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# Food Security of SNAP Recipients Improved Following the 2009 Stimulus Package

Mark Nord, [marknord@ers.usda.gov](mailto:marknord@ers.usda.gov)  
Mark Prell, [mprell@ers.usda.gov](mailto:mprell@ers.usda.gov)

- The American Recovery and Reinvestment Act of 2009 increased Supplemental Nutrition Assistance Program (SNAP) benefit levels and expanded SNAP eligibility for jobless adults without children.
- After these enhancements, SNAP participation and inflation-adjusted food spending by low-income households increased.
- Food insecurity declined by 2.2 percentage points among low-income households but was unchanged among households with incomes somewhat above SNAP-eligibility cutoffs.

The American Recovery and Reinvestment Act of 2009 (ARRA) increased benefit levels in the Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) and expanded eligibility for the program for jobless adults without children. The increase in benefits depended on the number of qualifying people in the household; benefits for a family of four went up by \$80 per month. In addition, ARRA gave States an option to suspend provisions that limit how long some jobless, working-age participants could receive benefits.

These expansions of SNAP were intended to stimulate the economy, create and save jobs, and improve the food security of low-income households. ERS researchers examined ARRA's impact on low-income households' food security and found that the ARRA SNAP enhancements increased food spending by low-income households and improved their food security during unusually challenging economic times.

## SNAP Benefits Increased by an Average of 17 Percent

SNAP is the largest USDA food and nutrition assistance program and the cornerstone of the Nation's programs for reducing food insecurity and hunger. The program provides monthly benefits for eligible low-income households to purchase approved food items at authorized food retailers. Households are eligible to receive SNAP benefits based on household income, assets, and certain basic expenses. In December 2008, SNAP provided benefits to 31.8 million people in the United States (10.6 percent of the population). The average monthly benefit was \$114.80 per person. Total Federal expenditures for the program in fiscal year 2008 were \$37.5 billion.

Households with no income net of allowable deductions receive the maximum SNAP benefit, which varies depending on the number of qualifying persons in the household. Effective in April 2009, ARRA increased benefits of those households by 13.6 percent.





In December 2009, 12.9 percent of Americans received SNAP benefits, up from 10.6 percent a year earlier.

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efits. The average benefit was \$134.55 per person per month—17 percent higher than a year earlier.

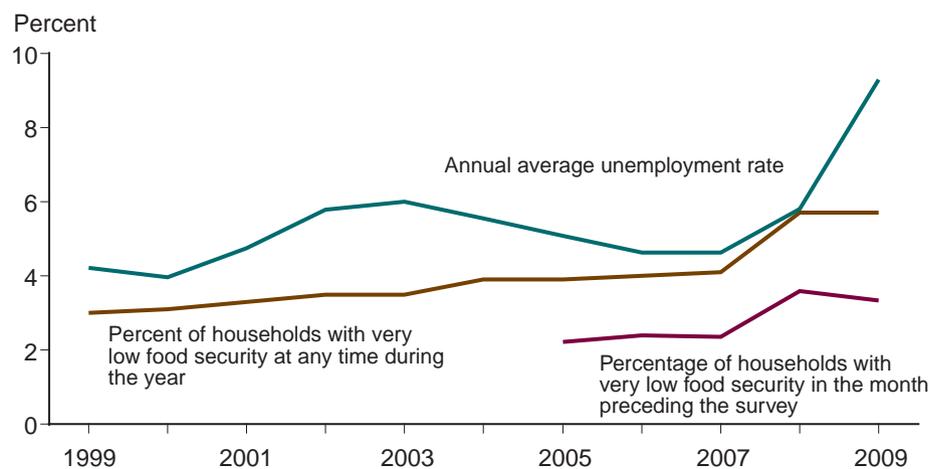
### Food Security Unchanged or Improved, Despite Rising Unemployment

USDA's annual report, *Household Food Security in the United States, 2009*, provided a preliminary indication of possible effects of the ARRA SNAP enhancements on the food security of low-income households. USDA monitors and reports on the food security of the Nation's households using data from an annual, nationally representative food security survey conducted by the Census Bureau with funding support from USDA. Household food security is measured by responses to a series of questions about food-related conditions and behaviors that typically occur in households having difficulty meeting their food needs. The questions cover a wide range of food access prob-

The ARRA benefit increase was implemented as a constant dollar amount for each household size, so the percentage increase was greater for households that had some net income and were therefore eligible for less than the maximum benefit. For example, prior to ARRA, a household of four with a monthly net income of \$980 qualified for \$294 in SNAP benefits—half the maximum benefit for a household of that size. Under ARRA, that household received \$374 in SNAP benefits—an increase of 27.2 percent.

USDA's Food and Nutrition Service (FNS), the agency that administers SNAP at the Federal level, reported that in December 2009, 8 months after initiation of the ARRA benefit increase, 39.0 million people were receiving SNAP ben-

**The percentage of households with very low food security held steady or declined from 2008 to 2009 in spite of increasing unemployment**



Note: Very low food security is a severe range of food insecurity characterized by reduced food intake and disrupted eating patterns of one or more household members (usually adults) due to inadequate resources for food.

Source: USDA, Economic Research Service using statistics from *Household Food Security in the United States, 2009* and the Bureau of Labor Statistics.



Rising unemployment and falling incomes accounted for about half of the increase in the SNAP caseload from 2008 to 2009.

lems, from worrying about running out of food to not eating for a whole day. Each question specifies a lack of money or other resources as the reason for the condition or behavior, so the measure is not affected by voluntary dieting or fasting.

Based on the number of food-insecure conditions reported, each household is classified as either food secure or food insecure. Food-insecure households are, at times, unable to acquire adequate food for an active, healthy life for all household members because they have insufficient money and other resources for food. Food-insecure households are further classified as having low food security or very low food security. Very low food security is a severe range of food insecurity characterized by reduced food intake and disrupted eating patterns of one or more household members (usually adults) due to inadequate resources for food.

According to the survey, the percentages of households with food insecurity and very low food security were unchanged from 2008 to 2009 despite continued rising unemployment during the year. Furthermore, the prevalence of very low food security measured during the 30-day period prior to each survey (from mid-November to mid-December) declined somewhat from 2008 to 2009, and the decline was greatest for households with income near or below the poverty line.

To determine whether, and to what extent, the SNAP enhancements may have been responsible for improving food security, ERS examined pre-ARRA to post-ARRA changes in program participation, food expenditures, and food security using data from the food security survey. The analyses compared conditions in late 2009, about 7 months after implementa-

tion of the ARRA SNAP enhancements, with conditions in late 2008, about a year into the recession but prior to ARRA. The focus was on households that were likely to have been income eligible for SNAP—those with annual incomes less than 130 percent of the Federal poverty line.

While almost all of these households would have been income-eligible for SNAP, some would not have met other eligibility criteria because of assets they owned, immigration status, or other reasons. The analyses focused on all “likely SNAP-eligible” households rather than more narrowly on those that reported receiving SNAP for two reasons. First, the ARRA provisions were expected to change the mix of SNAP recipients by attracting more eligible households to participate. Second, many households that receive SNAP fail to report their participation when asked in the food security survey. Both factors would likely have distorted comparisons based on reported SNAP receipt.

Changes other than ARRA could also have affected households’ food security in 2008-09. For example, unemployment and underemployment rose and incomes declined, on average, from 2008 to 2009. The first phase of the ERS analysis adjusted statistically for these and other factors that were measured in the food security survey, including household income, employment status, household composition, and demographics. To adjust for effects of other factors—especially a decline in real (inflation-adjusted) food prices from late 2008 to late 2009—changes among the likely SNAP-eligible households were compared with changes among “nearly SNAP-eligible households,” those with

incomes between 150 and 250 percent of the Federal poverty line.

### SNAP Participation Increased Following ARRA

The number of households receiving SNAP benefits increased by 25 percent from December 2008 to December 2009 according to USDA administrative records. Much of this increase was due to increased economic hardship as the recession deepened. As people lost jobs or had their hours of paid work cut, their incomes dropped. In some cases, this made them eligible for SNAP benefits.

However, the increase in SNAP benefits and eligibility also appear to have played a role in increased program participation. Results of the ERS analysis indicated that changes in income, employment, and other measured household factors accounted for only about half of the 25-percent increase in SNAP

participation. Higher post-ARRA SNAP benefits likely motivated some households to participate that would not have enrolled to receive the lower pre-ARRA benefits. The ARRA suspension of time limits for jobless adults without children also may have increased participation. Prior to ARRA, SNAP participation by many jobless, working-age, nondisabled adults without children was limited to 3 months within a 3-year period.

Some eligible low-income households choose not to participate in SNAP because the benefits they would receive are not sufficient to cover their monetary, time, and psychological costs of applying and participating. In fiscal 2008, the last year prior to the enactment of ARRA, about 66 percent of eligible individuals applied for and received SNAP benefits. Higher benefit levels would have changed this cost-benefit calculation for some households.

### SNAP Enhancements Boosted Food Spending...

What impact did the ARRA SNAP enhancements have on food spending by low-income households? To answer this question, ERS researchers examined food expenditures reported in the 2008 and 2009 food security surveys. Food expenditures were expressed as percentages of the cost of USDA's Thrifty Food Plan (TFP) at the time of the survey. The TFP specifies types and quantities of commonly consumed, lower cost foods that people can purchase and prepare at home to maintain a healthful diet that meets current dietary standards. Expressing food expenditures as percentages of the cost of the TFP adjusts for differences in household size, age-sex composition of the household, and food prices between 2008 and 2009.

Median food spending by likely SNAP-eligible households in the food

#### After the implementation of the 2009 stimulus package, likely SNAP-eligible households had higher food spending and better food security than expected

Outcome	Pre-ARRA (late 2008)	Post-ARRA (late 2009)		
		Expected <sup>1</sup>	Actual	Difference
Median food spending (percentage of the cost of the Thrifty Food Plan)				
Likely SNAP-eligible households	88.8	89.2	94.0	+4.8
Nearly SNAP-eligible households	101.3	102.4	105.7	+3.3
Food insecurity (percent)				
Likely SNAP-eligible households	25.03	26.07	23.87	-2.20
Nearly SNAP-eligible households	11.51	12.21	12.37	+1.16
Very low food security (percent)				
Likely SNAP-eligible households	11.27	11.89	9.89	-2.00
Nearly SNAP-eligible households	4.22	4.55	5.08	+53

<sup>1</sup>Value expected if the relationships between income, employment, and other household conditions and food spending and food insecurity had been the same in 2009 as in 2008.

Likely SNAP-eligible households have incomes below 130 percent of the Federal poverty line. Nearly SNAP-eligible households have incomes between 150 to 250 percent of the Federal poverty line.

Source: USDA, Economic Research Service calculations using Current Population Survey Food Security Supplement data.



About a half million more households were food secure in late 2009 than expected considering economic conditions.

security survey was 88.8 percent of the cost of the TFP in late 2008. Adjusting for changes in income, employment, and other household conditions, the expected figure for late 2009 was 89.2 percent. However, the median food spending reported by likely SNAP-eligible households in late 2009 was 94.0 percent of the TFP—a difference of 4.8 or 5.9 percent higher than in 2008 and 5.4 percent higher than expected for 2009. These calculations take into account changes in food prices

because they are expressed relative to the cost of the TFP in the month each survey was conducted.

Some of this increased food spending was due to a decline in real food prices. From December 2008 to December 2009, the cost of the TFP declined by about 4 percent. Since food prices fell while, on average, other prices rose slightly, it was expected that households would increase the quantity or quality of food they purchased (that is, their

inflation-adjusted food spending). Lower food prices accounted for an estimated 3.2-percent increase in inflation-adjusted food expenditures, based on the change in food spending by nearly SNAP-eligible households. This leaves an estimated 2.2-percent increase in food spending by likely SNAP-eligible households that may have resulted from the ARRA SNAP enhancements.

But the ARRA enhancements only affected those who actually received SNAP—estimated to be about half of the likely income-eligible households. For actual SNAP recipients, the effect on food spending was likely to have been about twice as large.

### ... And Improved Food Security

The percentage of likely SNAP-eligible households that were food insecure was 2.2 percentage points lower than expected in late 2009, after adjusting for changes in income, employment, other household characteristics, and food prices. The corresponding improvement for very low food security was 2.0 percentage points.

The improvements in food security rates in 2009 correspond to about 530,000 fewer food-insecure households and 480,000 fewer households with very low food security than would have been expected considering economic and demographic changes from 2008 to 2009. These represent reductions of about 8 percent and 17 percent, respectively. As was the case with food spending, the effect of the ARRA SNAP enhancements would be concentrated among SNAP recipients, so the percentage reductions would be about twice as large as those calculated for all likely SNAP-eligible households.

## ARRA SNAP Enhancements Provide Opportunity To Understand Program Impacts

Congress implemented the American Recovery and Reinvestment Act of 2009 (ARRA) enhancements to the Supplemental Nutrition Assistance Program (SNAP) to address specific problems resulting from the economic downturn. This unusually large, one-time change in program rules provides a rare opportunity to assess the effectiveness of SNAP.

Researchers rely on such occurrences because random-assignment experiments are not feasible for assessing programs like SNAP, and it is challenging to estimate program effects from survey data because of the statistical problem of selection bias. Under a random-assignment experiment—the strongest design for evaluating a program’s effect—eligible individuals would be randomly assigned to a test group who would receive SNAP benefits or a control group who would not. Such a design cannot be used to evaluate SNAP for legal and ethical reasons.

Without random assignment, self-selection bias distorts comparisons of SNAP recipients and nonrecipients. Participation in SNAP is voluntary for eligible households, and those with greater unmet food needs are more likely to apply. Households currently receiving SNAP benefits have consistently been found to be less food secure than eligible nonrecipients in survey data. Apparently, the extent of improvement that results from SNAP benefits is insufficient to offset the initial difference in food security between recipients and nonrecipients.

Researchers have used various statistical methods to attempt to adjust for differences between SNAP recipients and nonrecipients and, thereby, for self-selection bias. Multivariate regression and similar techniques can control

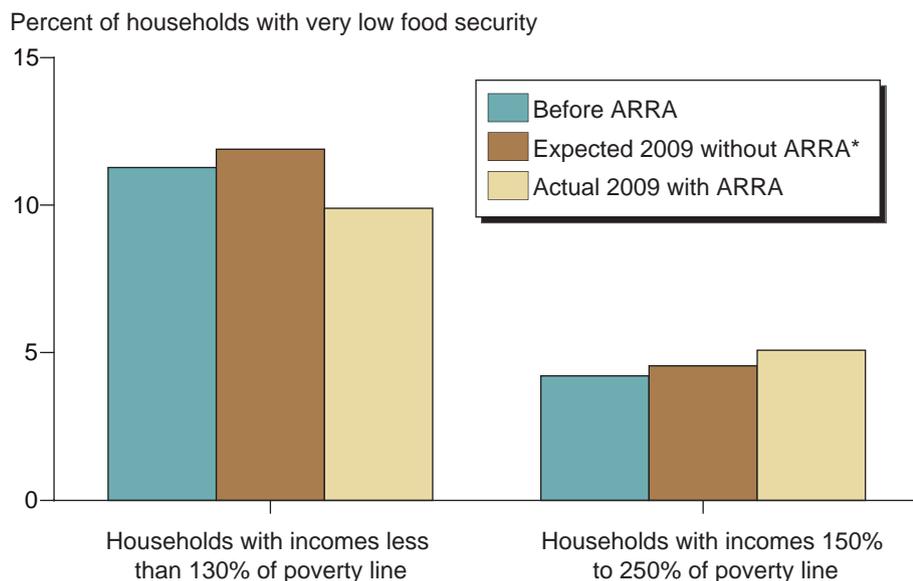
for differences between households on characteristics such as income and employment that are measured in the surveys. However, analyses using these methods have not generally isolated positive program effects. Apparently, many important differences are not measured in the data (and may be practically unmeasurable).

More sophisticated statistical methods have been used to attempt to adjust for unobserved differences between recipients and nonrecipients. Some of these methods have found positive effects of SNAP on improving food security, but because of their complexity, uncertainties regarding some of their underlying assumptions, and inconsistent results across methods and data sources, they have not provided unequivocal estimates of how effective SNAP may be at improving food security.

The rapid and substantial change in SNAP rules under ARRA not only allows researchers to directly assess the effects of the specific changes but also provides indirect evidence of the effectiveness of the program overall in reducing food insecurity.

In the present study, food security before the program changes were implemented can be taken as an estimate of what food security would have been after implementation in the absence of the changes (after adjusting for the effects of other changes that are known to have occurred over the same time period). This provides a substitute for the control group in a random-assignment experiment. The effect of the full amount of the SNAP benefit is considerably greater than the improvements attributed to ARRA in the study, which represent only the marginal effect of an increase of about 17 percent in SNAP benefits and an increase in eligibility that affected only a small proportion of households.

**The prevalence of very low food security declined among households with incomes in the eligibility range for SNAP but not for households with incomes somewhat higher**



\*Regression-based estimates taking into consideration changes from 2008 to 2009 in household income, employment, and other characteristics, but not changes in food prices.  
 Source: USDA, Economic Research Service calculations using Current Population Survey Food Security Supplement data.

There was no corresponding improvement among households with incomes above the SNAP-eligibility range. Food insecurity worsened somewhat from 2008 to 2009 among nearly-SNAP-eligible households interviewed for the food security survey, rather than improving as expected due to the decline in real food prices. However, the adjusted differences were relatively small and were not statistically significant.

These findings shed light not only on the effects of ARRA but, more broadly, on the overall effectiveness of SNAP in combating food insecurity (see box, “ARRA SNAP Enhancements Provide Opportunity To Understand Program Impacts”).

Taken together, changes in SNAP participation, inflation-adjusted food spending, and food security strongly suggest that the ARRA SNAP enhancements improved food security among low-income households during a period of tough economic conditions. SNAP participation increased, food spending increased, and food security improved among likely SNAP-eligible households from late 2008 to late 2009. Among households with incomes somewhat above SNAP-eligibility cutoffs, food spending increased by a smaller amount and food security did not improve.

**What’s Ahead Depends on Legislation and the Economy**

Congress did not intend the ARRA SNAP changes to be permanent. The Act specified that the maximum benefit levels remain fixed in dollar terms at the higher level until they were surpassed by standard SNAP benefits, which were expected to rise due to inflation in food prices. Subsequent congressional acts have mandated an earlier return to pre-ARRA benefit formulas. The special eligibility waiver for jobless adults without children lapsed in October 2010. In isolation, these changes would be expected to erode the improvements in food security realized in 2009, but the number of food-insecure household may decline if improvements in the economy reduce the number of low-income households.  $\mathcal{W}$

**This article is drawn from . . .**

*Food Security Improved Following the 2009 ARRA Increase in SNAP Benefits*, by Mark Nord and Mark Prell, ERR-116, USDA, Economic Research Service, April 2011, available at: [www.ers.usda.gov/publications/err116/](http://www.ers.usda.gov/publications/err116/)

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*Does SNAP Decrease Food Insecurity? Untangling the Self-Selection Effect*, by Mark Nord and Anne Marie Golla, ERR-85, USDA, Economic Research Service, October 2009, available at: [www.ers.usda.gov/publications/err85/](http://www.ers.usda.gov/publications/err85/)