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Does SNAP Decrease Food Insecurity?

Untangling the Self-Selection Effect

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The Supplemental Nutrition Assistance Program (SNAP), formerly the Food Stamp Program, is the largest Federal food assistance program, serving over 28 million households monthly in 2008. This study examines households' food security (their access to adequate food for active healthy living) month by month just prior to and just after SNAP entry in order to estimate the influence of benefits on the food security of recipient households.

What Is the Issue?

SNAP benefits are intended to increase the access of eligible low-income households to food and a nutritious diet—to improve their food security. However, it has proven difficult to demonstrate this positive effect or estimate its extent using household survey data. Food insecurity has always been found to be more prevalent in households enrolled in SNAP than in other low-income households. The hypothesized reason for this seeming anomaly is that food-needy households are more likely to enroll in SNAP, and that the initial difference in food security between SNAP participants and nonparticipants is greater than the ameliorative effect of the program. Researchers have used various statistical methods to untangle these opposite forces, but have not obtained consistent or convincing results.

This report provides greater detail on the timing of food insecurity relative to a household's first receiving SNAP benefits (or beginning to receive them again after being off the program for a year or more). The extent of food insecurity in households month by month in the year prior to their enrolling indicates whether signup generally occured after a period of deteriorating food insecurity, as the self-selection hypothesis suggests. The prevalence of food insecurity among households in the months just after versus just before enrollment may reflect the effect of SNAP benefits on food security.

What Did the Study Find?

Households' food security deteriorated substantially beginning 7 or 8 months prior to SNAP entry and improved shortly after benefits began. The prevalence of very low food security among sample households increased from around 8 percent 1 year prior to entering SNAP to nearly 20 percent in the 4-6 months prior to entry. Within a few months of entering SNAP, the prevalence of very low food security declined to around 12 percent, where it settled for the first 10 months on the program.

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These patterns could not be observed either in cross-sectional or 1-year longitudinal analysis of the food security survey data. Only with finer-grained detail of the month-by-month analysis can the deterioration in food security prior to receipt of SNAP benefits and the improvement after be observed.

These results clearly demonstrate the self-selection by households into SNAP at a time when they are more severely food insecure. The results are consistent with a moderate ameliorative effect of SNAP—reducing the prevalence of very low food security among recent entrants by about one-third—although they do not conclusively demonstrate that extent of amelioration.

How Was the Study Conducted?

Data for the study come from annual food security surveys from 2001 to 2006 sponsored by USDA and conducted by the U.S. Census Bureau as supplements to the monthly Current Population Survey. The nationally representative samples included about 48,000 households in each year. Two-year panels were assembled by matching households interviewed in 2 successive years. The primary analysis sample comprised 635 households that began receiving SNAP benefits in their second year in the survey but did not receive SNAP at any time during their first year in the survey nor in January of their second year in the survey.

The food security status of each household in the 30 days prior to each survey (conducted in mid-December) was based on the number of food-insecure conditions reported by one respondent in each household—conditions such as cutting the size of meals because there was too little money for food, or being hungry because there was too little money for food. Households were grouped by the month in year 2 in which they began receiving SNAP benefits, and the prevalence of very low food security for each group was calculated for December of year 1 and December of year 2.