

Impact of Cuts in Federal Assistance

The net effect of the new law is to significantly decrease food stamp outlays. CBO's estimate, though likely high, is that \$23 billion over 1997-2002, or about \$4 billion per year, will be cut. Reductions in food stamp benefits will cause low-income families to decrease spending on food and other goods such as housing, clothing, and medical care. Thus, the economic effects of cuts in transfers to low-income families, even in the form of food stamps, are not limited to the production and consumption of food, but ripple throughout the economy.

The effects of decreasing government transfers to low-income households on food production and consumption, and on the general economy, are estimated in two different though complementary general equilibrium studies. These general equilibrium analyses focus on how changes in relative sectoral profitability affect changes in output, returns, and the flow of resources into and out of the farm sector. Figure 2 provides a heuristic characterization of the general equilibrium models used to estimate the effects of lower Federal transfers to low-income households. The effects of major changes in policy, like welfare reform legislation, are not restricted to one sector but broadly affect economic incentives and behavior across the economy. Policy induced changes in sectors supplying inputs, demanding agricultural products, or competing for scarce capital and labor are likely to have different effects on agriculture than suggested by a partial equilibrium analysis.

Using general equilibrium models to assess policy changes is not new or unique to this study. Meade (1955), Johnson (1958), Harberger (1962), and others have applied early numerical analogues of traditional two-sector general equilibrium models. Analytical work has centered on the distortionary effect of taxes, tariffs, and other policies, together with the incidence of corporate taxes.² Not only do general equilibrium results highlight policy-induced changes in sectoral input and output, but they also highlight distributional changes as economic welfare shifts between consuming agents or income classes. The general equilibrium nature of a model is characterized by the determination of prices for consumer and producer goods and services that clear all markets. The equilibrium prices

²Harberger (1962) was the first author to investigate tax policy numerically using a two-sector general equilibrium framework.

determine the optimal allocation of resources, given the endowments of labor, capital, and natural resources (land for crop, livestock, and forestry production) and the tax and transfer policy regime in place.

Agriculture and the General Economy

A modified computable general equilibrium model based on Robinson, Kilkenny and Hanson (1990) simulates the effects on economywide output and employment from reducing Food Stamp Program benefits. Starting from a 1993 base, the model simulates the adjustments that would occur to the economy, given a \$4-billion annual average decline in the Food Stamp Program for 5 years. The general equilibrium approach applied allowed prices and wages to adjust to restore full employment of resources and to re-adjust supply and demand for goods and services.

Food stamps increase total spending on food, although the increase is less than the amount of the benefit. The marginal propensity to consume food from food stamps, often referred to as the supplementation effect, has been estimated in the range of 0.20 to 0.45 (Fraker, 1990; Ohls and Beebout, 1993; U.S. Department of Agriculture, 1995a,b). Although all of the food stamps are spent on food, funds previously spent on food are reallocated to other needs, such as housing, clothing, or medical care. This marginal propensity to consume out of food stamps, the supplementation effect, implies the initial impact of a \$23-billion decrease in Food Stamp Program benefits would be a decline of \$5 to \$10 billion over 6 years in retail food spending and a decline of \$18 to \$13 billion over 6 years in nonfood spending.

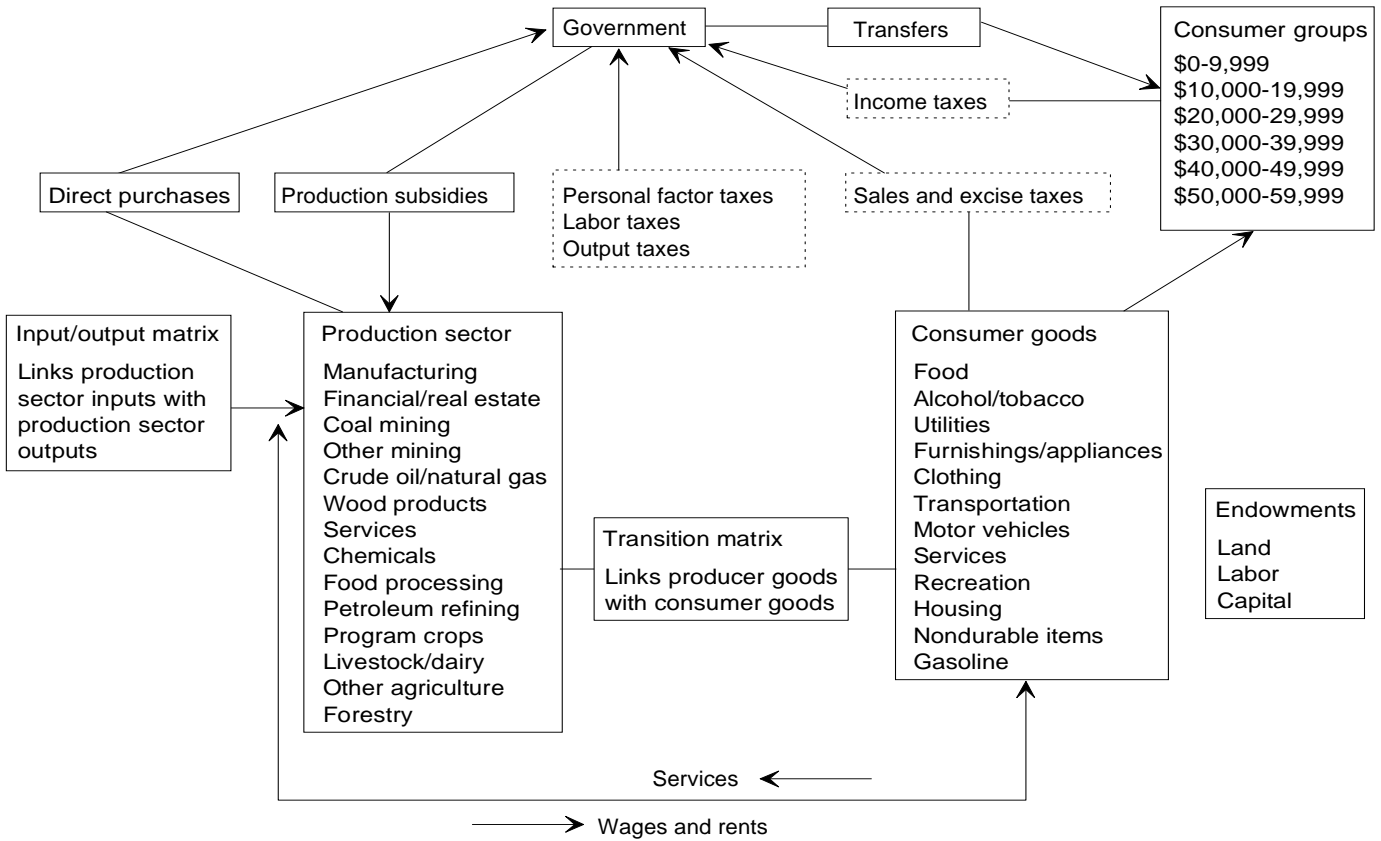
Two supplementation scenarios are examined: a supplementation effect of 0.2 and a supplementation effect of 0.45. It is also assumed budget savings from lower transfers are returned to the economy through tax reductions. With lower taxes, demand and jobs shift, primarily into consumer goods and services. In this analysis, returning budget savings to the economy leads to a constant level of total employment in the long run.³

The economywide effects capture the linkages among the producing sectors and households, with households distinguished by income groups. The impacts

³This analysis did not account for dynamic growth effects from investment into private capital or from potential changes in work incentives.

Figure 2

The Computable General Equilibrium model



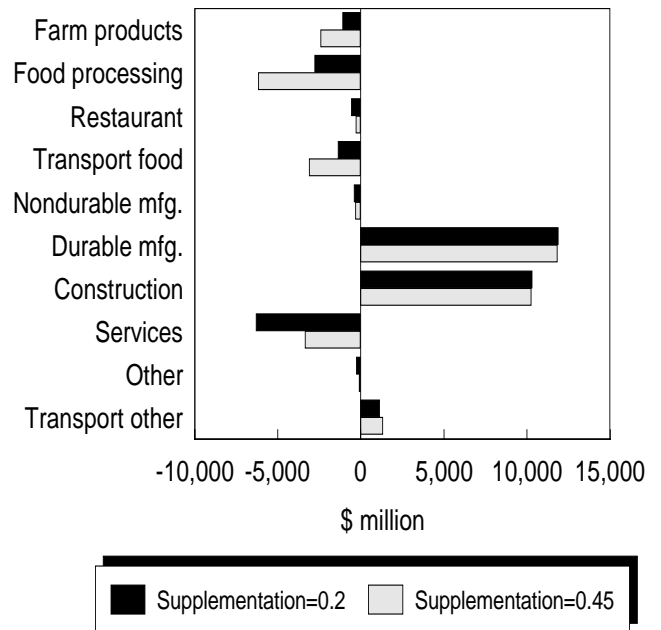
Source: Authors' calculations.

on producers from a \$4-billion annual reduction in food assistance and a shift from food to nonfood demand are analyzed under the assumption that savings from a decrease in the Food Stamp Program's budget are used for deficit reduction. Farm sector annual output losses are estimated to range from \$1 to \$2 billion over 5 years (between 0.1 and 0.2 percent of sector output) (fig. 3). Annual output losses from the food processing and distribution sector range from \$1 billion (0.15 percent) to \$2.5 billion (0.3 percent) over the same time. Losses in output among service sectors range from \$6 billion to \$3 billion (0.03 to 0.02 percent) as expenditures on consumer services are reduced to supplement food expenditures. Annual output in durable manufacturing expands by \$2.3 billion (0.1 percent), while construction expands by \$2.0 billion (0.25 percent).⁴ Employment impacts display the same pattern. On an annual basis, the farm sector loses 3,000 to 6,000 jobs, food processing and distribution lose 14,000 to 25,000 jobs, services lose

⁴Output per worker differs across sectors. The reallocation of jobs from low-productivity sectors, agriculture and services, into high-productivity sectors, construction and durable goods manufacturing, leads to greater total production.

Figure 3

Economywide impacts on output



Source: From data in U.S. Department of Agriculture, 1995a.

11,000 to 19,000 jobs, durable manufacturing gains 15,000 to 16,000 jobs, and construction gains about 18,000 jobs.

The impact of program modifications on spending for particular foods depends on the overall impacts on food spending as well as how low-income households allocate their food budget (fig. 4). The impact on farm commodities depends on changes in food spending of program participants, the value of the farm component in each food group, supply and demand adjustments that take place at the farm level, and any interactions that might take place with farm programs. Results suggest the largest impact is on the beef sector. This is due to the large portion of the household budget spent on beef and the large farm component of the product.

Meats account for the largest share of the household food budget. Low-income households spend one out of every three food dollars on beef, pork, poultry, fish, and eggs. In general, meat products at the retail level require less processing than other foods. In other words, they have a high share of farm value per dollar of retail expenditure. For example, the farmers' share of retail value of a pound of choice beef is 56 percent. This contrasts with a 34-percent farm value of a pound of cheddar cheese, 18- to 29-percent for fresh vegetables, and 28-percent for flour, and much less for prepared foods. Consequently, the farm value of a change in retail food spending at the farm level is likely to be greater for meats than for other food groups.

According to our model, the new welfare legislation's potential economic effects on the agricultural sector and the general economy would be as follows:

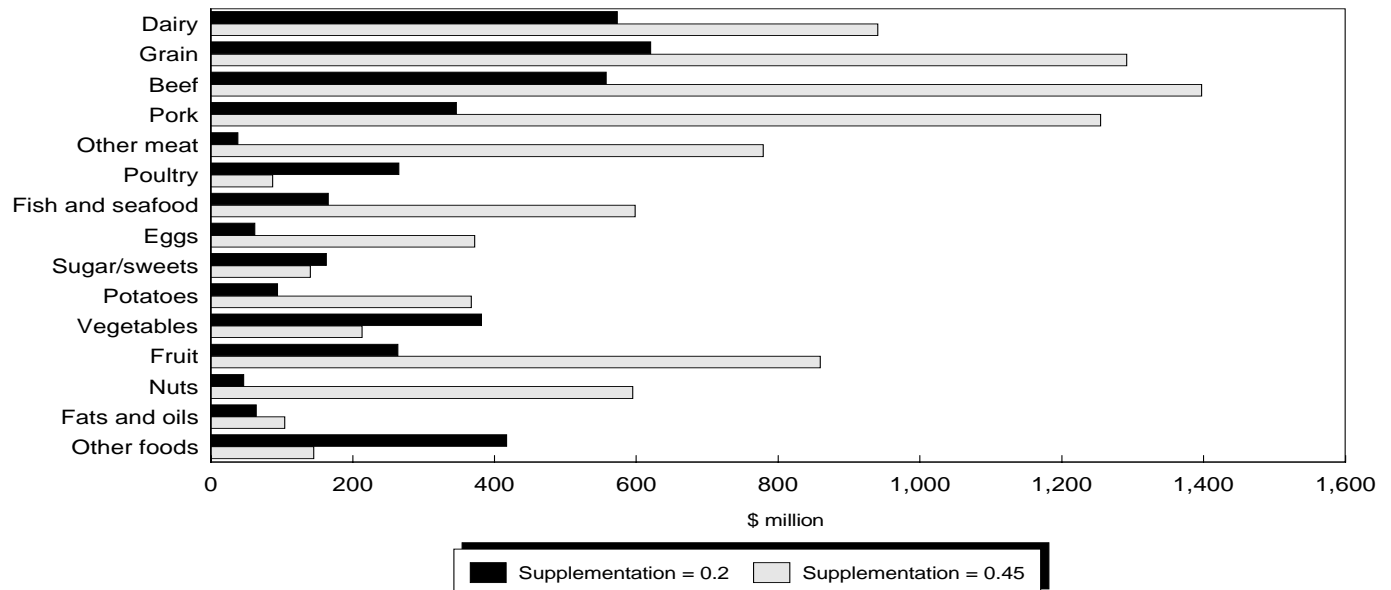
- Retail food spending would decrease.
- Demand for agricultural commodities would decrease.
- Commodity prices and farm income would decrease.
- Capital and labor would be reallocated to nonfood sectors.

Keep in mind, these effects depend on two criteria: (1) how much the benefits will be reduced, and (2) what shape the program will take. Our model shows that in the short run, the economywide effects would be negative. As the reduced government expenditures are injected back into the economy, through a tax cut, the short-term effects are mitigated.

Welfare Reform and Changes in Capital Gains Taxation

LeBlanc, Hrubovcak, and Durst (1998) examined the combined effects of cutting transfer payments and reducing the taxation of capital by decreasing the tax on capital gains. Linking welfare cuts with an exclusion on capital gains, it is argued, increases incentives

Figure 4
Estimated spending declines for food, 1996-2000



Source: From data in U.S. Department of Agriculture, 1995a.

for people to work in an expanding economy. Lowering the capital gains tax rate will provide additional incentives for capital formation through increased investment and savings and will mitigate the “double” taxation of capital income and the taxation of purely inflationary increases in the value of assets.

Two simulations are presented: *Proportional Redistribution* reduces transfer payments proportionally across all income classes by \$10 billion and maintains budget neutrality by restoring a 30-percent capital gains exclusion and *Targeted Redistribution* decreases welfare transfers to each income class and restores preferential treatment of capital gains. The authors use the change in a sector’s output as a useful summary indicator of the interaction between changing input use, returns, and consumption decisions. Driven by economywide efficiency gains from less distorting capital taxes, agricultural production and food processing, like all other sectors, experience increased output.⁵ Under a *Proportional Redistribution* scheme, output for program crops and other agriculture decreases while output for food processing and livestock and dairy increases (table 4). Reflecting the greater relative after-tax profitability, food processing increases by \$317 million and dairy and livestock increases by \$148 million. Food-related output under *Proportional Redistribution* is greater than under *Targeted Redistribution* as the demand for goods and services shifts to nonfood items. Food processing is affected directly by the capital gains exclusion and indirectly from cost savings from lower livestock prices.

Extending preferential tax treatment on income earned from the sale of assets held for draft, dairy, breeding, and sporting purposes acts as a catalyst for livestock and dairy agriculture. Without preferential treatment on the sales of livestock, agricultural output would increase little. Although agriculture is relatively capital intensive, land comprises most of the capital. Because a small percentage of land actually transfers in a taxable manner in any given year, the effect of restoring the capital gains exclusion for land is less important than for other forms of capital.

Cutting transfer payments proportionally while increasing the capital gains exclusion draws resources into food production, leading to lower prices and an

⁵The largest estimated dollar increase in output occurred in the service sector, nearly \$8 billion in the *Proportional Redistribution* experiment.

Table 4—Estimated change in food production

Item	Proportional redistribution	Targeted redistribution
Program crops	-204	-211
Livestock and dairy	148	54
Other agriculture	-75	-104
Food processing	317	-11

Source: From data in LeBlanc, Hrubovcak, and Durst, 1998.

increased consumption of goods and services by all income classes (table 5).⁶ Efficiency gains in the economy, due to reducing the distorting effect of over-taxing capital relative to labor, increase overall expenditures. Proportionally redistributing the budget shortfall over all income classes to offset the tax reduction still leaves sufficient income to increase consumption. Expenditures for essential goods and services (food, housing, and transportation) increase by nearly \$1.5 billion. Food expenditures alone increase by \$535 million. Expenditures for food increase by nearly \$216 million for the three lowest income classes and \$319 million for families with income exceeding \$30,000 annually.

By accounting for the flow of resources after a policy event, we can estimate which income class benefits or loses after the economy readjusts to a new equilibrium. Internal Revenue Service data reveal capital gains in the general economy are concentrated at incomes exceeding \$50,000 per year.⁷ In fact, 90 percent of the capital gains for all taxpayers were claimed for income tax returns with adjusted gross incomes of \$50,000 or more. Moreover, capital gains realizations are more concentrated than ordinary income. Persons in the top 0.5 percent of the income distribution generate 59 percent of all capital gains compared with only 12 percent of the adjusted gross income.

Table 6 presents estimated economic welfare changes due to restoring the preferential treatment of capital gains for two types of reduction in government transfers: (1) proportionally and (2) targeting low-income

⁶Estimates presented in tables 4 and 5 have been aggregated from 13 to 5 sectors to focus attention on food, housing, transportation, utilities, and services.

⁷Critics argue that statistics on the distribution of capital gains are misleading because a large fraction of capital gains go to people of modest income with temporarily inflated income in the year the gain is realized. Feenberg and Summers (1990) suggest reliance on a single year’s income does not greatly alter the distribution of capital gains.

Table 5—Change in consumer expenditures under alternative scenarios

Income class	Experiment	Consumption category						
		Food	Housing	Transport	Utilities	Services	Other	Total
Million dollars								
\$0-10,000	Proportional	54	51	31	25	22	82	266
	Targeted	-844	-877	-502	-385	-353	-1,321	-4,281
\$10-20,000	Proportional	69	61	44	27	69	116	386
	Targeted	-67	-172	-63	-21	-130	-197	-651
\$20-30,000	Proportional	93	86	73	34	109	171	566
	Targeted	183	9	109	74	115	209	699
\$30-40,000	Proportional	92	86	75	31	126	173	584
	Targeted	276	101	192	100	267	402	1,339
\$40-50,000	Proportional	64	61	53	21	96	124	420
	Targeted	219	86	155	77	234	330	1,100
> \$50,000	Proportional	163	195	139	55	316	375	1,242
	Targeted	633	412	479	226	956	1,231	3,937

Source: From data in LeBlanc, Hrubovcak, and Durst, 1998.

families.⁸ In either case, restoring a 30-percent capital gains exclusion increases national welfare by reducing the after-tax distortion between capital and labor prices. The results indicate total economic welfare increases by about \$800 million or roughly 0.02 percent of national income. Both transfer schemes simply reallocate the \$800 million in welfare gains to different income classes. Holding government expenditures constant isolates estimates of welfare gains by the private sector that are associated with reducing capital taxation. These results indicate that welfare gains generated by increasing the preferential treatment of capital gains are concentrated at higher incomes (table 6). Under the *Proportional Redistribution* scheme, nearly 55 percent of the estimated welfare gains accrue to the top 17 percent of families, 62 percent to the top 30 percent, and 76 percent to the top 50 percent. The bottom three income classes, representing 42 percent of households capture 24 percent of the welfare gains.

The estimated economic welfare gains associated with the preferential treatment of capital gains are, however, distributed more evenly among income classes than the distribution of capital gains realizations. While the highest income class, \$50,000 and above, accounts for 90 percent of the capital gains realizations in 1988, it only captures 62 percent of the welfare gains. The largest relative winners are families in the \$20,000-\$30,000 and \$30,000-\$40,000 ranges

⁸For the economy as a whole, the economic welfare costs or gains are measured by calculating Compensating Variation (CV) across the six income class utility functions. The authors adopt the convention that welfare-improving changes in CV are reported as positive.

Table 6—Welfare changes under proportional and targeted redistribution schemes

Income class	Proportional redistribution	Targeted redistribution
\$0-10,000	0.086	-4.970
\$10-20,000	0.045	-0.465
\$20-30,000	0.066	0.128
\$30-40,000	0.111	1.018
\$40-50,000	0.058	0.909
> \$50,000	0.446	4.193
Total	0.812	0.812

Source: From data in LeBlanc, Hrubovcak, and Durst, 1998.

who account for 22 percent of the welfare gains and only 4 percent of the capital gains realizations. The disproportionate increase in the welfare of these two income classes is explained by the increase in the after tax return of capital, but more importantly, the increase in wage income generated by an expanding economy. For both income classes, labor accounts for over seven times more income than from capital.

Not surprisingly, targeting low-income consumers to offset the reduced taxation of capital heightens the inequality of welfare distribution. Like the other targeting scheme, estimated gains are concentrated at higher income levels. With this redistribution scheme, however, families with income equal to or exceeding \$50,000 capture \$4 billion in welfare gains and families between \$20,000 and \$40,000 capture \$1.1 billion. Welfare for households with incomes below \$20,000 declines by \$4.7 billion.