The Effect of SNAP on the Composition of Purchased Foods

Evidence and Implications

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A new study by Justine Hastings, Ryan Kessler, and Jesse M. Shapiro of Brown University and Research Improving People's Lives (RIPL) finds that:

(1) SNAP participation has only a small effect on the nutritional quality of purchased grocery foods. The program's effect is small compared to the variation in nutritional quality across households.

(2) Closing the gap in food-at-home spending between households of high and low socioeconomic status would not close the corresponding gap in the nutritional quality of purchased foods.

BACKGROUND

The Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) is the second largest means-tested program in the United States after Medicaid, enrolling roughly one in five children in 2014. The program provides households with a monthly benefit via an Electronic Benefit Transfer (EBT) card, a pay-ment method similar to a debit card that can be used to buy groceries at eligible retailers.

One of SNAP's objectives is to improve nutrition by allowing households to spend more on food. For example, the Food and Nutrition Act of 2008, which created SNAP as the successor to the Food Stamp Program, states that SNAP "will permit low-income households to obtain a more nutritious diet… by increasing food purchasing power." This objective has seen increasing emphasis over the last decade amid growing concern regarding high rates of diet-related chronic disease in the US. The United States Department of Agriculture (USDA) views SNAP as "a powerful tool to improve nutrition among low-income people", and many policy reports advocate increasing SNAP enrollment or benefits as a way to improve diet-related health.

Prior research by Beatty and Tuttle (2015), Hastings and Shapiro (2018), and others finds that SNAP participation significantly increases household food spending, by more than would be expected from a cash benefit. Does this increased food spending translate into greater nutritional quality of purchased foods?

Hastings, Kessler, and Shapiro bring new evidence to bear on this question. Build-ing upon previous work by Hastings and Shapiro (2018), they use anonymized data from a grocery retailer consisting of detailed records on over 500 million

> "SNAP increases food spending but has only small effects on nutritional quality... closing the gap in food spending between households of high- and low- SES would not close the corresponding gap in the nutritional quality."

transactions by nearly half a million households. The data include information on mode of payment, including EBT, which they use to infer participation in SNAP. The data also contain identifiers for products purchased, which they join to data from several sources on food types and nutrient content. The resulting panel allows the authors to track the composition and nutrient content of households' grocery purchases at the retailer over nearly seven years, including thousands of transitions on to and off of SNAP.

The authors consider several measures of nutritional quality, including the share of kilocalories devoted to different types of foods (e.g., fruits and vegetables) and the ratio of different nutrients (e.g., fat) to total kilocalories. They focus on two summary measures drawn from the literature: a nutrient density score (NDS) measuring compliance with the Food and Drug Administration's Daily Value bounds, and the 2010 version of the Healthy Eating Index (HEI-2010) measuring compliance with the USDA's 2010 Dietary Guidelines for Americans.

FINDINGS

The study finds that any effect of SNAP is small compared to variation across households in the nutritional quality of the foods households purchase.

For example, the authors estimate that the average household devoted 2.33 percent of kilocalories purchased to whole fruits in the 6 months prior to SNAP adoption. Following SNAP adoption, that number is estimated to decline to 2.27 percent, implying an effect of SNAP of -0.0006 percentage points. This estimated effect is statistically insignificant and economically small, representing less than 3 percent of the distance between the 25th and 75th percentiles of whole fruit kilocalorie shares across households and less than 6 percent of the distance between the average household with a college-educated shopper and a less-than-high-school-educated shopper. The study reports similarly small effects for the NDS, HEI-2010, and many other markers of nutritional quality.

These results — that SNAP increases food spending but has only small effects on nutritional quality — suggest that closing the gap in food spending between households of high- and low- SES would not close the corresponding gap in the nutritional quality. The authors carry out this thought experiment in a simulation based on their estimates. They find that eliminating the $79 gap in mean monthly food-at-home spending between those with and without a college degree would eliminate less than nine percent of the corresponding gaps in the NDS and HEI-2010, and might even widen these gaps.

CONCLUSION

The new study uses large-scale data from a retail panel, joined to detailed information on the characteristics of purchased foods, to estimate the effect of SNAP on the nutritional quality of foods purchased by households.

The study finds that the effect of SNAP is small when compared a variety of benchmarks, and closing the gap in food spending between high- and low-SES households would not close the corresponding gap in the nutritional quality of purchased foods.

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