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Center for Agricultural & Environmental Policy at Oregon State University
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How Does the Supplemental Nutrition Assistance Program Affect the United States Economy?

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The food stamp program, renamed the Supplemental Nutrition Assistance Program (SNAP) in the 2008 farm bill, has grown rapidly in the aftermath of the popping of the house price bubble starting in 2007. Expenditures reached \$78 billion in 2012, with the number of SNAP recipients at 47 million, up from 27 million in 2007.

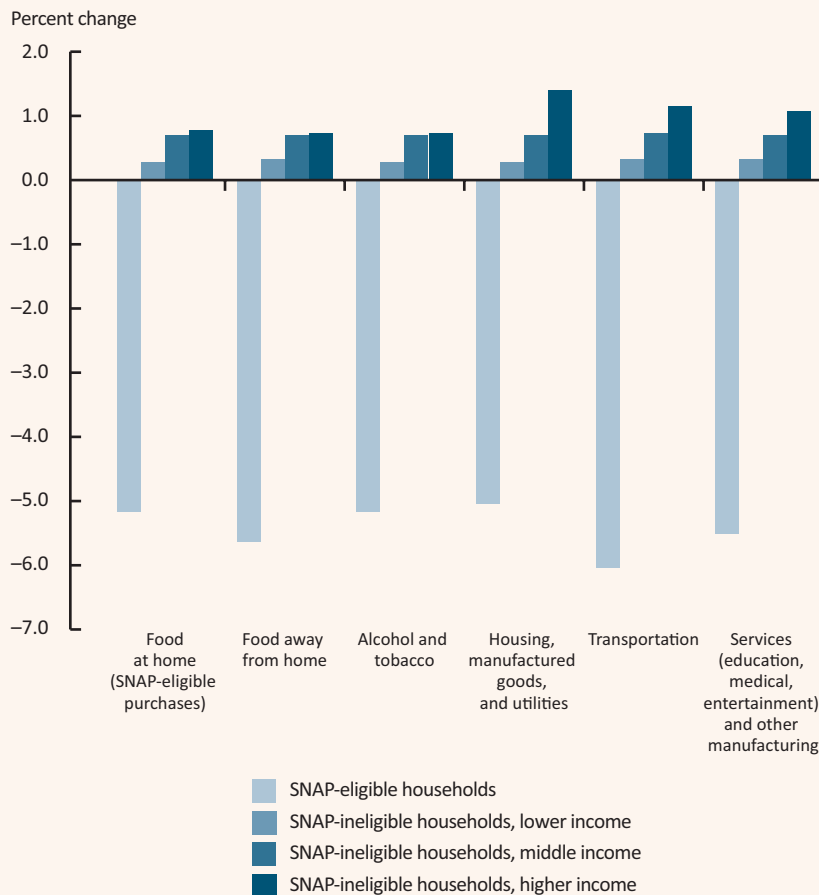
The program helps low-income households pay for food so they can avoid hunger. The SNAP therefore has an effect on the food sector of the economy. Yet the SNAP affects the rest of the economy, as well, in at least two other ways. One way operates through the households who provide funds for SNAP through taxes, but are ineligible for SNAP themselves. Another operates through spending by SNAP-receiving households on goods and services other than food.

In thinking about these two ways, it is helpful to first classify goods and services into two broad groups, “luxuries” and “staples.” A good is a luxury if consumption increases more than proportionately as income rises. Luxuries are said to have a high income elasticity of demand: as people have more money to spend, a higher share of a household’s budget is allocated towards it. A good is a staple if demand for it increases proportionately less than income when there is a rise in income. Staples are said to have a low income elasticity of demand, meaning that they become a smaller share of a household’s budget when there is a rise in income.

As mentioned, one effect of SNAP on the economy as a whole is its effect on households who are *not* eligible for SNAP benefits. For a household of three, this is roughly



Figure 1. Percentage Change in Consumption Were the SNAP Not in Place



those with incomes of more than \$25,000 per year. Much of the funding for SNAP is essentially tax transfers that are ultimately paid for by these higher-income, ineligible households. The allocation of their budget to different goods and services differs from that of lower-income, SNAP-eligible households. If an extra dollar is received, a higher-income household will spend less of it on food, for example, than would a low-income family. (This concept is called Engel's Law, after the 19th century statistician Ernst Engel.) If the SNAP were not in place, higher-income households would have more after-tax income, and they would increase consumption of some goods and services more than proportionately.

Offsetting this effect, however, is that without the SNAP, current beneficiaries of that program would have to cut back on non-food expenditures, as they scramble to pay for food (a staple) with what money they have. By supporting food expenses, the SNAP frees up money for goods and services that are otherwise unaffordable, such as the rent, the gas bill, and the electric bill. To higher-income, SNAP-ineligible households these products might be staples, but to low-income SNAP-eligible households they may need to be deferred or cut relative to food.

The point is that SNAP influences economy-wide spending on a wide variety of goods and services, and by extension, the economic sectors in which these goods and services are produced, as well as the associated labor markets. It allows more spending by low-income households, and limits spending on what is a likely somewhat different set of goods and services by higher-income, SNAP-ineligible households. The questions considered here are: Which economic sectors are smaller or larger than they would otherwise be in the absence of SNAP? How much do different types of households gain and lose from this policy?

To answer these questions, an economic simulation model was built for the United States. The model is general equilibrium, which means it covers the economy as a whole. The underlying data distinguish 509 sectors, including such activities as frozen food manufacturing, cheese manufacturing, breakfast cereal manufacturing, vegetable and melon farming, sugarcane and sugar beet farming, and poultry processing. The 509 sectors are aggregated into a smaller number of expenditure categories that better represent the choices that consumers make. For example, the individual sectors listed above are included, along with many others, in an expenditure category called "food-at-home" which encompasses all products eligible for SNAP purchases. Other expenditure categories concern services, transportation, housing, manufactures, utilities; a full list is in Figure 1.

To investigate how the SNAP affects the United States economy, the model is simulated such that this program is not in place. Predicted values from this experiment are then compared to baseline values for 2010 (a year for which data are available and the program was in place). How would the money be used if not used to fund the SNAP? It could be used to reduce the deficit, for example, or be spent on other government programs that are underfunded. In the model simulation, however, it is assumed that program expenditures are transferred back to middle- and higher-income households by means of a cut in their taxes, that is, a tax refund. This is not a policy currently under consideration, but it allows the hard-to-see effects of this policy on the U.S. economy to be teased out. The change that is considered is revenue-neutral; current SNAP transfers are eliminated and the money is left with higher-income taxpayers from whom the transfers are recorded in the data.

U.S. consumer expenditure data is used in conjunction with statistical techniques to estimate how household budgets change as a household has more or less money to spend. For all types of households, the share of their budget spent on food falls as they have more disposable income. In other words, as noted earlier, food is considered to be a staple and not a luxury. This tendency increases notably as household income rises; as higher-income households have more money to spend, their budget share for food falls from already-low levels. Meanwhile, the share of their budget spent on housing, manufactures, and utilities rises more than proportionately. The budget share for food by SNAP-eligible households changes little as they gain or lose disposable income. The lowest-income households still need to eat and largely maintain spending on this sector, even if the SNAP is not in place. Cuts are made, rather, for what are *relative* luxuries for these households, such as household utilities and transportation.

The analysis shows that without the SNAP, currently eligible households would have to cut purchases of all types by about 5.5 percent on average. Middle- and higher-income ineligible households, however, could increase purchases by somewhat less than 1 percent.

Without the SNAP, the food-at-home sector would be about 0.2 percent smaller than it is at present. This sector is smaller because low-income households no longer have assistance for making purchases from the sector. This decline is moderated by the fact that higher-income households, on the other hand, have more disposable income and can increase spending on this sector. These households fill back in some, although not all, of food-at-home expenditures in the economy.

Other sectors, meanwhile, tend to be larger without the SNAP. This is because higher income households spend more on housing, manufactured goods, and utilities. They more than fill in the gap left by low-income households. The net change to these sectors, however, is less than 1 percent of the value of output.

This can be seen in Figure 1, which reports the percentage change in consumption if the SNAP were not in place. This is done for six general categories of spending, and four types of households: SNAP-eligible households, and then three types of SNAP-ineligible households (low-, medium-, and high-income).

SNAP-eligible households clearly would have lower levels of consumption if the current SNAP was not in place. The sectors most affected are transportation and food away from home. Without the SNAP, former SNAP-eligible households would buy approximately 5.2 percent less, and would do so with their own disposable income. Households that are presently ineligible, on the other hand, would have at most 1 percent greater spending power.

In the end, even with the growth of SNAP over the past few years, its effects are negligible in the context of the overall economy. SNAP's main effect is on the spending power of very low-income households. It makes a large difference in the lives of poor people but is trivial in terms of total federal spending and effects on individual economic sectors. ■

FOR FURTHER READING

West, T.T., and J.J. Reimer. 2013. "Household and Intersectoral Effects of the Supplemental Nutrition Assistance Program." Unpublished manuscript, Oregon State University.

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OreCal is a policy research collaboration between Oregon State University's Center for Agricultural & Environmental Policy and the University of California Agricultural Issues Center. Principal Investigators for the partnership include members of the Departments of Agricultural and Resource Economics at both OSU and UC Davis. The Partnership's mission is to improve public and private decision-making by providing the highest quality, objective economic analysis of critical public policy issues concerning agriculture, the environment, food systems, natural resources, rural communities and technology.

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