

Summary

Changes in food assistance policy can have impacts on economic activity and household income across the economy. Using a Computable General Equilibrium model focusing on food assistance, we found that both a hypothetical cut in food stamp benefits and a hypothetical cash-out of the Food Stamp Program led to reductions in food demand and farm production. In addition, the cut in food stamp benefits resulted in a decline in transfer income for low-income households that was not compensated for by increased labor income. The cash-out triggered general equilibrium effects that led to higher taxes and reductions in labor income, chiefly for high-income households.

The interaction between food assistance and the general economy depends on the economic interaction among households, industry, the government, and the rest of the world. This interaction involves a complex system of relationships and economic transactions. A Computable General Equilibrium (CGE) model describes this complex system. The Food Assistance CGE model developed at USDA's Economic Research Service (ERS) describes the U.S. economy, focusing on the relationships between food assistance programs, households, the farm economy, and general economic activity. It provides a mechanism for examining the impact of food assistance programs on economic activity, and vice versa.

The Food Assistance Computable General Equilibrium model includes a number of innovations that make it particularly useful for analysts investigating the potential economic impact of changes in food assistance policy:

- Households are categorized by demographic variables and income to better capture the impact of changes in food assistance programs and taxes.
- Consumption patterns vary according to household income to better capture the impact of redistribution on economic activity.
- Industry categories highlight key agricultural and food processing sectors.
- Labor occupations are categorized by skill level to highlight differences in labor supply and demand by skill level across households and industries.
- Labor supply elasticities are detailed by household type to better capture the impact of the redistribution of economic activity.
- Government transfers to individuals are specified by program in order to focus on the role each transfer plays in assisting low-income households.

The policy simulation experiments address two questions, “What would happen if funding for the Food Stamp Program were cut by \$5 billion?” and “What would happen if food stamp benefits were converted from food vouchers to cash?” Each simulation experiment changed the initial conditions described in the base CGE model to reflect the hypothetical policy change and then, given the change, the model recalculated the new equilibrium conditions. A comparison of the new equilibrium conditions with the initial equilibrium revealed the economywide impacts of the hypothetical policy change.

Both simulation experiments had an impact on the farm economy. The \$5 billion food stamp cut led to decreases in farm and food processing production of

approximately \$1.3 billion and 7,500 jobs lost. The hardest hit farm sectors were livestock, feed crops, and fresh fruits and vegetables. The \$18.5 billion food stamp cash-out led to decreases in farm and food processing production of approximately \$3.5 billion and 18,500 jobs lost. Again, the hardest hit farm sectors were livestock, feed crops, and fresh fruits and vegetables.

The production and job losses resulting from the experiments were distributed across the Nation, with the greatest losses occurring in nonmetropolitan areas specializing in livestock and feed crops. For the food stamp cut, the hardest hit area was the Plains States, with nonmetro job losses of 441. However, many nonmetro areas gained jobs after the food stamp cut. In the aggregate, nonmetro employment expanded by over 1,000 jobs, illustrating the fact that many nonmetro areas of the country have an economic base extending beyond agriculture. All metro areas of the country experienced job growth, gaining 21,000 jobs in aggregate after the food stamp cut. In the cash-out experiment, all nonmetro areas of the country experienced job reductions, losing almost 8,000 jobs overall. The hardest hit nonmetro areas were located in the Plains and North Central States. The negative impact of the cash-out spilled over into many metro areas as well, particularly in the North Central States, illustrating how widespread the economic linkages are between agricultural and other industries.

The number of “working poor” increased as a result of the food stamp cut. Spurred by the reduction in food stamp benefits, low-income households sought more work hours, but, in aggregate, did not earn enough labor income to compensate for the drop in food stamp benefits.

The results of the cash-out experiment revealed a surprising negative effect on mid- and high-income households. The cash-out caused a shift in low-income household consumption from food to nonfood goods and services, which led to decreased production in industries demanding a relatively high amount of occupations with mid-level skills. These occupations are primarily filled by workers from mid- and high-income households. As a result, these households experienced a decline in labor income (a result that would have been dampened or reversed if the model had calculated longer term impacts on the housing market). Simultaneously, economywide changes triggered an increase in taxes for the mid- and high-income wage earners. The general equilibrium analysis reveals that a welfare policy change that is seemingly limited to effects on low-income recipient households, such as the food stamp cash-out, may have ramifications that extend to other income groups.

The results of the simulation experiments hinge critically on assumptions about consumption patterns embedded in the Food Assistance CGE model. Because the model incorporates a different marginal propensity to consume food with food stamps than with cash, an additional dollar of cash income produces a different mix of consumption than an additional dollar of food stamp benefits. Without this slippage effect, households would spend food stamp benefits the same way that they spend cash. In this case, the economywide effects triggered by the simulation experiments would be severely dampened or disappear completely. The value for the marginal propensity to consume food with food stamps that was used in the Food Assistance CGE model is taken from the lower range of estimates reported in the literature.

One of the primary strengths of the Food Assistance CGE model is that it provides policymakers and analysts with a mechanism for examining the economy-wide, distributional impact of potential policy changes. This is an important quality for a model designed to examine food assistance programs. Like all welfare assistance programs, food assistance programs are redistributive; these programs take government funds collected through taxes and redistribute them to lower income groups in the form of cash or in-kind assistance payments. The redistributive intent of food assistance programs means that an assessment of the consequences of these programs would benefit from a measure of distributional impact.

To the extent that assumptions about consumption patterns for households remain valid, the results of the simulations would have been similar, though of opposite sign, if we had flipped the questions to ask, “What would happen if funding for the Food Stamp Program were increased by \$5 billion?” and “What would happen if cash welfare benefits were converted to in-kind food benefits?” No matter which way the question is posed, changes in food assistance policy have effects on low-income households and the farm economy. As shown with the Food Assistance CGE model, the effects extend beyond these households and sectors, affecting the level and distribution of economic activity throughout the economy.