al. (2023), these included changes to the phrasing, ordering, and framing of the questions. As is the case whenever changes are made to a survey, these changes could lead to increases or decreases in food insecurity rates, independent of any other changes. In this case, changes to the placement of screener questions could have resulted in a different population answering food security questions in 2022 compared to 2019, potentially changing food insecurity estimates independent of any other changes.

Researchers at the USDA tested changes to the survey before launching the new survey in 2022 (Coleman-Jensen and Rabbitt 2023). They found that adjustments to the survey did not change the pattern of responses from individuals but that the sample answering food insecurity questions did change. They also found that the new survey produced food insecurity rates that were 1 percentage point higher than those documented in the former survey.[9] Given the findings from

7 The decline in food insecurity rates for Supplemental Nutrition Assistance Program (SNAP) recipients is generally ascribed to the changes described above. One other possible explanation would be that there was a composition shift among SNAP recipients such that those who are at less risk of food insecurity enter the program and those at more risk exit the program. We do not see evidence of this, however, at least over observed characteristics. Although the Current Population Survey (CPS) underreports SNAP receipt, underreporting was likely similar in 2019 and 2022. Further, income levels among SNAP recipients, which determines SNAP eligibility along with other factors, were essentially the same in both years for SNAP recipients, suggesting the income profile of SNAP recipients was similar in both years. In the CPS Annual Social Economic Supplements (ASEC), the median income of SNAP recipients was $25,571 in 2019 and $26,600 in 2022.

8 The number of SNAP recipients was 35 million in 2019, increasing to 41 million in 2021 and 2022.

9 Using data from the September Supplement of the CPS, the food insecurity rate was 9.7 percent with the standard instrument and 10.7 percent with the new instrument.

Table 2. Selected Demographic Characteristics of Those with Food Insecurity, 2019, 2021, 2022

	2019	2021	2022
Poverty Rate	11.4%	12.5%	12.6%
Unemployment Rate	3.7%	5.3%	3.6%
Median Income	$60,484	$63,638	$70,223
Percentage Hispanic	14.4%	15.0%	14.7%
Percentage Black	13.1%	13.0%	13.3%
Homeownership Rate	65.2%	65.0%	66.1%
Percentage Disabled	13.2%	14.1%	14.0%

Source: Authors' calculations from the Current Population Survey (Bureau of Labor Statistics n.d.).

the test instrument, it is plausible that up to 40 percent of the 2.4 percentage point increase in food insecurity rates (1 percentage point of the 10.4 percent to 12.8 percent increase) from 2019 to 2022 was attributable to the instrument changes.

Coleman-Jensen and Rabbitt (2023) break down the difference in food insecurity rates based on the test versus standard instrument for SNAP participants. Among SNAP recipients, they found that the new instrument produced a food insecurity rate that was 7.4 percentage points higher than the standard instrument. Based on this, had the FSS used the previous instrument, the food insecurity rate for SNAP participants would have been 40.3 percent in 2022 instead of 47.7 percent.

Above, we stated how SNAP recipients were among the only groups to see a decline in food insecurity rates from 2019 to 2022. Based on the results in Coleman-Jensen and Rabbitt (2023) describing the difference in food insecurity rates due to the new survey, the decline for SNAP recipients was substantially understated. Instead of a 5.3 percent decline, there would have been a decline of 20.0 percent. Further, we did not find strong evidence that the observed decline in food insecurity among SNAP recipients was due to a compositional change.[10]

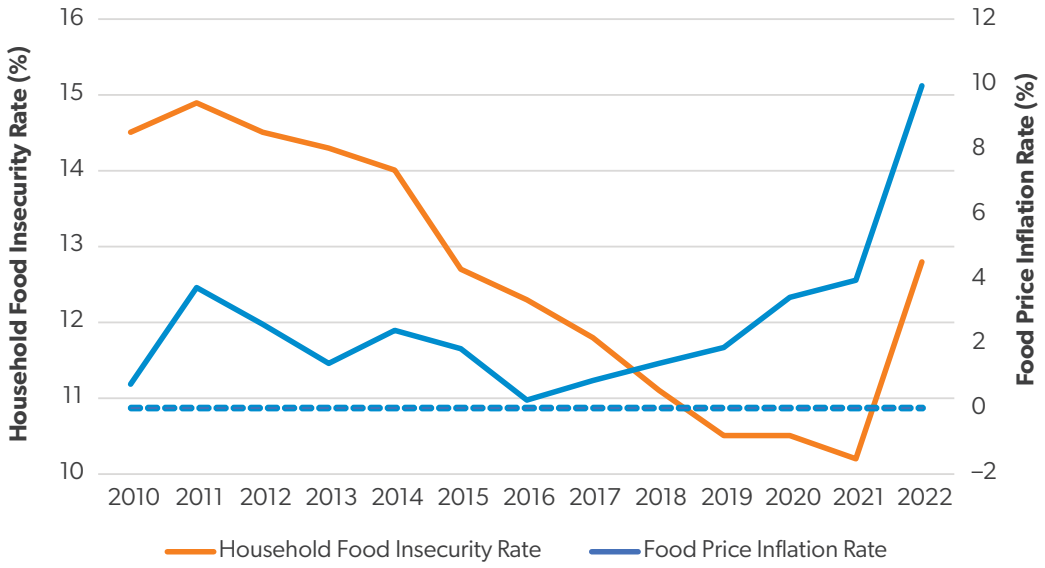
Changes in Economic Conditions. Another possible explanation for a change in food insecurity rates could be changes in economic conditions and other determinants of food insecurity. For example, the literature on food insecurity has found a wide array of variables associated with food insecurity rates (e.g., Anderson et al. 2016; Gundersen and Ziliak 2018). These include variables such as income, disability status, household structure, assets, and financial-management skills. In order for these factors to explain changes in food insecurity rates from 2019 to 2022, there would need to be large enough changes over this period to affect food insecurity trends.

In Table 2, we present population-level descriptive statistics for variables that relate to food insecurity. As shown, there were not large enough changes from 2019 to 2022 in these variables to explain the increase in food insecurity rates. In addition, looking at 2021 to 2022, these changes would indicate that there would be a decline in food insecurity because the unemployment rate fell. Therefore, we conclude that changes to underlying conditions cannot explain the increase in food insecurity from 2019 to 2022.

Changes in Food Prices. We now turn to the potential effect of food price inflation on food insecurity rates. A body of literature suggests that higher prices lead to higher food insecurity rates. These studies have examined, for example, the impact on food insecurity rates of grocery taxes (Zheng et al. 2021), overall inflation (Nord, Coleman-Jensen, and Gregory 2014), food price inflation (Gregory and Coleman-Jensen 2013), changes in SNAP purchasing power (Bronchetti, Christensen, and

10 According to the CPS, income levels which determine SNAP eligibility along with other factors, were essentially the same in both years for SNAP recipients, suggesting the income profile of SNAP recipients was similar. In the CPS ASEC, the median income of SNAP recipients was $25,571 in 2019 and $26,600 in 2022.

Figure 2. Trends in Household Food Insecurity and Food Prices, 2010–22



Source: US Census Bureau (2010–22), Federal Reserve Bank of St. Louis (2024).

Hoynes 2019), and expansions of affordable food outlets (Courtemanche et al. 2019).

Figure 2 displays the food insecurity rate and food price inflation from 2010 to 2022. From 2010 to 2019 food price inflation was low. In contrast, food price inflation increased starting in 2020, reaching a high of 9.9 percent in 2022. Put differently, the average food price inflation was 1.7 percent from 2010 to 2019 and 5.8 percent from 2020 to 2022.

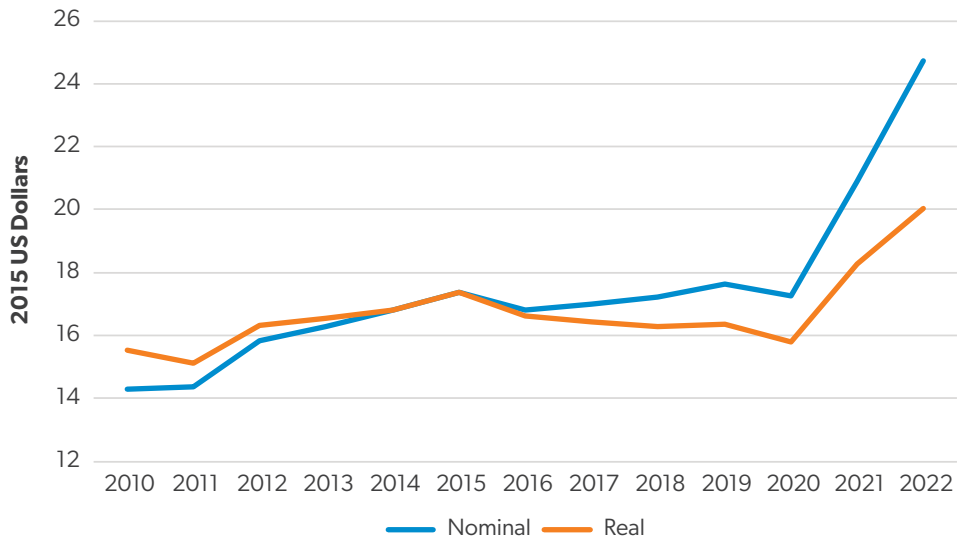
To estimate the impact of food price inflation on food insecurity, we use results from two of the most relevant studies cited above. Nord, Coleman-Jensen, and Gregory (2014) examines the impact of higher prices on food insecurity using the overall inflation rate. Based on the authors' estimate that a 1 percentage point increase in the inflation rate results in a 0.5 percentage point increase in the food insecurity rate, we estimate, holding all else constant, that the food insecurity rate for 2022 should have been 13.6 percent.[11] This is 0.8 percentage points higher than the official rate of 12.8 percent.

Gregory and Coleman-Jensen (2013) used a narrower definition of inflation, looking at only food price inflation. They estimate that a $10 increase in food prices (about 6.1 percent) results in a 2.7 percentage point increase in food insecurity. With this result, we estimate that the food insecurity rate would have been 14.1 percent,[12] slightly higher than the 13.6 percent rate we found when we used the overall inflation rate. One potential reason that increases in the food insecurity rates were not as high as predicted is due to safety-net changes that lingered into 2022, such as SNAP emergency allotments and the 2021 expanded CTC, along with permanent changes such as the increase in the Thrifty Food Plan.

11 More specifically, we calculated this projection as follows: The Federal Reserve Bank of Minneapolis (n.d.) reports that the annual inflation rate was 1.8 percent in 2019 and 8.0 percent in 2022, a 6.2 percentage point difference. This then implies that there would be a 3.1 percentage point increase in food insecurity (0.5 × 6.2).

12 This is calculated as follows: As found in Figure 2, the food price inflation rate in 2019 was 1.8 percent, and in 2022, it was 9.9 percent, an 8.1 percentage point difference. Gregory and Coleman-Jensen (2013) found that a 6.1 percent increase in food price inflation leads to a 2.7 percent increase in food insecurity, and here the relative difference in food price inflation is 8.1 percent, resulting in a 3.6 percent increase in food insecurity ((8.1/6.1) × 2.7).

Figure 3. Weekly Real and Nominal Per Capita Resource Gap, 2010–22



Source: US Census Bureau (2010–22).

Changes in the Resource Gap. Figure 3 displays the resource gap for 2010 to 2022. From 2010 to 2020, the nominal resource gap—that is, the gap between the resources that households report they need and the resources they report they have—rose slightly from a low of $14.28 in 2010 to a high of $17.64 in 2019. Using 2015 dollars, the increase in the real resource gap over those periods was smaller: $15.52 to $16.35.

Due to food price inflation, one would anticipate that the nominal resource gap would spike in 2021 and 2022. And it did, from $17.25 in 2020 to $20.91 in 2021 to $24.73 in 2022.[13] This increase of 43.4 percent, however, is far greater than the increase in food prices over this time, suggesting that increases in the perceived resources needed for food outpaced food price inflation. That the increase in the nominal resource gap was so much larger than food price inflation results in a large increase in the real resource gap of 21.7 percent over this period.

The higher real resource gaps suggest a greater need experienced by food-insecure households over this period, which outpaced even high food price inflation. In other words, food-insecure households reported needing more than the increase in food prices alone to cover their food needs. This may reflect a higher perception of the household resources needed to avoid food insecurity. If this is the case, the higher real resource need may be responsible for some of the increase in food insecurity, independently of higher food prices.

Conclusion

From 2010 to 2021, food insecurity rates declined markedly in the US, with especially large declines beginning in 2014. In 2022, however, food insecurity rates exhibited their largest annual increase since the start of the Great Recession. The increase in 2022 was similarly large compared to 2019 food insecurity rates.

In this report, we consider the change from 2019 to 2022 to remove the potential impacts of various policies pertaining to the COVID-19 pandemic. We find that the increase from 2019 to 2022 was likely not due to any cuts to the social safety net nor changes in underlying determinants of food insecurity, such as the unemployment

13 In 2020 and before, the reports of the resource gap were capped at $200 in the CPS. The cap was raised to $225 in 2021 and to $300 in 2022. This means the resource gap may have been understated in the past. While we can't observe what these would have been in the past, we can see what would occur if we cap the values in 2021 and 2022 at $200. The values for the nominal resource gap are then lower at $39.88 and $47.41.

rate. What we do find, however, is that the following can explain these changes: changes in the structure of the survey used to establish the official food insecurity rates, food price inflation, and higher perceptions of the dollars needed to be food secure. We consider three policy implications arising from these findings.

SNAP. The central component of the social safety net against hunger, SNAP, has been remarkably effective at addressing food insecurity in the US. As summarized in Smith and Gregory (2023), multiple studies have found that SNAP participants are substantially less likely to be food insecure than eligible non-recipients are once one controls for nonrandom selection into the program. Further evidence of the effect of SNAP is seen from an analysis of the decision at the outset of the COVID-19 pandemic to move all SNAP recipients to the maximum level (i.e., emergency allotments), which were likely at least part of the reason there were not increases in food insecurity during the pandemic (Gundersen 2023b). The success of the social safety net to alleviate hunger especially manifested itself from 2019 to 2022, evidenced by the fact that SNAP recipients were the only group that exhibited declining food insecurity over this period.

Food Prices. High food prices are especially harmful to households vulnerable to food insecurity. Insofar as these households spend a higher proportion of their incomes on food than higher income households do, the relative impact of even small increases in food prices can significantly affect these vulnerable households. While the amount of SNAP benefits adjusts for food price inflation each year, many food-insecure households are not eligible for SNAP, and SNAP's cost-of-living adjustment happens at the start of the federal fiscal year, not in real time.

Moreover, as it is a supplemental benefit, SNAP recipients typically spend more on food than they receive in benefits, so even when benefit levels increase, unless wages and other income sources keep pace, the inflation adjustment would not cover these additional expenditures fully. This means that keeping food price inflation low can prevent rises in food insecurity that SNAP alone is not well equipped to address.

It is not surprising that the substantial increases in food insecurity came about when food prices soared. This leads to four recommendations. First, policymakers should use caution when considering debt-financed government expenditures on programs and services, including safety-net program expansions. For example, a study by Blanchard and Bernanke (2023) explored the causes of pandemic-era inflation and concluded that, although supply-chain issues led to initial inflationary pressures, the effects of increased consumer and business demand due to increased government spending became the more important cause over time while leading to more persistent inflation. While debt-financed government expenditures can play a role in addressing crises (e.g., in preventing increases in food insecurity during COVID-19), permanent debt-financed program expansions will eventually lead to increases in inflation that have long-term negative effects on vulnerable families (McBride and Durante 2022). Given the burden this inflation places on vulnerable families, policymakers should make sure that interventions such as those that occurred during COVID-19 are cost-effective by directing them toward those most in need and keeping them temporary in nature. Additionally, policymakers should ensure that safety-net program expansions are paid for fully.

Second, as policymakers become more aware of the effects of food price inflation and consider the implications of policies on inflation, they should also turn their attention to the astonishing differences in food prices across the United States and the relationship to food insecurity. As an example, a comparison of Harris County (which includes Houston, Texas) with New York County (which is the Borough of Manhattan in New York City) shows that the cost of the Thrifty Food Plan is 77.4 percent higher in New York County. For another example, the price of the Thrifty Food Plan is 56.5 percent higher in San Francisco County than in Harris County.

National-level policies do not necessarily influence these regional differences in food prices, but local policymakers can help reduce prices in these and other high-price urban areas by relaxing zoning regulations (which would allow for more competition in food retailers), removing burdensome regulations, and lowering taxes. Local policymakers can also seek to address an even greater source of price variation—housing costs. High relative housing costs require a larger share of

a household's budget, leaving less money available for food.

Third, policymakers must consider the effect of regulations on inflation and the burden it places on vulnerable households in any comprehensive calculations of the costs and benefits associated with new or revised regulations. A recent example is a mandate in California that all eggs for sale by retailers be from cage-free hens. Due to the imposition of this mandate, egg prices were almost twice as high in California as they were in the Midwest, where this mandate is not in place (Editorial Board 2023). Just like with food price inflation, mandates like these lead to increases in food insecurity by driving up the cost of food. While regulations such as those on the housing of chickens may have advantages, these should be weighed against the harms on households at risk of food insecurity.

Finally, when inflation spikes as it did in 2020 and 2021, the safety net can be slow to respond unless Congress takes emergency measures. During the COVID-19 pandemic, Congress authorized SNAP emergency allotments, which likely prevented a spike in food insecurity among the SNAP population due to inflation. While emergency measures should be temporary in nature and triggered to real-time events, they can be an effective measure to combat hardship among vulnerable households due to inflation. Policymakers should consider mechanisms to allow short-term emergency measures to combat inflation, such as an automatic trigger in SNAP to increase benefits based on inflation before year-end cost-of-living adjustments.

Resource Gap. Higher food prices—whether over time or across space—means that, all else equal, households will be more constrained in their ability to afford sufficient amounts of food. The sharp increase in the real resource gap in 2021 and 2022, though, is suggestive evidence that the ramifications of inflation may go beyond its direct impact on the ability of households to afford enough food by also affecting perceptions of what families need to cover their food costs. This further illustrates the importance of avoiding actions that would lead to increases in inflation.

The US experienced a historically large increase in the household food insecurity rate from 2019 to 2022. Understanding the driving force behind this increase is important so that policymakers can identify effective strategies to reduce food insecurity and prevent a similar spike from happening in the future.

We conclude that the unprecedented increase in food prices throughout 2021 and 2022 contributed to the rise in food insecurity, while a change to the survey used to measure food insecurity likely also contributed to the rise at least in part. The implications of these findings point to the need for policies that keep inflation within acceptable targets.

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Acknowledgements

Thank you to Thomas O'Rourke, who provided excellent research assistance for this report. Also, thank you to Kevin Corinth for providing comments on an earlier draft.

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