

An important aspect of the labor market impacts to mid- and high-income households is the shift of low-income household consumption into housing. In the time horizon of our analysis, this shift in demand does not result in the construction of new housing stocks but in a demand for better, higher priced housing that already exists. The adjustment assumes there is available housing (with a longer run perspective, there would be a stimulus to generate new housing). A characteristic of the housing market, given existing stocks of housing, is that there is little to no employment associated with supplying the housing. So, as demand shifts away from economic activity with relatively high labor-to-production ratios to activity with low to zero labor-to-production ratios, there is a significant impact on the labor market.

The second source of change to household income and well-being came from a change in taxes. To maintain government expenditures and other transfer payments at initial levels, real taxes increased by approximately \$65 million after the cash-out. This increase was due both to price adjustments that increased the cost of fixed real government purchases and to economywide adjustments that affected other tax revenues. High-income households paid all of the tax increase—in fact, mid-income households actually had a reduction in their taxes of \$1 million (triggered by their large fall in labor income).

## Conclusions

The results of the two policy simulations demonstrate the degree to which economic activity and food stamp

**Table 15—Impact on household incomes from the cash-out**

*Income for all household types decreased, though mid- and high-income households were the hardest hit*

Type of household	Labor supply (jobs)	Food stamp income (nominal)	Labor income (real)	Taxes (real)	Net income <sup>1</sup> (real)
	<i>Number</i>	<i>-----Million dollars-----</i>			
Total households	-5,556	18,746	-559	65	-650
Low-income	-143	18,746	-17	0	-24
Mid-income	-2,821	0	-314	-1	-326
High-income	-2,593	0	-228	65	-300
Two-parent	-2,485	3,786	-210	18	-232
Low-income	-72	3,786	-8	0	-9
Mid-income	-1,329	0	-134	-1	-135
High-income	-1,083	0	-69	19	-89
Single-parent	-312	11,274	-39	1	-45
Low-income	-36	11,274	-4	0	-7
Mid-income	-91	0	-13	0	-14
High-income	-184	0	-22	1	-24
Two-adult	-2,145	796	-187	17	-210
Low-income	-13	796	-1	0	-2
Mid-income	-1,143	0	-110	0	-114
High-income	-989	0	-76	17	-94
Single-adult	-539	1,814	-98	12	-121
Low-income	-20	1,814	-4	0	-6
Mid-income	-246	0	-53	-1	-54
High-income	-273	0	-42	12	-62
Elderly	-76	1,077	-24	17	-42
Low-income	-1	1,077	0	0	-2
Mid-income	-12	0	-4	1	-9
High-income	-63	0	-19	17	-31

<sup>1</sup>Net income includes labor income, capital income, retirement income, and most cash and noncash government transfers net of personal income taxes. Appendix A provides a list of the income sources included in this definition.

policy are interconnected. Hypothetical changes in food stamp policy triggered changes in production, labor demand, and sector income—not just for the farm and food sectors, which are most directly affected by food stamp spending, but also for other industries across the economy. Likewise, changes in food stamp policy triggered changes in consumption, labor supply, and household income—not just for low-income households, but for mid- and high-income households as well.

Both simulation experiments had an impact on the farm economy. The \$5 billion food stamp cut (25 percent of the food stamp program) led to decreases in farm and food processing production of approximately \$1.3 billion, nominal sector income losses of \$440 million, and job losses of 7,500. These are all small impacts in that they amount to 0.2 percent of production, sector income, and jobs in the combined farm plus food processing sectors. 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, nominal sector income losses of \$1.2 billion, and job losses of 18,500. In both simulation experiments, nonfarm and nonfood processing industries grew in aggregate, though in the cash-out experiment, some nonfarm, nonfood processing industries also declined. The production and job losses resulting from the experiments were distributed across the country, with the greatest losses occurring in nonmetropolitan areas specializing in livestock and feed crops.

The simulation experiments also reveal the effect of the food stamp policies on the level and distribution of income. Spurred by the reduction in food stamp benefits, low-income households sought more work hours but did not earn enough labor income to compensate for the drop in food stamp income. Even if the income elasticities of labor supply were quadrupled from those in the base CGE model, so that low-income households supplied over four times more labor in reaction to the food stamp cut, these households would not be able to substantially increase their total labor earnings.<sup>18</sup> In the absence of an exogenous increase in production and the demand for low-skill labor, the increase in low-skill labor supply would spur a drop in the wage rate for low-skill labor (with wages falling until supply equaled demand). As a result, without wage or other work supports, low-income households would be unable to compensate for lost food stamp benefits. The model

<sup>18</sup>Appendix C presents the results of sensitivity analysis for the labor supply elasticity assumption.

does not consider adjustments to other government assistance programs such as the Earned Income Tax Credit or childcare supplements, which might offset some of the lost household income.

The effects of a food stamp cut are not favorable for low-income households. The results of the cash-out experiment also reveal a surprising negative effect on mid- and high-income households (an income drop of \$626 million). In this case, the shift in low-income household consumption triggered a change in economic activity that reduced mid- and high-income household labor income and increased mid- and high-income taxes. The change in consumption led to reduced production in industries using a relatively large amount of mid-skill-level occupations. Since these occupations are primarily filled by mid- and high-income household workers, these households showed a decline in labor income. This result would have been dampened or reversed if the model had calculated longer term impacts on the housing market (and the economic activity linked to homebuilding).

The drop in real income for low-income households was relatively small (\$24 million) in the cash-out experiment. However, in this case, the drop in income may understate changes in well-being because it does not measure any reductions in well-being that may result if food insecurity increases due to the cash-out (Bishop et al., 2000; Butler and Raymond, 1996; Devaney and Fraker, 1986). The relatively small reduction in real income for low-income households masks the very large shift in consumption from food to nonfood items. Food-at-home consumption fell over \$3.2 billion while nonfood consumption rose over \$3.1 billion for low-income households. This reduction may leave vulnerable household members with less access to food. Conversely, the drop in real income may overstate the decrease in household well-being because it does not reflect any increase in well-being gained by low-income households from having the opportunity to make unconstrained consumption choices.

The general equilibrium analysis reveals that a food assistance policy change that has effects that are seemingly isolated to low-income recipient households, such as the food stamp cash-out, may have ramifications that extend to other income groups. Any policy that changes the level or distribution of economic activity will have an impact on those households that have linkages to the economy through labor-force participation, capital income, or tax payments. The households with the strongest links are mid- and high-income households, and they will be affected by food

assistance policy to the extent that a policy impacts economic activity. In fact, as illustrated by the cash-out experiment, these households will be affected even more than low-income households (which tend to have fewer ties to the economy).

Three sets of assumptions built into the Food Assistance CGE model contributed to the results of the two policy simulations, though changes in only one set of assumptions led to substantial changes in the simulation results. The first set of assumptions involves the model's closure rules, particularly the balanced budget assumption. In the Food Assistance CGE model, personal income tax rates adjust after a policy change to bring the government account back into equilibrium. For example, personal income tax rates decline in response to a policy change that reduces government food stamp expenditures, thereby leaving the government deficit unchanged. Instead of returning the revenues freed by a cut in food stamp benefits to taxpayers, the government could have used the money to finance other activities or to buy down the debt. However, unless the money was used to finance farm programs, the impact on the farm economy would remain virtually the same. The type of closure chosen for the government account primarily affects nonfarm, nonfood expenditures. Kuhn et al. (1995) showed that the impacts on food demand and agriculture with a deficit-reduction closure were essentially identical to the impacts with a tax-reduction rule. The only real difference they found was that the tax reduction had a greater impact on nonfood consumer goods and services, while the deficit reduction scenario had a greater impact on capital goods sectors.

The second important set of assumptions involves the labor supply elasticities embedded in the Food Assistance CGE model. To check the robustness of the simulation results to these elasticity assumptions, we tested the sensitivity of the results to a wide range of labor elasticities (appendix C presents this sensitivity analysis). The elasticity assumptions do have dramatic effects on labor supply; however, because of the neoclassical assumption about labor market behavior embedded in the model, labor supply changes do not trigger dramatic changes in household income. In the model, changes in labor supply trigger changes in the wage rate sufficient to equate labor supply and demand. As a result, increases in labor supply and the number of jobs do not

result in large increases in labor income; wage-rate adjustments counterbalance the potential growth in labor income. In addition, wage adjustments for a particular skill level affect all labor income for all households supplying labor at that particular skill level. As a result, all households in the model, whether or not they actually adjust their own labor supply, experience changes in their wage rates and their labor income because of changes in aggregate labor supply. This assumption about labor market behavior leads to model results that accurately describe aggregate household effects but that may not reflect individual household experience.

The third and most critical set of assumptions concerns the consumption patterns of food stamp recipient households. 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 they spend cash. If that were the case, the results of the two simulation experiments would be different: a food stamp cut would affect the distribution of consumption only to the extent that high-income households spend money differently than low-income households, and a food stamp cash-out would not have an impact on consumption and therefore would not have an impact on general economic activity. A doubling of the slippage effect slightly more than doubles the reduction in food spending calculated in the simulation experiments (see Smallwood et al., 1995b, for sensitivity analysis of the slippage effect).

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