Discussion

While the FSP benefit formula is rather complex, the computations reported here are straightforward (the SAS software program used to make these calculations is provided in Appendix B). For research purposes beyond the goals of this report, more complex tools such as microsimulation analysis are more suitable (Jacobson et al., 2000).[11] For example, this report's tool is not consistently useful for understanding counter-factual scenarios, such as "How would benefits change if gross income rose by $20?" Similarly, the tool does not address changes to eligibility rules that influence participation—the focus here is on the distribution of benefits for a fixed sample of participants. In contrast, microsimulation analysis is specifically designed for counterfactual investigations, and it does seek to measure how policy changes affect both the participation decision and the benefit level for participants.

The main advantage of this report's analytic tool is that it summarizes in a simple and consistent format a variety of stipulations and regulations that are usually stated in a manner that makes comparison difficult. Microsimulation analysis requires estimation of a vector of behavioral parameters with one data source from one time period, and then simulation of policy changes in a second data source and time period under the assumption that the behavioral parameters remain constant.

Conclusions from such analysis depend on both the accuracy of the estimated parameters and the characteristics of the sample in a fashion that may be difficult for the casual reader to disentangle. The tool developed for this report permits a transparent comparison of the various components of the benefit formula for different types of household, and it is simpler than alternative approaches for this purpose.

The tool developed in this report quantifies the relative importance of the reduction in benefits due to cash income, the increase in benefits due to deductions, and the minimum and maximum benefit levels. First, the income effect (E1)—defined here as -0.3 times gross cash income—is very large in absolute value. For the full sample, the income effect equals -$89.27, compared to a mean per person maximum benefit of $112.70. Second, deductions go a long way toward offsetting the reduction in benefits that would result if all cash income counted against benefits. For the full sample, the deductions effect (E2) equals $50.35. Average benefits are less strongly affected by the maximum benefit effect (E3) of -$6.78 and the minimum benefit effect (E4) of $2.25, but these effects are not trivial. In this analysis, the actual mean per person food stamp benefit ($69.25) may be expressed as the maximum benefit plus the effects of E1 through E4.

The income effect (negative) and the deductions effect (positive) are both so large in absolute value that the balance between these effects is a major factor in determining the mean food stamp benefit for any population or subpopulation of participants. Differences in the income effect and deductions effect across subpopulations are typically a dominant source of differences in the actual benefit received, while differences across subpopulations in the maximum benefit are often less important. To understand the distribution of food stamp benefits across different types of households requires a comprehensible account of the whole array of positive and negative effects on the benefits that participants actually receive. This report takes a step toward providing such an account.

[11] Microsimulation analyses estimate how a particular program change would influence the participation decision and benefit amount for each household in a particular sample. Then, the analyses aggregate the individual level responses to report how the change would affect overall caseloads and average benefit levels.

References

Brinkley, Mark. *Technical Documentation for the Fiscal Year 1998 FSP QC Database and QC Minimodel*. Washington DC: Mathematica Policy Research, Inc. June 28, 1999.

Castner, Laura, and Randy Rosso. *Characteristics of Food Stamp Households, Fiscal Year 1998*. Washington DC: Mathematica Policy Research, Inc. February 2000.

Food Stamp Act of 1977. As Amended Through P.L. 106-171, Feb. 11, 2000. <http://www.fns.usda.gov/fsp/LEGISLATION/act.htm>.

Jacobson, Jonathan, Nuria Rodriguez-Planas, Loren Puffer, Mary Grider, and Emily Pas. *The Consequences of Economic Change for the Food Stamp Program: Illustrations from Microsimulation*. Report submitted to the U.S. Department of Agriculture, Economic Research Service. Washington, DC: Mathematica Policy Research, Inc., 2000 (forth-coming).

U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. "Official USDA Food Plans: Cost of Food at Home at Four Levels." Accessed (March 14, 2001) <http://www.usda.gov/cnpp/using3.htm>.

U.S. Department of Agriculture, Food and Nutrition Service. "Food Stamps." Accessed (March 13, 2001) <http://www.fns.usda.gov/fsp/> and <http://www.fns.usda.gov/pd/fssummar.htm>.