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How Do Food Assistance Programs Improve the Well-Being of Low-Income Families?

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Issue: Benefits and costs are important considerations when making program decisions. In 2000, the direct costs of the U.S. Department of Agriculture's three largest food assistance programs (food stamps, school meals, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)) were \$28 billion. While the costs of these programs are readily measurable, it is more difficult to estimate the value of the benefits for program participants. The Economic Research Service recently conducted several studies examining how food assistance programs affect the well-being of low-income families. The studies looked specifically at several dimensions of well-being, including food security, nutrient intake, food expenditures, and poverty.

Background: USDA food assistance programs provide needy people with access to nutritious foods. The largest program is the Food Stamp Program. The primary goal of the Food Stamp Program is to provide basic protection against hunger for low-income Americans of all ages and household types. Food stamps help eligible individuals obtain a more nutritious diet by providing benefits for purchases of food at grocery stores.

To receive food stamps, a household must be both income- and asset-poor (in addition to meeting citizenship and work requirements). For most households, this means gross income levels of less than 130 percent of the poverty line and assets below \$2,000. The amount of food stamp benefits a household receives declines as household income rises.

WIC provided nutritious foods to about 7.3 million participants per month in 2001. WIC's mission is to safeguard the health of low-income women, infants, and children up to age 5 who are at nutritional risk by providing nutritious foods to supplement diets, information on healthy eating, and referrals to health care.

To qualify for WIC, individuals must be nutritionally "at risk" and either be in families with incomes less than 185 percent of the poverty line or be receiving Medicaid benefits. Unlike the Food Stamp Program's sliding benefit scale, WIC benefits do not vary with income.

Findings:

1 The Food Stamp Program and Food Insecurity

According to ERS estimates, in 2000, more than 33 million people experienced food insecurity at some time during the year. Those households were uncertain of having or unable to acquire a supply of food sufficient to meet basic needs at all times because of inadequate resources. Since the primary goal of the Food Stamp Program is to provide a safety net against hunger, an important issue for policymakers is the effectiveness of food stamps in attaining this goal. In 2000, more than 17 million people in the United States received food stamps.

Studies of food insecurity consistently find that food stamp recipients are more likely to be food insecure than nonrecipients. Furthermore, even when households with similar observed characteristics (such as education, income, size of household) are compared, food stamp participants are more likely to be food insecure than nonparticipants. This puzzling result led ERS to conduct further analysis.

Research suggests that the relatively high rates of food insecurity among food stamp participants may arise from who chooses to participate in the program rather than the effect of the program. As might be expected, food-insecure households may seek out the program and be more likely to participate than food-secure households. If this is the case, an analysis of the effect of food stamps on food

security would find food stamps to decrease food security. Statistical analysis should take into account the effect of food security on the food stamp participation decision when estimating the effect of food stamp participation on food security. In a fully controlled research experiment, it would be possible to compare families that are identical except for their FSP participation status. Because data from this type of experiment do not exist, statistical techniques need to be used in lieu of the control or the randomization of experiments.

Using a statistical technique that accounts for the self-selection of food-insecure households into the Food Stamp Program, recent research finds that food stamp recipients are no more likely than eligible nonrecipients to be food insecure. Thus, the Food Stamp Program does not erode a household's food security, contrary to the possible implications of the comparison of food insecurity levels of food stamp recipients with those of low-income households whose members do not receive food stamps.

2 Food Assistance Programs and Nutrient Intake

Comparisons reveal that WIC has a positive effect on WIC participants' nutritional intake. Despite their more disadvantaged settings, children who are WIC participants consume more than noneligible children do of several key nutrients, including iron, folate, and vitamins B₆, C, and A.¹

One interpretation of these comparisons is that WIC improves the diet of its participants. Another interpretation, however, is that health-conscious, low-income parents—whose children probably would have relatively high nutrient intake anyway—are more likely than less health-conscious, low-income parents to participate in WIC with their children. If so, low-income, health-conscious families would have more healthful diets than low-income, less health-conscious families, regardless of WIC participation. This is another example of the statistical problem of self-selection bias. To correct for this possible effect, ERS researchers examined a sample of children living in households in which a person other than the child is on WIC. Such a person could be an infant or a pregnant or postpartum woman. This way, a comparison can be made between the nutrient intake of children receiving WIC benefits and children not receiving WIC benefits. The “control group” of children not receiving benefits live in a home not only eligible but also with similar nutritional motivations as the treatment group since other

¹ For example, in comparison with noneligibles, WIC participants are more likely to be in households headed by single parents with low education levels.

members of the control-group homes are receiving WIC benefits. Statistically significant results show that WIC participation has positive benefits on the children's nutritional intake.

3 The Food Stamp Program and Food Expenditures

Food stamp benefits can only be used to purchase food. If the total value of food stamps provided to a household is greater than the amount that the household would normally spend on food, a reasonable assumption is that the household is spending more on food using food stamps than if it just received cash instead. However, if the total value of food stamps is less than the amount normally spent on food, one could conjecture that the household's food spending would be the same whether the household received food stamps or a cash transfer. A standard economic argument predicts both of these outcomes. But studies have found substantially higher rates of food spending by FSP food stamp participants when the participants used food stamps rather than cash. This somewhat counterintuitive result is referred to as the “cash-out puzzle.”

An elaboration of this idea addresses the cash-out puzzle by defining separate variables to represent spending on food from food stamps versus from cash. This distinction allows for different spending patterns for food purchased with food stamps versus food paid for with cash. With this model and data from a cash-out demonstration in San Diego, researchers found that receiving food stamps increased a household's food spending by an amount greater than that of an equivalent cash transfer. This result also occurred when the total value of food stamps received was less than a household's typical expenditure on food.

The cash-out puzzle may be linked to household structure. Single, female-headed households in the San Diego cash-out experiment spent the same amount on food whether benefits were distributed as cash or as food stamps. For those households, there was no cash-out puzzle. Multi-adult households, on the other hand, spent less on food if benefits were distributed as cash. Thus, the cash-out puzzle is primarily observed in multi-adult households. The difference between the behavior of single, female-headed households and multi-adult households may be due to the presence of a single decisionmaker in the former and to intra-household relationships and budgeting controversies among adults in the latter. Whatever the reason, any program change to distribute cash rather than food stamps is likely to result in reduced food intakes for multi-

adult households. If children in multi-adult households receive more food when the benefit is in the form of food stamps rather than cash, then USDA may have a compelling reason to retain the use of in-kind benefits.

4 The Food Stamp Program and Child Poverty

The Food Stamp Program is an integral part of the social safety net. Recent ERS research examines the effect of food stamps on poverty and child poverty rates by considering a definition of family resources that adds the value of food-stamp benefits to family income. This modified definition of resources sheds light on the efficacy of food stamps in helping families meet basic needs. The results indicate that food stamps do not dramatically reduce the incidence of poverty and child poverty, as measured by the percentage of people who are poor, but they do significantly reduce the depth and severity of poverty. In 2000, 16 percent of all children were poor. This research shows that if the definition of income used to measure poverty also included the value of food stamps, then 15.4 percent of all children would be deemed poor. Food stamp benefits reduced the incidence of poverty by 4 percent.

Examining the reduction in the percentage of the population living in poverty is not an accurate measure of how food stamps help to ameliorate poverty, however. This is largely because the value of food stamp benefits declines as a household's income increases, and while many poor people become less poor due to food stamps, very few poor households receive enough food stamps to lift them above the poverty line. To determine how food assistance programs contribute to the well-being of low-income households, researchers examined two poverty measures that are sensitive to the distribution of income of poor persons.

The first measure, called the poverty-gap index, measures the depth of poverty. This index is found by first measuring the income gap, or the distance below the poverty line expressed as a proportion of that line, for all poor persons. The poverty-gap index is then the average value of the income gaps, where the average is formed over the entire population, counting the nonpoor as having zero income gap. Between 1988 and 2000, the average change in the poverty-gap index from adding the value of food stamp benefits to income was a decline in child poverty of 20 percent.

The second measure, the squared poverty-gap index, is the mean value of the squared income gaps. This measure is said to reflect the severity of poverty as it will be sensitive to (mean-preserving) changes in the distribution of income of the poor. The effect of food stamps on the average

decline in this measure of child poverty is 28 percent. The value of these two measures of child poverty is that they indicate the important role food stamps play in reducing poverty and improving the well-being of poor persons.

Conclusion: Policymakers need accurate information on both the benefits and costs of food assistance programs. ERS research has demonstrated the benefits of food assistance programs on various outcomes, including the alleviation of poverty and increases in food expenditures. The use of more sophisticated models by ERS researchers also has enabled policymakers to understand why some counterintuitive negative effects of food assistance on various outcomes emerge when using bivariate or simple multivariate statistical models. With the use of new data sets, more recent data, and sophisticated econometric techniques, future ERS research on the benefits of food assistance programs will further inform the decisions of policymakers.

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