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Comparing Alternative Economic Mechanisms To Increase Fruit and Vegetable Purchases

Mark Prell and David Smallwood

What Is the Issue?

Participants in USDA's Supplemental Nutrition Assistance Program (SNAP) typically consume less than the amount of fruits and vegetables (FVs) recommended by the *Dietary Guidelines for Americans*. To incentivize purchases of FVs by SNAP participants, an additional program benefit could be added to regular SNAP benefits in different forms, each based on an economic mechanism. In this report, the authors develop models of SNAP consumers' expected purchase decisions for three different forms of the benefit (or economic mechanisms):

- A *bonus* for fruit and vegetable spending
- A *rebate* for fruit and vegetable spending
- A *Cash Value Voucher* (CVV) that SNAP consumers redeem (at no charge to the participant) for fruits and vegetables at food retailers, up to a given dollar limit.

The three models chosen for development were based on economic mechanisms used in past U.S. Department of Agriculture (USDA) pilots or programs.

Three fundamental issues are also examined in this report. First, do each of the three mechanisms have the desired effect on behavior, increasing FV purchases at least on average? The second issue is distributional, focusing on an important component of the SNAP population: Which of the mechanisms might increase FV purchases the most among the subgroup of SNAP consumers who, in a typical month, were purchasing no FVs? And third, which economic mechanism might increase FV purchases the most for the average SNAP household, and how might that depend on whether the subgroup who purchases no FVs is a relatively small or large share of all SNAP households?

Recently, in SNAP's Healthy Incentive Pilot, participants in a treatment group of randomly selected SNAP households were eligible to receive a rebate of an additional \$0.30 worth of SNAP benefits for every dollar spent on Targeted Fruits and Vegetables at participating retailers. Adults in these SNAP households had greater fruit and vegetable consumption, on average, compared to a control group that was not eligible for rebates. However, while the treat-

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ment group's *average* response involved earning a rebate and increasing consumption, in a typical month about one-third of the treatment households did not earn any rebate. They are the participants arguably most in need of additional FVs and may be viewed as a high-priority subgroup within the overall SNAP population.

What Did the Study Find?

The economic models suggest that not all SNAP consumers increase FV purchases using each form of benefit, but at least some do. Therefore, each form will have the desired effect on average behavior, increasing purchases of FVs for SNAP consumers on average.

In the *bonus* and *rebate* models, a SNAP consumer who receives either a bonus or a rebate for purchasing FVs receives a decrease in the effective price of FVs. Because the bonus or rebate is earned only by purchasing FVs, the incentive to purchase additional FVs can be strong. Some of the SNAP consumers who had purchased no FVs may be induced to start purchasing them, especially if the bonus or rebate is large.

In the *Cash Value Voucher* (CVV) model, a SNAP consumer receives FVs at no charge, up to the CVV's stated dollar limit. If the dollar-limit worth of FVs was being purchased previously using cash or regular SNAP benefits, it may be that now the CVV is simply substituted for other ways to purchase some FVs, resulting in only a small net increase in FV purchases. In contrast, a SNAP consumer who had previously purchased no FVs may now have a strong incentive—the FVs are *free* (up to the dollar limit)—to acquire as many FVs as the CVV provides.

In summary, the models suggest that each mechanism will increase FV purchases differently across subgroups of SNAP consumers:

- Among consumers who were already purchasing the CVV's dollar-limit's worth of FVs, a bonus or rebate tends to increase FV purchases by more than a CVV.
- In contrast, for those who were purchasing no FVs, a CVV tends to increase FV purchases by more than a rebate or bonus.
- As the proportion of SNAP consumers who purchase no FVs increases, the ability of the CVV to increase average FV purchases tends to strengthen, while the ability of a rebate or bonus to increase average FV purchases tends to diminish.

How Was the Study Conducted?

Researchers from USDA's Economic Research Service (ERS) used neoclassical economics to develop models of consumers' purchase decisions based on alternative economic mechanisms. They reviewed recent studies in the economics and nutrition literature on interventions in SNAP and other USDA food assistance programs. Strategies to promote FV purchases based on nutrition education were outside the scope of the study, but could be used to supplement any of the mechanisms considered.