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State Variations in the Food Stamp Benefit Reduction Rate for Earnings

Cross-Program Effects from TANF and SSI Cash Assistance

Kenneth Hanson and Margaret Andrews



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State Variations in the Food Stamp Benefit Reduction Rate for Earnings

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Kenneth Hanson and Margaret Andrews

Abstract

The Food Stamp Program reduces benefits to households as their earnings rise. This reduction is affected by household participation in other Government assistance programs (cross-program effects) and by the wide variation in State-specific reduction rates for earnings in Temporary Assistance for Needy Families (TANF). This study shows that, for food stamp recipients who also received cash benefits through TANF in 2005, an extra dollar of earnings led to a change in food stamp benefits ranging from a reduction of 36 cents to an increase of 9 cents. On average across all States, the overall reduction rate for food stamp benefits and TANF cash benefits was about 70 percent, or about double the benefit reduction rate for a household that received only food stamp benefits. Even with this high benefit reduction rate, households received larger net incomes by working and earning income. Cross-program effects and State-level variability in food stamp benefits are important considerations in integrating Government assistance programs into a support system for low-income households.

Keywords: Food Stamp Program benefit formula; Effective Benefit Reduction Rates; food stamp benefit effects from TANF earning deductions, effective tax rates.

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Summary

States have adopted different rates at which to reduce households' Temporary Assistance for Needy Families (TANF) benefits as households earn more income. Because Food Stamp Program benefits depend on total income, including assistance income, the reduction in TANF benefits affects food stamp benefits for those who participate in both programs. Even when benefits are reduced because of higher earnings, households are better off with the additional earnings because the reduction in benefits is less than the increase in earnings.

What Is the Issue?

In 2005, 41 percent of the 10.8 million households participating in the Food Stamp Program also received cash assistance from TANF and/or the Supplemental Security Income (SSI) program. Of these multiprogram participants, 11 percent also earned some income (500,000 households). For these households, the rate at which increases in household earnings reduce food stamp benefits depends on the effect of earnings on other assistance programs (cross-program effects). Different State-level policies on TANF earnings deductions have resulted in variations in food stamp benefits across States. The extent of the variation affects the degree to which the Food Stamp Program provides a uniform level of benefits to recipients across the country.

Cross-program effects and State-level differences in food stamp benefits are important considerations in integrating government assistance programs into a support system for low-income households. This study provides estimates of State-specific reduction rates in food stamp benefits as earnings increase, as well as estimates of cumulative benefit reduction rates (that is, reductions in food stamp, TANF, and SSI benefits combined) as earnings increase.

The analysis also examines the impact on food stamp benefits of the excess shelter cost deduction. Many food stamp recipients spend a large portion of their income on shelter (rent/mortgage, utilities, and property taxes). Food stamp households can take a deduction for shelter expenses that exceed half of their monthly net income. A household's benefit reduction rate for an increase in earnings depends, in part, on whether the household uses the shelter deduction.

What Did the Study Find?

State variations in TANF earnings deductions (portion of earnings not counted as income) affect the net household income on which food stamp benefits are based, resulting in differences in the rate at which food stamp benefits are reduced by an increase in earnings. Depending on the State, an extra dollar of earnings results in a change to food stamp benefits ranging from a reduction of 36 cents (Arkansas, Connecticut, and Wisconsin) to an increase of 9 cents (Louisiana, Mississippi, South Carolina, Tennessee, Texas, and Wyoming). The other States fall in between. A number fall into similar groupings based on TANF earnings deduction rates:

- Fifteen States have a TANF earnings deduction of 50 percent. Each additional dollar of earned income in these States reduces food stamp benefits

The Food Stamp Program was renamed the Supplemental Nutrition Assistance Program in the 2008 Farm Act.

by 13.5 cents (CA, FL, MA, ME, NH, NJ, NM, NV, OH, OK, OR, PA, RI, UT, and WA).

- Four States have a TANF earnings deduction of 33.3 percent. Each additional dollar of earned income in these States reduces food stamp benefits by 5.99 cents (AK, DE, GA, and KY).
- Five States have a TANF earnings deduction of 20 percent. Additional earned income has no effect on food stamp benefits (AL, MI, NE, SD, and VA). In these States, the decrease in food stamp benefits due to extra earnings is precisely offset by the increase in food stamp benefits due to the earnings-induced reduction in TANF benefits.
- Six States have a TANF earnings deduction of less than 20 percent. Each additional dollar of earned income leads to an increase in food stamp benefits (LA, MS, SC, TN, TX, and WY).
- Three States (AR, CT, and WI) have a fixed TANF grant amount, which means that food stamp benefits adjust only by the direct effect of earnings on food stamp benefits—there is no cross-program effect on food stamp benefits because there are no earnings-induced changes in TANF.
- The remaining eighteen States have a TANF earnings deduction that ranges from zero to one hundred percent.

Given State policies regarding TANF earnings deductions, the average “cumulative” benefit reduction rate on earnings is about 70 percent (for nonmaximum use of the shelter deduction). In other words, taking into account combined program benefits, a food stamp household that earns an additional \$1 would lose 70 cents’ worth of food stamp and TANF benefits, which combines a 61-percent reduction in TANF benefits with a 9-percent reduction in food stamp benefits. The 70-percent reduction is about double the effective tax rate on earnings for a food stamp household that does not receive TANF cash assistance. Even with this high rate of benefit reduction, however, households are better off with the additional earnings because the reduction in benefits is less than the increase in earnings.

How Was the Study Conducted?

We derived the food stamp benefit reduction rates for earnings from the food stamp benefit formula under alternative assumptions about whether the household receives cash assistance from TANF or SSI. State TANF earnings deductions were from the Urban Institute’s Welfare Rules Database for 2005. Data from USDA’s Food Stamp Program Quality Control Public Use data file for 2005 were used to determine the proportion of the food stamp case-loads that were subject to different benefit reduction rates.

Introduction

The Food Stamp Program (FSP) is a means-tested entitlement program that provides food benefits to low-income Americans. In 2005, 41 percent of the 10.8 million households participating in the FSP also received cash assistance from Temporary Assistance for Needy Families (TANF) or Supplemental Security Income (SSI). Of these multiprogram participants, 11 percent (500,000 households) earned some income. The amount of food stamps a household receives depends on the household's earnings and cash assistance from these other programs. As earnings increase, the total resources available to a household increase, but by less than the earnings because benefits from the assistance programs decrease.¹ With the benefits from TANF and SSI affecting the level of food stamp benefits (cross-program effects), multiprogram participation leads to complex formulas for calculating the reduction in food stamp benefits due to an increase in total household resources from an increase in earnings. (Note that the name of the Food Stamp Program was changed to the Supplemental Nutrition Assistance Program in the 2008 Farm Act.)

The key element in the formula for calculating the rates of reduction for food stamp benefits due to earnings is each assistance program's earnings deduction. The FSP has a 20-percent nationally uniform earnings deduction. Similarly, SSI has a nationally uniform earnings deduction of 50 percent of earnings above a standard earnings deduction of \$65 plus work-related expenses due to a disability. Since welfare reform in 1996, States have set TANF earnings deductions, which have resulted in variations in cross-program effects across States.²

Another element in the FSP benefit formula that affects the benefit reduction rates from earnings is the excess shelter cost deduction (for monthly shelter costs in excess of 50 percent of net adjusted income after all other deductions are allowed, not to exceed \$431 in 2005). When earnings increase for a household using the shelter deduction at a nonmaximum value, the amount of the shelter deduction is reduced. As a result, net income rises and the food stamp benefit amount declines, resulting in a larger benefit reduction rate than if the household either does not use the shelter deduction or is using it at the maximum.

In this report, we estimate the impact of a change in earnings on Food Stamp Program benefits—the FSP effective benefit reduction rate (FSP EBRR)—taking into account cross-program effects from a change in TANF and SSI cash assistance due to a change in earnings. We also estimate the overall impact of a change in earnings on FSP, TANF, and SSI benefits—the overall EBRR—taking into account cross-program effects. We explore the impact of the shelter deduction on both sets of calculations. Our estimates do not account for adjustments to Federal and State taxes, including the Earned Income Tax Credit (EITC), Medicaid, housing subsidies, and child care subsidies.

¹Total resources include cash income from the private sector of the economy, such as earnings, plus cash and noncash benefits from government assistance programs. Earnings are counted as gross wages—that is, they include taxes.

²Assistance for Families with Dependent Children (AFDC), the predecessor to TANF, had a nationally uniform earnings deduction of \$120 plus one-third of remaining earnings for the first 4 months of consecutive earnings. After 4 months, the earnings deduction was \$120, and after 8 months it was \$90.

Literature Review: Effective Benefit Reduction Rates

Calculation and analysis of effective benefit reduction rates, which are also known in the economics literature as effective tax rates on earnings (Moffitt, 2002), have generated considerable research. A summary of this literature follows. Our study adds to the literature by providing greater detail on the FSP EBRR. We expand the literature with our analyses of the impact of State TANF earnings deductions and the FSP shelter deduction on the FSP EBRR and the overall EBRR for the FSP, TANF, and SSI on household total resources.

Econometric Estimates of FSP and TANF Effective Benefit Reduction Rates on Earnings

A number of studies have estimated what they call an average effective tax rate on earnings in terms of TANF and/or FSP benefits by using an econometric model of program benefits as a function of family size, earnings, and unearned income. Most analysis has been done for Aid to Families with Dependent Children (AFDC), which preceded TANF, and for TANF. For instance, McKinnish, Sanders, and Smith (1999) used AFDC data by State for 1983-91 to estimate an average EBRR on earnings of 37 percent in 1991. Ziliak (2007) reproduced and extended this work using data through 2002. He found that the average EBRR on earnings started to fall following welfare reform in 1996, down to 15 percent in 2002. Ziliak (2008) is the first to use this method to estimate the average EBRR on earnings for the FSP alone. Using data from the Food Stamp Program Quality Control Database (FSP-QC) by State for 1983-2003, he found that the average EBRR for earnings over the period of 1998-2003 was about 17.7 percent.

For the FSP, the econometric approach uses program data on household earned and unearned income, benefits received, and household size to estimate the program's EBRR on earnings. The regression coefficient on earnings is the EBRR on earnings, averaged by State or for the Nation, for each period in the analysis. Implicitly, the EBRR reflects the variety of factors that affect a household's benefits, given its level of earned and unearned income and household size, such as program policy (including State options, use of deductions, cross-program effects, and other unforeseen circumstances). The earnings coefficient measures the relationship of benefits to earnings averaged over all the factors that affect that relationship for the households in the database, but it does not allow the analyst to sort out the relative effect of the different factors that influence the effective tax rate. In our analysis, we use the FSP benefit formula to derive EBRRs on earnings to illustrate some—but not all—factors that influence the EBRR. We highlight the influence of cross-program effects with TANF and SSI cash assistance and the influence of the shelter deduction on the FSP EBRRs for earnings. After deriving our FSP EBRRs for earnings, we compare them with estimated FSP EBRR by Ziliak (2008).

FSP Cost Impacts from Changes in Income from Other Sources

A series of studies for USDA's Food and Nutrition Service (FNS) (e.g., 1997 and 2004) have established "rules of thumb" that indicate the change in FSP benefits issuing from a change in income from other sources. The 2004 study, using data for 2002, projected that FSP benefits would decrease by 21.6 percent of the dollar increase in TANF cash benefits and by 10.2 percent for SSI benefits. The FNS rules-of-thumb cost impact depends on the proportion of benefits from the interacting program that go to FSP households and the average EBRR for FSP households participating in the interacting program. The average EBRR was 30.8 percent for TANF and 30.3 percent for SSI. These percentages were derived from microsimulation with the FSP-QC data and are similar in concept to those calculated in our study.³ While these studies assess the impact of changes in benefits from other programs on the FSP, they do not assess the impact of a change in earnings on FSP benefits with cross-program effects with TANF or SSI, which is the focus of our analysis.

Income Accounting Model Estimates of Effective Benefit Reduction Rates on Earnings

A household income accounting model derives EBRRs for specific household circumstances such as family structure and State of residence. For instance, Coe et al. (1998) estimated the EBRR on earnings for households participating in TANF, food stamps, and EITC in 1997 for a single mother with two children living in 1 of 12 States. Coe found that, as a recipient went from no work to a minimum-wage part-time job, the EBRR on earnings was 12 percent. The EBRR increased to 28 percent as the worker went from a part-time to a full-time minimum-wage job and up to 65 percent as he/she went from a full-time minimum-wage job to a \$9-per-hour job. Shaviro (1999) included additional programs (child care, housing, and Medicaid) and a fuller treatment of taxes in an analysis of a single mother in 11 States to find EBRRs of 80-90 percent as households moved from part- to full-time jobs or moved from low to higher wages. Such high EBRRs were also found by Hepner and Reed (2004), MaCurdy and McIntyre (2004), and Carasso and Steuerle (2005).

The phaseout of the EITC is a focus of analysis in these studies. The impact of the FSP benefit adjustment to the increased earnings is included in all of the studies, but is not highlighted. Nor do these studies address the State variation in the FSP-TANF relationship or the variation in the FSP EBRR with respect to a household's use or nonuse of the shelter deduction. As MaCurdy and McIntyre (2004) pointed out, "A more careful representation of the food stamp rules would be necessary if the focus were on food stamp policy" (p. 23, footnote 2).

Incentive Effects on Labor Supply and Program Participation

The labor supply incentive effects from FSP EBRRs to an increase in earnings have been found to be small (Moffitt, 2002). A change to the FSP maximum benefit amount or a change in the rate of benefit reduction for

³The average, which is across the FSP recipients who also participate in the interacting program, accounts for the variation in the EBRR due to the excess shelter cost deduction and the maximum and minimum benefit levels.

an increase in earnings has weak effects on work. The findings reported by Moffitt were based on studies by Fraker and Moffitt (1988), Hagstrom (1996), and Keane and Moffitt (1998).⁴ These studies were based on data from 1979 and 1984. Given the work-support focus of public assistance since welfare reform in 1996, it is likely that the labor supply effects from the FSP in combination with TANF have changed.

Blank, Card, and Robins (2000) found that changes in EBRRs had little or no effect on labor supply from these low-income households. Instead, they find that current welfare programs include strong work requirements and time constraints, which tend to reduce the incentives for nonrecipients to work less and enter the program, and to reinforce the incentives for participants to increase their work effort. Matsudaira and Blank (2008) found that changes to State TANF earnings deductions since welfare reform had little effect on labor supply. Steuerle (2006) pointed out that psychological and sociological motives for labor supply and program participation decisions may be more important than the economic motives alone, making it difficult to generalize about changes in program financial incentives on labor supply behavior.

⁴Fraker and Moffitt (1988) modeled the labor supply response to joint AFDC-FSP participation for single mothers. They found that “the Food Stamp Program in total reduces the labor supply of participants by about 9 percent, but marginal changes in the program’s maximum benefit amount and benefit reduction rate have only small effects on hours or work in the U.S. population of female heads” (p. 47). Keane and Moffitt (1998) extended this earlier work on multiple program participation and labor supply for single mothers. They found that simultaneously reducing both AFDC and FSP benefit reduction rates for earnings induced some nonworking recipients to work and some newly eligible recipients to participate and reduce their labor supply. The increase in labor supply from existing recipients more than offset the reduction in labor supply from new recipients. The contribution of the FSP to the labor supply response was not separable. Hagstrom (1996) found a small labor supply response to the rate of benefit reduction from earnings for married couples in the program.

FSP Caseload Trends: A Shift from Welfare to Work

The share of FSP recipients with earnings has increased since the mid-1990s, from 22.5 percent of households in 1996 to 27.2 percent in 2000, and to 29.3 percent in 2005, about 3.2 million households (USDA-FNS, 2006(a)). During the late 1990s, labor force attachment among low-income households increased due to a strong economy and incentives to work introduced by 1996 welfare reform legislation. The work incentives continued into the early 2000s, but the 2001 recession (March to November) and the sluggish labor market conditions in the early 2000s limited employment opportunities for low-income household members.

While the share of FSP households with earnings increased, the share of FSP households with TANF cash assistance decreased from 37 percent in 1996 to 14.5 percent in 2005. Among FSP households with children, the percentage receiving TANF cash assistance fell from 60.6 percent in 1996 to 26.3 percent in 2005, whereas the percentage with earnings increased from 31.8 percent in 1996 to 45 percent in 2005. The rising share of FSP households with earnings and the decreasing share with TANF cash assistance reflect the movement from welfare to work by single mothers since welfare reform in 1996.⁵

The share of FSP households with TANF cash assistance and earnings decreased from 5.2 percent in 1996 to 2.7 percent in 2005 (290,000 households), due to a reduction in TANF caseloads. Of FSP households that received TANF cash assistance, 18.4 percent had earnings in 2005, up from 14.2 percent in 1996 but down from 25 percent in 2000. Similarly, the share of FSP households with SSI and earnings has remained relatively stable, starting at 1.6 percent in 1996, going up to 2.5 percent in 2000 and 2001, and going back down to 1.9 percent in 2005 (210,000 households). Of FSP households that received SSI, 7.3 percent had earnings in 2005, up from 6.7 percent in 1996 and down from 7.8 percent in 2000. Although SSI encourages participants to work if possible and offers earnings deductions, a relatively low percentage of SSI participants worked, compared with those in FSP households with TANF cash assistance.⁶

In 2005, 41 percent of the 10.8 million households participating in the FSP also received cash assistance from TANF or SSI. Of these multiprogram participants, 11 percent also received earnings in 2005 (500,000 households). Although the number of households receiving food stamps that were working and participating in these other programs is small, they are of policy significance, given the interest in promoting work among adult members of low-income households and recent policy changes that have affected the treatment of earnings by Government assistance programs.

⁵For single mothers, the employment rate increased from 65.9 percent to 75.5 percent from 1996 to 2000, but fell back to 71.2 percent in 2005 (U.S. Department of Labor, April 2006, table 4).

⁶Since preparation of this report, food stamp caseload data through 2007 became available. The trends discussed in this section have persisted. The share of FSP households with earnings increased to 29.8 percent in 2007 (about 3.5 million households), while the share of FSP households with TANF cash assistance fell to 12.1 percent in 2007 (1.4 million households). The share of FSP households with TANF cash assistance and earnings decreased to 2.5 percent in 2007 (292,000 households), which implies that 20.9 percent of households that received TANF cash assistance had earnings. Similarly, the share of FSP households with SSI cash assistance and earnings decreased to 2.2 percent in 2007 (252,000 households), which implies that 7.9 percent of households that received SSI cash assistance had earnings.

Program Benefit Formulas

Program benefits issued to a household are based on a measure of household net income, which is the sum of all sources of “countable” income, net of program deductions. In general, the FSP, TANF, and SSI include the same sources of countable income. All three programs have an earnings deduction, which differs by program. The FSP also has a number of other deductions, whereas TANF and SSI do not. In addition, food stamp benefits do not count as income for TANF or SSI, but the cash assistance from TANF and SSI count as income for the FSP.

FSP Benefit Calculation

To be eligible for benefits, a household must have a gross income at or below 130 percent of the poverty guideline, unless the household contains an elderly or disabled member, in which case it is not subject to the gross income criterion. Gross income is the cash or money income from all countable sources for all household members. Also, net income must be at or below 100 percent of the poverty guideline for all households including the elderly and disabled.⁷ Net income is calculated by subtracting the deductions listed below from gross income, as follows:

1. *Earned income deduction* of 20 percent of the combined monthly gross earnings of household members; gross earnings include wages and salaries, as well as self-employed net income.
2. *Standard deduction* of 8.31 percent of the applicable net income limit based on household size (as set by the poverty guidelines), with a minimum deduction of \$134 prior to Fiscal Year (FY) 2009 and a minimum of \$144 starting in FY 2009 as a result of the 2008 Farm Act.⁸
3. *Medical deduction* for nonreimbursed medical expenses for elderly or disabled members of the household that are greater than \$35 per month.
4. *Dependent care deduction* for certain expenses for care of children or other dependents while other household members work, seek employment, or go to school. Prior to FY 2009, there was a maximum monthly deduction of \$200 per child younger than age 2, plus \$175 per dependent age 2 or older, to be in effect through 2008. As a result of the 2008 Farm Act, the cap has been removed starting in FY 2009.
5. *Child support payment deduction* for legally obligated child support payments to somebody who is not a member of the household.
6. *Excess shelter expense deduction* equal to monthly unsubsidized shelter costs that exceed 50 percent of gross income, net of all other deductions. Shelter costs include rent, mortgage payments, utility bills, property taxes, and insurance, net of housing subsidies.⁹ A maximum deduction of \$388 for households without an elderly or disabled member was set in 2005.

The use or nonuse of the shelter deduction influences the EBRR for earnings. The shelter deduction is based on the principle that a household is expected to spend no more than 50 percent of its adjusted income on shelter

⁷Eligibility also involves rules that impose limits on the value of vehicles and assets (USDA-FNS, 2006a).

⁸Starting in FY 2003, the 2002 Farm Act replaced the \$134 standard deduction for all households with a deduction that varies according to household size and is adjusted annually for cost-of-living increases. It sets the deduction at 8.31 percent of the applicable net income limit based on household size. No household will receive less than the deduction in place in 2002 (\$134 for the continental United States) or more than the standard deduction for a household of six. Starting in FY 2009, the 2008 Farm Act increased the minimum standard deduction to \$144.

⁹A standard utility allowance is available to households that incur heating or cooling expenses separately from their rent or mortgage and to households that receive direct or indirect assistance under the Low Income Home Energy Assistance Act of 1981 (LIHEAA). Some States allow homeless households a set amount for shelter costs.

costs. If shelter costs exceed this amount, then the excess can be deducted from income, up to a maximum value. Adjusted income to which the shelter costs are compared is cash income net of all other deductions. In 2005, a majority of FSP households (68.5 percent) used the shelter deduction, with 19.7 percent of those using the maximum deduction. Harkness and Newman (2002), using the 1999 American Housing Survey, found that 38 percent of food stamp recipients received housing assistance. This finding suggests that housing assistance may be the reason that many FSP recipients do not use the shelter deduction. Also, in 2005, 13.6 percent of FSP households had zero gross income and did not need the deduction.

The food stamp benefit formula is used to compute the level of benefits on the basis of a household's earned and unearned cash income, allowable deductions, and a 30-percent statutory benefit reduction rate from a maximum benefit. For an algebraic expression of the formula, see the box, "Food Stamp Benefit Formula" (p. 8). The level of monthly food stamp benefits is calculated by subtracting 30 percent of household net income, if any, from the maximum benefit amount for the household size. The maximum benefit is based on 100 percent of the cost of the Federal Government's Thrifty Food Plan, and it varies by household size. For 2005 in the continental United States, the maximum benefit amount ranged from \$149 for a household of one to \$898 for a household of eight. Prior to the 2008 Farm Act, there was a minimum benefit of \$10 for one- and two-person households. The 2008 Act replaces the \$10 minimum benefit for one- and two-person households with an amount equal to 8 percent of the maximum benefit for a one-person household. No minimum benefit is set for larger households. The statutory benefit reduction rate of 30 percent of net income reflects the assumption that a household is expected to spend 30 percent of its net income on food.

The food stamp benefit formula is equation 1 in the box. After various substitutions, the benefit formula becomes equation 4 or 7, depending on the shelter deduction. If the shelter deduction is zero or the maximum amount, then equation 4 can be used to determine a household's benefit amount. If the shelter deduction is between zero and the maximum amount, equation 7 is the relevant one. The appropriate equation can be used to determine the change in benefit that results from a change in income from the relevant source (TANF, etc.). It is in the context of these equations that we derive the FSP EBRR for earnings for households that also receive TANF and SSI cash assistance.

Simplified reporting and transitional benefits are two State options in the FSP that modify the standard benefit calculation (Trippe et al., 2004). Both options reduce or eliminate the need for recipients to report income changes that do not make them ineligible for the program. Consequently, benefits are not always adjusted as income changes during the certification period. For households participating in the FSP under these options, the EBRRs temporarily fall to zero, overriding the rates that would exist under the standard benefit formula. At the time of recertification, households in the FSP under the simplified reporting option would have benefits recalculated to adjust them to the new level of earnings.

Food Stamp Benefit Formula

$$(1) B = \max [B_{\min}, B_{\max} - rY_{\text{net}}]$$

where,

B: Dollar value of food stamp benefits received by a household, monthly

B_{\min} : Minimum food stamp benefit

B_{\max} : Maximum food stamp benefit, which varies with household size

r: Statutory benefit reduction rate from maximum benefits, $r = 0.3$

Y_{net} : Household monthly cash income net of deductions

Net income (Y_{net}) is gross countable cash income net of FSP deductions, not gross income net of taxes:

$$(2) Y_{\text{net}} = Y_G - D_E - D_S - D_D - D_M - D_H - D_C$$

where:

Y_G : Gross countable cash income

D_E : Earnings deduction

D_S : Standard deduction

D_D : Dependent care deduction, net of subsidies and subject to a maximum

D_M : Medical deduction, expenses for the elderly and disabled net of subsidies

D_H : Excess shelter cost deduction, net of subsidies and subject to a maximum

D_C : Child support payment deduction

Gross income Y_G is all sources of countable cash income without deductions and without tax deductions:

$$(3) Y_G = Y_{\text{Earn}} + Y_{\text{Tanf}} + Y_{\text{SSI}} + Y_{\text{Other}}$$

where:

Y_{Earn} : Earnings of wages and salaries plus self-employed income

Y_{Tanf} : Temporary Assistance for Needy Families (TANF) cash assistance

Y_{SSI} : Supplemental Security Income (SSI) cash assistance

Y_{Other} : Other sources of cash income

Substitute (3) into (2) and (2) into (1), substitute for D_E with the earnings deduction rate (e). For eligible households that receive more than B_{\min} the result is:

$$(4) B = B_{\max} + rD_H - r(1-e)Y_{\text{Earn}} + r[D_S + D_D + D_M + D_C] - r[Y_{\text{Tanf}} + Y_{\text{SSI}} + Y_{\text{Other}}]$$

where:

e : Earnings deduction rate, $e = 0.2$

The shelter deduction is constrained by a maximum deduction and by a minimum of zero:

$$(5) D_H = \min\{D_{\max}, \max[D_h, 0]\}$$

Where (note the distinction in subscript h and H),

$$(6) D_h = C_H - 0.50 [Y_G - D_S - D_E - D_D - D_M - D_C]$$

where:

C_H : Shelter cost (including utilities) net of housing subsidies

Assuming the shelter deduction is D_h and not zero or the maximum, substitute (6) into (4), explicitly include subsidies with the deductions, and rearrange terms to get:

$$(7) B = B_{\max} + r C_H + 1.5r[D_S + D_D + D_M + D_C] - 1.5r[Y_{\text{Tanf}} + Y_{\text{SSI}} + Y_{\text{Other}}] - 1.5r(1-e)Y_{\text{Earn}}$$

TANF Benefit Calculation

A State may provide TANF benefits to a family that it defines as needy if that family includes a minor child (younger than 18) or a pregnant person. This basic rule has technical qualifications related to the age of the minor child if the child is attending school, the living circumstances of unwed mothers younger than 18, legal alien status, and other stipulations. The major financial eligibility rules are an asset limit, gross income limit, and net income limit, all set by the States. The gross income limit pertains to the sum of earned and unearned income. Under the net income test, some earnings are deducted from gross income to determine countable net income. The portion of earnings deducted for the net income eligibility test may be smaller than the portion deducted in determining a recipient's benefits.

States set the earnings disregards for eligibility and benefit determination to provide a work incentive to TANF recipients and to offset the costs of working. The rules for TANF earnings deductions vary by State, and they take a range of values (see table 1).¹⁰ The fixed dollar deduction (column 2 in table 1) is the amount of earnings a household can receive without having any reduction in TANF benefits. Many States also deduct a percentage of additional earnings that exceed the fixed deduction (column 3 in table 1). Most FSP households that work and participate in TANF earn more than the fixed deduction. States are often more generous in their earnings deductions in the first months of work, and after a period of about 4-12 months, the earnings deductions are reduced. Our analysis is focused on the cross-program effects, with the percentage of earnings deductions that apply after about a year of earning.

Twenty-five States, including the District of Columbia, used both fixed and percentage deductions; 18 States used a percentage deduction only; 6 States used a fixed deduction only; and 2 States had no earnings deduction and a flat grant amount. The percentage deductions ranged from zero to 100 percent, with 15 States using 50 percent, 4 States using 33.3 percent, and 5 States using 20 percent. For 14 States, the fixed deduction or the percentage deduction changed over the length of time the recipient worked. The earned income deduction used by AFDC when it was replaced by TANF continues to be used by three States. The deduction consists of a \$120 fixed deduction plus a 33-percent deduction for 4 months, a \$120 fixed deduction for the next 4 months, and a \$90 fixed deduction thereafter.

State TANF earnings deductions, set by States following the 1996 welfare reform legislation, have taken a range of values relative to the previous nationwide earnings deduction for AFDC (33 percent). A majority of States (31) have increased the earnings deduction relative to the AFDC rule, whereas 16 States have lowered the earnings deduction. Four other States have maintained a 33-percent earnings deduction. There is no obvious explanation for why some States have become more generous with the earnings deductions while others have reduced them. One hypothesis is that Democrat-leaning States tend to be more generous, but empirical evidence does not support this claim. Using data from the University of Kentucky Center for Poverty Research (2007) on State Government party affiliation, we found that 17 out of 25 (68 percent) Democrat-leaning States (including

¹⁰ We use the Urban Institute's Welfare Rules Database to specify State TANF earnings deductions (Urban Institute, 2007). For some States we use the earnings deductions that apply after a household member has been working for about a year. What we refer to as an earnings deduction is also called an earnings disregard.

Table 1

State earnings deductions for Temporary Assistance for Needy Families (TANF), 2005

State	Fixed monthly amount	Share of earnings	Summary of complex earnings deduction
	<i>Dollars</i>	<i>Percent</i>	
Alabama	0	20.0	100% for first 3 months, 50% for next 6 months, 20% thereafter
Alaska	150	33.0	Valid for 12 months, then \$150 and 25% for next 12 months, and then 5% less each year
Arizona	90	30.0	
Arkansas	0	100.0	No disregards, flat grant amount
California	225	50.0	
Colorado	0	66.7	Reported deductions are for 12 months, then \$120 and 33% for next 4 months, \$120 for next 8 months, \$90 thereafter
Connecticut	0	100.0	100%, up to the Federal poverty level
Delaware	120	33.3	Reported deductions are for 4 months, \$120 for next 8 months, \$90 thereafter
Washington, DC	160	66.7	
Florida	200	50.0	
Georgia	120	33.3	Reported deductions are for 4 months, \$120 for next 8 months, \$90 thereafter
Hawaii	200	56.0	
Idaho	0	40.0	
Illinois	0	66.7	
Indiana	0	75.0	
Iowa	0	70.0	20% of gross earnings plus 50% of earnings net of diversions
Kansas	90	40.0	
Kentucky	120	33.3	100% for 2 months, \$120 and 33.3% for 4 months, \$120 for next 8 months, then \$90
Louisiana	120	0.0	
Maine	108	50.0	
Maryland	0	40.0	
Massachusetts	120	50.0	For recipients not exempt from work requirements. For recipients exempt from work requirements, replace the reported percent with 33.3
Michigan	200	20.0	
Minnesota	0	36.0	
Mississippi	90	0.0	100% for first 6 months, \$90 thereafter
Missouri	90	66.7	Reported deductions are for first 12 months, then \$90 thereafter
Montana	200	25.0	
Nebraska	0	20.0	
Nevada	0	50.0	100% for 3 months, 50% for months 4-12, \$90 or 20% (whichever is greater) thereafter
New Hampshire	0	50.0	
New Jersey	0	50.0	100% for 1 month, 50% thereafter
New Mexico	125	50.0	Reported deductions and 100% of earnings from work in excess of 34 hours per week for 2 years
New York	90	45.0	
North Carolina	0	27.5	100% for 3 months, 27.5% thereafter
North Dakota	180	27.0	\$180 or 27%, whichever is greater, plus 50% of remainder for 6 months, 35% for months 7-9
Ohio	250	50.0	
Oklahoma	120	50.0	
Oregon	0	50.0	
Pennsylvania	0	50.0	
Rhode Island	170	50.0	
South Carolina	100	0.0	50% for 4 months, \$100 thereafter

...continued

Table 1

State earnings deductions for Temporary Assistance for Needy Families (TANF), 2005--continued

State	Fixed monthly amount	Share of earnings	Summary of complex earnings deduction
	<i>Dollars</i>	<i>Percent</i>	
South Dakota	90	20.0	
Tennessee	150	0.0	
Texas	120	0.0	\$120 and 90% of remainder for 4 months (up to \$1400), \$120 thereafter
Utah	100	50.0	
Vermont	150	25.0	
Virginia	134	20.0	\$134 for families of 1-4 members, \$153 for 5-member families, \$175 for larger families
Washington	0	50.0	
West Virginia	0	40.0	
Wisconsin	0	100.0	No disregards, flat grant amount
Wyoming	200	0.0	
Average	85.9	41.7	

Source: Urban Institute, Welfare Rules Database, Query the database, 2005 data.

Washington, DC) had a more generous earnings deduction than did AFDC rules, while 8 did not.¹¹ Similarly, 14 out of 26 (54 percent) Republican-leaning States had a more generous earnings deduction, while 12 did not. Using a Chi-squared test, we do not reject the null hypothesis, at standard levels of statistical tests (1, 5, or 10 percent), that there is no statistical difference in the proportion of Democrat- and Republican-leaning States that have chosen a TANF earnings deduction greater than the AFDC earnings deduction (Snedecor and Cochran, 1967). The way that States have set the TANF earnings deduction as an incentive to work does not seem to be affected by political party affiliation.

The amount of TANF cash assistance is set by the State. Most States have continued pre-TANF maximum cash benefit schedules, while 18 States have raised their cash benefit levels since 1995 (Urban Institute, 2007). Cash benefits in all but two States are calculated in one of two ways. In 35 States, a family's benefit is the difference between countable net income and the maximum benefit for a family of its size. In 14 States, a family's benefit is the difference between countable net income and a specified standard, which is greater than the maximum benefit, but the benefit amount cannot be greater than the maximum benefit. Two other States, Arkansas and Connecticut, set benefits at either the maximum or 50 percent.

SSI Benefit Calculation

SSI is a means-tested Federal program for cash transfers to people who are 65 or older, blind, or have a disability. Some States offer a supplement. For adults, a disability exists if the person has a physical or mental problem that prevents performance of "substantial" work and that is expected to last at least a year or to result in death. The test for substantial work is whether a person is able to engage in work that can earn \$700 per month, with impairment-related expenses subtracted. When deciding if a child is disabled, the Social Security Administration looks at how his or her disability (physical or mental) affects everyday life, in that he or she must have severe functional limitations.

¹¹Information on party affiliation of the Governor and the percentage of upper and lower houses of the State Congress that are Democrats and Republicans were used to create a composite measure of the State as being Democrat- or Republican-leaning. If two or more of the three arms of State Government were predominantly Democrat, we treated the State as Democrat-leaning and vice versa. We did the analysis for 1997, 2003, and 2005 and arrived at the same conclusions.

An eligible individual cannot have a monthly net income in excess of the current Federal benefit rate (maximum benefit amount). The amount is the same for all States and is subject to annual increases dictated by cost of living adjustments. Since 1997, countable assets must be less than \$2,000 for an individual and \$3,000 for a couple. After summing gross income from countable sources, a number of deductions are made to arrive at net income for benefit calculations, as follows:

- (1) Standard deduction of \$20.
- (2) Earnings deduction of \$65 of earned income (in addition to the \$20 if no unearned income).
- (3) Earnings deduction of work-related expenses due to disability or blindness (monthly).
- (4) Earnings deduction of one-half of the remaining earned income, after deductions 1-3.
- (5) Income set aside under a plan for achieving self-support (PASS).

The level of SSI cash assistance is set by subtracting net income from the full Federal benefit rate (maximum benefit amount). In 2005, the individual full Federal benefit rate was about \$600 per month, while, for an eligible couple, it was about \$900 per month.

Findings: FSP Effective Benefit Reduction Rates (EBRRs) for Earnings

The way that FSP EBRRs for earnings with and without cross-program effects from TANF and SSI cash assistance are derived is explained in this section. Data from the FSP-QC are used to determine the distribution of FSP households with these sources of income across the circumstances that result in different FSP EBRRs for earnings. EBRRs on earnings depend on whether the household's benefits are at the minimum or maximum (B_{\min} or B_{\max}) or an intermediate level and whether the household uses the shelter deduction (and if so, whether it does so at the maximum or some lesser level). With the estimated FSP EBRRs for earnings over the different circumstances, we calculate a weighted average for comparison with the national average FSP EBRR estimated by Ziliak (2008), using an econometric model. Finally, our estimated FSP EBRRs for earnings with cross-program effects from TANF and SSI cash assistance are combined with estimates of TANF EBRRs and SSI EBRRs for earnings, to provide an estimate of the EBRR on earnings in terms of these program benefit reductions.

Distribution of FSP EBRRs by Household Circumstance

Discussion of the distribution of FSP EBRRs by household circumstance is divided into three parts:

- (1) FSP EBRRs for FSP households with earnings but no TANF or SSI cash assistance. This calculation provides a basis for comparing what happens to the FSP EBRRs for earnings when FSP households also receive cash assistance from TANF or SSI.
- (2) FSP EBRRs for TANF and SSI cash assistance without earnings.
- (3) FSP EBRRs for earnings when FSP households also receive TANF or SSI cash assistance.

Earnings Without Cross-Program Effects, and TANF or SSI Cash Assistance Without Earnings

Table 2 provides a detailed breakout of the incidence of FSP EBRRs for earnings without cross-program effects from TANF or SSI cash assistance, from TANF cash assistance, and from SSI cash assistance.¹² The first five two-column blocks in table 2 identify the relevant FSP EBRR for a change in gross income (for the income source in the corresponding row) and the percentage of caseload under the circumstance of the column heading. The FSP EBRR depends on, first, whether benefits are at the maximum (B_{\max}), minimum (B_{\min}), or an intermediary level, and second, whether the household is not using the shelter deduction ($D_H=0$) or using it at the maximum ($D_H=Max$) or a lesser level. The last block of three columns, at the right side of table 2, displays the average EBRR and the percentage of total FSP caseload for each source of income.

¹²The FSP EBRRs are derived from either equation 4 or 7 (see box "Food Stamp Benefit Formula," p. 8), depending on the use or nonuse of the shelter deduction. The 2005 FSP-QC data are used for the caseload distribution by circumstance (USDA-FNS, Sept. 2006(b))

Table 2

Food Stamp Program effective benefit reduction rates without cross-program effects, 2005

Sources of gross income	$Y_{net} = 0$				$Y_{net} > 0$				Average EBRR	Number of cases	Share of total cases		
	$B = B_{max}$		$B = B_{min}$		$B_{min} < B < B_{max}$		Share of cases						
	EBRR	Share of cases	EBRR	Share of cases	EBRR for $D_H \max$	Share of cases		EBRR for $0 < D_H < D_H \max$					
Percent	Percent	Percent	Percent	Percent	Percent	Percent	Thousands	Percent					
Earnings (Y_E) only, no TANF or SSI	0	18.4	0	2.5	-0.24	14.7	-0.24	21.4	-0.36	43.0	-0.241	2697.7	24.9
TANF cash assistance	0	21.6	0	0.8	-0.30	9.8	-0.30	24.0	-0.45	43.9	-0.299	1,583.9	14.6
SSI	0	10.9	0	5.9	-0.30	0.1	-0.30	14.7	-0.45	68.3	-0.352	2,871.6	26.5

Y_{net} = Household monthly cash income net of deductions.

B = Benefit amount; B_{max} = Maximum benefit amount; B_{min} = Minimum benefit amount.

D_H = Housing deduction.

EBRR = Effective benefit reduction rate.

Y_E = earned income.

TANF = Temporary Assistance for Needy Families.

SSI = Supplemental Security Income.

Notes: An EBRR measures the rate of reduction in Food Stamp Program benefits from an increase in cash income. Cases with zero gross income (13.64 percent, or 1,479,983 cases) are included in the $Y_{net} = 0$, B_{max} category.

Source: Derived by USDA-ERS using caseload data from FSP-QC data for 2005, USDA-FNS.

The average FSP EBRR for earnings without cross-program effects is -0.24, averaged over the circumstances of the household's use or nonuse of the shelter deduction and whether it receives the minimum or maximum benefit amount or some intermediate amount. The FSP EBRRs for earnings without cross-program effects fall into three groups: -0.36 for 43.0 percent of FSP households with earnings, -0.24 for 36.1 percent of these households, and zero for 20.9 percent of these households. The -0.36 FSP EBRR for earnings occurs when the FSP household uses the shelter deduction at a nonmaximum level and is derived from equation 7. It is larger than the -0.24 FSP EBRR (derived from equation 4) that occurs when the FSP household is either not using the shelter deduction or using it at the maximum level. For an FSP household using the shelter deduction at less than the maximum amount, the additional earnings lead to a lower shelter deduction, which increases net income and reduces benefits; consequently, the FSP EBRR for earnings is larger.¹³ For FSP households with zero net income and maximum benefits, we assume that the additional earnings do not lead to positive net income, so that the FSP EBRR for earnings is zero and the additional earnings do not affect benefits. At some level of earnings, the additional earnings will cause the FSP household's net income to shift from zero to a positive value and benefits to decline at an EBRR of -0.24 or -0.36, depending on the shelter deduction. This shift in circumstance is illustrated in the appendix, where the impact of incremental increases in earnings (from zero to an amount that makes the household ineligible) on benefits issued is illustrated. For a one- or two-person FSP household with minimum benefits, we assume the additional earnings are small enough that the household remains eligible for the minimum benefits and the FSP EBRR is zero, but the additional earnings could cause the household to be ineligible and lose its benefits.

The average FSP EBRR for TANF cash assistance is estimated to be -0.299. The FSP EBRR for TANF cash assistance fall into three groups: -0.45 for 43.9 percent of FSP households with TANF cash assistance, -0.30 for 33.8

¹³The additional earnings for FSP households using the shelter deduction at the maximum level could be large enough that the use of the shelter deduction shifts to a less-than-maximum amount, which would shift the FSP EBRR for earnings from the lower value of -0.24 to the larger value of -0.36. Our analysis assumes the additional earnings are small enough that such a shift in the FSP EBRR does not occur.

percent of these households, and zero for 22.4 percent of these households. Similarly, the average FSP EBRR for SSI cash assistance is estimated to be -0.352, and falls into three groups: -0.45 for 68.3 percent of FSP households with SSI cash assistance, -0.30 for 14.8 percent of these households, and zero for 16.8 percent of these households. The FSP EBRR for TANF and SSI cash assistance without cross-program effects with earnings are the same and are larger than the FSP EBRR for earnings without cross-program effects because of the 20-percent earnings deduction.

Earnings with Cross-Program Effects from TANF Cash Assistance

In 2005, 14.5 percent of FSP households received TANF cash assistance, with 18.6 percent of them also earning income from work (294,000 households). Of these households, 93 percent (272,200 households) did not receive SSI cash assistance.¹⁴ When an FSP household also participates in TANF, a change in earnings not only has a direct effect on FSP benefits, but also has a cross-program effect from TANF cash assistance on FSP benefits. As earnings increase, TANF cash assistance is likely to decrease, but not dollar for dollar. TANF earnings deductions determine the reduction in TANF cash assistance from an increase in earnings, which have been set by States since welfare reform in 1996. The Urban Institute (2007) Welfare Rules Database provides information on State TANF Earnings deductions, as summarized in table 1. Due to State-specific TANF earnings deductions, the FSP EBRRs for earnings with TANF cash assistance are distinguished by State.

State TANF earnings deductions generally consist of two parts, a fixed deduction and a percentage of the remaining earnings (percentage deduction). For households with very low earnings, a small change in monthly earnings is less than the State TANF fixed deduction, and TANF cash assistance does not adjust for the change in earnings. However, from our tabulation of FSP-QC data (table 3), we find that most FSP households have earnings greater than the State TANF fixed deduction so that additional earnings are subject to the State TANF percentage deduction, as discussed next.

¹⁴The remaining 21,800 households with earnings received both TANF and SSI, creating multiprogram cross-program effects. We do not assess their FSP EBRRs in this section.

Table 3

Food Stamp Program effective benefit reduction rates with cross-program effects from TANF and SSI, 2005

Households with earnings and the following	$Y_{net} = 0$				$Y_{net} > 0$								Average EBRR	Number of cases
	$B = B_{max}$		$B = B_{min}$		$Y_E < Y_E$ fixed deduction				$Y_E > Y_E$ fixed deduction					
	EBRR	Share of cases	EBRR	Share of cases	EBRR for $D_H = \text{max or 0}$	Share of cases	EBRR for $D_H > 0, < \text{max}$	Share of cases	EBRR for $D_H = \text{max or 0}$	Share of cases	EBRR for $D_H > 0, < \text{max}$	Share of cases		
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent			
SSI only, no TANF	0	4.2	0	12.3	-0.24	0.9	-0.36	8.1	-0.09	26.9	-0.135	47.7	-0.120	188.0
TANF only, no SSI														
New York	0	9.2	0	0.0	-0.24	7.3	-0.36	0.0	-0.075	58.3	-0.1125	25.1	-0.090	12.7
California	0	5.0	0	2.3	-0.24	5.1	-0.36	10.4	-0.09	43.6	-0.1350	33.4	-0.134	80.5
Texas	0	26.8	0	1.7	-0.24	0.0	-0.36	0.0	0.06	6.2	0.0900	65.3	0.062	23.7
Florida	0	36.1	0	0.0	-0.24	15.4	-0.36	9.3	-0.09	16.6	-0.1350	22.6	-0.116	6.8
Illinois	0	17.0	0	0.0	-0.24	0.0	-0.36	0.0	-0.1401	44.6	-0.2102	38.4	-0.143	3.3
Pennsylvania	0	21.0	0	0.0	-0.24	0.0	-0.36	0.0	-0.09	38.9	-0.1350	40.1	-0.089	12.8

TANF = Temporary Assistance to Needy Families; SSI = Supplemental Security Income.

Note: An effective benefit reduction rate measures the rate of reduction in FSP benefits from an increase in cash income.

Source: ERS calculations using FSP caseload data are from FSP-QC for 2005, USDA-FNS.

For working FSP households that also receive TANF cash assistance, earnings have a direct and a cross-program effect on FSP benefits. The direct effect takes one of two values, depending on whether the FSP household is using the shelter deduction at less than the maximum amount (-0.36) or whether it either does not use the shelter deduction or uses it at the maximum amount (-0.24).¹⁵ First, we consider the situation where the FSP household uses the shelter deduction at less than the maximum amount. In this case, the FSP EBRR combines the -0.36 direct effect with the cross-program effect of earnings on TANF cash assistance. Earnings reduce TANF cash assistance by $(1-z)$, where z is the State's TANF percentage earnings deduction. The reduced TANF cash assistance increases FSP benefits by 45 percent (see table 2, shelter deduction (D_H) at less than the maximum amount, column 5). Combining the direct and cross-program effects, an increase in earnings reduces FSP benefits by $-[0.36 - 0.45(1-z)]$ times the change in earnings. Rearranging terms, the FSP EBRR for earnings is $[0.09 - 0.45z]$, which varies according to the State TANF percentage earnings deduction. Similarly, for FSP households that do not use the shelter deduction or use it at the maximum amount, the FSP EBRR for earnings with a cross-program effect from TANF cash assistance is $-[0.24 - 0.3*(1-z)]$, or, upon rearranging terms, it becomes $[0.06 - 0.3z]$.

Table 4 presents the FSP EBRR for earnings by State with the cross-program effect from TANF cash assistance (using percentage earnings deduction in table 1, column 2) for the two circumstances relative to the FSP household's use or nonuse of the shelter deduction. First, consider the circumstance where the FSP household uses the shelter deduction at less than the maximum amount. In States where the TANF percentage earnings deduction is 50 percent, as in Pennsylvania and 14 other States, FSP benefits are reduced by 13.5 percent of the change in earnings. If, instead, the State TANF earnings deduction is 33.3 percent, as in Kentucky and three other States, FSP benefits are reduced by 5.99 percent of the change in earnings. When the State TANF earnings deduction equals the FSP earnings deduction of 20 percent, as in Nebraska and three other States, the direct and cross-program effects offset each other and the FSP EBRR is zero (i.e., there is no change in the FSP benefits due to increased earnings). For a State with a TANF earnings deduction less than 20 percent, as in Texas and five other States, the FSP EBRR is positive, so FSP benefits actually increase with earnings due to the cross-program effect from TANF. For two States with a fixed TANF grant amount (Wisconsin and Arkansas), there is no cross-program effect from earnings due to change in TANF cash assistance, and FSP benefits adjust only by the direct effect of earnings on FSP benefits.

Next, consider the circumstances where the FSP household either does not use the shelter deduction or uses it at the maximum amount. In States where the TANF percentage earnings deduction is 50 percent, as in Pennsylvania and 14 other States, FSP benefits are reduced by 9 percent of the change in earnings (table 4). For the 50-percent TANF earnings deduction and all other percentage earnings deductions, the FSP EBRRs for earnings with cross-program effects from TANF cash assistance are one-third less when the FSP household either does not use the shelter deduction or uses it at the maximum amount, relative to using the shelter deduction at less than the maximum amount.

¹⁵The direct effect can be zero if earnings are small enough that net income remains less than or equal to zero (see table 2). Also, the direct effect can be zero for a one- or two-person household with minimum benefits if the household remains eligible for FSP benefits with the additional earnings. These circumstances are less likely to occur and are not discussed.

Table 4

Food Stamp Program effective benefit reduction rate for earnings with TANF cash assistance, given State TANF earning deductions, 2005

State	Non-max shelter deduction	Max or 0 shelter deduction
Alabama	0.0000	0.0000
Alaska	-0.0585	-0.0390
Arizona	-0.0450	-0.0300
Arkansas	-0.3600	-0.2400
California	-0.1350	-0.0900
Colorado	-0.2102	-0.1401
Connecticut	-0.3600	-0.2400
Delaware	-0.0599	-0.0399
Washington, DC	-0.2102	-0.1401
Florida	-0.1350	-0.0900
Georgia	-0.0599	-0.0399
Hawaii	-0.1620	-0.1080
Idaho	-0.0900	-0.0600
Illinois	-0.2102	-0.1401
Indiana	-0.2475	-0.1650
Iowa	-0.2250	-0.1500
Kansas	-0.0900	-0.0600
Kentucky	-0.0599	-0.0399
Louisiana	0.0900	0.0600
Maine	-0.1350	-0.0900
Maryland	-0.0900	-0.0600
Massachusetts	-0.1350	-0.0900
Michigan	0.0000	0.0000
Minnesota	-0.0720	-0.0480
Mississippi	0.0900	0.0600
Missouri	-0.2102	-0.1401
Montana	-0.0225	-0.0150
Nebraska	0.0000	0.0000
Nevada	-0.1350	-0.0900
New Hampshire	-0.1350	-0.0900
New Jersey	-0.1350	-0.0900
New Mexico	-0.1350	-0.0900
New York	-0.1125	-0.0750
North Carolina	-0.0338	-0.0225
North Dakota	-0.0315	-0.0210
Ohio	-0.1350	-0.0900
Oklahoma	-0.1350	-0.0900
Oregon	-0.1350	-0.0900
Pennsylvania	-0.1350	-0.0900
Rhode Island	-0.1350	-0.0900
South Carolina	0.0900	0.0600
South Dakota	0.0000	0.0000
Tennessee	0.0900	0.0600
Texas	0.0900	0.0600
Utah	-0.1350	-0.0900
Vermont	-0.0225	-0.0150
Virginia	0.0000	0.0000
Washington	-0.1350	-0.0900
West Virginia	-0.0900	-0.0600
Wisconsin	-0.3600	-0.2400
Wyoming	0.0900	0.0600
Average	-0.0976	-0.0651

TANF = Temporary Assistance for Needy Families.

Source: Urban Institute, Welfare Rules Database, Query the database, 2005 data.

For six States, table 3 shows the distribution of FSP households among the different FSP EBRRs for earnings with TANF cash assistance under various circumstances pertaining to the FSP household's use of the shelter deduction and receipt of maximum and minimum benefits.¹⁶ The table also makes the distinction as to whether the earned income is less than the TANF fixed deduction ($Y_E < Y_E$ fixed deduction), whether there is a 100-percent deduction, or whether the earned income is in the TANF percentage-deduction range ($Y_E > Y_E$ fixed deduction). The average State FSP EBRRs for earnings, including both direct and cross-program effects, range from -0.09 to -0.14 for five of the six States. For one State, Texas, the average FSP EBRR is a positive 0.062. Among these six States, a large percentage of FSP households are subject to the TANF earned-income percentage deduction and use the FSP shelter deduction at the maximum amount or zero. Under these circumstances, 43.6 percent of FSP households with earnings and TANF cash assistance in California have an FSP EBRR of -0.09. In these six States, a significant share of FSP households with TANF cash assistance and earnings use the FSP shelter deduction at less than the maximum amount; consequently, these households have a larger FSP EBRR (by one-third) than FSP households that either do not use the shelter deduction or use it at the maximum level. That is, a reduction in FSP benefits from an increase in earnings is larger due to the shelter deduction.

Figure 1 ranks the FSP EBRR for earnings with the cross-program effect from TANF cash assistance under the circumstance in which the FSP household uses the shelter deduction at less than the maximum amount. While most States have an FSP EBRR between -0.0225 and -0.135, some have a zero and even positive FSP EBRR for earnings. Prior to welfare reform in 1996, the AFDC percentage earnings deduction was 33 percent, which leads to an FSP EBRR of -0.0585, an earnings deduction still used by four States. Some States have increased their TANF earnings deduction—which results in a larger negative FSP EBRR and a greater reduction in FSP benefits from the increase in earnings—while other States have decreased their TANF earnings deduction relative to the pre-welfare reform AFDC earnings deduction.

Earnings with Cross-Program Effects from SSI Cash Assistance

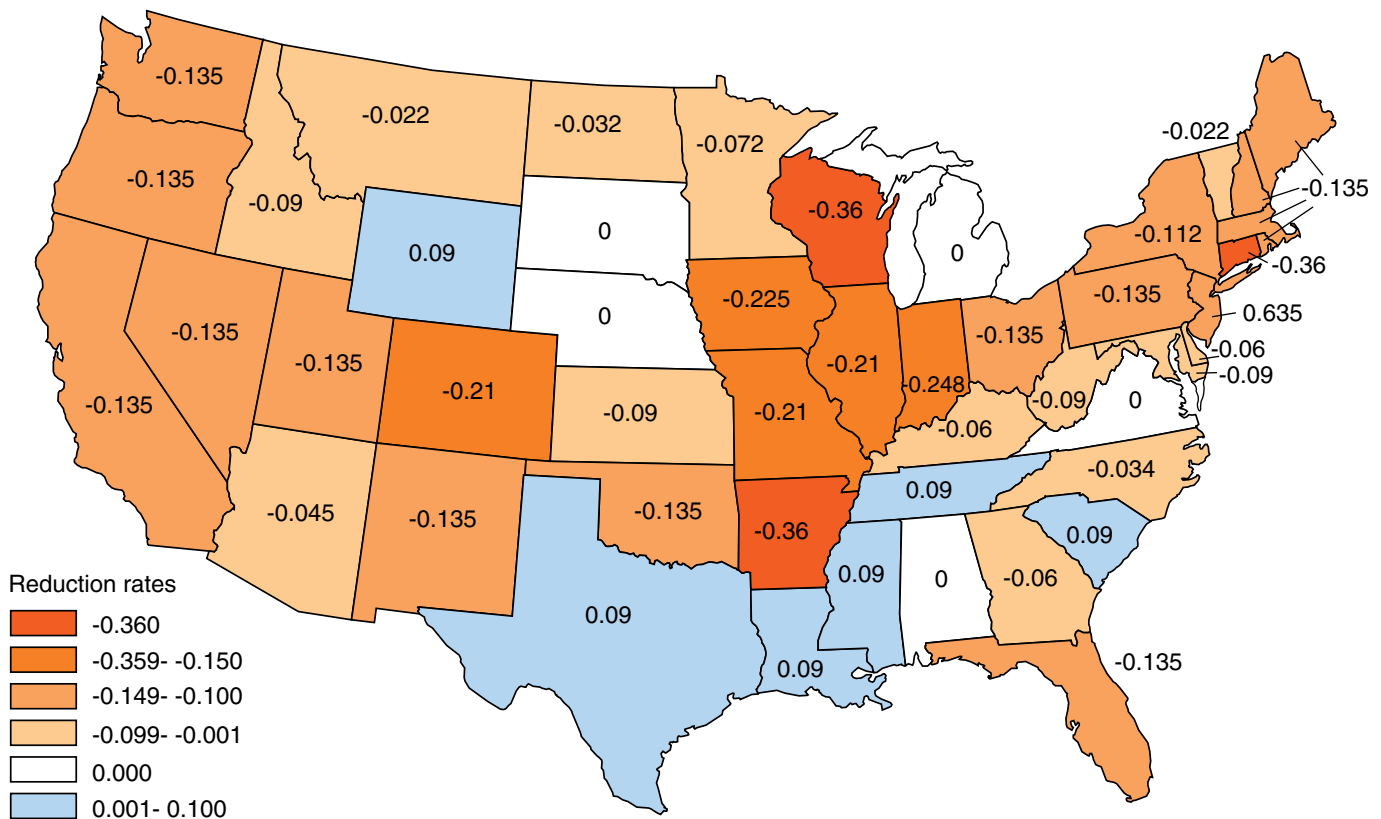
In 2005, 7.3 percent of FSP households with SSI cash assistance received earnings (210,000 households). Of these households, 90 percent (188,000 households) did not receive TANF cash assistance. The FSP EBRR for earnings with cross-program effects from SSI cash assistance (without TANF) combines the cross-program effect of the change in SSI benefits from the additional earnings on FSP benefits with the direct impact of the change in earnings on FSP benefits. The first row of results in table 3 reports the FSP EBRRs for earnings with cross-program effects from SSI cash assistance.

The cross-program effect from SSI cash assistance depends on the SSI earnings deduction that applies to the additional earnings. As can be seen by the distribution of FSP households with SSI cash assistance and earnings in table 3 ($Y_E > Y_E$ fixed deduction), 74.6 percent of these households (adding the 26.9 percent of cases that used the shelter deduction at the maximum or did not use it and 47.7 percent of cases that used the shelter deduction at less than the maximum) have enough earnings that the 50-percent earnings deduction

¹⁶We have chosen these States based on their large FSP caseload sample size in the FSP-QC database. They account for 50 percent of FSP households with both earnings and TANF cash assistance.

Figure 1

State Food Stamp Effective Benefit Reduction Rates for earnings with cross-program effects from TANF cash assistance, with nonmaximum shelter deduction, 2005



Note: An effective benefit reduction rate for earnings is the rate of reduction in food stamp benefits from an increase in earnings (as a fraction of earnings).
 Source: ERS calculations using Urban Institute data on TANF earnings deduction for 2005 and the Food Stamp benefit formula.

applies to any additional earnings. The FSP EBRR for earnings also depends on the FSP household’s use or nonuse of the shelter deduction. For instance, assume that the household uses the FSP shelter deduction between zero and the maximum value and that it receives less than the maximum benefits. Under these circumstances, SSI cash assistance decreases by 50 percent of the additional earnings, which increases FSP benefits by 45 percent of the decrease in SSI cash assistance (see table 2 for the 45-percent FSP EBRR for SSI cash assistance). Consequently, the cross-program effect from a reduction in SSI cash benefits due to the additional earnings increases FSP benefits by 22.5 percent of the earnings. The direct effect from the additional earnings under these circumstances will decrease FSP benefits by 36 percent of earnings (see table 2). The net result (36 minus 22.5) is a reduction in food stamp benefits of 13.5 percent of the additional earnings. As seen from the first row of table 3, this FSP EBRR for earnings with cross-program effects from SSI cash assistance occurs for 47.7 percent of FSP households that receive SSI cash assistance and have earnings.

The other blocks of columns in the first row of table 3 present the FSP EBRRs for earnings with cross-program effects from SSI cash assistance for other circumstances pertaining to the use or nonuse of the FSP shelter deduction, receipt of maximum and minimum FSP benefits, and whether the house-

hold's earnings are greater than or less than the SSI fixed earnings deduction. For instance, 26.9 percent of FSP households with SSI cash assistance and earnings have an FSP EBRR for earnings of -0.09 when the FSP shelter deduction is either not used or used at the maximum level. In this case, FSP benefits are reduced by 9 percent of the additional earnings.

Comparing the FSP EBRR for Earnings with Those from an Econometric Model

We estimate an average national FSP EBRR for earnings with our approach and compare it with an estimate by Ziliak (2008), using an econometric model. Our average national FSP EBRR for earnings is a weighted average over the different circumstances of a household's receiving earnings only or earnings with TANF and/or SSI cash assistance, taking into account the household's nonuse or use of the shelter deduction and whether the household receives the maximum or minimum shelter deduction or some intermediate value. Table 5 reports these average national FSP EBRRs for 2003-2005.¹⁷ We include an estimate for 2003 for comparison with Ziliak's estimate, the last year of his analysis. In 2003, our estimated average national FSP EBRR for earnings is -.211 (vs. Ziliak's -.152). It is slightly more negative at -.218 in 2004 and at -.220 in 2005. The average national FSP EBRR has been rising since 2000 as the FSP caseload has shifted towards more households with earnings only and fewer with TANF cash assistance and earnings.¹⁸

Ziliak followed an econometric tradition for estimating effective tax rates for AFDC/TANF, which are equivalent to effective benefit reduction rates. For the FSP, the approach is to use the FSP-QC data to estimate an econometric model of food stamp benefits relative to earnings, unearned income, and a set of dummy variables for family size. Ziliak estimates the coefficients of the model by State and over time (1983-2003). The earnings coefficient is the FSP EBRR. Given State caseload shares, a weighted average national FSP EBRR for earnings is calculated to be -.152 in 2003.

The econometric model that Ziliak used results in an average national EBRR (-.152) that is 28 percent less negative than the one estimated in our

¹⁷For the 21,781 FSP households with earnings that also receive cash assistance from both TANF and SSI, we have calculated an FSP EBRR of positive 0.0736, assuming a TANF percentage-earnings deduction of 50 percent along with the 50-percent earnings deduction for SSI, given that 52 percent of these households do not use the shelter deduction and 43 percent use the shelter deduction at less than the maximum level and receive less than the maximum benefit amount.

¹⁸National average FSP EBRRs were calculated to be -.20 in 2000 and 2001 and -.205 in 2002.

Table 5
Weighted average national Food Stamp Program effective benefit reduction rates for earnings

	2003			2004			2005		
	Average EBRR	Share of cases with earnings	Number of cases with earnings	Average EBRR	Share of cases with earnings	Number of cases with earnings	Average EBRR	Share of cases with earnings	Number of cases with earnings
		Percent	Thousands		Percent	Thousands		Percent	Thousands
Earnings only, no TANF or SSI	-0.239	80.8	2046.5	-0.240	82.9	2400.2	-0.241	84.8	2697.7
Earnings with SSI, no TANF	-0.107	6.7	168.8	-0.122	6.2	178.6	-0.120	5.9	188.0
Earnings with TANF, no SSI	-0.090	11.4	289.8	-0.109	10.2	296.2	-0.092	8.6	272.2
Earnings with TANF and SSI	0.074	1.1	27.5	0.074	0.7	21.4	0.074	0.7	21.8
Weighted average	-0.210	100.0	2532.6	-0.217	100.0	2896.3	-0.219	100.0	3179.7

EBRR = Effective benefit reduction rate.

TANF = Temporary Assistance for Needy Families.

SSI = Supplemental Security Income.

analysis (-.211). One technical difference in the two approaches is that Ziliak excludes households with an elderly person, whereas we do not. Households with an elderly person account for only 2.7 percent of households with earnings in 2003. With sensitivity analysis, we find little effect of excluding the elderly on our average national FSP EBRR for earnings, with a change from -.211 percent to -.212 percent.

We suggest that our estimated average national FSP EBRR for earnings is larger (in absolute value, i.e., more negative) than the Ziliak estimate because our analysis omitted some factors that reduce the response of FSP benefits to additional earnings that are implicitly taken into account in the econometric model of Ziliak. The most important factors, we believe, are the State options for simplified reporting and transitional benefits, introduced in 2000. Both options allow States to maintain benefit levels set at the time of certification, even when earnings increase during the household's certification period. This would reduce (make smaller in absolute value, i.e., less negative) Ziliak's estimated FSP EBRR for earnings relative to ours. Another possibility, but one we feel is small, is that we do not account for an increased use of the child care deduction as earnings increase.

Overall EBRR on Earnings from FSP, TANF, and SSI

The FSP EBRR for earnings can be combined with an EBRR for TANF or SSI cash assistance to derive an overall EBRR on earnings as benefits from these programs declined in response to an increase in earnings. The change in household total resources, when the household participates in the FSP and TANF or SSI, is the change in earnings net of the change in FSP benefits and TANF or SSI cash assistance.¹⁹ Table 6 provides State estimates for the overall EBRR for different assumptions about the use or nonuse of the shelter deduction. The map in Figure 2 illustrates the State variation in the overall EBRR due to State variation in TANF earnings deductions, assuming the nonmaximum use of the shelter deduction.

Across all States, the average (not weighted by State caseload) overall EBRR with TANF cash assistance is -.684 for nonmaximum use of the shelter deduction and -.653 for either maximum use or nonuse of the shelter deduction. This average overall EBRR rate combines a TANF EBRR of -.59 with an FSP EBRR of -.095 or -.063, with the larger FSP EBRR for the use of the shelter deduction at less than the maximum amount. As a result, the household loses about 70 percent of its earnings, mostly as a reduction in TANF cash assistance. When a household receives TANF cash assistance, the reduction in FSP benefits is relatively small. If the household does not receive TANF cash assistance, then the FSP EBRR goes from about -.06 to -.24 or -.09 to -.36, depending on the shelter deduction (see table 2). Note that we have used the TANF earnings deductions that apply after the household member has been working for a number of months (see table 1). If the TANF participant is just starting to work, the TANF earnings deduction is larger, resulting in a lower TANF EBRR and lower overall EBRR on earnings and a higher level of total resources.

A lower TANF earnings deduction results in a larger TANF EBRR, and hence larger overall EBRR. The FSP EBRR is smaller for a larger TANF EBRR, partially offsetting the increase in the overall EBRR from a larger

¹⁹The EITC, which would further increase household income from the change in earnings, is not included in our analysis.

Table 6

Overall EBRR on earnings

State	Overall EBRR on earnings Non-max shelter deduction	Overall EBRR on earnings Max or 0 shelter deduction	TANF/ SSI EBRR
Earnings, no TANF or SSI	-0.360	-0.240	0.0000
SSI	-0.635	-0.590	-0.5000
TANF			
Alabama	-0.800	-0.800	-0.8000
Alaska	-0.729	-0.709	-0.6700
Arizona	-0.745	-0.730	-0.7000
Arkansas	-0.360	-0.240	0.0000
California	-0.635	-0.590	-0.5000
Colorado	-0.543	-0.473	-0.3330
Connecticut	-0.360	-0.240	0.0000
Delaware	-0.727	-0.707	-0.6670
Washington, DC	-0.543	-0.473	-0.3330
Florida	-0.635	-0.590	-0.5000
Georgia	-0.727	-0.707	-0.6670
Hawaii	-0.602	-0.548	-0.4400
Idaho	-0.690	-0.660	-0.6000
Illinois	-0.543	-0.473	-0.3330
Indiana	-0.498	-0.415	-0.2500
Iowa	-0.525	-0.450	-0.3000
Kansas	-0.690	-0.660	-0.6000
Kentucky	-0.727	-0.707	-0.6670
Louisiana	-0.910	-0.940	-1.0000
Maine	-0.635	-0.590	-0.5000
Maryland	-0.690	-0.660	-0.6000
Massachusetts	-0.635	-0.590	-0.5000
Michigan	-0.800	-0.800	-0.8000
Minnesota	-0.712	-0.688	-0.6400
Mississippi	-0.910	-0.940	-1.0000
Missouri	-0.543	-0.473	-0.3330
Montana	-0.773	-0.765	-0.7500
Nebraska	-0.800	-0.800	-0.8000
Nevada	-0.635	-0.590	-0.5000
New Hampshire	-0.635	-0.590	-0.5000
New Jersey	-0.635	-0.590	-0.5000
New Mexico	-0.635	-0.590	-0.5000
New York	-0.663	-0.625	-0.5500
North Carolina	-0.759	-0.748	-0.7250
North Dakota	-0.762	-0.751	-0.7300
Ohio	-0.635	-0.590	-0.5000
Oklahoma	-0.635	-0.590	-0.5000
Oregon	-0.635	-0.590	-0.5000
Pennsylvania	-0.635	-0.590	-0.5000
Rhode Island	-0.635	-0.590	-0.5000
South Carolina	-0.910	-0.940	-1.0000
South Dakota	-0.800	-0.800	-0.8000
Tennessee	-0.910	-0.940	-1.0000
Texas	-0.910	-0.940	-1.0000
Utah	-0.635	-0.590	-0.5000
Vermont	-0.773	-0.765	-0.7500
Virginia	-0.800	-0.800	-0.8000
Washington	-0.635	-0.590	-0.5000
West Virginia	-0.690	-0.660	-0.6000
Wisconsin	-0.360	-0.240	0.0000
Wyoming	-0.910	-0.940	-1.0000
<i>Average</i>	-0.681	-0.648	-0.5831
<i>Maximum</i>	-0.910	-0.940	0.0000
<i>Minimum</i>	-0.360	-0.240	-1.0000

EBRR = Effective benefit reduction rate.

TANF = Temporary Assistance for Needy Families.

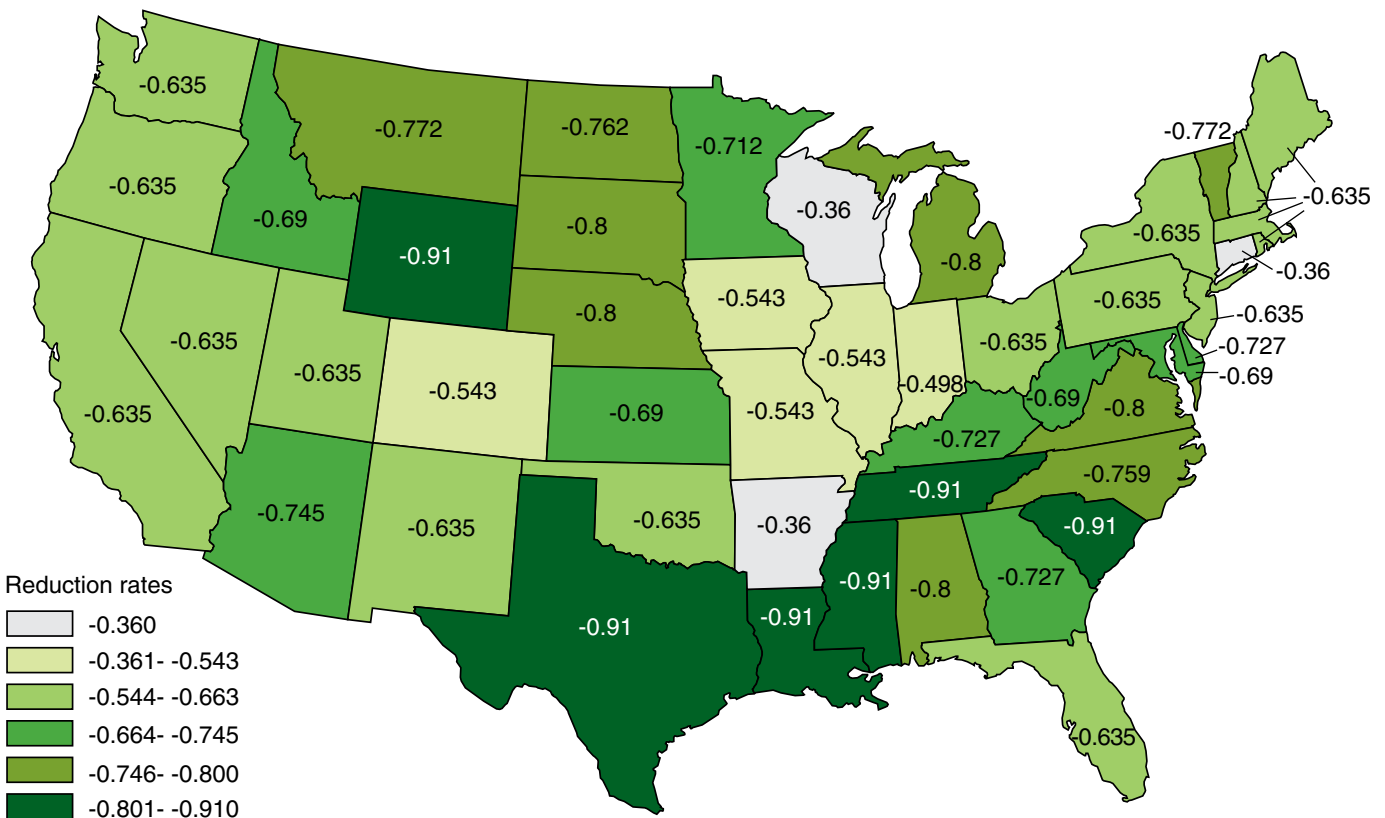
SSI = Supplemental Security Income.

Source: Urban Institute, Welfare Rules Database, Query the database, 2005 data.

TANF EBRR. For instance, a TANF earnings deduction of 50 percent results in an overall EBRR of $-.635$ for nonmaximum use of the shelter deduction. The TANF EBRR is $-.5$, while the FSP EBRR for the nonmaximum use of the shelter deduction is $-.135$. A 33.3-percent TANF earnings deduction results in an overall EBRR of $-.727$ for the non-maximum use of the shelter deduction. In this case, the TANF EBRR is $-.667$, while the FSP EBRR for the nonmaximum use of the shelter deduction is $-.06$, less than the $-.135$ FSP EBRR with a 50-percent TANF earnings deduction.

For all States, the overall EBRR with SSI cash assistance is $-.635$ for a nonmaximum use of the shelter deduction and $-.59$ for either the use of the shelter deduction at the maximum amount or nonuse of the shelter deduction. This overall EBRR combines an SSI EBRR of $-.50$ with an FSP EBRR of $-.135$ or $-.09$, with the larger FSP EBRR for the use of the shelter deduction at less than the maximum amount. As a result, the household loses about 60 percent of its earnings, mostly as a reduction in SSI cash assistance.

Figure 2
State overall EBRR for earnings with food stamp benefits and TANF cash assistance, with nonmaximum shelter deduction, 2005



Note: Overall EBRR for earnings is the rate of reduction in food stamp benefits from an increase in earnings (as a fraction of earnings).
 Source: ERS calculations using Urban Institute data on TANF earnings deduction for 2005 Food Stamp benefit formula, and TANF benefit formula.

Discussion

This report illustrates that cross-program effects can have a large impact on effective benefit rate reductions. In all cases, however, even with the highest benefit reduction rates calculated here, households realized larger net incomes by working and earning income. Though the formula is complex, an additional dollar of earnings still added more to a household's net income than was subtracted by the reduction in assistance benefits. Such cross-program effects are an important consideration in integrating Government assistance programs into a support system for low-income households.

This report also illustrates the State variation in the effect of earnings on food stamp benefits to recipients who participate in TANF. The FSP is commonly thought of as a program with eligibility rules and benefits that are nationally uniform. However, the 1996 welfare reform that transferred authority to the States for AFDC—succeeded by TANF—has resulted not only in variable TANF benefit reduction rates, but also, through cross-program effects, in variable FSP benefit reduction rates. As a result, working households may receive different amounts of food stamps across States. The variability of Food Stamp Program benefits is a consideration in designing nationwide support systems for low-income households.

References

- Blank, Rebecca M., David Card, and Philip K. Robins. "Financial Incentives for Increasing Work and Income among Low-Income Families." In Rebecca Blank and David Card, eds., *Finding Jobs: Work and Welfare Reform*. New York: Russell Sage, 2000.
- Carasso, Adam, and C. Eugene Steuerle. "The Hefty Penalty on Marriage Facing Many Households with Children," *The Future of Children* 15(2), Fall 2005, 157-75. http://www.urban.org/UploadedPDF/1000844_marriage_penalty.pdf
- Coe, Norma, Gregory Acs, Robert Lerman, and Keith Watson. *Does Work Way? A Summary of the Work Incentives under TANF*. Urban Institute, New Federalism: Issues and Options for States, Number A-28. 1998. <http://www.urban.org/UploadedPDF/anf28.pdf>
- Fraker, Thomas, and Robert Moffitt. "The Effect of Food Stamps on Labor Supply," *Journal of Public Economics* 35, 1988, 25-56.
- Hagstrom, Paul A. "The Food Stamp Participation and Labor Supply of Married Couples: An Empirical Analysis of Joint Decisions," *Journal of Human Resources* 31(2), Spring 1996, 383-403.
- Harkness, Joseph, and Sandra Newman. *Effects of Housing Assistance on Food Spending*. Joint Center for Poverty Research, Policy Briefs 4(3), 2002.
- Hepner, Mickey, and W. Robert Reed. "The Effect of Welfare on Work and Marriage: A View from the States," *Cato Journal* 24(3), Fall 2004, 349-70. <http://www.cato.org/pubs/journal/cj24n3/cj24n3-10.pdf>
- Keane, Michael, and Robert Moffitt. "A Structural Model of Multiple Welfare Program Participation and Labor Supply," *International Economic Review* 39(3), August 1998, 553-89.
- MaCurdy, Thomas, and Frank McIntyre. "Helping Working-Poor Families: Advantages of Wage-Based Tax Credits over the EITC and Minimum Wages." Employment Policies Institute, April 2004. http://www.epionline.org/studies/macurdy_04-2004.pdf
- Matsudaira, Jordan, and Rebecca Blank. "The Impact of Earnings Disregards on the Behavior of Low Income Families." NBER Working Paper 14038, May 2008.
- McKinnish, Terra, Seth Sanders, and Jeffrey Smith. "Estimates of Effective Guarantees and Tax Rates in the AFDC Program for the Post-OBRA Period," *Journal of Human Resources* 34(2), Spring 1999, 312-45.
- Moffitt, Robert. "Welfare Programs and Labor Supply." In Alan J. Auerbach and Michael D. Intriligator, eds., *Handbook of Public Economics*, Vol. 4. North-Holland, 2002.

- Ohls, James C., and Harold Beebout. *The Food Stamp Program: Design Tradeoffs, Policy, and Impacts*. Washington, DC: Urban Institute Press, 1993.
- Shaviro, Daniel N. "Effective Marginal Tax Rates on Low-Income Households." Employment Policies Institute, February 1999. http://www.epionline.org/studies/shaviro_02-1999.pdf
- Snedecor, George, and William Cochran. *Statistical Methods*. Ames, Iowa: Iowa State University Press, 1967, pp. 215-18.
- Steuerle, Gene. "Do Incentives Affect Behavior? Would an Economist Know?" *Tax Notes*, April 3, 2006. http://www.urban.org/UploadedPDF/1000944_EP_040306.pdf
- Trippe, Carole, Liz Schott, Nancy Wemmerus, and Andrew Burwick. *Simplified Reporting and Transitional Benefits in the Food Stamp Program: Case Studies of State Implementation*. Prepared by Mathematica Policy Research, Inc. for U.S. Department of Agriculture, Economic Research Service, E-FAN-04-003, May 2004. <http://ers.usda.gov/publications/efan04003/efan04003.pdf>
- U.S. Department of Agriculture, Food and Nutrition Service. *Characteristics of Food Stamp Households: Fiscal Year 2005*. Prepared by Allison Barrett of Mathematica Policy Research, Inc. Report No. FSP-06-CHAR, September 2006(a). <http://www.fns.usda.gov/oane/MENU/Published/FSP/FILES/Participation/2005Characteristics.pdf>
- U.S. Department of Agriculture, Food and Nutrition Service. *Technical Documentation for the Fiscal Year 2005 FSPQC Database and QC Minimodel*. Prepared by Allison Barrett and Daisy Ewell of Mathematica Policy Research, Inc. September 2006(b). <http://host4.mathematica-mpr.com/fns/fnsqcddata/2005/qcfy2005.pdf>
- U.S. Department of Agriculture, Food and Nutrition Service. *Update to Rules of Thumb*. Prepared by Joel Smith, Mathematica Policy Research, Inc. May 2004.
- U.S. Department of Agriculture, Food and Nutrition Service. *Rules of Thumb for Producing Food Stamp Program Impact Estimates*. Prepared by Scott Cody, Mathematica Policy Research, Inc. June 1997. <http://www.nal.usda.gov/foodstamp/FOODSTAMPREPORTS/FSP-258.PDF>
- U.S. Department of Labor, Bureau of Labor Statistics. *Employment Characteristics of Families in 2005*. Economic News Release, April 2006. http://stats.bls.gov/news.release/archives/famee_04272006.pdf
- University of Kentucky Center for Poverty Research. "State-Level Data of Economic, Political, and Transfer-Program Information for 1980-2005. 2007."
- Urban Institute. Welfare Rules Database: A Longitudinal Database Tracking State AFDC/TANF Policies. <http://anfdata.urban.org/wrd> Accessed 2007.

Ziliak, James P. "Making Work Pay: Changes in Effective Tax Rates and Guarantees in U.S. Transfer Programs, 1983-2002," *Journal of Human Resources* 42(3), Summer 2007, 619-42.

Ziliak, James P. "Effective Tax Rates and Guarantees in the Food Stamp Program." Unpublished manuscript, April 2008.

Appendix: FSP EBRRs Change with Income

The effective rate at which FSP benefits adjust to a change in gross income from earnings differs from the minus-30-percent statutory rate on net income due to the earnings and shelter deductions and the cross-program effects from TANF and SSI cash assistance. A variety of EBRRs arise from the complexity of the FSP benefit formula, which adjusts for household circumstances in order to provide benefits according to a household's need for nutritional assistance. In this appendix we illustrate by example how EBRRs vary as a household's income increases from zero to the maximum amount allowed for program eligibility, by incremental increases in earned and unearned income. All of the examples are illustrated for a single-parent family with two children, shelter expense of \$400 per month, and no other deductible expenses. The examples use maximum food stamp benefit and deduction levels and rules that were in effect in 2005.²⁰ Scenarios A and B show how FSP EBRRs change with the level of unearned and earned income (without cross-program effects from TANF or SSI).²¹ The unearned income could be from either TANF or SSI cash assistance. Scenarios C and D introduce cross-program effects with TANF and SSI cash assistance. Scenarios A and B are illustrated in figure A-1 and scenarios C and D in figure A-2.

In all the scenarios, it is the underlying changes in net income (not actually illustrated in the figures) that drive the change in food stamp benefits. Net income does not change dollar-for-dollar with gross income. For example, when gross income comes in the form of earnings, each additional dollar creates a \$0.20 earnings deduction, so that net income goes up by only \$0.80. Similarly, the amount of shelter deduction a household can take depends on its income. In certain income ranges, each additional dollar of income reduces the amount of shelter costs that a household can deduct by \$0.40-\$0.50. Because of the standard deduction, there is always a range of income (at least from \$0.0 to \$134.0) where net income is zero and the EBRR is zero.²² Other deductions increase that range.

For Earnings and TANF or SSI Cash Assistance Without Cross-Program Effects

Scenario A in figure A-1 shows how the food stamp benefit would change for progressive increases in unearned income (such as TANF or SSI cash assistance). The standard deduction and the shelter deduction keep net income at zero until unearned income reaches a total of \$400. In this income range, FSP benefits do not change with increasing gross income and remain at the \$393 maximum. With income increases beyond \$400, each dollar of unearned income reduces the food stamp benefit by \$0.45, and the EBRR remains at -0.45 until the shelter deduction is exhausted at a gross income of \$940.²³ With unearned income increasing beyond \$940, the EBRR equals the statutory rate (-0.3) and food stamp benefits fall by \$0.30 for each new dollar of unearned income until benefits fall to zero at the net income eligibility limit of \$1,306, which occurs at a gross income of \$1,440.

Scenario B in figure A-1 contrasts the situation for progressive increases in earned income. In this case, the combination of the standard, shelter, and earned income deductions maintain net income at the zero level until earn-

²⁰The maximum benefit in 2005 for a family of three was \$393 and the maximum shelter deduction was \$388. The gross income eligibility cutoff was \$1,698 and the net income eligibility cutoff was \$1,306. The \$400 shelter expense is between the mean and median value in the 2005 FSP-QC data.

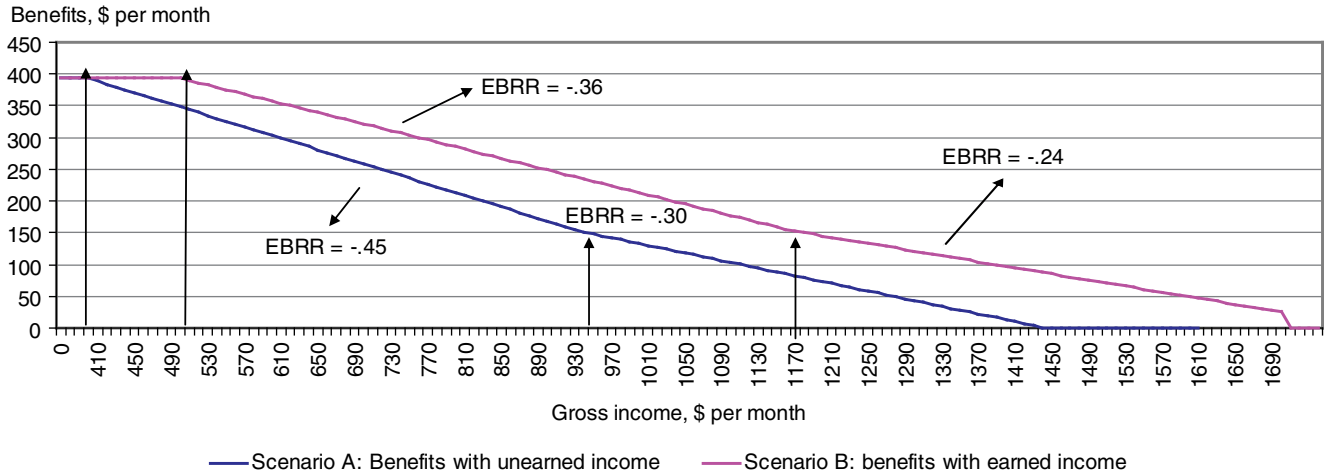
²¹Fraker and Moffitt (1988) also describe how the effective benefit reduction rates change for an increase in earnings, as do Ohls and Beebout (1993, pp. 42-44).

²²Similarly, when a one- or two-person eligible household's net income has reached the point where it is receiving the minimum benefit, small changes in deductions and subsidies will not have an impact.

²³Beyond this point housing cost is no longer greater than 50 percent of net income, and the household is no longer able to take an excess shelter cost deduction.

Figure A-1

FSP benefits with earned and unearned income, for a family of three in 2005



ings reach \$510. At that point, each new dollar of earned income increases the earnings deduction by \$0.20, but reduces the shelter deduction by \$0.40. The combined effect is to increase net income by \$1.20 and reduce the food stamp benefit by \$0.36. The EBRR remains at -0.36 until earned income reaches \$1,170, where the household no longer qualifies for a shelter deduction. After that point, only the earned income deduction can be applied, and the EBRR is -0.24 until the household loses eligibility at a gross income of \$1,698. At this point there is a “notch effect” (Ohls and Beebout, p. 45), where an additional dollar of income results in complete loss of benefits, a drop of \$25, and an implied EBRR of infinity.

For Earnings with Cross-Program Effects from TANF or SSI Cash Assistance

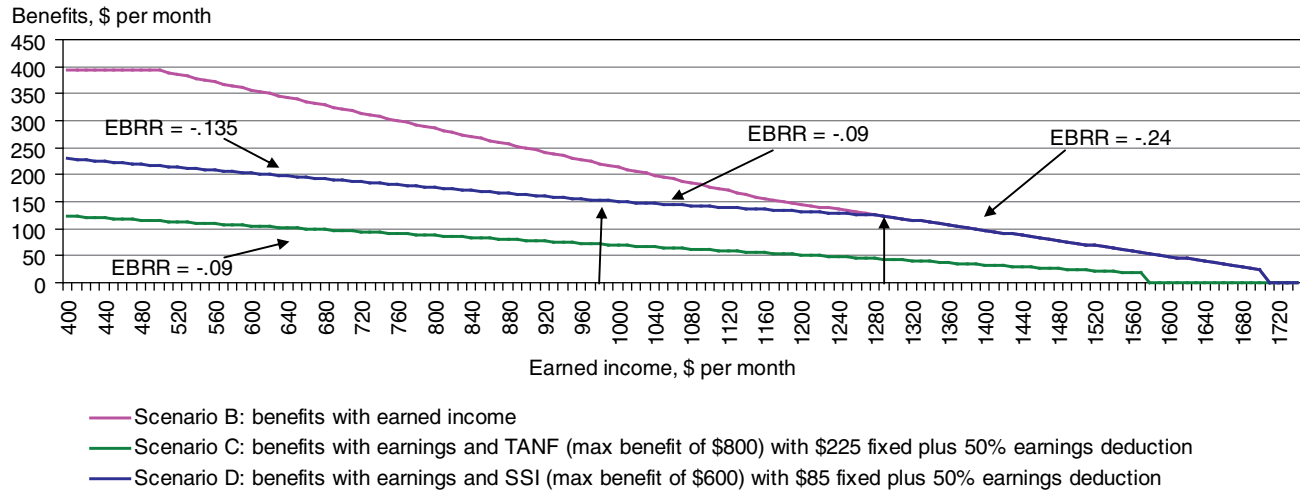
In figure A-2, the basic earned income situation, Scenario B, is compared with the situation of a household with earnings receiving TANF or SSI cash assistance whose benefits are also reduced by additional earnings. In both these cases, each additional dollar of earnings directly reduces FSP benefits, while also having cross-program effects that increase FSP benefits, partially offsetting the direct effect. The net result at times can be quite complicated and additional earnings can, in some cases, increase food stamp benefits, but in most cases they decrease the benefits.

Scenario C illustrates cases where a household is eligible for a maximum TANF cash assistance of \$800 and there is a 50-percent earnings deduction beyond a \$225 fixed deduction.²⁴ Unlike Scenario B, where the household has no income besides earnings, the TANF scenario begins with the household’s receiving lower food stamp benefits due to the TANF cash assistance. However, as earnings increase and TANF cash assistance is reduced, the gap between Scenario B and C narrows. At earnings of \$1,580 and TANF cash assistance of \$120, gross income reaches the maximum level for program eligibility (\$1,700), and benefits fall to zero. Under Scenario C, where TANF benefits are being reduced, the FSP EBRR is -0.09, given that the shelter deduction is zero.

²⁴Scenario C is for the earnings deduction set by California.

Figure A-2

FSP benefits with earned income and TANF or SSI for a family of three, 2005



Scenario D illustrates the case of a household eligible for a maximum SSI benefit of \$600. In this situation, the SSI benefit is not affected by the first \$85 in earnings; after that, benefits are reduced by \$0.50 for each dollar earned.²⁵ Up to \$980 of earnings, SSI benefits are being reduced by earnings and the shelter deduction is in effect, so that the EBRR is -0.135. At \$980 of earnings, the shelter deduction goes to zero, and the EBRR goes to -0.09 as SSI cash assistance continues to be reduced. At earnings of \$1,290, SSI cash assistance goes to zero, but FSP benefits continue to be positive and the FSP EBRR goes to -0.24, given that the shelter deduction is zero. At earnings of \$1,700, the gross income limit for program eligibility, FSP benefits fall from \$25 to zero.

²⁵SSI has a \$65 earnings deduction and a \$20 standard deduction that applies to earnings if there is no other income.