The Effect of Specific Welfare Policies on Poverty

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ABSTRACT

This paper uses monthly Survey of Income and Program Participation (SIPP) data from 1988 through 2002 and monthly state-level policy data to measure the effects of specific policies on the deep poverty and poverty rates of ever-single mothers and children of ever-single mothers. The 19 specific policies included in the model are grounded in a conceptual framework. More lenient eligibility requirements for welfare receipt and more generous financial incentives to work generally reduce deep poverty, as hypothesized. Welfare time limits are hypothesized to have ambiguous effects on poverty and our results suggest that some stricter time limit policies may decrease deep poverty and poverty rates.

I. INTRODUCTION

Poverty rates in the United States fell from a 25-year high of 15.1 percent in 1993 to near record lows of 11.3 percent in 2000 and have since increased steadily to 12.7 percent in 2004 (U.S. Census Bureau 2004a). The poverty rates for children and for people in single female-headed families followed a similar pattern, although at considerably higher rates—17.8 percent and 30.5 percent in 2004, respectively (U.S. Census Bureau 2004a, 2004b). Many political leaders pointed to poverty rate declines along with increases in employment and falling welfare caseloads that occurred in the late 1990s as evidence that the 1996 federal welfare reform had been a success (Kaus 2001). During the late 1990s, however, there was concern that welfare reform was leading to increases in deep poverty (living below 50 percent of the poverty threshold) (e.g., Sherman et al. 1998, as cited in Haskins 2001), as deep poverty rates increased in 1996 and were unchanged in 1997 (U.S. Census Bureau 2004c). Deep poverty rates subsequently fell, however.

While trends in poverty and deep poverty generated discussion and speculation about the effect of welfare reform on poverty and deep poverty, there is limited and mixed information on welfare reform's effect on these outcomes. Moreover, the literature provides no guidance on how *specific* welfare reform policies affect poverty and deep poverty. Some of the welfare reform policies implemented by states are hypothesized to increase poverty (e.g., family cap), while others are hypothesized to decrease poverty (e.g., increases in the earned income disregard). Thus, on net, one could find an overall reform effect of zero, when in fact specific policies have affected families' economic well-being, but in off-setting ways.

This paper contributes to the literature by examining the effects of a rich and comprehensive set of specific welfare policies on poverty and deep poverty among women and children. We capture objective and detailed measures of states' policies by measuring policies individually, and in continuous values such as dollars, wherever possible. Nineteen specific policies are included in our analysis. These polices are grounded in a conceptual framework of how policies can influence poverty and are measured in great detail on a monthly basis from 1986 through 2000. Our approach leads to results that are robust to alternate specifications. Variation in welfare policies over time and across states enables us to measure the relationship between policy and poverty. States implemented changes to their welfare programs via welfare waivers in the early to mid-1990s and then used the flexibility provided by federal welfare reform's 1996 Temporary Assistance for Needy Families (TANF) program to further change policies. We also examine how the effects of these policies change over time, as there can be short-run mechanical effects that are simply due to changes in grant size and eligibility rules, for

example, as well as medium-run behavioral responses as families alter their work effort in response to changes in program rules. In addition, we contribute to the literature by examining the impact of welfare reform on the economic well-being of children as well as adults.

We use longitudinal data from the 1988, 1990, 1993, 1996, and 2001 panels of the Survey of Income and Program Participation (SIPP). We use these panels to provide data from January 1988 through December 2002, allowing us to capture the period prior to the implementation of state waivers, during the implementation of state waivers, and after the 1996 federal welfare reform. Further, these data capture periods of strong and weak economic conditions. We use the Urban Institute's Welfare Rules and related databases to measure our welfare policies.

Overall, we find evidence that more lenient eligibility requirements for welfare receipt and more generous financial incentives to work generally reduce deep poverty, as hypothesized. We also find evidence that eligibility requirements for welfare receipt and financial incentives to work affect poverty. Time limits are hypothesized to have ambiguous effects on poverty and our results suggest that some stricter time limit policies may lead to lower rates of deep poverty and poverty. Our findings are generally consistent with our hypotheses and are also consistent across our population of ever-single mothers and children of ever-single mothers.

The remainder of this paper is organized as follows. Section II reviews the literature and Section III presents the conceptual framework and hypotheses. A discussion of our poverty and deep poverty measures, sample, and data are in Section IV. This is followed by a description of our empirical model in Section V and our results in Section VI. Section VII concludes.

II. LITERATURE REVIEW

There is a considerable amount of research on the impact of state and federal welfare reform on welfare caseloads, employment, earnings, income, poverty status, and other outcomes.[1] The majority of this research has examined welfare reform's impact on welfare caseloads (e.g., Council of Economic Advisers 1999; Danielson and Klerman 2004; Grogger 2004a, 2004b; Moffitt 1999; Moffitt and Stevens 2000; Zedlewski 2001; Zedlewski and Alderson 2001; Zedlewski and Brauner 1999; Ziliak, Gundersen, and Figlio 2000), most of it suggesting that welfare reform played an important role in reducing caseloads. In addition, the literature suggests that welfare reform led to increases in employment, earnings, and income. In

[1] For a thorough review of the literature, see Blank (2002) and Grogger, Karoly, and Klerman (2002).

contrast, the more limited literature on the effect of welfare reform on poverty provides mixed results.

Generally, research examines the overall effect of state welfare waivers and TANF, not the role of specific welfare policies. The few notable papers that do measure the role of specific policies generally do not use a comprehensive and detailed set of policies nor do they examine poverty as an outcome. Grogger (2003) examines the role of time limits on welfare use, employment, earnings, and income; the Council of Economic Advisors (1999) examines the role of waivers for time limits, family caps, exemptions, sanctions, and earnings disregard on welfare caseloads; Danielson and Klerman (2004) examine the role of time limits, financial incentives, and work-related sanctions on welfare use; Fitzgerald and Ribar (2004) use specific welfare policies to examine welfare reform and female headship; and Fang and Keane (2004) look at the effect of many specific welfare policies on welfare receipt and employment.

Some researchers have grouped state policies into variables designed to measure the strictness of state policies (lenient, intermediate, or stringent), and have examined how this strictness affects individuals' outcomes (e.g., Council of Economic Advisors 1999). However, researchers' categorizations of state policies differ. Grogger, Karoly, and Klerman (2002) examine four sets of ratings and find disagreement in 26 of the 51 states. We capture more objective and detailed measures of state policies by measuring policies individually (rather than in groups) and in continuous values, such as dollars, wherever possible.

The literature on the effects of welfare reform on poverty is small and inconclusive. Results from experimental evaluations conducted by MDRC suggest that welfare "programs that included only mandatory employment services usually left families no better off financially than they would have been without the programs" (Bloom and Michalopoulos 2001, p. ES-2). In contrast, two programs that supplemented the earnings of working recipients, Self-Sufficiency Project (SSP) and Minnesota Family Investment Program (MFIP), reduced poverty. However, most members of these two programs were still in poverty at the end of the study (Bloom and Michalopoulos 2001). Although findings from experimental evaluations such as those conducted by MDRC are persuasive because they are based on random assignment research design, they are typically based on waiver initiatives that do not span the diverse set of policy reforms implemented under federal welfare reform and are not nationally representative (Duncan and Chase-Lansdale 2001). For example, experimental studies typically focus on the subpopulation of welfare recipients, thereby excluding non-recipients at risk of welfare receipt.

Results from studies using nationally representative but nonexperimental data are mixed. Some studies find welfare reform reduced poverty, while others find no effect of welfare reform on poverty. Using multiple years of data from the annual cross-sectional March Current Population Survey (CPS), Schoeni and Blank (2000) estimate that state waivers and TANF each reduced the poverty rate among female high school dropouts by roughly two percentage points, after controlling for the economy. Similar to much of the caseload literature, their primary statistical model uses aggregated state-level data and a regression model with indicator variables for whether a state has implemented a major welfare waiver or TANF. These indicator variables provide an overall measure of the effect of welfare reform, but do not measure the effects of marginal changes in specific policies. Using two months of SIPP data, Bavier (2002) assesses welfare reform's relationship with the poverty status of female family heads using a dummy variable to indicate the post-reform period. He concludes that "controlling for other demographic and economic variables, female family heads in the later cohort [post-reform period] were less likely. . .to be poor" (p. 11).

Weber, Edwards, and Duncan's (2003) analysis of the CPS, on the other hand, finds that changes in welfare policies during the 1990s had no significant effect on poverty or deep poverty of single mothers, though they do find some rural/urban differences. Similarly, Gundersen and Ziliak (2004), who also use the CPS, find no effect of welfare waivers or TANF on the poverty rate of female-headed families with children.

With few studies that examine the relationship between welfare reform and poverty, more research is needed to understand the role that welfare reform played in changing the poverty status of low-income women and children. We know little about the *aggregate* effects of welfare reform on poverty and deep poverty, not to mention the effect of *specific* welfare policies on these outcomes. This paper contributes to the literature by examining the effect of a rich and comprehensive set of 19 specific welfare policies on poverty and deep poverty. These specific policies are grounded in a conceptual framework and measured in great detail on a monthly basis.

III. Conceptual Framework and Hypotheses: Determinants of Poverty

We assume a utility maximization framework where households maximize utility subject to both time and income constraints. This framework provides information on the major factors underlying household poverty status: household earned income, household unearned income, and household size and composition. Our model of the determinants of poverty is based on human capital theory (Becker 1975) and Becker's (1991) theory of the demand for children. McKernan

and Ratcliffe (2005) use these theories to identify the underlying reduced-form determinants of poverty. Accordingly, we do not redevelop the framework here, but rather present the variables hypothesized to affect poverty, based on this conceptual framework.[2]

Additional children in the household are hypothesized to increase poverty through their negative effect on wage labor hours (especially young children) and positive effect on household size. Additional working-age adults in the household are hypothesized to decrease poverty through their positive effect on labor supply. Poverty is hypothesized to first decrease with age, as young adults finish investing in human capital and enter the labor market, then increase with age as older adults retire. Increases in human capital are hypothesized to decrease poverty and being a minority or female is hypothesized to increase poverty through their negative effects on wages. Finally, improvements in the state of the economy are hypothesized to decrease poverty through their positive effect on wages and the hours household members can choose to work. These variables provide the reduced-form control variables for our model. However, our focus is on the policy variables, which we turn to next.

Variation in state welfare policies has increased substantially since the early 1990s. Under Aid to Families with Dependent Children (AFDC), the federal government determined most program rules, though states established their own rules in areas such as income eligibility limits, benefit levels, and eligibility requirements for two-parent families. By the mid-1990s, variation in welfare programs' policies and rules began increasing, as many states were granted waivers from the federal government to experiment with policies, such as family caps and time limits. This devolution culminated in the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in August 1996, which replaced the AFDC program with the TANF program. This legislation permitted further variation in state welfare programs.

The conceptual framework narrows the hundreds of program rules that make up each state's welfare policy into a meaningful typology that is conducive to understanding poverty. The policies are narrowed in two key ways. First, we include only welfare and related policies we hypothesize will most directly affect our specific outcome of interest, poverty. Second, we

[2] While the discussion in this conceptual framework focuses on poverty, it follows through similarly for deep poverty.

include only policies that affect poverty in the short run and medium run (one to two years). Using these guidelines, the typology includes 19 specific policy variables.[3]

Government policies hypothesized to affect poverty are grouped into three general categories: welfare eligibility requirements, financial incentives to work, and time limits. For each of these general categories, a set of specific policy variables is identified that jointly describe a state's policy. These three categories and their associated specific policies comprise the poverty typology and are presented in Table 1, along with the variable's hypothesized effect on poverty and the variable's measurement type (dollars, 0/1 indicator, scale, or months). Below we briefly describe each specific policy and its hypothesized effect. Details on how the policies are measured are presented in the appendix.

Eligibility Requirements

In general, more lenient welfare eligibility requirements for welfare receipt are hypothesized to decrease poverty as families eligible for welfare can use cash welfare payments to supplement earnings. Three state policies are identified to describe states' eligibility requirements: the family cap, vehicle asset exemption for applicants, and earned income disregard for eligibility purposes.

(1) Family Cap. Family caps are policies that deny eligibility to children conceived while the family is receiving TANF benefits. Under AFDC, when a welfare family had a child, the benefit increased to meet the needs of the new child. Under TANF, family cap policies have the effect of preventing or limiting an increase in the family's benefit for that child. We hypothesize that states with a family cap will have higher poverty rates because mechanically, unearned income per family member will be lower. Behaviorally, this effect might become smaller over time if earned income is used to replace unearned income and if households decide not to have an additional child.

(2) Vehicle Asset Exemption for Applicants. States exempt differing amounts of either the fair market value or equity value of a vehicle in determining the amount of a family's assets for eligibility purposes, on the theory that a vehicle can be used to seek and retain employment. The larger the vehicle asset exemption from the total unrestricted asset limit offered by states, the lower we hypothesize poverty will be, as (i) mechanically, more families will be approved for

[3] This typology, along with typologies for five other outcomes, was developed in combination with the U.S. Department of Health and Human Services and a technical workgroup, which included key researchers in the welfare reform area. See Fender, McKernan, and Bernstein (2002) for a detailed description of these typologies.

welfare and thus have higher unearned income and (ii) behaviorally, higher vehicle values will better enable recipients to seek and retain employment and thus have higher earned income.

(3) Earned Income Disregard for Income Eligibility Purposes. States vary in the amount of earned income they disregard when judging an applicant's income for eligibility. The earned income disregard is used to determine the applicant's net income for income eligibility tests. (Net income is equal to gross income minus any earned income disregards.) Some states have no explicit net income test for income eligibility; our analysis includes a dummy variable that identifies these states. In these states, the benefit calculation becomes an implicit eligibility test on an applicant's net income. We hypothesize the higher the earned income disregard, the lower the poverty rate because (i) mechanically, unearned income may increase as more families with earnings are approved for cash assistance and (ii) behaviorally, earned income may increase as current and potential welfare recipients learn that they can combine higher incomes with benefits (i.e., we expect the substitution effect to dominate the income effect for low-income populations).

Financial Incentives to Work

State policies that increase total family income are hypothesized to decrease poverty. State policies may affect both unearned income (e.g., cash welfare benefits) and earned income (e.g., minimum wage and earned income tax credit [EITC]). We identify 10 state policies that together describe a state's policy affecting income (and thus poverty), largely through financial incentives to work.

(1) Maximum Monthly Benefit. In 2000, only six states had welfare benefits high enough (greater than $578) to lift a family of three with no earned income out of deep poverty; no states had welfare benefits high enough (greater than $1,156) to lift a family of three with no earned income out of poverty. Changes in welfare benefits alone are unlikely to have mechanical effects on poverty because welfare benefits alone are not enough to lift a family out of poverty. When combined with earnings, however, welfare benefits can affect poverty. We hypothesize that the higher the maximum monthly benefit level, the higher unearned income and thus the lower the poverty rate, holding all else equal. However, higher maximum monthly benefits could increase poverty if higher benefits reduce labor supply and thus earned income.

(2) Earned Income Disregard During Month 12. Under AFDC, federal policy set the earned income disregard (the percent of earnings not included in calculating income for benefit computation purposes) at the first $30 per month plus a maximum of 33 percent of the remainder, for the first four months of employment. Following that, no earnings were

disregarded (i.e., all earnings were counted for computing continuing eligibility). On the theory that this created low and, eventually, no incentives to work, many states increased the earnings disregard under pre-1996 waiver authority as well as under TANF. We hypothesize that the higher the earned income disregard, the higher earned income (i.e., we expect the substitution effect to dominate the income effect for low-income populations) and unearned income and thus the lower the poverty rate. In many states, the earned income disregard changes depending on how long a recipient has been working. We focus on states' disregard policies in month 12 because it permits time for the recipient to learn that sustained employment does not result in loss of welfare eligibility.

(3) Applicable Minimum Wage for Federally (FLSA) Covered Categories. The applicable minimum wage for federally covered categories is the higher of the state or federal minimum wage. In 1999, the Fair Labor Standards Act (FLSA) covered 72 percent of all wage and salary workers (U.S. Department of Labor 2001). A higher minimum wage is expected to lower the poverty rate through its effect on labor supply and earned income. However, a potentially opposite effect comes from the demand side; as the minimum wage increases, it could induce employers to hire fewer (and lay off more) low-skilled workers, thus raising the poverty rate.

(4) State Minimum Wage for Non-Federally (FLSA) Covered Categories. The state minimum wage is often used to cover workers who are not covered by the FLSA, 28 percent of workers in 1999. The FLSA does not cover most workers in small businesses or in businesses where no interstate commerce is involved; workers in seasonal or recreational jobs; workers delivering newspapers or engaged in fishing operations; many workers in private households; and executive, administrative, and professional employees. Similar to the applicable minimum wage, a higher state minimum wage can lead to an increase or decrease in the poverty rate.

(5) Most Severe Sanction Amount for Noncompliance. State sanction policies for failure to cooperate with a work requirement are hypothesized to have an ambiguous effect on poverty. On the one hand, more severe sanctions will reduce unearned income and thus lead to increased poverty. On the other hand, more severe sanctions may make the recipient more likely to come into compliance to restore welfare benefits, and the consequent combination of welfare benefits and earnings may lower the poverty rate.

(6) Most Severe Sanction Duration. In addition to the variation in amount of sanctions, states have varying policies on how long sanctions can last—whether it is a permanent or temporary benefit reduction, and variations in between. Similar to the preceding policy on sanction amount, we hypothesize an ambiguous effect of sanction duration on poverty.

(7) Treatment of Child Support Income. Until fall 1996, states were required to pass through only the first $50 of monthly child support collections to the custodial family and to retain any remainder to repay the state treasury and the federal government their commensurate shares of past welfare expenditures. The $50 pass-through was tacked onto the monthly welfare check amount. PRWORA eliminated the pass-through requirement and, over the ensuing years, a number of states reduced the child support pass-through amount, while other states increased the pass-through amount. We hypothesize that the higher the portion of child support collections passed through to the custodial families (88-90 percent of which are headed by mothers) and disregarded as unearned income, the higher total family income and the lower the poverty rate.

(8) Federal EITC. The federal EITC is a refundable income tax credit, which not only reduces a person's tax liability but also allows refunds in excess of the income tax liability. Thus, a refundable credit can create an incentive to work even for very low income families that have little or no tax liability. The official poverty rate is a before-tax poverty rate and does not count income from the EITC, so the effect of the EITC on the official (before-tax) poverty rate operates in large part through its effects on labor supply and earnings. The EITC has two offsetting effects on earnings—a substitution effect and an income effect. If the substitution effect dominates, then labor supply increases and poverty decreases. If the income effect dominates, labor supply decreases and poverty increases. Further, an equilibrium model of wages predicts that the EITC should lower before-tax wages and thus increase poverty. Finally, increases in earnings and the EITC benefit income could lead to reductions in transfer income (e.g., public welfare benefits and private transfers from friends and relatives) and thus increased poverty rates. Overall, we hypothesize an ambiguous effect of the federal EITC on official poverty.

(9) State EITC and *(10) State EITC Refundable.* Some states supplement the federal EITC with a state EITC. Some of these state EITC benefits are refundable, while others are not. We hypothesize that these two state EITC policies also have an ambiguous effect on poverty.

Time Limits

Time limits on welfare receipt are hypothesized to have ambiguous effects on poverty. Standard economic theory predicts that the elimination of welfare cash benefits unambiguously increases labor supply, but has ambiguous effects on total income. Unearned income will likely fall due to the loss of welfare benefits, but some individuals might increase their labor supply enough to increase earned income by more than the amount of benefits lost (Moffitt and Pavetti 2000). Another factor that further clouds the effect of time limits on poverty is the extent to which women leaving welfare are able to replace unearned income lost from welfare benefits

with unearned income from other sources, such as private transfers from friends and relatives. Six policies are identified to capture the multiple dimensions of states' time limit policies.

(1) Duration of Lifetime Limit and *(2) No Time Limit.* PRWORA established a federal lifetime limit of 60 months that a family could receive cash TANF benefits, but it also gave states the option to establish lower maximums. States were also given the option to continue benefits for some or all recipients beyond the 60-month limit using nonfederal funds; therefore, some states do not have any time limit. As described above, we hypothesize an ambiguous effect of the duration of lifetime limits on poverty.

(3) Intermittent Time Limit. An intermittent time limit is one in which there is a limit on how long an individual can *continuously* receive benefits (i.e., they must exit the program for a specified period of time before they can return). We hypothesize that the effect of intermittent time limits on poverty is ambiguous. On the one hand, individuals in states with intermittent time limits will have higher job entry rates and thus potentially higher earned income that reduces poverty rates. For example, a client facing a 24-month intermittent time limit followed by 36 months of ineligibility may be more likely to seek out employment, given the prospect of losing cash benefits and/or supportive services, than a client facing no intermittent time limit. On the other hand, states with intermittent time limits may have higher poverty rates due to the loss of unearned income from lost cash benefits.

(4) Time Limit Exemption for Illness and *(5) Time Limit Exemption for Child.* The broader the categories for and the larger the proportion of recipients exempted from any type of time limit, due to any one of a variety of hardships, the higher we hypothesize unearned income, but the lower we hypothesize earned income, resulting in an ambiguous effect on the poverty rate. We include two time limit exemption categories: (1) caring for a child under a certain age, measured in months[4] and (2) ill or incapacitated head or caring for another ill/incapacitated person in the household, measured as a 0/1 indicator variable.

(6) Time Limit Extension if Cooperating. Similarly, we hypothesize that individuals in states that extend benefits beyond time limits will have lower job entry rates, resulting in lower earned income but higher unearned income from cash benefits. We capture state extension policies using a 0/1 indicator variable that measures whether a state extends benefits to recipients

[4] For example, if a state has a time limit exemption for families with children under six months of age, then this variable equals six for that state.

for months in which the unit head has fully cooperated with program requirements and still cannot find employment.

IV. MEASURES, SAMPLE, AND DATA

We estimate the impact of state monthly policy measures from the Urban Institute's Welfare Rules and related databases on the poverty and deep poverty of a sample of ever-single mothers and children of ever-single mothers from the Survey of Income and Program Participation (SIPP). The measures, sample, and data are described below.

Measuring Poverty

Most authors analyzing U.S. poverty use the official U.S. government's poverty measure for determining whether a family is in poverty. The poverty measure, however, has received considerable criticism over the years. A National Research Council (NRC) report argues that changes in the labor force (such as an increase in working mothers who must pay for child care), the substantial expansion of the EITC, and changes in the role of in-kind transfers over the last 30 years require a new poverty calculation (Citro and Michael 1995). They propose numerous factors to incorporate in an experimental poverty measure, some that are relatively easy to measure in the data and others that are not.

In this study, we use the official poverty measure for two reasons. First, the aim of this study is to understand the official U.S. poverty rate and the extent to which changes in policy have affected women's and children's official poverty state. It is trends in the official poverty rate that have generated discussion and speculation about the effect of welfare reform on poverty and deep poverty. The official poverty rate is the primary measure used to examine economic well-being in the United States and is linked to participation in means-tested welfare programs.

A second reason for using the official poverty measure is that not all of the factors necessary for calculating the experimental poverty measure are available in any one data set. The SIPP, the NRC recommended data, for example, provides either inadequate or no information on the EITC, federal and state income taxes, and out-of-pocket medical expenses.[5] An alternative poverty measure that considers only some factors suggested by the NRC is less desirable than the official

[5] The SIPP provides inadequate information on the EITC. For example, the 1996 SIPP panel measures whether the EITC was claimed in 1997, 1998, and 1999. Much of these data are missing or unreported. In their low-income population, Mikelson and Lerman (2004) find that approximately 65 percent of respondents either refused, didn't know, or did not answer the question asking about whether the EITC was claimed. The remaining approximately 35 percent of respondents answered "yes" or "no." Of those respondents who answered yes, approximately 51 percent reported the actual amount of EITC claimed, while the remaining 49 percent either refused or said "don't know."

poverty measure. If, for example, an alternative poverty measure incorporates only the EITC and does not incorporate factors that reduce disposable income such as child care and other work-related expenses recommended by the NRC, then the alternative measure could overstate the EITC's effect on poverty. These work-related expenses are potentially important. Overall, the experimental poverty rates tend to be higher than official poverty rates (Iceland et al. 2001), particularly among full-time working families with children, whose expenses (such as child care costs) tend to outweigh noncash benefits (Iceland 2000; Iceland and Kim 2001). Thus, an alternate poverty measure should consider all, not only some, factors suggested by the NRC. Examining the effect of specific policies on an experimental poverty measure that captures all factors suggested by the NRC is of interest, but is a large undertaking best addressed in future research.

Sample

We improve upon the current literature by using a largely constant study population of ever-single (unmarried) mothers for our analysis. Much of the literature examines individuals who are single mothers in a particular year, so the sample can change over time if welfare reform affects marriage and/or fertility from year to year, potentially leading to biased results. To avoid this potential bias, several researchers have defined the study population to include all women (Moffitt 1999; Schoeni and Blank 2000). However, too broad a population can wash out real effects. Grogger (2000) argues that examining the effect of welfare reform on the full population of women could "lead one to conclude that welfare reform has little or no effect [on outcomes such as poverty], even if its effect on eligible women was substantial" (p.11).

We use detailed information on individuals' marriage and fertility histories available in the SIPP (information not available in the CPS used by most researchers) to construct a sample of ever-single mothers (and children under age 18 of ever-single mothers). This population is more similar across the pre- and post-welfare reform periods (than the population of single mothers at a point in time), so it is less likely to lead to bias and is limited to persons vulnerable to welfare receipt and poverty.

Data

We use individual-level, longitudinal data from the SIPP and state-level, longitudinal data from the Urban Institute's Welfare Rules and TRIM3 databases.

SIPP: Each SIPP panel contains a nationally representative (noninstitutional) sample of households whose members are interviewed at four-month intervals (referred to as waves) over approximately a two- to four-year period. Each panel has 12,500 to 37,000 households. We use

the 1988, 1990, 1993, 1996, and 2001 SIPP panels to provide data from January 1988 through December 2002[6]—prior to the implementation of state waivers, during the implementation of state waivers, and after the 1996 federal welfare reform. These data capture poverty during weak economies, including the July 1990 to March 1991 and March 2001 to November 2001 recessions (NBER 2005) when the poverty rate was increasing, and during the economic boom of the late 1990s when the poverty rate was decreasing.

A strength of the SIPP lies in its monthly data on income and household composition, allowing poverty to be calculated on a monthly basis. While we identify the poverty status of each individual in our sample (ever-single mothers and children of ever-single mothers), the unit for defining poverty status is the SIPP household. A SIPP household consists of all persons who occupy a housing unit (including all unrelated persons). The SIPP also includes all individual-level and household-level characteristics identified in our conceptual framework: age, race and ethnicity, educational attainment, number of children and adults in the household, and metropolitan status.

For our analysis, we aggregate the individual-level SIPP data to the state level.[7] This aggregation gives us monthly state-level poverty and deep poverty rates and average individual- and family-level characteristics (e.g., average educational attainment and average number of children per household) for each state in each month. On average (weighted), the deep poverty and poverty rates for our sample of ever-single mothers are 8.8 percent and 20.8 percent, respectively (Appendix Table 1). And the deep poverty and poverty rates for children of ever-single mothers are 13.0 percent and 29.9 percent, respectively. Summary statistics for all of the non-policy variables included our analysis are also provided in Appendix Table 1.

Economic Variables: To control for changes in the economy, our SIPP data are supplemented with (1) monthly state unemployment rates, (2) annual state per capita income, (3) monthly state employment-population ratio,[8] and (4) quarterly gross domestic product (GDP) from the U.S. Department of Commerce (2005).

Policy Variables: Information on when states implemented a major AFDC waiver and when states implemented their TANF plan comes from tables available on the Department of Health and Human Services (DHHS) web site (Crouse 1999). Measures of states' specific

[6] The 1988 SIPP panel starts in October 1987 and the 2001 SIPP panel provides data through 2003, but we only use data from 1988 through 2002 because these years match our welfare policy data.
[7] We also estimated models at the individual level and found similar results.
[8] For the employment-population ratio we use monthly employment data but annual population data.

welfare policies from 1986 through 2000 come from the Urban Institute's Welfare Rules Database (WRD), TRIM3 Database, and related databases, together with the *First Annual TANF Report to Congress* (U.S. DHHS 1998).[9] The WRD was built using AFDC State Plans and Waiver Terms and Conditions prior to 1997 and caseworker manuals and state regulations from 1997 to the present; state staff verified much of these data. We capture detailed measures of the 19 policies identified in the conceptual framework's poverty typology. We often assume a prototypical family of one adult and two children to create continuous measures of states' policies (e.g., dollars). Each policy variable's measurement type (2000 dollars, 0/1 indicator, scale, months) is identified in Table 2 and assumptions made in coding the variables are provided in the data documentation appendix.

Summary statistics for the state policy variables are presented in Table 2 and show considerable variation across states and over time. For example, state vehicle exemption policies—measured as fair market value in year 2000 dollars—vary from $4,200 in Indiana in 1999 to approximately $16,000 in Ohio in 1997, with a mean of $7,137 and a standard deviation of $3,363.

Graphs of state policies over time provide additional evidence of variation across states and over time (Figure 1, where each line represents a state), as needed to identify the effects of specific welfare policies on poverty. We focus on the first three welfare policies in the poverty typology as examples.[10] For example, one state, New Jersey, first introduced a family cap in 1992. This increased to 7 states in 1995, 16 states in 1996, and 19 states by the end of 2000. The vehicle exemption policy was constant across states under AFDC at $6,700 (measured in fair market value year 2000 dollars; it was $1,500 in equity value nominal dollars) but varied significantly with welfare reform. Within a year (2000 for example), the vehicle exemption varied across states from $4,600 in Rhode Island to over $15,000 in Ohio. Within states, the vehicle exemption varied over time from $4,836 in Florida in December 1997 to $12,086 in January 1998, for example. The earned income disregard for income eligibility shows similar variation across states and over time.

[9] The official Welfare Rules Database (WRD) measures data from 1996 forward. We use the more general term "Urban Institute databases" or "related databases" when measuring policies from the nonofficial WRD, which captures policy data prior to 1996.

[10] Graphs of the remaining state policies are provided in the appendix of figures.

V. EMPIRICAL MODEL

The empirical model measures the relationship between welfare policies and two outcomes—the deep poverty rate and the poverty rate. This is done for two populations—ever-single mothers and children of ever-single mothers. Identifying the effect of welfare reform on poverty (and deep poverty) requires disentangling the effect of state and federal welfare policies from other factors that affect these outcomes, such as other social policies (e.g., minimum wage), economic conditions (e.g., unemployment rate), and unobservable state characteristics (e.g., public sentiment toward welfare recipients). If, for example, public sentiment toward welfare recipients affects both a state's welfare policy and the likelihood individuals in that state apply for and receive welfare benefits, and in turn their likelihood of being poor, then omitting public sentiment from a model of welfare policy on poverty would produce biased estimates. Our model captures unobservable state and time differences with state and time fixed effects.

Our model, which follows the nonexperimental welfare reform literature, uses the variation across states and in the timing of different state policies to identify the effect of welfare reform on poverty. Also, having data back to the late 1980s gives us multiple years of monthly data prior to the implementation of welfare reforms in the early to mid-1990s, which aids in the model's identification by allowing us to control for trends in poverty and the economy over time.

As mentioned above, we aggregate the individual-level SIPP data to the state level, giving us monthly state-level poverty and deep poverty rates (our dependent variables) and average individual- and family-level characteristics for each state in each month. Our discussion of the model focuses on ever-single mothers' deep poverty rate, but the model follows similarly for children of ever-single mothers as the sample population and the poverty rate as the outcome. The dependent variable Y_{st} represents the deep poverty rate of ever-single mothers in state s in time t (i.e., month) and is expressed as:

$$Y_{st}^{*} = \delta' W_{st} + \beta_1' X_{st} + \beta_2' S_{st} + \mu_s + \eta_t + \nu_{st}$$

where the independent variables (W, X, and S) are drawn from the conceptual framework. W_{st} represents a variable indicating whether welfare reform has been implemented in state s at time t in some specifications, and the set of state-level specific welfare policies in state s at time t in other specifications; X_{st} represents the average of individual- and family-level characteristics of mothers in state s at time t (such as age, educational attainment, race, and number of children and adults in household); and S_{st} represents state-level non-policy variables at time t (such as unemployment rate). Finally, μ_s is the state fixed-effect, η_t is the time fixed effect, and ν_{st} is the error term, which is assumed to be uncorrelated with the explanatory variables. We estimate a

weighted least squared regression model weighting for heteroscedasticity, with weights based on the SIPP individual weights for each state/month.[11] To account for potential serial correlation in the error term, we cluster our standard errors by state as recommended by Bertrand, Duflo, and Mullainathan (2004).

This model does not control for potential unobservables that vary within a state over time. If the Cov(W_{st}, ν_{st})≠0, then δ will be biased. Some of the literature has addressed this issue (of unobservables that vary within a state over time) by including linear state-specific time trends. These linear trends control for unobservables within states that trend smoothly over time. With 19 policy variables, there is concern about identification in a model that allows state-specific trends, so it is not our preferred specification. However, we have carried out specification tests that include state-specific trends, and our broad conclusions remain.

We estimate both the overall effect of welfare reform (on deep poverty and poverty), as well as the effect of specific policies. This broader first model, while not our primary model, allows us to compare our finding with SIPP data to findings from the literature based primarily on CPS data. For this first model, we estimate models common in the literature where welfare reform is measured with two indicator variables: the first identifies whether states had a major welfare reform waiver in place at time *t* and the second identifies whether states had implemented TANF by time *t*.[12] States implemented welfare reform via waivers throughout the early to mid-1990s, while states implemented TANF over a much shorter 16-month period between September 1996 and January 1998. Bitler, Gelbach, and Hoynes (2003) show that this timing of TANF's implementation, along with the above methodology, produces a coefficient on the TANF variable that captures the effect of TANF over this 16-month period; it does not capture the average effect of TANF over the post-TANF period. We interpret our finding from this model with this in mind. In our model that examines the effect of specific policies on deep poverty and poverty, we have variation in the specific welfare policies beyond 1997, so our interpretation of the results is not as restricted.

We estimate a series of models with different lag structures on the specific policy variables. After a policy is implemented, there may be immediate changes to individuals'

[11] The correlation between (1) the sum of individuals' SIPP weight (in each state in each month) and (2) the sum of the number of individuals (in each state in each month) is high at 0.94 for the sample of both mothers and children. We use the SIPP individual weights because they produce coefficient estimates based on a nationally representative sample.

[12] For states that implemented a welfare waiver prior to TANF, the welfare waiver indicator variable is turned off (changed from a 1 to a 0) when the state implements TANF.

outcomes because of "mechanical" changes brought about by the policy change, as well as medium-run changes that result from behavioral responses to the policy change. For example, an increase in the earned income disregard could move an employed welfare recipient from living in deep poverty to not living in deep poverty without any change in behavior as a result of a welfare benefit increase induced by the policy change. Over time, individuals may increase their employment and earnings in response to this policy, thereby further reducing deep poverty. To examine both the short-run mechanical and medium-run behavioral effects, we estimate models with policies measured at time *t*, *t*-12, and *t*-24.

An important issue raised in the welfare reform literature is the difference in timing of when a state sets a policy and when the local level implements that policy. Identifying implementation of these policies is difficult, particularly obtaining this data retrospectively for over a decade. This is a weakness in this literature. However, by including lags for up to two years, our models are generally capturing policies that have been implemented.

VI. RESULTS

Overall Effect of Welfare Reform on Deep Poverty and Poverty

We begin by estimating the overall effect of welfare reform waivers and TANF on the deep poverty rate and the poverty rate. In addition to the welfare waiver and TANF indicator variables, these models include measures for policies not tied to welfare reform—maximum monthly welfare benefit, minimum wage, and EITC variables—as done in the literature. Overall, we find no statistically significant effects of welfare reform on deep poverty or poverty (Table 3).

We find a negative relationship between welfare waivers and the deep poverty rate, although the coefficients are not statistically significant for either ever-single mothers (mothers) or children of ever-single mothers (children). We also find a negative relationship between TANF and the deep poverty rate, but again, the coefficients are not statistically significant. These results are consistent with Weber, Edwards, and Duncan (2003), who find that changes in welfare policies during the 1990s had no significant effect on deep poverty.

Our analysis of poverty also suggests that overall neither waivers nor TANF affected the poverty rate of mothers or children. These results are consistent with analyses of poverty by Gundersen and Ziliak (2004) and Weber, Edwards, and Duncan (2003), who find no effect of welfare reform on poverty. They differ, however, from results by Schoeni and Blank (2000), who

find that state waivers and TANF reduced the poverty rate among female high school dropouts by roughly two percentage points.

Evaluation of Lag Structure on Specific Policy Variables

As discussed in the empirical model section, policy changes can have an immediate mechanical effect on individuals' outcomes, as well as a longer run behavioral impact. For this reason, we estimate a series of models with different lag structures. We present the results of four separate models where the policy variables are measured in (1) month *t*, (2) month *t*-12, (3) month *t*-24, and (4) month *t* and *t*-24. We generally find a consistent pattern of results over time.

With 19 specific policies often having related components, we would not necessarily expect individual policies to be significant, so we also carry out tests of joint significance. However, a consistent pattern of individual policy effects emerges, as well.

Focusing on the deep poverty of ever-single mothers, we find that the "eligibility requirement" and "financial incentives to work" variables are jointly significant at the 1 or 5 percent level in all models, while the "time limit" variables are jointly significant at the 5 percent level in only the month *t*-24 model (Table 4).[13] We also find that subgroups of variables within the financial incentives to work category are statistically significant. In the month *t*, *t*-12, and *t*-24 models, for example, the minimum wage, sanction, and EITC variables are jointly significant. In addition to the levels of statistical significance, many of our coefficients have the hypothesized sign. This is an improvement over many of the earlier studies. In discussing research that has examined specific policies, Blank (2002) says that "much of the econometric literature focusing on individual policy components find insignificant or even perverse coefficients" (pp. 1125-26). We hypothesize that the conceptually grounded and comprehensive set of policy variables, along with the detail with which we quantify these policies, is what sets our study apart from earlier analyses.

We find some evidence of both short-run mechanical effects of welfare policies and medium-run behavioral effects of policies. A comparison of models in month *t* and *t*-24 shows that the magnitude of the effects grow stronger over time for the state minimum wage, most severe sanction duration, and intermittent time limit. These changes over time, however, are modest relative to the standard errors. We also find that the impact of some variables diminishes

[13] Statistically significant groups of variables at the 1 and 5 percent levels are indicated with + signs in Tables 4 and 5.

with time, including the family cap. The declining pattern for the family cap may result from individuals adjusting their behavior by reducing childbearing and/or increasing employment to offset lost benefits. Finally, the model that includes the policy variables measured in both month *t* and *t*-24 shows that many of the policy variables that are significant in the separate models are also significant in this more fully specified model.

Our evaluation of the policy effects over time shows that while there are some differences, the results are, in general, similar. We find similar patterns for the other three outcomes: children of ever-single mothers' deep poverty rate, ever-single mothers' poverty rate, and children of ever-single mothers' poverty rate. For this reason, we present one main model for each outcome/subpopulation. We focus on the models with policy variables lagged 24 months, as these models provide the longest window over which to observe behavioral responses.

Effect of Specific Policies on Deep Poverty and Poverty: Primary Specification

Deep Poverty of Ever-Single Mothers and Children of Ever-Single Mothers

Focusing first on variables that capture state eligibility requirements, we find that states' family cap and vehicle exemption policies significantly affect deep poverty. As hypothesized, the family cap increases deep poverty (Table 5).[14] We find that the family cap increases the deep poverty rate of (ever-single) mothers by 1.1 percentage points (from 8.8 percent to 9.9 percent, or by 12.5 percent) and increases the deep poverty rate of children (of ever-single mothers) by 1.7 percentage points (from 13.0 percent to 14.7 percent, or by 13.1 percent). An increase in the vehicle exemption value reduces deep poverty, as hypothesized, but the effect is statistically significant for children only. A $1,000 increase in the vehicle amount exempt is found to reduce the deep poverty rate of children by a relatively modest 0.2 percentage points, from 13.0 percent to 12.8 percent (a 1.5 percent decline). Higher earned income disregards for income eligibility are associated with lower deep poverty rates, as hypothesized, although the coefficients are not statistically significant. Finally, we find that mothers in states with no explicit net income test for eligibility have higher deep poverty rates. These states may have a more flexible income policy for eligibility, so we expected a negative relationship between this variable and deep poverty.

Besides their joint significance, several of the financial incentives to work variables are also individually statistically significant. We find that higher monthly welfare benefits and a higher state minimum wage both reduce deep poverty, as hypothesized. A $100 increase in states' monthly maximum benefit is found to reduce the deep poverty rate of children by 2.0

[14] The full set of coefficients is presented in Appendix Table 2.

percentage points. A $1 increase in the state minimum wage is found to reduce mothers' deep poverty rate by 0.7 percentage points and reduce children's deep poverty rate by 0.9 percentage points, although the effect for children is marginally statistically significant at the 10 percent level. This result is consistent with Gundersen and Ziliak (2004), who find that a higher state minimum wage reduces poverty.

We also find that as the duration of the most severe sanction increases, mothers' deep poverty increases, although the effect is marginally statistically significant at the 10 percent level. This variable is measured as a categorical variable (0-5) and the magnitude of the coefficient suggests that going from a sanction policy where the length of the sanction is one month or until compliance (value of 1) to a policy where the sanction length is permanent (value of 5) increases mothers' deep poverty rate by 1.4 percentage points, or by 15.9 percent (from 8.8 percent to 10.2 percent). While the effect for children is positive, it is not statistically significant at conventional levels. We find that the greater the amount of child support income passed through to mothers, the lower the deep poverty rate of mothers. The coefficient for children is not statistically significant.

Finally, we find that none of three EITC variables are individually statistically significant, although the three variables are jointly statistically significant. The coefficients on these variables tend to suggest that the EITC may increase our measure of deep poverty, which as described above is a before-tax measure. This finding is consistent with Gundersen and Ziliak (2004) who find that state EITC programs lead to slightly higher rates of before-tax poverty. This is not to say that the EITC does not improve individuals' economic well-being, since these before-tax poverty measures do not capture the after-tax benefits of the EITC. Grogger (2003) finds no effect of the EITC on before-tax income, although he finds that the EITC significantly increases employment and earnings, which is consistent with much of the literature. Results in this literature suggest that while the EITC increases employment and earnings, reductions in before-tax non-earnings income (e.g., transfer income) lead to the same level or lower levels of before-tax income. Importantly, Gundersen and Ziliak (2004) analysis suggests that the EITC reduces after-tax poverty.

For time limits, our results suggest that some stricter time limit policies may lead to lower deep poverty rates among mothers and children. Specifically, we find that having an intermittent time limit and having no time limit exemption for an ill family member lead to lower rates of deep poverty for both mothers and children. In the conceptual framework, we hypothesize that time limits can increase or decrease deep poverty. Stricter time limits can lower deep poverty rates if they encourage individuals to enter the labor force and thereby increase their earnings.

Our finding is consistent with Grogger (2003), who finds that time limits increase employment. However, Grogger finds no effect of time limits on income. One important difference between the two studies is that Grogger examines the overall effect of implementing a time limit (i.e., a 0/1 dummy variable), while our analysis examines six specific time limit components.

Poverty of Ever-Single Mothers and Children of Ever-Single Mothers

The eligibility requirement variables are jointly statistically significant, as they are in the deep poverty analysis (Table 5). Like the deep poverty results, we find that the family cap increases the deep poverty rate of both mothers and children. The family cap increases mothers' poverty rate by 1.2 percentage points (from 20.8 percent to 22.0 percent, or by 5.8 percent) and increases children's poverty by 2.2 percentage points (from 29.9 percent to 32.1 percent, or by 7.4 percent). We do not find a significant effect of vehicle exemption values on poverty, as we did in our deep poverty analysis. Counter to our expectation, we find a positive, although statistically insignificant, effect of the earned income disregard on poverty.

Turning to our financial incentives to work variables, we find that higher monthly welfare benefits lead to higher poverty rates. While this finding is not in the hypothesized direction, it is possible that higher maximum monthly benefits could increase poverty if higher benefits reduce labor supply and thus earned income. Gundersen and Ziliak (2004) also find that higher welfare benefits increase poverty. Consistent with our analysis of deep poverty, we find that the state minimum wage reduces poverty. A $1 increase in the minimum wage is found to reduce mothers' poverty rate by 0.9 percentage points and children's poverty rate by 1.1 percentage points. We also find that the duration of the most severe sanction affects mothers' poverty—as the sanction duration increases so does mothers' poverty rate. We find that going from a sanction policy where the length of the sanction is one month or until compliance to a policy where the sanction length is permanent increases mothers' poverty rate by 2.4 percentage points, or by 11.5 percent (from 20.8 percent to 23.2 percent).

Also in the financial incentives to work category, we find states' EITC policies affect poverty rates. The three EITC variables are jointly statistically significant, as is the value of states' EITC. We find that a $100 increase in states' maximum EITC value leads to poverty rate increases of 0.3 percentage points and 0.6 percentage points for mothers and children, respectively. As described above, this finding is consistent with Gundersen and Ziliak (2004), who find that living in a state with a supplemental EITC leads to a greater likelihood of before-tax poverty, although this same research suggests that the EITC reduces after-tax poverty rates. Taken together, this research suggests that an examination of the effect of the EITC on an

experimental poverty measure that captures all factors suggested by the National Research Council would be particularly informative in understanding how these policies affect the well-being of women and children.

Finally, consistent with our finding for deep poverty, we find that having an intermittent time limit and having no time limit exemption for an ill family member may lead to lower poverty rates for mothers and children. Ours is the first known paper to measure the effects of these specific time limit policies. Earlier work by Grogger (2003) found no evidence that a broader measure of time limit policies affected income. Because of the potentially important policy implications of these findings, future research should further investigate the effects of specific time limit policies on poverty.

Overall, these findings suggest that specific policies linked to welfare reform (e.g., family cap, sanction duration, and time limits) have affected the deep poverty and poverty status of mothers and children. These results differ from our analysis of the overall effect of waivers and TANF, which suggests that welfare reform did not affect deep poverty or poverty. Because the welfare reform policies implemented by states can have offsetting effects (some policies are hypothesized to increase poverty and others are hypothesized to decrease poverty), an evaluation of the overall effect of states' policy changes does not provide a complete picture. Our examination of the effect of specific policies takes a significant step toward providing information on how states' welfare policy choices affect individuals' economic well-being.

VII. CONCLUSION

This paper uses monthly SIPP data from 1988 through 2002 and monthly state-level policy data to measure the effect of specific welfare policies on the deep poverty and poverty rates of ever-single mothers and children of ever-single mothers. The 19 specific welfare policies included in the model are based on a conceptual framework that lays out a typology of welfare policies hypothesized to affect poverty. We find some evidence of both short-run "mechanical" effects of welfare policies and medium-run behavioral effects of policies. We find evidence that policies capturing state eligibility requirements, financial incentives to work, and time limits affect the deep poverty and poverty rates of ever-single mothers and children of ever-single mothers.

Our findings are generally consistent with our hypotheses, as well as across our population of ever-single mothers and children of ever-single mothers. In addition, the findings are robust across numerous specifications, including specifications that use policy variable lags

of different lengths, wavely data rather than monthly data, functional forms with logged variables, slightly different combinations of state policy variables, and exclude individuals that move states during the analysis.

We find that more lenient eligibility requirements for welfare receipt and more generous financial incentives to work generally reduce deep poverty, as hypothesized. The family cap, for example, is found to increase the deep poverty rate of both mothers and children. We also find that an increase in the vehicle amount exempt in determining a family's assets for eligibility purposes reduces deep poverty of children. On financial incentives to work, our results suggest that states' welfare benefit levels, sanction policies, treatment of child-support income, and minimum wage levels can be used to reduce deep poverty.

We find that the effect of eligibility requirements and financial incentives to work on poverty are somewhat mixed. While we find that the family cap increases the poverty rate of mothers and children, as hypothesized, other eligibility requirement variables—vehicle exemption and earned income disregard—do not always have the hypothesized sign (although the coefficients are not statistically significant). On financial incentives to work, our results suggest that more generous financial incentive to work policies lead to lower poverty rates in some cases and higher poverty rates in others. Specifically, we find that more generous state minimum wage and more lenient sanction duration policies reduce poverty, while higher benefit levels increase poverty. Higher benefit levels can lead to increased poverty if it leads individuals to reduce their labor supply.

Finally, our results suggest that some stricter time limit policies may decrease deep poverty and poverty rates. Specifically, two time limit policies—having an intermittent time limit and having no time limit exemption for an ill family member—are consistently found to affect deep poverty and poverty of mothers and children. As discussed in our conceptual model, strict time limits can decrease poverty if they encourage individuals to enter the labor force. Overall, our findings suggest that there are many levers that can be used to reduce deep poverty and poverty rates in the United States.

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Table 1
Poverty Rate Typology

Policy Variable	Hypothesized Effect on Poverty	Measurement Type
Eligibility Requirements		
1) Family cap	(+)	0/1
2) Vehicle asset exemption for applicants	(-)	$
3) Earned income disregard for income eligibility purposes	(-)	$
Financial Incentives to Work		
Benefits		
1) Maximum monthly benefit for family of 3	(-)	$
2) Earned income disregard during month 12	(-)	$
Minimum Wage		
3) Applicable minimum wage for FLSA covered categories	(+)/(-)	$
4) State minimum wage for non-FLSA covered categories	(+)/(-)	$
Sanctions		
5) Most severe sanction amount	(+)/(-)	$
6) Most severe sanction duration	(+)/(-)	Scale 0-5
Child Support		
7) Treatment of child support income	(-)	Scale 0-2
EITC		
8) Federal EITC	(+)/(-)	$
9) State EITC	(+)/(-)	$
10) Percentage of state EITC refundable	(+)/(-)	0-1
Time Limits		
1) Duration of lifetime time limit	(+)/(-)	Months
2) No time limit	(+)/(-)	0/1
3) Intermittent time limit	(+)/(-)	0/1
4) Time limit exemptions for illness	(+)/(-)	0/1
5) Time limit exemption for child under age x months	(+)/(-)	Months
6) Time limit extension if cooperating	(+)/(-)	0/1

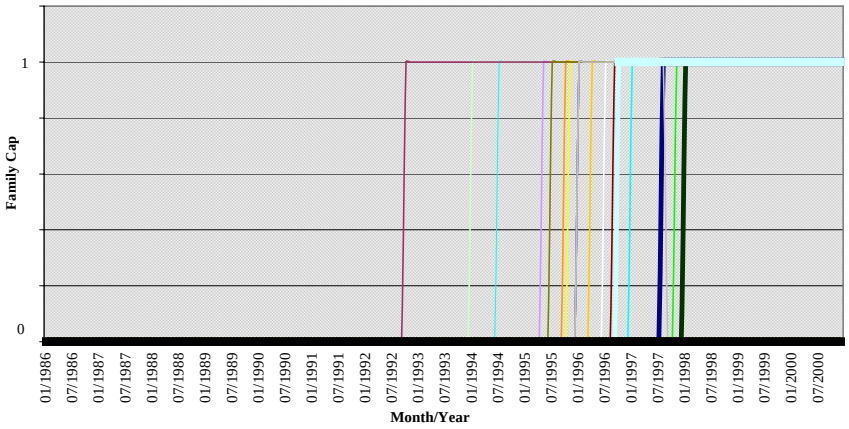
Table 2
Summary Statistics: State Policy Variables, Monthly 1986-2000

Policy Variable	Minimum	Maximum	Mean	Standard Deviation
Eligibility Requirements				
Family cap (0/1)	0	1	0.14	0.34
Vehicle exemption ($s)	4,202	16,104	7,137	3,363
Earned income disregard for income eligibility ($s)	0	469	121	52
No explicit net income test for income eligibility (0/1)	0	1	0.06	0.24
Financial Incentives to Work				
Benefits				
Maximum monthly benefit ($s)	123	1051	437	170
Earnings disregard during month 12 ($s)	86.5537	469	169	61
Minimum Wage				
Applicable minimum wage ($s)	4.16	6.66	4.95	0.39
State minimum wage for non-FLSA covered categories ($s)	0	6.15	3.00	2.22
Sanctions				
Most severe sanction amount ($s)	29	654	152	115
Most severe sanction duration (scale 0-5)	1	5	2.86	0.73
Child Support				
Treatment of child support income (scale 0-2)	0	2	0.90	0.41
EITC				
Federal EITC ($s)	802	3,913	2,394	1,211
State EITC ($s)	0	1,957	73	250
Percentage of state EITC refundable (0-1)	0	1	0.06	0.24
Time Limits				
Duration of lifetime time limit (months)	21	60	58.8	6.0
No time limits (0/1)	0	1	0.77	0.42
Intermittent time limit (0/1)	0	1	0.07	0.25
Time limit exemption for illness (0/1)	0	1	0.88	0.32
Time limit exemption for child under age x months (months)	0	60	46.7	24.5
Time limit extension if cooperating (0/1)	0	1	0.84	0.36
Sample Size		7,534		

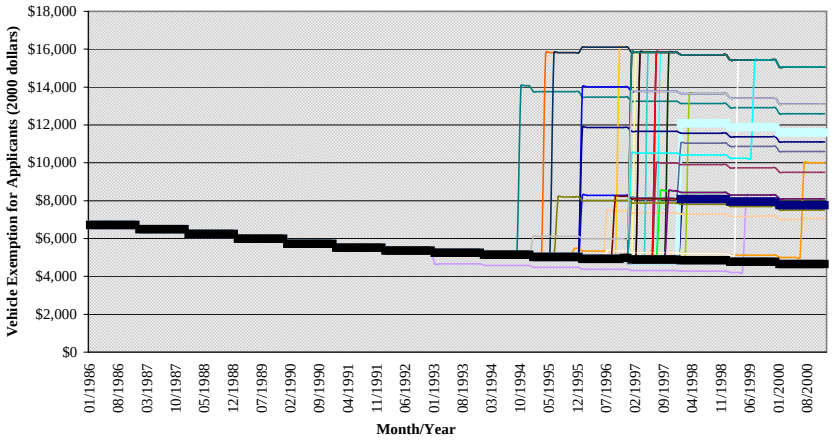
Note: All dollar values are in year 2000 dollars.

Figure 1 - State Welfare Policies Over Time, 1986-2000

Family Cap



Vehicle Exemption for Applicants



Earned Income Disregard for Income Eligibility

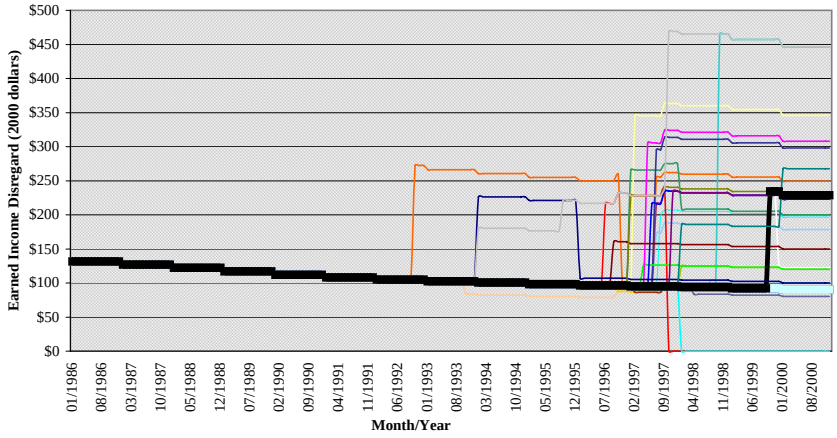


Table 3
Weighted Least Squares Regression Results
The Overall Effect of Welfare Reform on Deep Poverty and Poverty, 1988-2002

	Deep Poverty		Poverty	
	Mothers	**Children**	**Mothers**	**Children**
	Coeff (SE)	Coeff (SE)	Coeff (SE)	Coeff (SE)
Waiver implemented (0/1)	-0.252	-0.393	-0.336	-0.514
	(0.455)	(0.717)	(0.412)	(0.649)
TANF implemented (0/1)	-0.560	-0.517	-0.774	-0.680
	(0.486)	(0.659)	(0.540)	(0.636)
Sample Size	7,534	7,533	7,534	7,533

Note: ** and * indicate statistical significance at the 1 and 5 percent levels, respectively. Weighted least squares regression with standard errors adjusted for clustering by state. All models also include: state level means for age, age squared, black, Hispanic, less than high school education, high school education, number of children in household, number of adults in household, and metropolitan area; state level monthly unemployment, per-capita income, and employment-population ratio; quarterly GDP; and dummies for seam bias, year, and state. Age, race/ethnicity, and education variables are for ever-single mothers in the ever-single mother sample and for mothers of the children in the children of ever-single mothers sample.

Table 4
Weighted Least Squares Regression Results
The Effect of Specific Policies on Deep Poverty of Ever-Single Mothers [1]

	Specific Policies Measured in Month:											
	t		t-12		t-24		t	and	t-24			
	Coeff (SE)		Coeff (SE)		Coeff (SE)		Coeff (SE)		Coeff (SE)			
Eligibility Requirements		++		++		++		+				
Family cap (0/1)	1.513		1.300		1.064		1.257		0.469			
	(0.377)	**	(0.422)	**	(0.380)	**	(0.360)	**	(0.380)			
Vehicle exemption (in 1000's of $s)	-0.064		-0.031		-0.066		-0.055		0.006			
	(0.046)		(0.044)		(0.059)		(0.051)		(0.064)			
Earned income disregard for income eligibility (in 100's of $s)	0.308		0.183		-0.046		0.095		-0.591			
	(0.356)		(0.372)		(0.445)		(0.414)		(0.387)			
No explicit net income test for income eligibility (0/1)	0.056		0.851		1.779		0.426		1.067			
	(0.619)		(0.540)		(0.623)	**	(0.608)		(0.630)			
Financial Incentives to Work		++		++		++					++	
Benefits											+	
Maximum monthly benefit (in 100's of $s)	-0.532		-0.420		-0.545		0.216		-0.914			
	(0.440)		(0.409)		(0.370)		(0.496)		(0.367)	*		
Earnings disregard during month 12 (in 100's of $s)	0.212		0.180		0.307		0.196		-0.036			
	(0.244)		(0.222)		(0.279)		(0.266)		(0.356)			
Minimum Wage		+		++		+					+	
Applicable minimum wage (in $s)	1.122		0.622		0.137		0.897		-0.036			
	(0.576)		(0.366)		(0.362)		(0.469)		(0.323)			
State minimum wage for non-FLSA covered categories ($s)	-0.479		-0.803		-0.697		-0.147		-0.729			
	(0.202)	*	(0.189)	**	(0.247)	**	(0.294)		(0.279)	*		
Sanctions		++		++		+						
Most severe sanction amount (in $s)	-0.003		-0.004		-0.002		-0.002		-0.002			
	(0.002)		(0.002)	*	(0.002)		(0.002)		(0.002)			
Most severe sanction duration (scale 0-5)	0.209		0.327		0.315		-0.018		0.464			
	(0.170)		(0.174)		(0.174)		(0.171)		(0.263)			
Child Support												
Treatment of child support income (scale 0-2)	-0.718		-0.628		-0.766		-0.720		-0.199			
	(0.282)	*	(0.239)	*	(0.213)	**	(0.290)	*	(0.310)			
EITC		+		+		+					++	
Federal EITC (in 100's of $s)	0.051		0.001		-0.042		0.045		-0.041			
	(0.070)		(0.038)		(0.121)		(0.074)		(0.107)			
State EITC (in 100's of $s)	0.161		0.127		0.082		-0.128		0.205			
	(0.068)	*	(0.063)	*	(0.076)		(0.076)		(0.106)			
Percentage of state EITC refundable (0/1)	0.581		0.956		0.832		0.729		1.558			
	(0.670)		(0.659)		(0.654)		(0.515)		(0.640)	*		
Time Limits						+						
Duration of lifetime time limit (months)	0.005		0.006		-0.012		-0.016		0.024			
	(0.018)		(0.020)		(0.026)		(0.020)		(0.032)			
No time limits (0/1)	0.387		-2.199		-1.238		0.133		-1.712			
	(1.600)		(1.411)		(1.413)		(1.377)		(1.187)			
Intermittent time limit (0/1)	-1.155		-1.431		-1.449		-1.034		-0.114			
	(0.554)	*	(0.589)	*	(0.608)	*	(0.485)	*	(0.532)			
Time limit exemption for illness (0/1)	1.310		1.297		1.357		1.255		0.425			
	(0.583)	*	(0.512)	*	(0.510)	*	(0.521)	*	(0.517)			
Time limit exemption for child under age x months (months)	-0.013		0.020		-0.003		-0.005		0.024			
	(0.024)		(0.023)		(0.023)		(0.022)		(0.017)			
Time limit extension if cooperating (0/1)	-0.501		-0.066		0.219		-0.677		-0.543			
	(0.543)		(0.571)		(0.572)		(0.519)		(0.511)			
Sample Size	6,430		6,982		7,534		6,430					

[1] All four models are estimated with policy data through December 2000. Because of the lag structure, the samples differ slightly across the models, as evident in the sample size numbers presented. The models estimated in month t, t-12, and t-24 include states' monthly poverty rates from 1988-2000, 1988-2001, and 1988-2002, respectively. We also estimated models with the same sample of states' monthly poverty rates, but with changes in the policy data years, and found similar results (available from authors).

Note: ** and * indicate statistical significance at the 1 and 5 percent levels, respectively.
++ and + indicate joint statistical significance at the 1 and 5 percent levels, respectively.
Weighted least squares regression with standard errors adjusted for clustering by state. All models also include: state level means for age, age squared, black, Hispanic, less than high school education, high school education, number of children in household, number of adults in household, and metropolitan area; state level monthly unemployment, per-capita income, and employment-population ratio; quarterly GDP; and dummies for seam bias, year, and state. All dollar values are in year 2000 dollars.

Table 5
Weighted Least Squares Regression Results
The Effect of Specific Policies at Month "t-24" on Deep Poverty and Poverty, 1988-2002

	Deep Poverty				Poverty			
	Mothers		Children		Mothers		Children	
	Coeff (SE)		Coeff (SE)		Coeff (SE)		Coeff (SE)	
Eligibility Requirements		++		++		++		+
Family cap (0/1)	1.064		1.690		1.242		2.150	
	(0.380)	**	(0.611)	**	(0.441)	**	(0.751)	**
Vehicle exemption (in 1000's of $s)	-0.066		-0.204		0.034		-0.069	
	(0.059)		(0.099)	*	(0.050)		(0.087)	
Earned income disregard for income eligibility (in 100's of $s)	-0.046		-0.085		0.289		0.336	
	(0.445)		(0.748)		(0.426)		(0.581)	
No explicit net income test for income eligibility (0/1)	1.779		1.544		1.552		1.060	
	(0.623)	**	(0.918)		(0.674)	*	(1.069)	
Financial Incentives to Work		++		++		++		++
Benefits				++				
Maximum monthly benefit (in 100's of $s)	-0.545		-1.966		0.724		1.505	
	(0.370)		(0.641)	**	(0.341)	*	(0.642)	*
Earnings disregard during month 12 (in 100's of $s)	0.307		0.783		0.400		0.366	
	(0.279)		(0.537)		(0.334)		(0.478)	
Minimum Wage		+		+		++		++
Applicable minimum wage (in $s)	0.137		0.817		-0.606		-0.474	
	(0.362)		(0.518)		(0.557)		(0.688)	
State minimum wage for non-FLSA covered categories ($s)	-0.697		-0.870		-0.957		-1.098	
	(0.247)	**	(0.441)		(0.219)	**	(0.298)	**
Sanctions		+				+		
Most severe sanction amount (in $s)	-0.002		-0.002		-0.002		-0.002	
	(0.002)		(0.003)		(0.002)		(0.003)	
Most severe sanction duration (scale 0-5)	0.315		0.255		0.592		0.422	
	(0.174)		(0.275)		(0.236)	*	(0.343)	
Child Support								
Treatment of child support income (scale 0-2)	-0.766		-0.147		-0.365		-0.135	
	(0.213)	**	(0.457)		(0.266)		(0.448)	
EITC		+		+		+		++
Federal EITC (in 100's of $s)	-0.042		0.079		-0.013		0.214	
	(0.121)		(0.169)		(0.152)		(0.208)	
State EITC (in 100's of $s)	0.082		0.187		0.279		0.568	
	(0.076)		(0.120)		(0.089)	**	(0.168)	**
Percentage of state EITC refundable (0-1)	0.832		1.983		-0.325		-1.938	
	(0.654)		(1.248)		(0.737)		(1.354)	
Time Limits		+				++		++
Duration of lifetime time limit (months)	-0.012		0.036		-0.057		-0.034	
	(0.026)		(0.045)		(0.049)		(0.055)	
No time limits (0/1)	-1.238		-1.495		1.083		2.601	
	(1.413)		(2.304)		(1.663)		(3.093)	
Intermittent time limit (0/1)	-1.449		-2.301		-1.595		-2.591	
	(0.608)	*	(1.096)	*	(0.609)	*	(1.098)	*
Time limit exemption for illness (0/1)	1.357		1.975		1.973		3.555	
	(0.510)	*	(0.955)	*	(0.524)	**	(1.169)	**
Time limit exemption for child under age x months (months)	-0.003		0.000		-0.045		-0.082	
	(0.023)		(0.034)		(0.024)		(0.049)	
Time limit extension if cooperating (0/1)	0.219		-0.131		0.134		0.181	
	(0.572)		(0.730)		(0.717)		(0.947)	
Sample Size	7,534		7,533		7,534		7,533	

Note: ** and * indicate statistical significance at the 1 and 5 percent levels, respectively.
++ and + indicate joint statistical significance at the 1 and 5 percent levels, respectively.
Weighted least squares regression with standard errors adjusted for clustering by state. All models also include: state level means for age, age squared, black, Hispanic, less than high school education, high school education, number of children in household, number of adults in household, and metropolitan area; state level monthly unemployment, per-capita income, and employment-population ratio; quarterly GDP; and dummies for seam bias, year, and state. Age, race/ethnicity, and education variables are for ever-single mothers in the ever-single mother sample and for mothers of the children in the children of ever-single mothers sample. All dollar values are in year 2000 dollars.

Appendix Table 1
Summary Statistics: Dependent and Control Variables, Monthly 1988-2002

	Ever-Single Mothers		Children of Ever-Single Mothers	
Control Variable	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**
Deep Poverty	8.8	0.58	13.0	0.93
Poverty	20.8	0.75	29.9	0.94
Age	37.6	0.1	34.4	0.1
Age-squared	1510.5	8.1	1245.0	10.3
Black	0.223	0.023	0.243	0.028
Hispanic	0.125	0.030	0.167	0.043
Education less than high school	0.206	0.009	0.241	0.018
High school education only	0.381	0.013	0.376	0.016
Number of children in household	1.426	0.023	2.536	0.031
Number of adults in household	2.051	0.021	1.921	0.026
Metro area	0.774	0.032	0.770	0.035
Monthly unemployment	5.612	0.185	5.665	0.190
Quarterly GDP	8,293	15.25	8,286	18.59
State per-capita income	26,054	591	26,022	608
State employment-population ratio	0.474	0.004	0.473	0.004
Seam bias	0.252	0.000	0.252	0.000
Sample Size	7,534		7,533	

Note: Weighted means and standard deviations. Age, race/ethnicity, and education variables are for ever-single mothers in the ever-single mother sample and for mothers of the children in the children of ever-single mothers sample. All dollar values are in year 2000 dollars.

Appendix Table 2
Weighted Least Squares Regression Results
The Effect of Specific Policies at Month "t-24" on Deep Poverty and Poverty, 1988-2002
Full Set of Coefficients

	Deep Poverty				Poverty			
	Mothers		Children		Mothers		Children	
	Coeff (SE)		Coeff (SE)		Coeff (SE)		Coeff (SE)	
Eligibility Requirements		++		++		++		+
Family cap (0/1)	1.064		1.690		1.242		2.150	
	(0.380)	**	(0.611)	**	(0.441)	**	(0.751)	**
Vehicle exemption (in 1000's of $s)	-0.066		-0.204		0.034		-0.069	
	(0.059)		(0.099)	*	(0.050)		(0.087)	
Earned income disregard for income eligibility (in 100's of $s)	-0.046		-0.085		0.289		0.336	
	(0.445)		(0.748)		(0.426)		(0.581)	
No explicit net income test for income eligibility (0/1)	1.779		1.544		1.552		1.060	
	(0.623)	**	(0.918)		(0.674)	*	(1.069)	
Financial Incentives to Work		++		++		++		++
Benefits				++				
Maximum monthly benefit (in 100's of $s)	-0.545		-1.966		0.724		1.505	
	(0.370)		(0.641)	**	(0.341)	*	(0.642)	*
Earnings disregard during month 12 (in 100's of $s)	0.307		0.783		0.400		0.366	
	(0.279)		(0.537)		(0.334)		(0.478)	
Minimum Wage		+		+		++		++
Applicable minimum wage (in $s)	0.137		0.817		-0.606		-0.474	
	(0.362)		(0.518)		(0.557)		(0.688)	
State minimum wage for non-FLSA covered categories ($s)	-0.697		-0.870		-0.957		-1.098	
	(0.247)	**	(0.441)		(0.219)	**	(0.298)	**
Sanctions		+				+		
Most severe sanction amount (in $s)	-0.002		-0.002		-0.002		-0.002	
	(0.002)		(0.003)		(0.002)		(0.003)	
Most severe sanction duration (scale 0-5)	0.315		0.255		0.592		0.422	
	(0.174)		(0.275)		(0.236)	*	(0.343)	
Child Support								
Treatment of child support income (scale 0-2)	-0.766		-0.147		-0.365		-0.135	
	(0.213)	**	(0.457)		(0.266)		(0.448)	
EITC		+		+		+		++
Federal EITC (in 100's of $s)	-0.042		0.079		-0.013		0.214	
	(0.121)		(0.169)		(0.152)		(0.208)	
State EITC (in 100's of $s)	0.082		0.187		0.279		0.568	
	(0.076)		(0.120)		(0.089)	**	(0.168)	**
Percentage of state EITC refundable (0-1)	0.832		1.983		-0.325		-1.938	
	(0.654)		(1.248)		(0.737)		(1.354)	
Time Limits		+				++		++
Duration of lifetime time limit (months)	-0.012		0.036		-0.057		-0.034	
	(0.026)		(0.045)		(0.049)		(0.055)	
No time limits (0/1)	-1.238		-1.495		1.083		2.601	
	(1.413)		(2.304)		(1.663)		(3.093)	
Intermittent time limit (0/1)	-1.449		-2.301		-1.595		-2.591	
	(0.608)	*	(1.096)	*	(0.609)	*	(1.098)	*
Time limit exemption for illness (0/1)	1.357		1.975		1.973		3.555	
	(0.510)	*	(0.955)	*	(0.524)	**	(1.169)	**
Time limit exemption for child under age x months (months)	-0.003		0.000		-0.045		-0.082	
	(0.023)		(0.034)		(0.024)		(0.049)	
Time limit extension if cooperating (0/1)	0.219		-0.131		0.134		0.181	
	(0.572)		(0.730)		(0.717)		(0.947)	

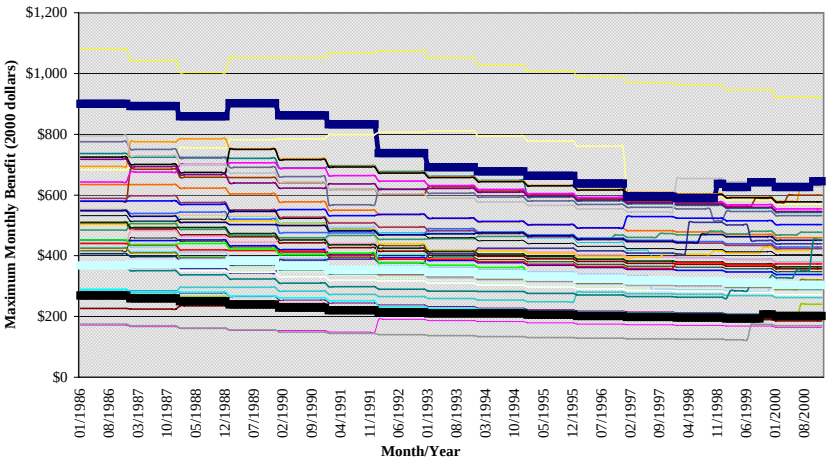
Appendix Table 2 (continued)
Weighted Least Squares Regression Results
The Effect of Specific Policies at Month "t-24" on Deep Poverty and Poverty, 1988-2002
Full Set of Coefficients

	Deep Poverty		Poverty	
	Mothers	**Children**	**Mothers**	**Children**
	Coeff (SE)	Coeff (SE)	Coeff (SE)	Coeff (SE)
Controls				
Age	-1.323	-3.239	0.063	-5.043
	(1.027)	(1.341) *	(1.499)	(1.889) *
Age-squared	0.017	0.045	-0.004	0.070
	(0.014)	(0.019) *	(0.020)	(0.027) *
Black	15.157	20.643	24.344	24.883
	(3.993) **	(4.484) **	(4.115) **	(5.018) **
Hispanic	21.466	23.385	15.752	16.146
	(4.420) **	(6.157) **	(6.841) *	(8.045)
Education less than high school	13.926	20.815	26.208	29.893
	(4.070) **	(5.141) **	(5.800) **	(4.656) **
High school education only	2.504	6.823	10.093	12.728
	(2.233)	(3.414)	(3.913) *	(3.516) **
Number of children in household	2.254	3.672	5.392	5.888
	(1.332)	(1.147) **	(1.565) **	(1.057) **
Number of adults in household	-8.197	-15.784	-10.938	-16.022
	(2.005) **	(1.949) **	(2.162) **	(1.857) **
Metro area	-0.551	-2.177	-2.642	-4.870
	(1.422)	(1.712)	(1.335)	(2.037) *
Monthly unemployment	0.455	0.562	0.567	0.500
	(0.209) *	(0.384)	(0.274) *	(0.388)
Quarterly GDP	-0.001	-0.002	-0.001	-0.001
	(0.001)	(0.001) *	(0.001)	(0.001)
State per-capita income	0.000	0.000	0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)
State employment-population ratio	-10.200	-8.351	-23.272	-50.526
	(18.96)	(34.03)	(25.54)	(35.90)
Seam bias	0.301	1.415	0.609	1.187
	(0.504)	(0.584) *	(0.682)	(0.777)
Sample Size	7,534	7,533	7,534	7,533

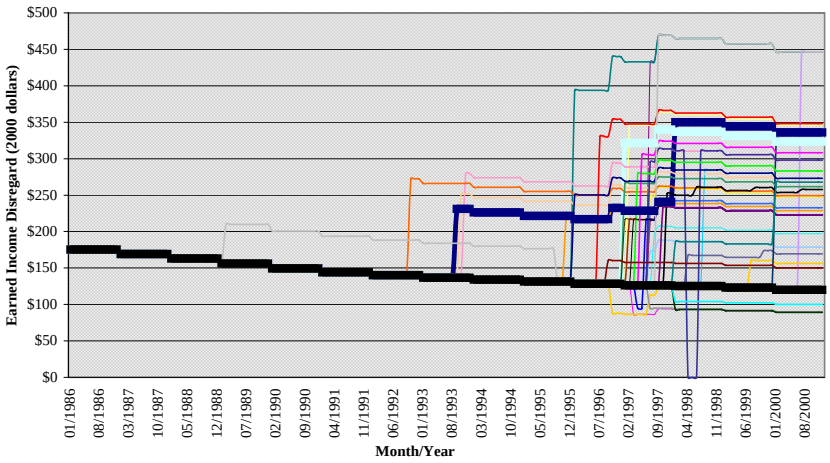
Note: ** and * indicate statistical significance at the 1 and 5 percent levels, respectively.
++ and + indicate joint statistical significance at the 1 and 5 percent levels, respectively.
Weighted least squares regression with standard errors adjusted for clustering by state. All models also include year dummies and state dummies. Age, race/ethnicity, and education variables are for ever-single mothers in the ever-single mother sample and for mothers of the children in the children of ever-single mothers sample. All dollar values are measured in year 2000 dollars.

Appendix Figures - State Welfare Policies Over Time, 1986-2000

Maximum Monthly Benefit for a Family of Three

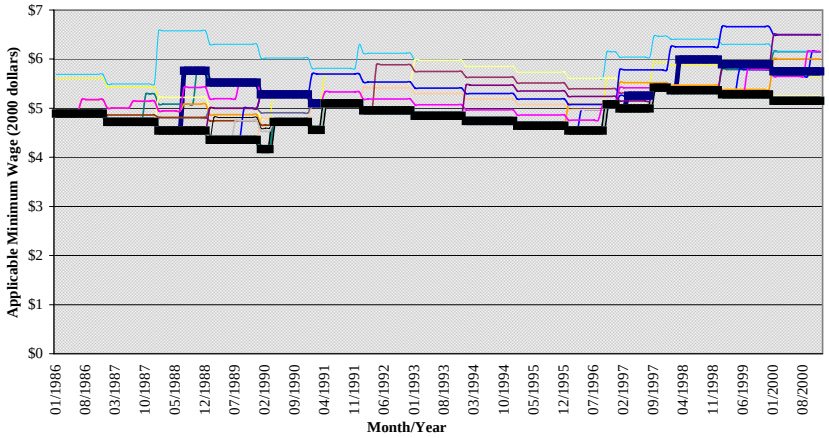


Earned Income Disregard While Working (Month 12)

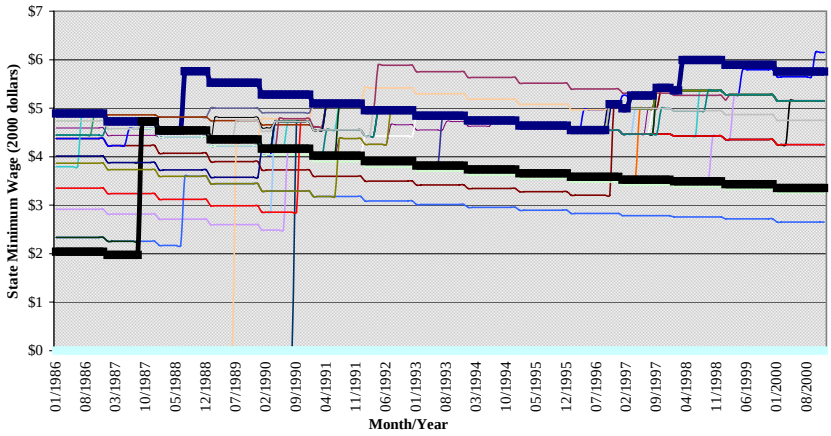


Appendix Figures - State Welfare Policies Over Time, 1986-2000 (continued)

Applicable Minimum Wage

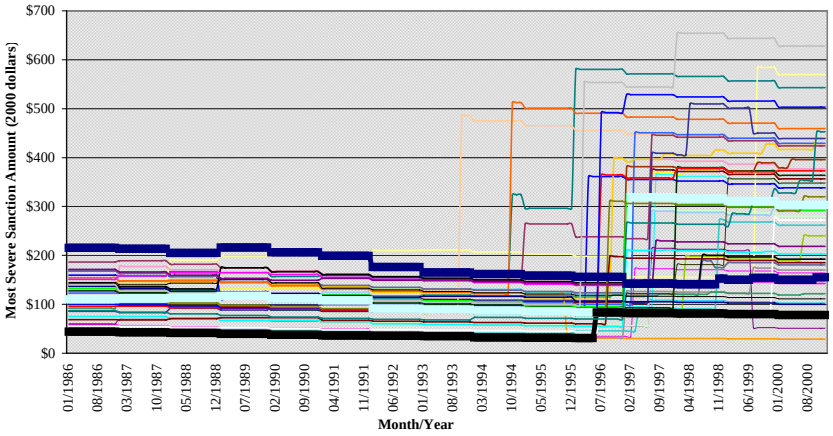


State Minimum Wage for Non-FLSA Covered Categories

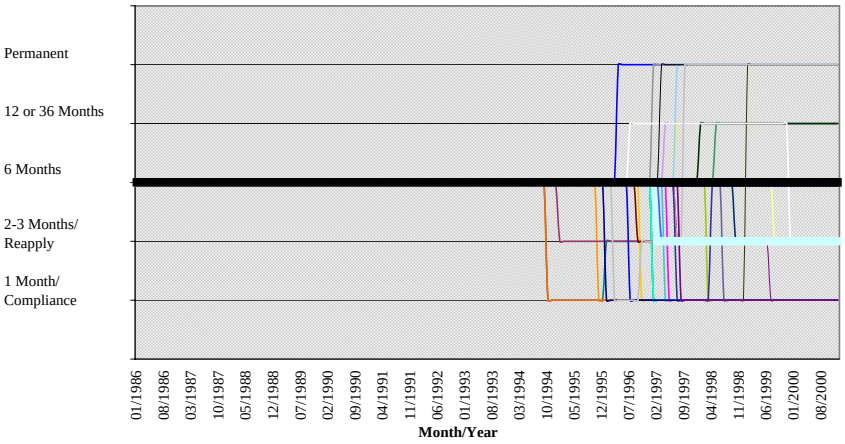


Appendix Figures - State Welfare Policies Over Time, 1986-2000 (continued)

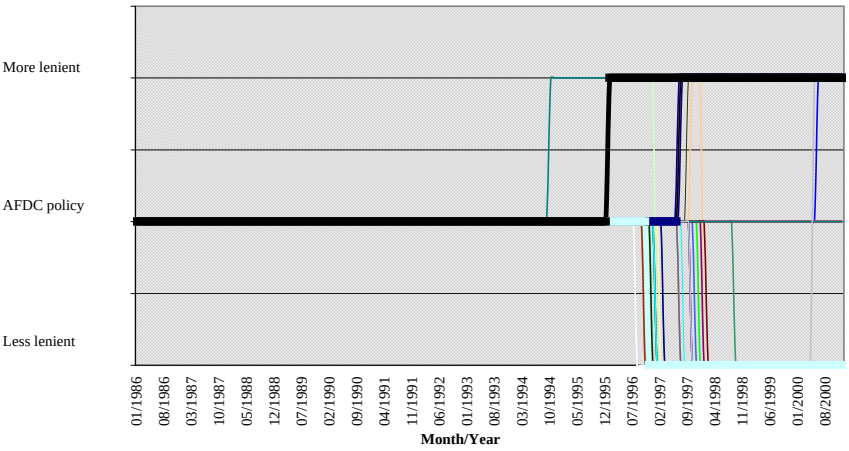
Most Severe Sanction Amount



Most Severe Sanction Duration

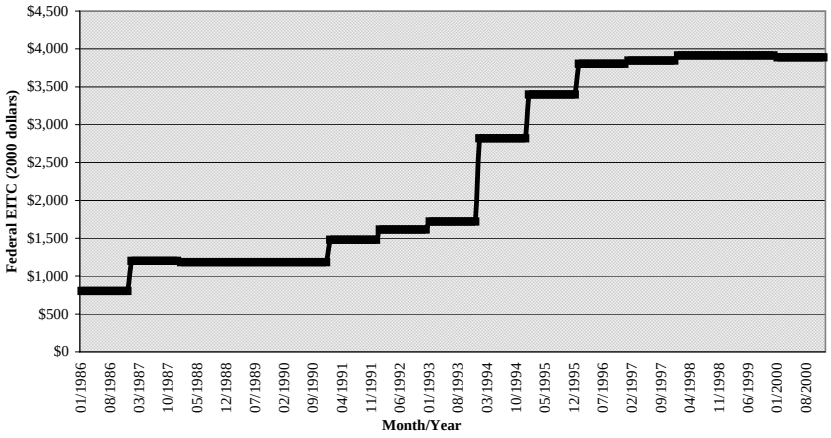


Treatment of Child Support Income

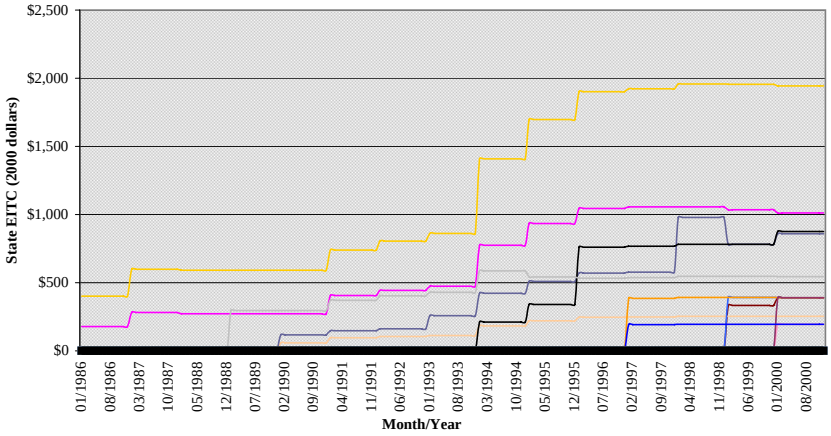


Appendix Figures - State Welfare Policies Over Time, 1986-2000 (continued)

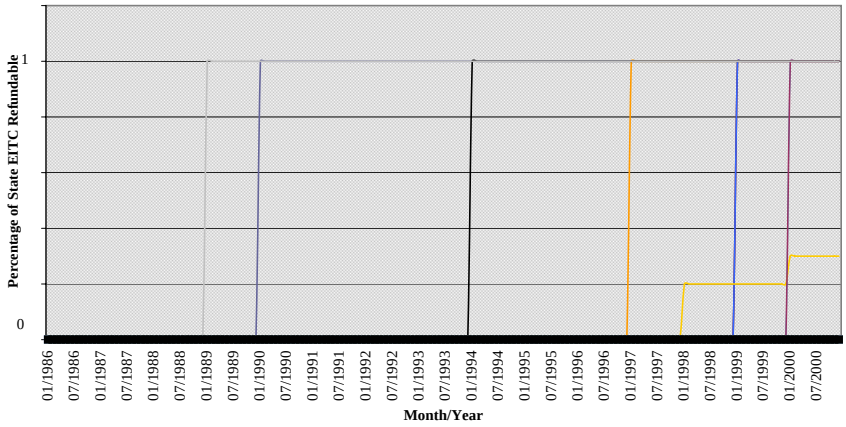
Federal EITC



State EITC

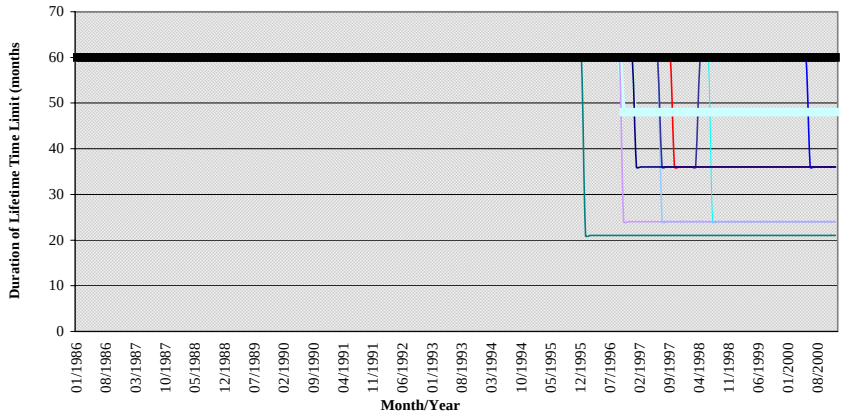


Percentage of State EITC Refundable

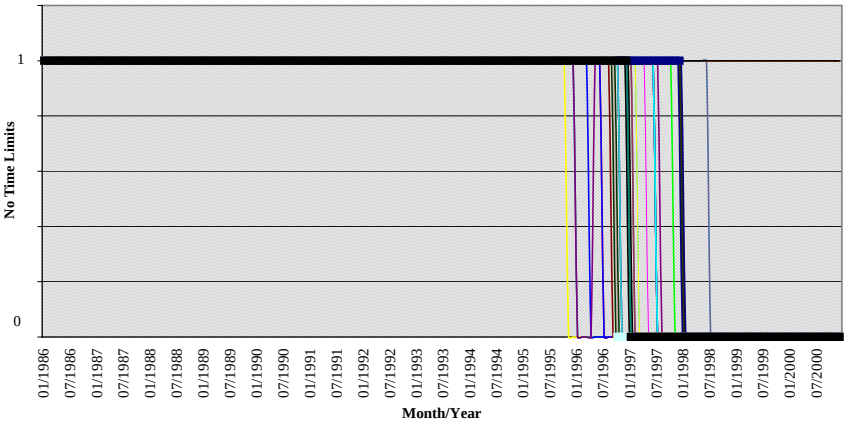


Appendix Figures - State Welfare Policies Over Time, 1986-2000 (continued)

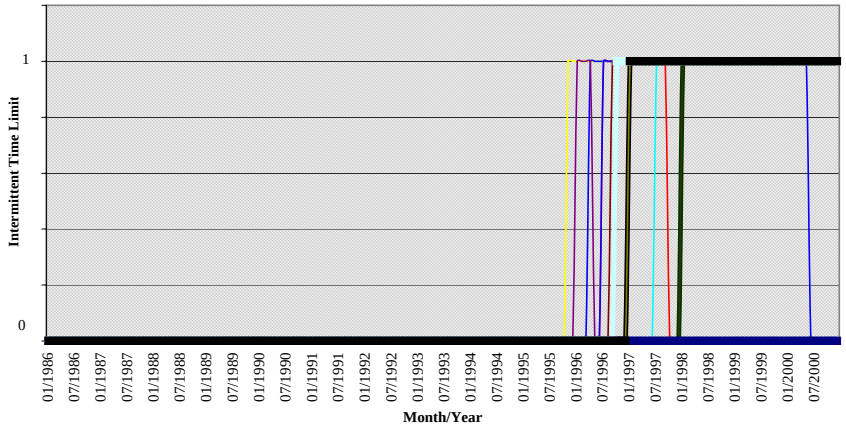
Duration of Lifetime Time Limit



No Time Limits

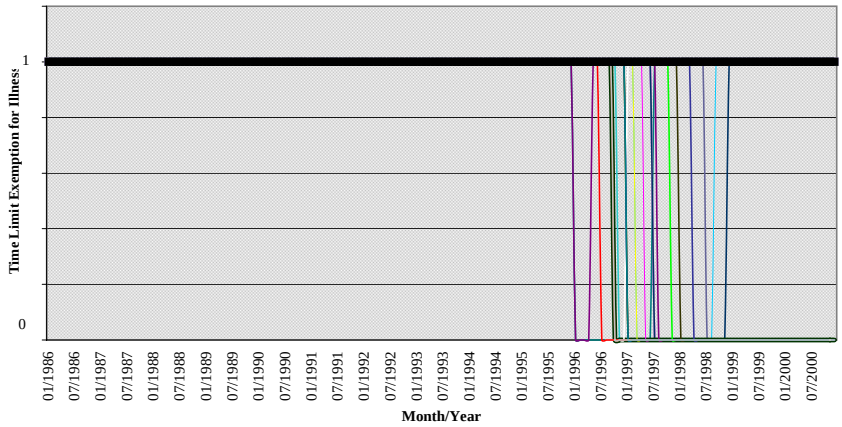


Intermittent Time Limit

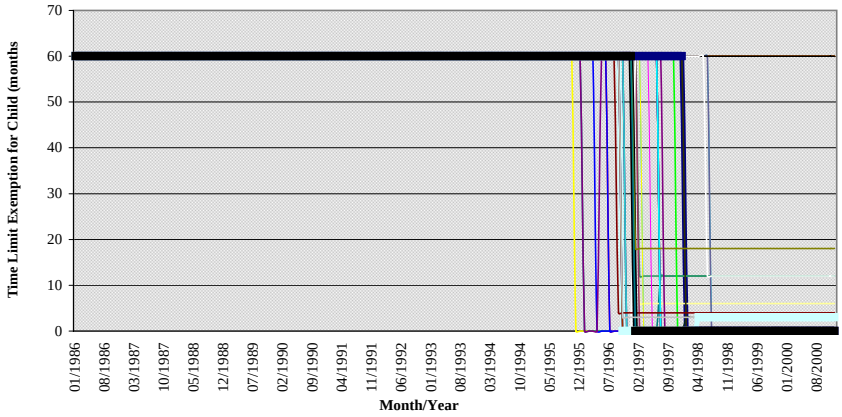


Appendix Figures - State Welfare Policies Over Time, 1986-2000 (continued)

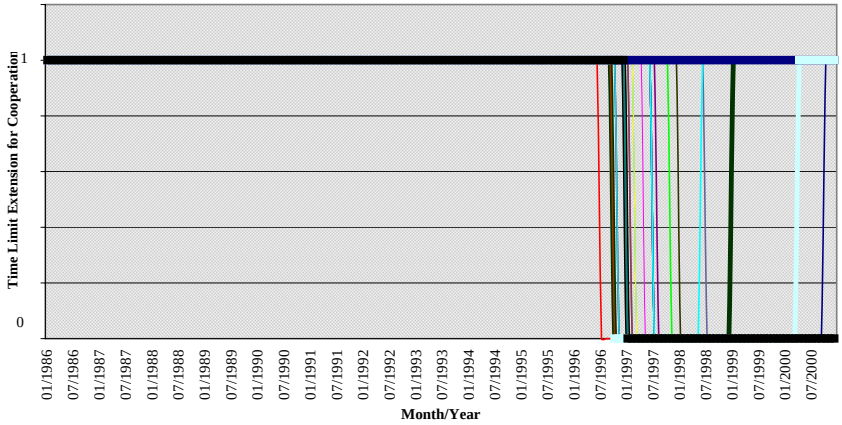
Time Limit Exemption for Illness



Time Limit Exemption for Child Under Age x Months



Time Limit Extension for Cooperation



Appendix: Policy Data Documentation

Eligibility Requirements

1. Family Cap

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   Values: 0/1 (no/yes): If the state has a family cap, the collapsed variable receives a 1; if not, it receives a 0.

2. Vehicle Exemption for Applicants

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.
   Assumptions:
   - One adult and two (uncapped) children in family
   - One vehicle per driver/adult = One vehicle per household
   - No asset test = All vehicles owned by unit
   - All vehicles owned by unit = One vehicle (one adult family)
   - One vehicle = 15% above state with highest capped value in given month
   - Equity values to fair market value (conversion): Add $3,100

   Notes: Measured in fair market value.

3. Earned Income Disregard for Income Eligibility Purposes

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.
   Assumptions:
   - One adult and two (uncapped) children in family
   - Adult works 20 hours at federal minimum wage
   - No explicit net income test = use net income test for benefit computation for applicants during the first month.

   Notes: This is only earned income disregards and does not include child care disregards or disregards of any other type.

4. No Explicit Net Income Test for Income Eligibility Purposes

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   Rowe, Gretchen and Tracy Roberts. October 2004. *The Welfare Rules Databook: State Policies as of July 2000*. Assessing the New Federalism 04-08. Washington, DC: The Urban Institute.
   Values: 0/1 (net income test/no explicit net income test): If the state either imposes no net income test at application or does impose a net income test, but the calculation of the test and disregards allowed for the test are no different from those used to calculate the benefit, the no explicit net income test variable receives a 1; if not, it receives a 0.
   Notes: This is only earned income disregards and does not include child care disregards or disregards of any other type.

Financial Incentives to Work

1. Maximum Monthly Benefit for Family of 3

   Sources: Welfare Rules Database (WRD)
   Transfer Income Model (TRIM3), "Rules of Simulated Programs," http://trim.urban.org/T3Welcome.php.
   Assumption: One adult and two (uncapped) children in family
   Notes: Values come from TRIM3 (1986-1995) and the WRD (1996-2000)

2. Earned Income Disregard While Working During Month 12

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.
   Assumptions:
   - One adult and two (uncapped) children in family
   - Adult works first month after benefits for 20 hours at federal minimum wage
   - Disregard cannot be greater than earnings
   - States with flat grant amounts disregard 100% of earnings

   Notes: This is only earned income disregards and does not include child care disregards or disregards of any other type.

3. Applicable Minimum Wage for Federally (FLSA) Covered Categories

   Sources: U.S. Department of Labor, "History of Federal Minimum Wage Rates," http://www.dol.gov/esa/minwage/chart.htm.
   Richard Nelson (1985-2001), *Monthly Labor Review*.
   Council of State Governments, *The Book of States*, Vols. 27, 28, 30, 31, 33.
   Labor Commission of Utah, "Minimum Wage," http://www.labor.state.ut.us/Utah_Antidiscrimination___Labo/Employment_Standards/minwage/minwage.htm.
   Jim Mosley (3 May 1990), *St. Louis Post-Dispatch*, "State Minimum Wage To Take Effect Aug. 28," pg 8A.
   Larry Tye (2 April 1991), *Boston Globe*, "Minimum Wage Increases To $4.25," pg 3.
   Notes: This wage is the higher of the state or federal minimum wage. In general, it is the minimum wage covering the majority of workers in a state for the majority of the month. Although not all state minimum wages cover FLSA-covered occupations, it is assumed that if a state has a higher minimum wage than the federal level, that state minimum wage is effective for FLSA-covered workers (which was the case in 1999 and 2000).

4. State Minimum Wage for Non-FLSA Covered Categories

Sources: Richard Nelson (1985-2001), *Monthly Labor Review.*
Council of State Governments, *The Book of States*, Vols. 27, 28, 30, 31, 33.
Labor Commission of Utah, "Minimum Wage," http://www.labor.state.ut.us/Utah_Antidiscrimination___Labo/Employment_Standards/minwage/minwage.htm.
Wage and Hour Administration of Alaska, "Minimum Wage Standard and Overtime Hours," http://www.labor.state.ak.us/lss/whact.htm
Industrial Welfare Commission of California, "Summary of Interim Wage Order—2000," http://www.dir.ca.gov/Iwc/SummaryInterimWageorder2000.html
Connecticut General Assembly, "Wages," http://www.cga.ct.gov/2001/pub/Chap558.htm
Office of Labor Law Enforcement of Delaware, "Minimum Wage," http://www.delcode.state.de.us/title19/c009/index.htm
Department of Employment Services of the District of Columbia, "Minimum Wages," http://www.does.dc.gov/does/cwp/view,a,1234,q,539346.asp
State Legislature of Iowa, "Iowa Code 2003: Section 91D.1," http://www.legis.state.ia.us/IACODE/2003/91D/1.html
Massachusetts General Laws, "Minimum Fair Wages," http://www.mass.gov/legis/laws/mgl/gl-151-toc.htm
State Legislature of Minnesota, "Labor Standards and Wages," http://www.revisor.leg.state.mn.us/stats/177/
New Hampshire General Court, "Minimum Wage Law," http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XXIII-279.htm

Jim Mosley (3 May 1990), *St. Louis Post-Dispatch*, "State Minimum Wage To Take Effect Aug. 28," pg 8A.
Larry Tye (2 April 1991), *Boston Globe*, "Minimum Wage Increases To $4.25," pg 3.

Assumptions:

- A state minimum wage at or below the federal minimum wage for the majority of a state's state-month observations from 1986-2000 is assumed to cover Non-FLSA workers in that state at all times. Otherwise, it is assumed to cover only FLSA workers, in which case the Non-FLSA minimum wage is 0. This assumption is based on the similarities between the exceptions to state minimum wage coverage in states with a higher-than-federal minimum wage and the exceptions to FLSA minimum wage coverage.

Notes: The state minimum wage is often used to cover workers who are not covered by the FLSA, 28 percent of workers in 1999. In most states (82 percent of our state-month observations), the state minimum wage is less than or equal to the federal minimum wage, suggesting non-FLSA coverage. For some states with a state minimum wage higher than the federal minimum wage, the higher wage covers FLSA workers only. The FLSA does not cover most workers in small businesses or in businesses where no interstate commerce is involved, workers in seasonal or recreational jobs, workers delivering newspapers or engaged in fishing operations, many workers in private households, and executive, administrative, and professional employees.

5. Most Severe Sanction Amount for Noncompliance with Work Requirements for Single-Parent Head of Unit

Sources: Welfare Rules Database (WRD) and Urban Institute databases
First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.

Assumptions:

- Family of one adult and two children with no income receiving the maximum monthly benefit prior to sanction.
- Adult portion of benefit is calculated with the formula:

$$\frac{\text{Maximum Benefit Family of 3 - Maximum Benefit Family of 2}}{\text{Maximum Benefit Family of 2}}$$

- Case is closed = 100% of max monthly benefit
- Vendor Payment (shelter costs) = 40% of max monthly benefit
- Pro rata portion of benefit = max monthly benefit divided by 3 (# of individuals in the prototypical family)
- Benefits vendored to third party = 10% of max monthly benefit
- MN (7/98-12/00): (0.10) (0.40) (Maximum Benefit Family of 3) + (0.30) (Transitional Standard)
- State for which recipients are not required to participate in work activities and therefore have no sanctions are coded missing

6. Most Severe Sanction Duration for Noncompliance with Work Requirements for Single-Parent Head of Unit

Sources: Welfare Rules Database (WRD) and Urban Institute databases
First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.

Values: 0: warning - no actual sanction
1: one month or until compliance (for 30 days, 2 weeks)
2: 2-5 months, reapplication
3: 6-11 months
4: 12-36 months, indefinitely
5: permanent

7. Treatment of Child Support Income for Recipients

Sources: Welfare Rules Database (WRD) and Urban Institute databases
First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.

Values: 0: Anything less than AFDC policy
1: (Standard AFDC policy) $50 pass-through or $50 transfer (all disregarded)
2: Anything more than AFDC policy

Note: Considered less than AFDC ($50 of disregarded child support income):
Amount of unmet need
Amount in excess of welfare benefit
Less than $50 child support disregard (regardless of amount transferred)

8. Federal EITC

Sources: V. Joseph Hotz and John Karl Scholz (January 2001), "The Earned Income Tax Credit," NBER Working Paper 8078, Table 1, 64.
Internal Revenue Service (2001), "Publication 596."
Internal Revenue Service (2000), "Publication 596."

Assumptions:

- Family of one adult and two or more qualifying children
- Earned income at end of the phase-in range (maximum Federal EITC benefit)

9. State EITC

Sources: David Neumark and William Wascher (June 2001), "Using the EITC to Help Poor Families: New Evidence and a Comparison with the Minimum Wage," *National Tax Journal*, Vol. 54 (2).
Nicholas Johnson (December 2001), Center on Budget and Policy Priorities, "A Hand Up: How State Earned Income Tax Credits Help Working Families Escape Poverty in 2001."
State of Minnesota (January 2000), "The Federal Earned Income Tax Credit and The Minnesota Working Family Credit," http://www.house.leg.state.mn.us/hrd/pubs/feicwfc.pdf.

Assumptions:

- Family of one adult and two or more qualifying children
- Earned income at end of the phase-in range (maximum Federal EITC benefit)
- Maryland's EITC (1998-2000) is equal to the value of its non-refundable EITC.

Notes: Minnesota's EITC (1999-2000) varies from other states as the state does not offer a percentage of the Federal EITC. Minnesota offers an EITC composed of varying percentages of earnings dependant on recipient income level. Maryland's EITC (1998-2000) varies from other states in that it offers a refundable and non-refundable EITC.

10. Percentage of State EITC Refundable

Sources: David Neumark and William Wascher (June 2001), "Using the EITC to Help Poor Families: New Evidence and a Comparison with the Minimum Wage," *National Tax Journal*, Vol. 54 (2).
Nicholas Johnson (December 2001), Center on Budget and Policy Priorities, "A Hand Up: How State Earned Income Tax Credits Help Working Families Escape Poverty in 2001."
State of Minnesota (January 2000), "The Federal Earned Income Tax Credit and The Minnesota Working Family Credit," http://www.house.leg.state.mn.us/hrd/pubs/feicwfc.pdf.

Assumptions:

- Maryland (1998-2000) has both a refundable and non-refundable EITC. For these observations, the variable is equal to the value of the refundable EITC divided by the value of the non-refundable EITC.

Time Limits

1. Duration of Lifetime Time Limits

Sources: Welfare Rules Database (WRD) and Urban Institute databases
First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.

Assumptions:

- Family of one adult and two children
- Rules are for family which has not recently moved from another state
- Time limit exists during first month that is counted toward the limit
- Missing when no time limits exist
- Rules are for time limits affecting majority of state at any given time

Note: States that have no lifetime time limit (through 2000) because they plan to continue recipients in state-only program or are still operating under waiver authority: AZ, MA, ME, MI, NY, OR, VT. New York provides Safety Net Assistance program (20% cash and the rest in-kind benefits). Ohio is coded as 36 months, however some residents may become eligible for 24 months of additional benefits after waiting for 24 months and reapplying. South Dakota education track rules are followed from 6/94 – 12/96 (following TANF Report to Congress). Montana is coded as 60 months since families can only participate in the Pathways program for 24 months, however they still receive benefits for the remaining 36 months through the Community Service Program (CSP).

2. No Time Limit

Sources: Welfare Rules Database (WRD) and Urban Institute databases
First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.

Values: 0/1 (limits exist/no limits): If the state has not implemented any time limit during the given month, the collapsed variable receives a 1; if not, it receives a 0.

3. Intermittent Lifetime Time Limit

Sources: Welfare Rules Database (WRD) and Urban Institute databases
First Annual TANF Report to Congress (August 1998), "Specific Provisions of State Programs," http://www.acf.dhhs.gov/news/welfare/congress/tanfp9.htm.

Values: 0/1 (no/yes): If the state an intermittent time limit, the collapsed variable receives a 1; if not, it receives a 0.

Assumptions:

- Family of one adult and two children
- Rules are for family which has not recently moved from another state
- Time limit exists during first month that is counted toward the limit
- Rules are for time limits affecting majority of state at any given time
- Use implementation date
- Implementation date = Effective date when implementation not specified

4. Time Limit Exemptions for Ill/Incapacitated Individuals

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   Values: 0/1 (no/yes): If the state has any type of time limit exemption for either ill/incapacitated or caring for ill/incapacitated, the collapsed variable receives a 1; if both have no exemption, it receives a 0.

5. Time Limit Exemption for Parents Caring For Children Under This Age (in Months)

   Sources: Welfare Rules Database (WRD) and Urban Institute databases

6. Time Limit Extension for Cooperating Individuals

   Sources: Welfare Rules Database (WRD) and Urban Institute databases
   Values: 0/1 (no/yes): If the state has a time limit extension for individuals who are cooperating but still cannot find employment, the collapsed variable receives a 1; if not, it receives a 0.

Non-Specific Policy Variables

1. AFDC Waiver in Place

   Sources: Crouse 1999. "State Implementation of Major Changes to Welfare Policies, 1992-1998," http://aspe.hhs.gov/hsp/Waiver-Policies99/policy_CEA.htm.
   Assumptions:
   - If a waiver is in effect on or before the 15th day of a month, it is treated as being in place for the entire month.

   Values: 0/1 (no/yes): If the state has an AFDC waiver in place, the variable receives a 1; if not, it receives a 0.

2. TANF Implemented

   Sources: Crouse 1999. "State Implementation of Major Changes to Welfare Policies, 1992-1998," http://aspe.hhs.gov/hsp/Waiver-Policies99/policy_CEA.htm.
   Assumptions:
   - If TANF is in effect on or before the 15th day of a month, it is treated as being in place for the entire month.

   Values: 0/1 (no/yes): If the state has implemented TANF, the variable receives a 1; if not, it receives a 0.