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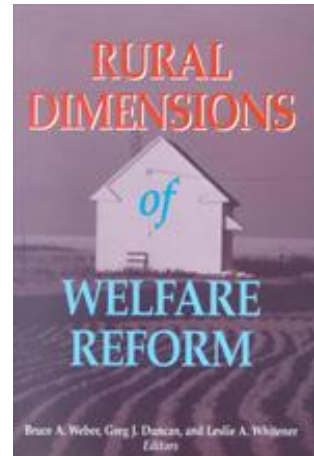
## Reducing Food Stamp and Welfare Caseloads in the South: Are Rural Areas Less Likely to Succeed Than Urban Centers?

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Chapter 4 (pp. 113-146) in:

**Rural Dimensions of Welfare Reform**

Bruce A. Weber, Greg J. Duncan, and Leslie A. Whitener, eds.

Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2002

DOI: 10.17848/9781417508884.ch4

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# 4

## **Reducing Food Stamp and Welfare Caseloads in the South**

### **Are Rural Areas Less Likely to Succeed Than Urban Centers?**

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As this volume attests, welfare reform is likely to have different effects in different areas of the country. We consider how the distribution of cash assistance and food stamps across urban and rural areas may affect caseload change in the South. Some trends suggest that rural areas face more difficulty in reducing caseloads than urban areas; other trends do not. In this chapter, we provide a statistical test of rural/urban differences in capacity to reduce caseloads. Spatial effects are captured by contrasting caseload trends over time in metropolitan (urban) counties and nonmetropolitan (rural) counties in two southern states, Mississippi and South Carolina.<sup>1</sup>

A rural/urban difference in rates of program participation might be expected if barriers to moving off public assistance are more difficult

to overcome in rural counties than in urban counties.<sup>2</sup> Moreover, there may be a link between the decline in welfare (Aid to Families with Dependent Children [AFDC] or Temporary Assistance for Needy Families [TANF]) caseloads and the recent declines in the Food Stamp program participation. Zedlewski and Brauner (1999), for example, found that those exiting welfare (beginning in 1995) leave the Food Stamp program at higher rates than families that had not been on welfare.

To test for location effects on caseload change, we use an empirical model that controls for trends in the vitality of the local (county) economy, trends in the “opportunity costs” (e.g., minimum-wage earnings, cash assistance, and the Earned Income Tax Credit) to the welfare recipient of not entering the workforce, and changes in welfare policy in each state. Findings from these tests indicate that reducing both welfare and food stamp participation rates will be more difficult in rural counties than in urban counties in these southern states.

### **WHY METROPOLITAN/NONMETROPOLITAN CASELOAD ANALYSIS?**

Urban and rural areas have very different kinds of economies. Rural areas tend to have a larger share of jobs in “routine” manufacturing, those further down the product life cycle. Many rural areas are dominated by a single industry, such as manufacturing, farming, or extractive industries, while urban economies offer jobs in a wide range of trade and services sectors. Because welfare caseloads can be affected by both the vitality of the economy and the kinds of economic sectors that are growing, diversified urban economies may have an advantage over rural areas in reducing caseloads.<sup>3</sup> In terms of work support services, rural areas lack professional child care facilities and public transit for daily commuting. Both services are much more likely to be available in urban than in rural counties. Each of these urban/rural differences suggests that reducing caseloads in rural counties will be a more difficult task than in urban counties, given the strength of the local economy and the policy regime in effect.<sup>4</sup>

## Why Look at Caseload Changes?

We take a slightly different approach to studying welfare participation than the approaches in much of the previous research. Modeling caseloads, as we do here, instead of examining exit rates of welfare participants (e.g., in leaver studies) has the advantage of capturing both entry and exit effects of changes in welfare policy (Moffitt 1999, pp. 96–97). Looking only at the exit population says little about how potential entrants respond to new policy, to the strength of the local economy, or to the opportunity cost of not entering the workforce.<sup>5</sup>

Because our goal is to test for urban/rural differences in caseloads over time, ignoring how potential entrants affect caseload changes assumes away much of the problem of understanding why caseloads increase or decline. A focus on total caseload change not only captures how policy, the local economy, and opportunity costs affect potential entrants, but also offers insight into related issues. Figlio and Ziliak (1999, p. 18), for example, note that if welfare caseloads are strongly associated with the rate at which the economy is growing, state fiscal problems may arise when the economy weakens. When the economy enters a recession, state TANF payments can be expected to rise sharply. States that have not set up a reserve fund from recent TANF block grant funds will be faced with difficult choices on work assistance program cutbacks and the need to raise new revenues.<sup>6</sup>

## Why Within-State Caseload Analysis?

Most analyses of caseload change have used panel studies across states and years.<sup>7</sup> Caseload changes appear to be sensitive both to the strength of the state economy and to the changing incentives embodied in the welfare reforms in each state. Using within-state analysis allows us to capture the effect of local county labor market conditions on welfare and food stamp participation decisions by households residing in that county. By tracking caseload changes in cash assistance programs and the Food Stamp program over time and across counties within a state, we also test for the effects of policy changes and for rural/urban differences in caseload changes. The welfare policy changes we examine include the adoption by South Carolina of the Family Independence

Act of 1996, under the TANF umbrella.<sup>8</sup> In Mississippi, several counties obtained waivers from AFDC rules in 1995, and TANF was instituted statewide in 1997.<sup>9</sup> The Food Stamp program changes in 1997, as mandated under the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), reduced eligibility for some families but mainly reduced benefit levels for all and required coordination with TANF sanction rules (Zedlewski and Brauner 1999, pp. 4–8).

## **RECENT TRENDS: MISSISSIPPI AND SOUTH CAROLINA<sup>10</sup>**

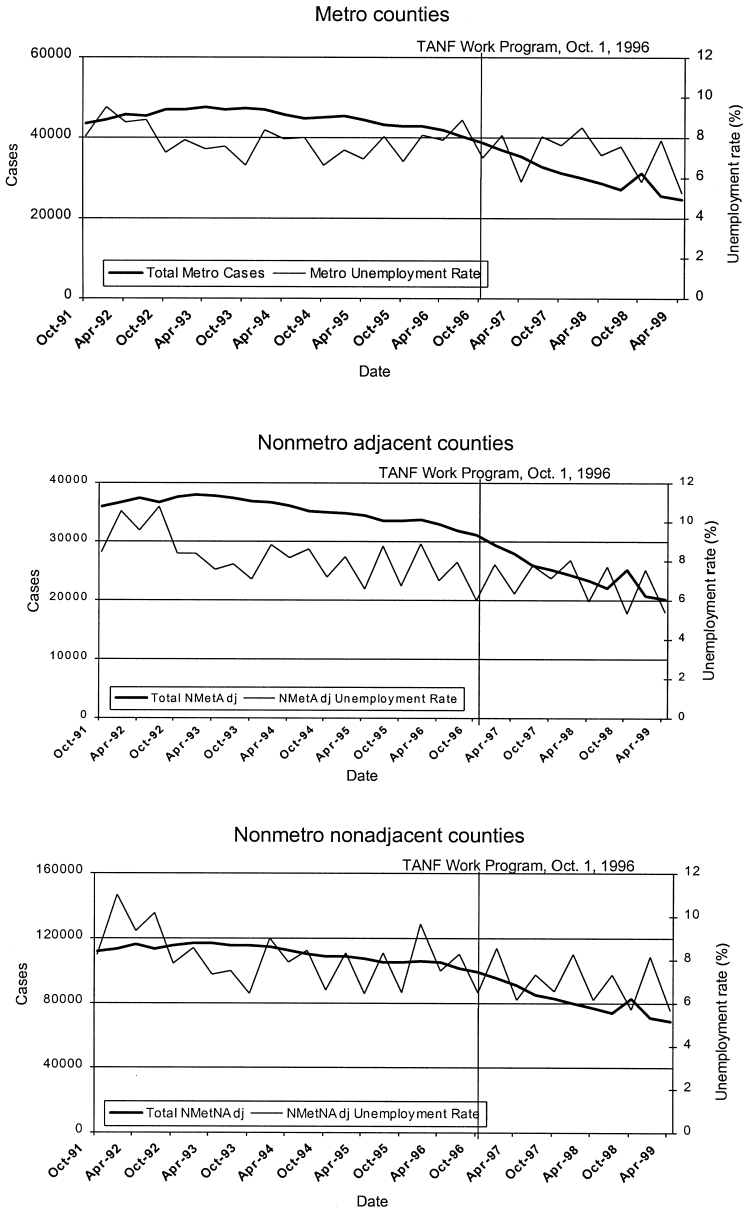
### **Mississippi Caseloads**

The number of welfare and food stamp cases (household units) has declined dramatically since October of 1991 (see Figures 4.1 and 4.2). In the pre-TANF period (October 1991 through September 1996), the number of AFDC/TANF cases averaged 53,272 per month across all counties. This average caseload in the post-TANF period (October 1996 through April 1999) declined to 31,123 cases, a decline of 43.8 percent. Although not as significant, average county food stamp caseloads declined 25.1 percent in the post-TANF period (190,659 cases to 142,732 cases). Caseload trends for three county groupings based on degrees of ruralness (Ghelfi and Parker 1997) are constructed: metropolitan counties (MET); nonmetropolitan (rural) counties adjacent to metropolitan counties (ADJ); and nonmetropolitan counties not adjacent to a metropolitan county (NONADJ). In Figures 4.1 and 4.2, AFDC/TANF and food stamp caseload trends are compared with monthly unemployment rates for each spatial grouping.

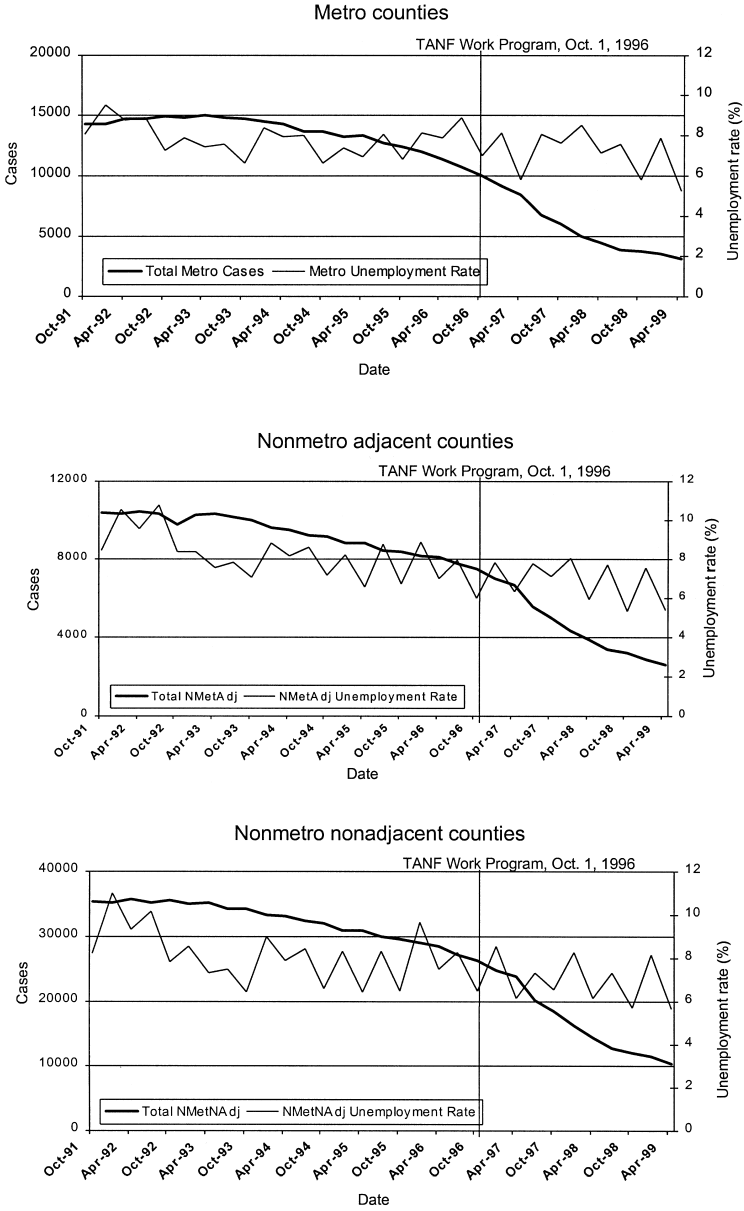
### **Welfare**

Since the beginning of fiscal year (FY) 1992 on October 1, 1991, the number of AFDC/TANF cases (households) has declined steadily for all three groups of counties, metropolitan, rural adjacent, and rural nonadjacent (Figure 4.1). Only in metropolitan counties was there a slight increase in cases from October 1991 through roughly mid July 1993. Over the remainder of the time, cases have steadily dropped in all three county classifications. Comparing average monthly caseloads

**Figure 4.1 Mississippi AFDC/TANF Caseloads and Unemployment Rates, 1991–99**



**Figure 4.2 Mississippi Food Stamp Caseloads and Unemployment Rates, 1991–99**



in the pre- and post-TANF periods indicates that MET counties experienced a decline of 51.6 percent in caseloads (from 13,589 to 6,573), while ADJ caseloads fell by 43.5 percent (from 9,361 to 5,291), and NON-ADJ county caseloads fell by 40.6 percent (from 32,422 to 19,259).

Unemployment rates have also declined somewhat over the time period, reflecting the overall robustness of the state and national economies (Figure 4.1). However, there does not appear to be any clear correlation between welfare caseload changes and unemployment rates beyond the fact that both have fallen over time. Also, there are no sharp differences across the three county groupings in welfare cases and unemployment trends.

The rural/urban share of caseload numbers has changed somewhat over the 1990s. The rural share of total state caseloads increased from 59 percent to 62 percent, the rural adjacent county share remained essentially unchanged, and the metropolitan share dropped by almost 4 percent. These figures may reflect the barriers in rural areas to successful welfare-to-work transitions reported by Beeler et al. (1999).<sup>11</sup>

### **Food stamps**

As with welfare caseloads, food stamp caseloads have been declining, but at a significantly lower rate (Figure 4.2).<sup>12</sup> Food stamp trends reveal little correlation to fluctuations in unemployment rates. Mean monthly food stamp declines from the pre- to post-TANF periods were roughly half as great as those for welfare cases: 28 percent for metropolitan; 27 percent for rural adjacent; and 23 percent for rural nonadjacent areas. In contrast to welfare cases, where the rural share of total cases increased after welfare reform, food stamp shares of the total caseload by county groups remained essentially unchanged.

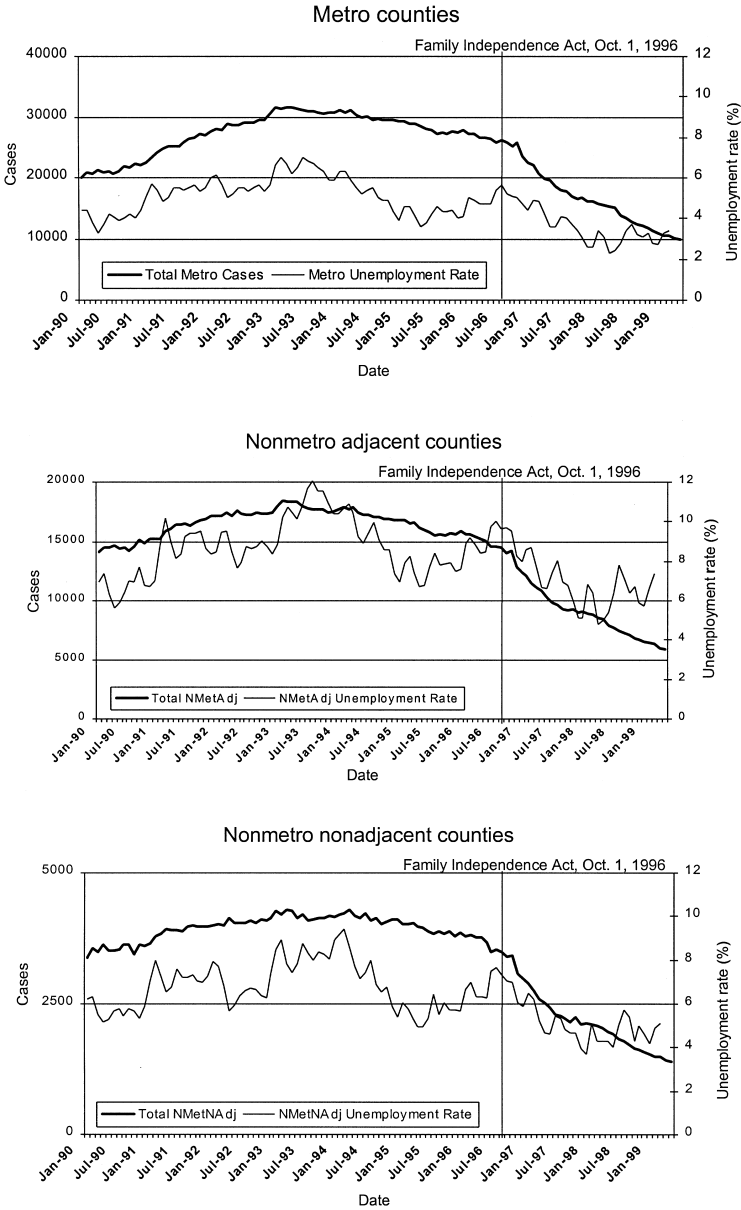
## **South Carolina Caseloads**

### **Welfare**

The number of welfare caseloads in South Carolina (household units) also declined steadily after the implementation of the Family Independence Act (FIA) in October 1996 (Figure 4.3). The monthly average caseloads across all counties in South Carolina declined from 47,610 in the pre-TANF period (January 1990 through September



**Figure 4.3 South Carolina AFDC/TANF Caseloads and Unemployment Rates, 1990–99**



1996) to 32,566 during the post-TANF period (October 1996 through August 1998), a decline of 31.6 percent. The monthly caseload trend in metropolitan counties shows a sharp decline (29.1 percent) in the post-TANF period after October 1, 1996. The caseload declined from an average caseload of 27,280 in the pre-TANF period to 19,344 after TANF. Similar downturns are evident in rural counties adjacent to metropolitan counties and nonadjacent rural counties; each area experienced average caseload declines of about 35 percent from the pre- to post-TANF period averages.<sup>13</sup>

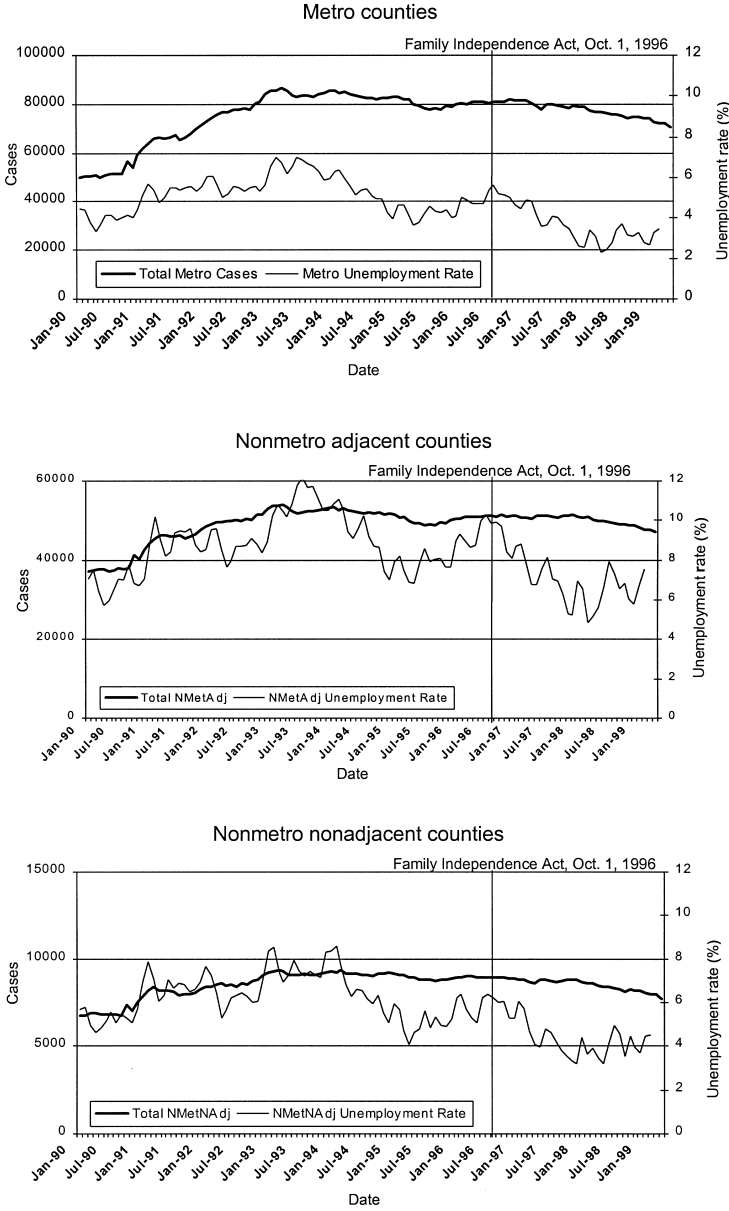
In South Carolina, metropolitan counties have the highest welfare caseloads, while in Mississippi, rural counties have the most welfare cases. Moreover, unlike in Mississippi, the trends in Figure 4.3 also suggest that the robustness of the local economies is correlated with changes in caseloads since the FIA was implemented. In each county group, the mean unemployment rate has declined since October 1996.<sup>14</sup> Although unemployment rates have been lower in metropolitan counties than in rural counties, the rates have fallen sharply across all county types since late 1996. Figure 4.3 suggests that strength in the local economy (lower unemployment rates) is associated with reduced welfare caseloads. When unemployment rates rise, welfare cases increase (as they did in the early 1990s). This local economy effect on caseloads seems to have been in play both before and after the state's TANF plan was implemented in October 1996. After 1996, the rural share of cases fell from 43 percent to 41 percent while the metropolitan share increased from 57 percent to 59 percent.

### **Food stamps**

In contrast to the dramatic declines in welfare caseloads since 1993, South Carolina food stamp caseloads have remained stable even as unemployment rates dipped in the mid 1990s. There is also no apparent reduction in caseloads after the FIA—especially in the rural counties (Figure 4.4). The number of food stamp caseloads is three to four times the number of cash assistance cases, suggesting an ongoing need for this form of support even as welfare caseloads have plunged over the 1990s.

In metropolitan counties, the number of food stamp caseloads in the 1990s fluctuated around 80,000 households each month. The trends

**Figure 4.4 South Carolina Food Stamp Caseloads and Unemployment Rates, 1990–99**



in Figure 4.4 suggest that food stamp caseloads vary with the unemployment rate in metropolitan counties—with perhaps the beginning of a downward trend appearing in 1997. In rural adjacent counties, about 50,000 households received food stamps in the 1990s. The number of caseloads did not deviate much from this level throughout the decade. Even more apparent is the lack of correlation between changes in the rural nonadjacent unemployment rate and the number of food stamp cases. In these rural counties, food stamp caseloads hovered around 10,000 even as the unemployment rate dropped from over 8 percent to about 4 percent.

The mean number of metropolitan county food stamp caseloads declined by about 3 percent from the pre-FIA to the post-FIA period. In rural counties, the decline was about 1 percent. These results differ sharply from the 31.6 percent decline seen in the cash assistance cases after the FIA was implemented. Because the FIA does not end food stamp eligibility and many of the jobs taken by former FIA clients are in entry-level, service-sector jobs, it is not surprising that many former welfare clients draw on food stamps to help cover the basic costs of living.<sup>15</sup> It appears that rural households may have a more long-term need for food stamp assistance than households in metropolitan counties. This may be due to a more attractive mix of job opportunities (and earnings potential) in metropolitan counties than in rural counties. Or, it may reflect differing demographic characteristics of urban and rural low-wage households that suggest more persistent need for food stamp assistance in rural areas.

A key finding in the pre- and post-FIA caseloads by county type is that rural counties in South Carolina do not seem to be at a disadvantage in reducing caseloads. The state share of caseloads in rural counties is smaller after the FIA than before. However, population and the associated resident labor force may also be growing faster in metro counties than in rural counties. If so, the caseloads per capita may be increasing in rural areas relative to urban areas. A summary of surveys of former FIA clients presented in Reinschmiedt et al. (1999) indicated that inadequate public transportation and child care continue to be barriers to reducing welfare caseloads in Mississippi. However, without a rural-urban distinction in the South Carolina leaver surveys, it is unclear whether these barriers are worse in rural or urban counties.

## CASELOAD CHANGES: TESTS FOR A “RURAL DISADVANTAGE”

Some caseload trends in Mississippi and South Carolina suggest that there are more severe barriers to moving off public assistance and more need for food assistance in rural counties relative to urban counties; other trends do not. We examine the “rural disadvantage” hypothesis using econometric models of caseload change along the lines of those developed by the Council of Economic Advisers (1999).<sup>16</sup> The formal model is presented in the appendix.

The dependent variable in this model is the caseload participation rate—the number of caseloads in a county divided by the county labor force.<sup>17</sup> Because a county with a larger population (and labor force) will have more caseloads than less densely populated counties, a proper test for rural-urban differences must control for the size of the county labor force (or population). Using caseload participation rates achieves this control.

To explain why caseload participation rates may have changed over time, three groups of “explanatory variables” are used in the regression model. These include opportunity cost variables, TANF and the economy variables, and region identifiers to test for rural/urban differences in caseload participation rates, holding other factors constant.

### “Opportunity Cost” Variables<sup>18</sup>

The first opportunity cost variable, the value of the Earned Income Tax Credit (EITC), has been assigned an important role in reducing caseloads by Ellwood (2000). Its value changed substantially over the 1990s, giving more incentives to welfare recipients to join the workforce. These changes are proxied by the average maximum EITC for taxpayers with children for each year, 1990–1999. As the value of the EITC increases, caseloads should decline because the earned income forgone by remaining on welfare increases.

The second opportunity cost variable is the monthly value of state minimum wage divided by the maximum monthly AFDC/TANF cash assistance benefit for a family of three. Because many former welfare clients begin work in the low-wage segment of the labor market,

changes in the minimum wage serve as a good proxy for the expected wage income for former welfare participants who enter the labor market. By comparing this expected wage income from working to the cash assistance forgone by leaving welfare, welfare recipients can estimate the expected net income benefits from voluntarily leaving AFDC/TANF.

### **TANF and the Economy Variables<sup>19</sup>**

Several welfare policy variables are constructed to test for the effect that TANF reforms have had on changes in caseloads, holding constant opportunity costs, the strength of the county economy and urban-rural location of the welfare recipients. Tests of the effect of the TANF reforms at the county level in the two states are made using three variables. First, a simple test for a discrete change in caseloads before and after TANF is made. This discrete effect—*independent of the strength of the local economy*—might arise from aspects of the TANF reforms that reflect new sanction rules, time limits, and efficiencies or “cultural” reforms in how the local welfare agencies provide services to welfare clients under TANF versus AFDC.

A second welfare policy variable tests the proposition that TANF reforms are likely to reduce caseloads only in conjunction with a robust county economy that provides job opportunities to former welfare clients. Simply put, welfare reform may provide a host of incentives to exit welfare but if no jobs are available, one would not expect the caseloads to decline. To test this hypothesis, we create two interaction variables. If the TANF reforms reduce caseloads mainly when the unemployment rate is falling, then the interaction variable will have a positive parameter (increasing the expected positive parameter value for the unemployment rate variable in the TANF period compared to the AFDC period).

The role of the local economy in caseload change is also captured in a second variable, the employment growth rate for the county. Employment growth is a good indicator of how well the local economy is generating new jobs for welfare leavers and those who might be new entrants to the welfare program. In contrast, the unemployment rate reflects household decisions on labor force participation and underlying population change as well as local job generation. Faster local job

growth should reduce welfare caseloads; a negative parameter is expected for the employment growth variable. As before, if TANF reforms are most effective when jobs are more plentiful, then the interaction effect between local employment growth rates and TANF should be significant, and the parameter estimate should be negative. Faster job growth is expected to reduce welfare caseloads and caseloads are expected to decline faster in the post-TANF period under this scenario.

### **Regions Used to Test for Rural/Urban Differences in Caseload Change**

We estimate several regression models to reflect alternative ways to define “rurality” using *alternative* dummy variables representing location effects. In the first regression, a simple indicator variable identifies counties as either metropolitan or nonmetropolitan. The second regression tests for a “remote” rural disadvantage by dividing the nonmetropolitan counties into a group adjacent to metro counties and nonmetropolitan counties not adjacent to metropolitan counties. Welfare participants in counties more distant from urban job centers may have less access to jobs than welfare participants in counties near urban counties.

A third regression divides the nonmetro counties into one of four economic base groups: farm, manufacturing, government, or other, the last including services and nonspecialized (Ghelfi and Parker 1997). Positive parameters on these dummy variables would indicate that counties in these classes are less likely to reduce welfare participation rates than are urban counties, given the same vitality of the local economy, opportunity cost of not working, and policy regime. This is a way to control for “industry mix” effects on welfare participation that Bartik and Eberts (1999) found to be useful in explaining changes in welfare caseloads.

In addition, each state was divided into functional economic regions (economic areas developed in Johnson 1995). These regions have an urban center and rural hinterland that are connected by substantial within-region commuting. Regions with a booming urban center that offers jobs to residents in proximate rural areas are expected to have more success in reducing rural caseloads than other regions. In-

cluding economic area region variables also provides control for the type of urban center: government-dominated urban areas such as Columbia, South Carolina, and Jackson, Mississippi; manufacturing-dominated regions such as the Greenville-Spartanburg metro center along the I-85 growth corridor from Charlotte to Atlanta; and resort-tourism service oriented urban areas such as Charleston, South Carolina, and the Mississippi Gulf Coast.

### **Food stamps model**

The food stamps model is similar to the welfare caseload model used by the Council of Economic Advisors (CEA) for two reasons. First, across most states, there has been a strong correlation between food stamps and AFDC/TANF caseload changes. Second, important changes in food stamp policy took effect in 1997 (Zedlewski and Brauner 1999). Following a suggestion in Wallace and Blank (1999), we use AFDC/TANF caseloads per capita as a variable in explaining food stamp caseloads in one model, recognizing that this raises endogeneity problems.

However, unlike the CEA model that is estimated among states, the level of nominal cash assistance benefits is approximately constant among counties in South Carolina and Mississippi—about \$200 per month. Thus, we cannot test for the effects of varying benefits levels among counties as the CEA does among states. Instead, the ratio of the minimum wage monthly equivalent to the benefit level was used as one proxy for the changing opportunity cost to welfare caseloads to staying on AFDC/TANF.

## **RESULTS**

The key findings from estimating the regression equations are summarized in Table 4.1 for both AFDC/TANF and food stamps. The county welfare caseload participation rate (county caseloads divided by county labor force) is the dependent variable in columns 1 and 2 of the table, while the county food stamp caseload participation rate is the dependent variable for columns 3 and 4.



**Table 4.1 Determinants of Welfare and Food Stamp Caseloads in South Carolina and Mississippi, 1990–99**

Explanatory variables	Direction of influence on			
	AFDC/TANF		Food stamps	
	S.C.	Miss.	S.C.	Miss.
<b>Opportunity cost</b>				
Ratio of minimum wage to benefits	–	–	–	–
Value of the Earned Income Tax Credit	–	–	–	–
<b>TANF and the economy</b>				
TANF (welfare reform alone)	ns	ns	ns	–
TANF × employment growth	–	–	–	–
Employment growth (lagged)	mixed	–	mixed	–
TANF × unemployment rates	+			+
Unemployment rates (lagged)	+			+
<b>Region</b>				
1) Rural	+	+	+	+
2) Rural – adjacent	+	+	+	+
Rural – not adjacent	+	+	+	+
3) Rural – farm	+	+	+	+
Rural – manufacturing	+	ns	+	+
Rural – government	ns	ns	ns	+
Rural – other	+	+	+	+
4) “Persistent poverty” in S.C.	+		+	
“Delta” in Miss.		+		ns

NOTE: Dependent variable is  $\ln(\text{caseloads}/\text{labor force})$ . Nonsignificant regression parameter at the 0.05 level is denoted “ns.” Regression parameters significant at least at the 0.05 level are denoted “+” for a positive relationship between increasing the value of the explanatory variable and increasing caseloads (for details, see Henry et al. 2000). Variables that have some positive and some negative effects are indicated as “mixed.” Blank cells indicate that the variable was not used in the regression. “Region” effects are comparisons between the rural category and the metropolitan counties in the state.

## **Opportunity Costs, Policy Reforms, and the Economy: How Did They Affect Welfare Caseloads in Mississippi and South Carolina?**

The effect on AFDC/TANF caseloads from the “opportunity costs” and “TANF and the economy” variables are reported in data columns 1 and 2 of the first two sections of Table 4.1. For the two “opportunity cost” variables—increases in the minimum wage relative to AFDC/TANF benefits and a higher EITC, increasing the EITC and the minimum wage relative to cash assistance reduces welfare participation as expected. These results are statistically significant across all models estimated for South Carolina and Mississippi.<sup>20</sup>

A second consistent finding is that TANF policy impacts on caseloads occur in conjunction with a strong local economy. Although the TANF indicator variable is not significantly different from zero<sup>21</sup> in either state, the interaction of TANF with the local economic variables was important in explaining caseload. This suggests that TANF incentives to leave welfare (or not join the welfare program) are effective if the local economy is generating local job opportunities. This finding is consistent with Ellwood (2000), who argued the TANF effect may be strongest where a robust local economy offers more low-wage jobs to former welfare clients.

In South Carolina, lower unemployment rates reduce caseloads, and the effect of lower unemployment rates on caseloads is about twice as strong after TANF than before. Employment growth rate effects are more mixed for South Carolina. Prior research (e.g., Council of Economic Advisers 1999) indicates that employment growth affects welfare participation decisions but that there is a lag between the labor market signal and caseload changes. In South Carolina and Mississippi, faster employment growth reduces caseloads as expected, but there is about a three-month lag between a stronger local economy and caseload declines. Although faster job growth reduces welfare caseloads, the job growth impact of caseloads has been stronger since TANF. However, the employment growth effects are more mixed than those for the unemployment rate. The four-quarter lag in employment growth has a positive effect on caseloads. This suggests in-migration to fast-growing counties by low-wage households that are seeking jobs but still drawing welfare benefits for a period. During the post-TANF period, however, the four-quarter lagged employment growth turns negative or neutral.

The Mississippi findings for local economic and policy effects on caseloads are similar to those for South Carolina. In Mississippi, the one-quarter and four-quarter lagged job growth effects were negative, as expected. The one-quarter lag interaction with TANF also contributed to strong declines in welfare caseloads, while the four-quarter lag interaction effect was neutral. The Mississippi results also indicate that both a strong economy and the implementation of welfare reform have contributed to declines in welfare participation rates.

### **Is There a Rural Disadvantage in Reducing Welfare Caseloads?**

Findings indicate a strong metropolitan advantage in reducing the rate of welfare participation rates in both South Carolina and Mississippi, other things being equal, as shown in data columns 1 and 2 of the “Region” section of Table 4.1. Welfare caseload participation rates are higher in nonmetro counties than metro counties after controlling for local economic vitality, TANF policy effects, and the rising opportunity cost of staying on welfare. The results suggest a slightly higher disadvantage in the more remote South Carolina and Mississippi rural counties (those not adjacent to a metro county).

Spatially configuring counties according to predominant economic activity produced mixed results for the two states. Farm-based economies in both South Carolina and Mississippi had higher rates of welfare participation relative to other counties. Beyond this common element, other economy types showed varying differences from the metro base. In South Carolina, where most rural counties are manufacturing or service or mixed economies, there was little difference from the nonmetro average effect. The lower salary, predominantly service-mixed rural economies in Mississippi had greater numbers of welfare cases than metro counties.

Economic region effects are also associated with welfare participation in both states. In South Carolina, the reference region is the I-85 growth corridor in the northwest corner of the state. It is dominated by a diverse manufacturing sector, with BMW, Hitachi, and Michelin providing a high profile for international investors, and the region has a rapidly expanding service sector serving a growing population. Other regions, with the exception perhaps of the Charlotte (North Carolina)

spillover region, are likely to have higher rates of welfare participation than the I-85 growth corridor. The Midlands and Low Country regions include many of the persistent poverty counties in South Carolina and are part of the set of counties with persistent poverty that run across the Southeast. It appears that rural counties in these economic regions will have the most difficult time reducing welfare caseloads.

In Mississippi, the Jackson-based metro region and surrounding area was used as a reference. Three regions differed significantly from the base. Two regions had lower levels of welfare participation—a corridor of development activity paralleling an interstate highway from Jackson to Meridian; and an area in which the economy has undergone rapid growth in light industry, particularly upholstered furniture manufacturing. A third region differing significantly from the metro base was the high-poverty region of the Mississippi Delta, which had notably higher numbers of welfare cases.<sup>22</sup> This region depends heavily on production agriculture and is plagued by limited employment opportunities and the full range of socioeconomic problems accompanying persistent poverty across the Black Belt region of the South.

Several general conclusions can be inferred from the Mississippi and South Carolina cash assistance findings. One is that a strong economy, represented here by variables measuring unemployment rates and employment growth rates, has contributed significantly to the caseload declines observed from 1991–1999. Second, TANF program changes have not significantly affected caseloads, holding other things constant, unless accompanied by strong local economies. As noted, the relatively short time elapsed since the passage and implementation of the PRWORA may be a factor in this finding. Over time and as economic conditions change, these program initiatives may have a more significant impact.

Finally, this research shows that spatial issues are important to understanding caseload changes. Specifically, the results show that the caseload participation rates are significantly higher in nonmetropolitan areas, all else the same, and farm-dependent areas face the most difficult challenges in reducing caseloads. This finding suggests that rural areas may experience unique problems and face additional obstacles in the implementation of PRWORA not encountered in more urbanized areas.

## Food Stamp Participation in South Carolina and Mississippi

Results for food stamp participation in South Carolina and Mississippi are presented in data columns 3 and 4 of Table 4.1. They differ somewhat from the cash assistance results. This is not surprising given the smaller changes in food stamp caseloads compared with the dramatic reductions in AFDC/TANF over the period under review.<sup>23</sup> We find that higher minimum wages and increases in the EITC in both states tend to lower total food stamp participation. However, when looking at those only receiving food stamps without cash assistance (the residual cases), the relationships reverse in South Carolina. A possible reason for the reversal is that residual cases view the higher minimum wage and higher EITC benefits and food stamps as a “work support package.” As the minimum wage and EITC increased, fewer people entered welfare but more signed on for food stamps.

Focusing on the South Carolina “residual” food stamp cases, TANF, by itself, has a negative, but insignificant, impact on food stamp caseloads and seems to have only a weak effect during quarters when employment is growing. Faster employment growth lagged four quarters seems to increase the food stamp caseloads. This suggests that there is in-migration to high employment growth counties, with added demand for food stamps at least for a time. Employment growth in the most recent quarter reduces food stamp caseloads. It may be that not enough time has passed between this quarterly signal of job growth in a county and subsequent immigration of food stamp participants.

In Mississippi, relative to the welfare caseload results, the effects on food stamp caseloads were considerably smaller. This is expected given the eligibility link between food stamp benefits and income as well as other eligibility requirements. That is, as income levels increase, individuals can remain eligible for some level of benefits as long as they remain below the 130 percent poverty level and meet other necessary requirements.

Differing from South Carolina, the effect of TANF implementation is highly significant and negative in all the Mississippi food stamp models, indicating that program changes have contributed to declining

food stamp participation. This finding, although not necessarily anticipated, is not surprising for two reasons. First, addressing food stamp and TANF interrelationships, Zedlewski and Brauner (1999) found that about one-third of families leaving food stamps were no longer eligible based on their current income, meaning that almost two-thirds were leaving for some reason other than income thresholds. They found that former welfare recipients left the Food Stamp program more often than their non-welfare counterparts regardless of income level. Roughly 84 percent of those receiving TANF in Mississippi also received food stamps over the time period evaluated. Second, although not likely as important to Mississippi as to border states such as Texas and California, the denial of food stamps to immigrants beginning in 1997 was a major policy change that nearly coincides with implementation of TANF.

The impact of employment growth lagged one- and four-quarters on food stamps paralleled the findings for welfare caseloads. Again, the fourth-quarter lag was not significant. Unemployment lagged 12 months and the lagged unemployment–TANF interaction terms were both highly significant and both had positive signs, indicating that lower unemployment rates reduce food stamp caseloads. Although highly significant, the post-TANF program unemployment effect is considerably weaker in the post-TANF timeframe.

### **Is There a Rural Disadvantage in Reducing Food Stamp Caseloads?**

Except for the case of the lone government-dependent county in South Carolina, all rural counties in both states, regardless of location or economic base, fare worse than metropolitan counties in reducing the rate of food stamp participation. Mirroring the South Carolina welfare caseload results, counties in the economic regions outside the I-85 manufacturing belt depend more on the Food Stamp program to supplement incomes of the working poor. Economic regions in Mississippi also showed results similar to the welfare caseload analyses. Farm-based counties had higher food stamp participation rates, although the Delta region showed no significant difference in food stamp participation rates relative to the urban reference.

## SUMMARY

Evidence presented here suggests that, for these two southern states, rural areas will have more difficulty than urban areas in reducing both cash assistance and Food Stamp program participation, all else the same. In Mississippi, rural counties with a strong orientation toward farming and those in the Delta region are likely to face the greatest difficulty in reducing cash assistance caseloads. Farm-based rural counties in Mississippi face the most difficulty in reducing food stamp participation rates. In South Carolina, it is the set of rural counties that lie between Columbia and the coast that are least likely to reduce dependence on welfare and food stamps.

Why the rural disadvantage exists is an open question. It may mean that improved rural transit linking rural residents to urban employment growth areas is needed to reduce rural caseloads. More widely available child care, job training, and other assistance in rural areas may be needed. Because rural clients tend to be dispersed, rural efforts to reduce barriers to leaving welfare are likely to be more expensive on a case-by-case basis than in urban centers.

One important qualifier to the evidence presented in this chapter is worth emphasizing. Unlike other areas in the country, South Carolina and Mississippi have few, if any, metropolitan areas with urban core counties that have a concentration of poverty and TANF dependence. Given the evidence in Smith and Woodbury (1999) that urban core cities do worse than suburbs or nonurban areas in providing jobs for low-wage labor, a test for caseload change between rural and the urban core would be useful but best undertaken in states that have larger metropolitan areas.

Finally, most of the employment growth in both Mississippi and South Carolina has been concentrated in urban counties and rural counties along the Atlantic and Gulf coasts. The most remote rural counties have not benefited as much from state economic growth, suggesting that both economic development programs and “barrier” programs to provide transit, child care, and job training are needed to reduce the rate of welfare participation in rural Mississippi and South Carolina. As caseloads rise in the next recession, under the TANF rules, states will have three choices: “cut people off even though jobs may not be avail-

able, relax the time limits, or provide some form of subsidized work for those that cannot get private employment” (Ellwood 2000, p. 193). States like South Carolina and Mississippi, with pockets of rural poverty, may be under substantial fiscal stress when they are faced with rising needs to support low-income households during a time when state revenues are not growing and the TANF block grant is fixed.

## Notes

1. Analysis within a state has several advantages over cross-state analyses. The low-wage labor market conditions that welfare recipients confront are more closely reflected in local county data than state averages. Second, the institutional framework—political, social, and economic—is likely to be more consistent among counties in a given state than among 50 states.
2. Henry, Barkley, and Brooks (1996) examined a South Carolina case study illustrating the rural spatial mismatch between where new entry-level jobs are growing and where low-income households are located. Alternatively, Smith and Woodbury (1999) found that low-wage job growth may be favorable to the employment prospects of former welfare recipients in nonurban areas; urban suburbs are likely to fare best, and central cities the worst in offering low-wage job opportunities.
3. Bartik and Eberts (1999, p. 139) found that three state “industrial mix” variables are important to understanding caseload changes among states.
4. Possible differences in caseload change across multicounty regions, each with an urban core and rural hinterland, are also explored in this chapter.
5. Moffitt and Ver Ploeg (1999) provided an overview of data and methodological issues for evaluating welfare reform and a review of selected state and local evaluation projects.
6. These choices are explored in Pavetti (1999).
7. Bartik and Eberts (1999) is an exception as metropolitan areas are considered in one set of models. In addition, Wallace and Blank (1999) and Figlio and Ziliak (1999) estimated models with monthly data at the state level.
8. Given new federal flexibility in administering state AFDC in the mid 1990s, South Carolina began to transform its AFDC program in January 1996 (prior to the passage of the federal PRWORA) with new training and education programs for adult AFDC recipients. Anticipating the PRWORA, South Carolina had transformed AFDC into its version of TANF, the Family Independence (FI) program, by October 1996. Three key features of the FI program distinguish it from AFDC: 1) Individuals are required to seek work before becoming eligible for the FI program, whereas income criteria were sufficient under AFDC; 2) A time limit of 2 years within a 10-year span, with a total lifetime limit of 5 years; and 3) under FI, failure of an adult client to comply with FI requirements can result in both



the adult recipient and the entire family losing benefits. Although this is a more severe noncompliance feature compared with AFDC, the FI program also allows spouses to participate in FI just as in the more stringent AFDC Unemployed Parent eligibility provision.

9. The process of welfare reform in Mississippi began in 1993 with the passage of legislation to implement statewide changes and demonstration projects to address the needs of the state's low-wage population through increased work opportunities, supportive services for adults, and required school attendance and health care for children. This legislation, the Mississippi Welfare Restructuring Program Act of 1993, was amended in the 1994 legislative session, allowing the state to request waivers, later granted by HHS, HCFA, and USDA, to implement the amended reforms. In December 1994, Mississippi began its pilot Welfare Reform Demonstration Project along with the work program component, WorkFirst, in six counties. The pilot program made benefits contingent on fulfilling a work requirement and was virtually identical to the federal TANF legislation in 1996. Development of the existing state plan for TANF implementation began with the approval of an initial state plan to take advantage of TANF block grant funds available beginning October 1, 1996. The Mississippi legislature passed and the governor signed House Bill 766 in March 1997, authorizing the Mississippi Department of Human Services (MDHS) to implement the TANF Work Program (TWP) and other reforms throughout the state. TWP replaces the old Job Opportunity and Basic Skills (JOBS) program and focuses on the immediate placement of nonexempt TANF recipients in private-sector, full-time jobs. Key features differentiating TWP from JOBS are: TWP focuses on immediate job placement, whereas the JOBS program focused on long-term preparation for work; TWP has a full family TANF sanction for noncompliance that existed with the JOBS program. TWP has a 5-year lifetime limit on the receipt of benefits and provides a 160-hour job search program, including a 20-hour job readiness-training program for adult TANF recipients.
10. This section draws from Reinschmiedt et al. (1999).
11. Key findings in this leaver study are summarized in Reinschmiedt et al. (1999).
12. The spike that occurred in all three groupings in October 1998 resulted from a special disaster one-month issuance of food stamps associated with a hurricane.
13. South Carolina has 16 MSA counties, 24 rural adjacent counties, and 6 nonadjacent rural counties.
14. Unemployment rates are the weighted means for each county type.
15. However, Zedlewski and Brauner (1999) found that former welfare clients exited the FSP at a greater rate than those not receiving AFDC/TANF in 1995–1997.
16. Rector and Youssef (1999, p. 1) found that states with “stringent sanctions and immediate work requirements . . . are highly associated with rapid rates of caseload decline,” while “the relative vigor of state economies, as measured by unemployment rates, has no statistically significant effect on caseload decline.” However, this is a distinctly minority finding. Most analysts find that robust economic growth is important to reducing welfare caseloads. The Council of Economic Ad-

visers (1999), Figlio and Ziliak (1999), Wallace and Blank (1999), Bartik and Eberts (1999), and Moffitt (1999) each found that stronger state economies have the expected effect of reducing participation in welfare programs. Bartik and Eberts (1999) found that use of the unemployment rate alone as an indicator of the robustness of the local (state) economy failed to explain recent dramatic declines in caseloads or late 1980s increases in caseloads despite low unemployment rates. They concluded that other features of the local labor market—employment growth rates and some industry mix variables—also need to be included in the measurement of the robustness of the local economy. They resolve the riddle of rising caseloads in the late 1980s in the face of lower unemployment rates by noting the decrease in demand for low-skill labor during the same period. The rapid decline in caseloads in the late 1990s is most likely explained by new TANF policy given that indicators of local labor demand fail to explain the decline. Rector and Youssef (1999) provided support for this view for the January 1997 to June 1998 period. Specifically, they assert that an increase in the severity of penalties for noncompliance with TANF regulations across states has been a major force in reducing welfare caseloads in the late 1990s. Recent Council of Economic Advisors (1999) results also support an important policy impact from TANF.

17. County labor force and monthly estimates of population were used as alternative bases for calculating the caseload participation rates. There is virtually no difference in the empirical estimates using the two divisors.
18. Ellwood (2000) made several observations about how means-tested benefits in the welfare system (AFDC/TANF and food stamps) and income support programs for working, low-wage households, especially the Earned Income Tax Credit (EITC), have changed since the early 1990s to provide powerful incentives to leave welfare. First, the real value of welfare benefits in the median state is now about half the 1970 level. Second, the EITC benefits expanded dramatically in the early 1990s. Third, there is expanded support for child care and Medicaid coverage for children of a single parent working full-time at the minimum wage. In one comparison, a single parent working full-time at the minimum wage in 1986 would gain total real “disposable” income of \$2,005 in 1996 dollars—about a 24 percent gain over AFDC and lose all Medicaid coverage by leaving AFDC. By 1997, the same parent would gain real disposable income of \$7,129 and lose Medicaid coverage for adults only by leaving TANF for a full time minimum wage job. This gain roughly doubles the disposable income of the working parent in 1997 in the median state. Chernik and McGuire (1999, pp. 278–280) also argued that the EITC has substantially increased the benefits of moving from no work to at least part-time work. The percentage gain in real disposable income when a welfare recipient moves from welfare to work is likely to be even larger in most southern states given their low levels of TANF benefits compared with the rest of the nation. As the minimum wage is increased and cash assistance from a state’s TANF program declines in real terms, there will be further increases in the cost to the welfare recipient of staying on welfare. This “pull” effect is apparent before considering how “push” incentives from new sanction rules for noncom-

pliance with TANF rules or time limits might affect the household decision to leave welfare. This is also before any consideration of caseload impacts from the demand side of the labor market for low-wage households—the strength of the local economy—or the variation in availability of work support services (public transit, child care, and job training) across localities.

19. Studies find that welfare policy reform has contributed to the reduction in caseloads, although the business cycle caseload effect has been stronger over the periods studied than the impact of welfare policy reform. In part, the relatively weak policy effect may be associated with the short time period over which the new policies have been in place. Although waivers from AFDC were implemented by some states in the early 1990s, in most states TANF was “activated” in October 1996, leaving only two complete years of data on how TANF recipients have responded to the new rules and incentives. The two-consecutive-years-on TANF rule would, in most states, not have been binding on most recipients until late 1998 at the earliest. Indeed, the Council of Economic Advisors (1999) report was a follow-up to the earlier Wallace and Blank (1999) analysis to address this time series issue. The most recent CEA study found that the welfare policy impacts accounted for about one-third of the caseload decline from 1996–1998.
20. Complete regression results are available from Henry et al. (2000).
21. The associated  $p$  values are in the 0.2 or above range. Tables with detailed statistical properties are available on request.
22. Howell, in this volume, also examines caseload data in Mississippi, with outwardly different results. However, Howell makes the point that the single labor market area (LMA) with the most TANF recipients is Jackson. He also shows, however, that the Delta *region* (which includes more than one LMA) does indeed have more TANF cases than the Jackson LMA. In addition, and more important, Howell compares actual caseloads, while the findings in this chapter (Henry) are based on a regression analysis in which other factors that might differ between the regions is held constant. Therefore, holding all else constant between the regions, the caseload would be predicted to be higher in the Delta than the Jackson LMA.
23. The lagged unemployment and its interaction with TANF are deleted to allow use of the random effects approach in the food stamps models displayed in columns 3 and 4 of Table 1.
24. Data for the CEA study are annual calendar years from 1976–1998 on all states and the District of Columbia for 1,173 observations (Council of Economic Advisors 1999, pp. 10–13).
25. The models estimated for South Carolina and Mississippi differ from the CEA model in variables, data used, and in estimation strategy. First, counties and months are used as the panel (rather than states and years). Because it is the strength of the local county economy (rather than the state average) that would seem most relevant in welfare clients’ job searches, the use of county data seems proper. The CEA study uses the number of caseloads in a case divided by state population on an annual basis. However, the SC-MS data are across counties and months so there is no population estimate available to us as a denominator in the rate calculation. Accordingly, the county labor force by month is used as a proxy

for the size of the local population, and the dependent variable is the log of case-loads/labor force. Although the size of this is a practical necessity given that county population data by month are not available, county working-age population and labor force are likely to be highly correlated. Second, the South Carolina–Mississippi model uses both unemployment rates and employment growth rates as suggested by Bartik and Eberts (1999) to capture the vitality of the county economy in offering work to welfare clients. Interaction effects of the unemployment rate and the employment growth rates with TANF are used to determine whether the policy effects from TANF are influenced by the economic conditions facing welfare recipients. Third, opportunity costs of not working are proxied both by the ratio of the minimum wage to welfare benefits and by changes in the Earned Income Tax Credit. Fourth, there are several tests, using the “region” variables, for the effects of a rural location on welfare and food stamp participation rates. With metropolitan counties as the reference group, region effects are reflected across several alternative dimensions within each state.

26. The CEA model uses a county-specific time trend variable to control for “unobserved factors, such as family structure and other policies that may be correlated with the observed variables” (Council of Economic Advisers 1999, p. 12). A time trend is not used in the South Carolina–Mississippi models for two reasons. First, the location effects in the models should reflect the cross-sectional county social and demographic characteristics that may be omitted. Second, these county characteristics are unlikely to change rapidly over the period of this analysis. Under these circumstances, including a time trend (whether quadratic or linear) will add little control for omitted local characteristics and could reduce the information content in the remaining regressors. A second change from the CEA model revolves around the choice of using a fixed effects (like the CEA model) or a random effects approach to the panel data regressions. This is, in part, a matter of testing for the appropriate model (Greene 2000, pp. 576–577). The Hausman test for orthogonality between the random effects and the regressors is used to limit regressors to those that are consistent with the theoretical expectations from the caseload literature and that do not violate the assumption that the individual effects are not correlated with the regressors in the model. As noted below, the Hausman test was sensitive to the regressors included (most notably in the Mississippi welfare panel data) but generally supported the use of the random effects model for the panel data. The use of cross-sectional dummies for region effects also makes the random effects approach to the panel data estimations attractive. Estimating fixed-effects models was problematic because of the collinearity between cross-section dummies and the region dummies. Finally, the discussion in Wallace and Blank (1999) and Figlio and Ziliak (1999) concerning the merits of the CEA model identified several econometric issues that were taken into account when developing our model. First, the random effects models address the use of first differences as opposed to levels. In Parks (1967), the time-series data were transformed using a first-order autoregressive parameter estimated for each county. In Fuller and Battese (1974), data are transformed using constants derived from the estimators for each of the variance components. Assuming the error

terms are heteroscedastic and contemporaneously correlated, Parks also employs a GLS procedure to adjust for each potential problem. In sum, the estimation strategy for the SCM model is a two-step process. First, use the Hausman test for the random effects assumption that the error term effects are uncorrelated with the other variables in the model. Second, both the Fuller and Battese (1974) and the Parks (1967) GLS models are estimated to gauge the sensitivity of results to alternative assumptions about the error term.

27. "The 1989 classification system of nonmetro counties, known as the ERS typology, is designed to provide policy-relevant information about diverse rural conditions to policymakers, public officials, and researchers. The classification is based on 2,276 U.S. counties (including those in Alaska and Hawaii) designated as nonmetro as of 1993. The typology includes six mutually exclusive economic types: five types (farming, mining, manufacturing, government, and services) reflect dependence on particular economic specializations; a sixth type, termed non-specialized, contains those counties not classified as having any of the five economic specializations" (Cook and Mizer 1994, p. 4).

## APPENDIX

Data sources for the South Carolina caseloads are from reports PC100R03, PC100R17, MR410, and MR420, Division of Information Services, South Carolina Department of Social Services. Mississippi AFDC/TANF and food stamp administrative data are from the Division of Economic Assistance, Mississippi Department of Human Services. Data for the county employment, labor force, and unemployment rates by month are from the Employment Security Commissions of South Carolina and Mississippi. County identifiers are from the Beale code, U.S. Department of Agriculture (Ghelfi and Parker 1997). Earned Income Tax Credit and minimum wage data are from Council of Economic Advisers (1999).

### A WELFARE CASELOADS REGRESSION MODEL

One econometric specification developed by the Council of Economic Advisers (1999) forms the foundation for the regression model in Equation 1 used to test for region effects on caseload change.<sup>24</sup> Discussions of the merits of the CEA model in Wallace and Blank (1999) and Figlio and Ziliak (1999) are used to address estimation issues.

$$\begin{aligned}
 (1) \quad \ln R_{ct} = & B_0 + \ln \text{EITC} B_{\text{eitc}} + \ln \text{WAGETO BEN}_{ct} B_{wb} + \text{TANF}_{ct} B_{\text{tanf}} \\
 & + \text{UNEMPLOYMENT}_{ct} B_u + \text{TANF} \times \text{UNEMPLOYMENT}_{ct} B_{tu} + \text{EGROW} B_{\text{eg}} \\
 & + \text{TANF} \times \text{EGROW} B_{\text{teg}} + \text{REGION} B_{\text{reg}} + \gamma_c \gamma_t + \varepsilon_{ct}
 \end{aligned}$$

where

the dependent variable is caseload participation rates,

$\ln R_{ct}$  = log of the ratio of caseloads to the labor force in county  $c$  for month  $t$ ,

$\gamma_c$  = county effects (modeled as an error components term),

$\gamma_t$  = month effects (modeled as an error components term),<sup>25</sup> and

$\varepsilon_{ct}$  = random error.

## Explanatory Variables

### Opportunity cost regressors

In  $EITC$  = log of the average of the maximum earned income tax credit for taxpayers with one child and with more than one child for each year 1990 to 1999

In  $WAGETOBEN$  = log of the ratio of the value of state minimum wage as a monthly amount (30 hours of work per week for 4.33 weeks) to the maximum monthly benefit for a family of three on AFDC/TANF

### TANF and the economy regressors

$TANF$  = dummy variable = 1 for year and month TANF was in effect for a county; otherwise 0

$UNEMPLOYMENT$  = county unemployment rate (lagged two years to ameliorate endogeneity with current labor force)

$TANF \times UNEMPLOYMENT$  = interaction effect between unemployment rate lagged two years and TANF

$EGROW$  = employment growth rate in the county (most recent quarter and four-quarter lag)

$TANF \times EGROW$  = interaction effect between lagged employment growth rates and TANF

### Region effects used to examine rural/urban differences in caseload change.

Three regressions are estimated to reflect three alternative ways to define “rurality” using *alternative* dummy variables representing location effects.

#### Group 1 (Rural disadvantage)

Regional group 1 identifies counties as either metropolitan or nonmetropolitan.

$NONMET$  = dummy variable = 1 for all nonmetropolitan counties and 0 for other counties

#### Group 2 (Remote rural disadvantage)

Group 2 is the set of nonmetropolitan counties divided into those that are adjacent to a metro county and those that are not. Welfare participants in counties more distant from urban job centers may have less access to work opportunities than welfare participants in counties near urban counties.

ADJ = dummy variable = 1 nonmet counties adjacent to metro counties and 0 for other counties

NONADJ = dummy variable = 1 for nonmet counties not adjacent to metro and 0 for other counties

### Group 3 (Rural industry mix effect)

Group 3 divides the nonmetro counties into one of four economic base groups: farm, manufacturing, government, or other (services and nonspecialized), from Ghelfi and Parker (1997). Positive parameters on these dummy variables would indicate that counties in these classes are less likely to reduce welfare participation rates than are urban counties, given the same vitality of the local economy, opportunity cost of not working, and policy regime. This is a way to control for “industry mix” effects on welfare participation that Bartik and Eberts (1999) found to be useful in explaining changes in welfare caseloads. In addition, each state was divided into functional economic regions (BEA Component Economic Areas developed in Johnson 1995). These regions have an urban core and rural hinterland that are connected by substantial within-region commuting. Regions with a booming urban core that offer jobs to residents of proximate rural areas are expected to have more success in reducing rural caseloads than other regions. Including BEA region dummies also provides some control for the type of urban center—government-dominated urban areas such as Columbia, South Carolina, and Jackson, Mississippi; manufacturing-dominated regions like the Greenville-Spartanburg metro center along the I-85 growth corridor from Charlotte to Atlanta; and resort-tourism service-oriented urban areas such as Charleston, South Carolina, and the Mississippi Gulf Coast.<sup>26</sup>

FRM = dummy variable = 1 for farm dependent rural counties. Farming contributed a weighted annual average of 20 percent or more labor and proprietor income from 1987–1989.<sup>27</sup>

MFG = dummy variable for manufacturing dependent rural counties and 0 for other counties; manufacturing contributed a weighted annual average of 30 percent or more labor and proprietor income from 1987–1989.

GOV = dummy variable for government dependent rural counties and 0 for other counties; government activities contributed a weighted annual average of 25 percent or more labor and proprietor income from 1987–1989.

OTH = dummy variable for rural counties not dependent on farming, manufacturing, or government and 0 for other counties. These counties were either services-dependent (service activities contributed weighted annual average of



50 percent or more labor and proprietor income from 1987–1989) or nonspecialized (counties not classified as a specialized economic type from 1987–1989).

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# **Rural Dimensions of Welfare Reform**

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2002

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Kalamazoo, Michigan

**Library of Congress Cataloging-in-Publication Data**

Rural dimensions of welfare reform : welfare, food assistance, and poverty in rural America / Bruce A. Weber, Greg J. Duncan, Leslie A. Whitener, editors.

p. cm.

“This book presents revised versions of about half of the papers presented at a conference on the title topic held in May 2000”—summary p.

Includes bibliographical references and index.

ISBN 0-88099-239-5 (pbk. : alk. paper)—ISBN 0-88099-240-9 (cloth : alk. paper)

1. Rural poor—United States. 2. Social service, Rural—United States. 3. Public welfare—United States. 4. United States. Personal Responsibility and Work Opportunity Reconciliation Act of 1996. I. Weber, Bruce A. II. Duncan, Greg J. III. Whitener, Leslie A.

HC110.P6 R855 2002

361.6'8'091734—dc21

2002016815

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The facts presented in this study and the observations and viewpoints expressed are the sole responsibility of the authors. They do not necessarily represent positions of the W.E. Upjohn Institute for Employment Research.

Cover design by J.R. Underhill.  
Index prepared by Nairn Chadwick.  
Printed in the United States of America.