

## 5: Estimating the Effects of Policies and the Economy on FSP Caseloads

This report analyzes trends in food stamp caseloads for each of the 51 “states” (including DC) and for each fiscal year from 1987 through 1999, the years in which FSP-QC data are available. Food stamp caseloads are generally measured as the number of FSP participants divided by a measure of the relevant population. The explanatory variables include state-level unemployment rates, measures of state-level AFDC/TANF policies such as sanctions and time limits, and measures of FSP administrative features such as EBT systems and the presence of short recertification periods. More complex models add measures of demographic and political trends that may also affect food stamp receipt. The statistical models are described in detail in this chapter.

### 5.1 Basic Model of FSP Caseloads

**Statistical model:** The statistical models used in this report are generally of the form:

$$C_{ts} = \mathbf{a} + \mathbf{b}_E E_{ts} + \mathbf{b}_D D_{ts} + \mathbf{b}_P P_{ts} + \mathbf{a}_s + \mathbf{t}_t + u_{ts}$$

where

- $C_{ts}$  is the measure of the FSP caseloads for year “t” in state “s;”
- $\mathbf{a}$  is the intercept;
- $\mathbf{b}_E$  is a set of coefficients for each of the economic variables;
- $E_{ts}$  is a set of economic variables, such as the unemployment rate;
- $\mathbf{b}_D$  is a set of coefficients for each of the variables measuring demographic factors;
- $D_{ts}$  is a set of variables measuring demographic factors;
- $\mathbf{b}_P$  is a set of coefficients for each of the variables measuring policies;
- $P_{ts}$  is a set of variables measuring the proportion of a year (values of 0-1) in which a policy is imposed in state “s” and in year “t;”
- $\mathbf{a}_s$  is a set of state “fixed effects” for each of the states and DC;
- $\mathbf{t}_t$  is a set of year “fixed effects” for each of the years analyzed;
- $u_{ts}$  is a random disturbance

Separate analyses will be performed for all persons and for those in households consisting of single adults with children, multiple adults with children, adults living separately, elderly persons living separately, and elderly persons living with adults and/or children. The observations are weighted by the measure of state population used in constructing the measure of FSP caseloads. Table 5-1 shows trends in the chosen measures of FSP caseloads for each type of household. Mean values of important economic and policy measures are shown in Table 5-2.

**Measuring FSP caseloads -- key assumptions :** This study measures FSP caseloads by estimating the number of FSP participants as a proportion of the relevant population. The “numerator” in this proportion is equal to the number of participants (not households or units) in each state and fiscal year<sup>1</sup>, as reported by the QC data.<sup>2</sup> The “denominators” are population estimates based on the Current Population Surveys (CPS). The definition of a CPS “household” and an FSP “household” seem similar in that both are defined as a group of persons who regularly consume food together.<sup>3</sup> The preferred measure of caseloads in this report is equal to the number of participants divided by the estimated population in similar types of households. For single adult households with children, for example, the relevant population is the population in households with a single adult and children.<sup>4</sup> This study does not analyze food stamp “participation rates,” usually defined as the number of participants as a percentage of those eligible for food stamps.

This proportion measures food stamp receipt for important types of households in a straightforward manner, and seems especially relevant for single adult households with children because it measures food stamp usage among an historically poor group of households. Caseloads measured as a proportion of the

---

<sup>1</sup> Fiscal year 1999 begins on October 1, 1998 and ends on September 30, 1999.

<sup>2</sup> The rules used to count participants and to classify QC households as single adults with children, etc., are the same as those used in Chapter 3. Participants are those certified to receive food stamps; the QC data classify these persons as “members of the Food Stamp case under review.” Other ineligible persons recorded in the QC data are not counted. Analyzing numbers of participants seems most appropriate because FSP program costs are most closely related to numbers of participants rather than numbers of units. Using numbers of units or households as a “unit of analysis” would effectively give additional weight to persons in small units (often elderly, adults living alone, and child-only units) and reduced weight to persons in the largest units (which generally consist of adults and children).

<sup>3</sup> In the CPS, a household consists of all the persons who occupy a house, an apartment, or other group of rooms that constitutes a “housing unit.” A group of rooms or a single room is regarded as a “housing unit” when it is occupied as separate living quarters; that is, when the occupants do not live and eat with any other person in the structure.

<sup>4</sup> For estimates of populations that include children (the entire population, all non-elderly persons, persons in households with children, etc), the March CPS data are used. For estimates of populations that include only adults and/or elderly persons, the CPS outgoing rotation group (ORG) data are used. The sample sizes in the ORG data are three times the size of the March CPS data and allow more precise population estimates, but the ORG data do not consistently record the presence and number of children over these years.

population are readily compared across large and small states. By analyzing food stamp participants as a proportion of the population, one can explore the combined effect of economic trends and policy changes on both the proportion of the population that is eligible for food stamps and the proportion of eligible persons who actually receive food stamps. Analyzing participation rates alone would miss any potentially large effects of economic trends and policy changes on the proportion of the population that is eligible for food stamps.

The chosen caseload measures and models take population trends by type of household, the economy, demographic trends, and policies as given, or “exogenous.” The models assume that these factors determine both participation rates and the number of eligible persons. By determining these two outcomes, these factors determine the proportion of the relevant population that receives food stamps.

Although the preferred measure of caseloads has many advantages, a potential problem is that the number of types of households may not be “exogenous,” but determined partly by the effects of economic and policy changes. It is possible that welfare reform may have affected the number of single adult households with children. If so, analyzing the chosen measure of caseloads will provide an incomplete sense of the effects of economic and policy changes. To address this concern, alternative caseload measures are also considered. These alternative measures are discussed later in this chapter.

**Macroeconomic trends.** State-level annual unemployment rates are the best available year-to-year measure of the state of the labor market. Unemployment rates reflect labor conditions facing all adults rather than just those with low incomes or limited skills, but these rates are nevertheless clearly correlated with caseload changes. State-level unemployment rates are available from the BLS.

**State fixed effects and year effects.** These variables attempt to control for unmeasured, systematic variation in caseloads that could otherwise bias estimates of the effects of program and economic factors. State fixed effects control for enduring differences in caseloads across states. Without controls for these fixed effects, the model could overstate (understate) the impact of policy changes on caseload declines if states with historically low (high) participation rates imposed these policy changes. With state fixed effects, the estimated effects of economic and policy measures cannot take into account any time-invariant, cross-state variation in caseloads. The coefficients of the year effects measure the effects of nationwide events not measured by the other independent variables, including nationwide policies such as

changes in the EITC. With state and year effects, the economic and policy measures can only explain variation in caseloads that occurs over time and within states.

**Administrative features of the FSP:** Many facets of FSP administration, such as the accessibility of local offices and the effectiveness of local “outreach” to eligible non-participants, are difficult to quantify, but some are more easily measured. Three variables measure the effects of some administrative features of the Food Stamp Program. These are an indicator for the presence of an EBT system, state FSP error rates, and the proportion of working FSP households with especially brief recertification periods.

Electronic Benefits Transfer (EBT): A total of 35 states implemented electronic benefits transfer (EBT) systems during the 1990s. EBT cards may increase caseloads by making the use of food stamps easier and less visible, reducing stigma and participation costs associated with the program. Some may find the EBT technology too confusing or intimidating to use, however. The EBT variable measures the proportion of the fiscal year in which a statewide EBT system was in effect.<sup>5</sup>

State FSP error rates: A state’s annual error rate is equal to the sum of all benefits issued in error (overpayments and underpayments are added, not netted) divided by the sum of all payments. As was discussed in Chapter Two, states had a strong incentive to lower error rates because the food stamp quality control (QC) system imposed sanctions if a state’s error rate was unusually high. During the 1990s, some states responded to the threat of these sanctions by imposing more burdensome reporting requirements on food stamp recipients, and these requirements may have encouraged some families to leave the FSP. State error rates are included as an explanatory variable to control for the effects of reporting requirements on caseloads. Higher error rates are assumed to be associated with less aggressive attempts to reduce payment errors, easier reporting procedures for recipients, and higher caseloads.

The “frequent recertification rate:” Errors are more likely to occur among households with earnings, which vary from month to month and which may be difficult to track. After 1994, some states tried to reduce errors by shortening the recertification periods of working families. As a result, a household member must visit the welfare office more frequently to report earnings and assets, and some households

---

<sup>5</sup> By the end 1999, statewide EBT systems were in place in AL, AK, AZ, AR, CO, CT, DC, FL, GA, ID, IL, KS, KY, LA, MD, MA, MN, MO, NH, NJ, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX UT, VT, and WA. Most states implemented EBT in 1997 or afterward.

**Table 5-1  
Measures of FSP Caseloads**

	Fiscal year			Percentage Change in Measure of FSP Caseloads		
	1989	1994	1999	1989-94	1994-96	1996-99
<i>All FSP participants as a percentage of the U.S. population</i>	7.8%	10.8%	6.7%	38.7%	-9.1%	-31.9%
<i>Participants by type of household, as a percentage of the population in similar CPS households</i>						
Single adults with children	60.3%	78.6%	48.1%	30.3%	-8.4%	-33.2%
Multiple adults with children	4.9%	6.6%	3.4%	33.9%	-14.6%	-39.5%
Adults only	3.3%	5.0%	3.1%	50.8%	-5.4%	-34.2%
Elderly only	4.4%	5.5%	4.8%	24.0%	-2.7%	-10.6%
Elderly and others	2.9%	2.9%	1.8%	0.4%	-15.0%	-26.3%
<i>Participants by type of household, as a percentage of the population in a similar age group</i>						
Single adults with children/Persons under age 60	4.4%	6.3%	3.9%	41.5%	-7.8%	-32.5%
Multiple adults with children/Persons under age 60	2.7%	3.6%	1.8%	33.0%	-15.0%	-40.9%
Adults only/Persons age 18-60	1.4%	2.1%	1.4%	48.8%	-4.3%	-31.9%
Elderly only/Persons age 60 and above	3.2%	4.0%	3.5%	24.5%	-2.8%	-11.0%
Elderly and others/All Persons	0.3%	0.3%	0.2%	2.2%	-15.7%	-26.5%

The numbers of participants are obtained from FSP-QC data. Estimates of the entire population, the population under 60, and the numbers of persons in each type of CPS household (households rather than families) are obtained from the March Current Population Surveys (CPS). Estimates of the adult and elderly populations are obtained from the CPS outgoing rotation group (ORG) data.

may have responded by leaving the FSP. The variable used to capture this effect is the “frequent recertification rate,” equal to the number of participants in households with both earnings and a recertification period of 1-3 months divided by the number of participants in households with earnings.<sup>6</sup>

**State AFDC/TANF policies:** The remaining variables in the basic model measure the timing of specific policies implemented as part of AFDC waivers and state TANF plans. These variables measure the timing of implementation of:

<sup>6</sup> The error rate and recertification variables may suffer from “endogeneity problems” that could bias their estimated effects. If a state imposes a 1-3 month recertification period on some working families, and a large proportion of these families respond by leaving the FSP while the exit rate among the other working families is lower, then the estimated proportion of working families with short recertification periods could go down over time as caseloads decline, even though short recertification periods really do reduce caseloads. This bias is hopefully minimized by using the proportion of those in working FSP households with short recertification periods

- Time limits on AFDC/TANF receipt (the date on which families first meet these time limits);
- Family caps for AFDC/TANF recipients;
- Changes in levels of earned income that is disregarded for the purpose of calculating TANF benefits;
- Partial sanctions, delayed full family sanctions, and immediate full family sanctions for noncompliance with work requirements;
- Lifetime TANF sanctions for noncompliance with TANF work requirements; and
- Comparable disqualification from food stamps for noncompliance with TANF work requirements.

With the exception of the measure of earned income disregards, these policy measures are equal to one in states and years in which these policies were imposed, and zero otherwise. When policies are implemented in the middle of a fiscal year, these variables are set equal to the proportion of the year in which the policy was implemented. The next section describes these AFDC and TANF policy measures.

## **5.2 Measuring Changes in State AFDC/TANF Policies**

State TANF plans, which were initially implemented from late 1996 to the end of 1997, introduced a wide range of time limits on cash assistance, sanctions, family caps, and other policies. In prior years, many states also received waivers to implement new AFDC program rules. By now, several researchers have documented the numerous characteristics and timing of these policies. The variables used in this report are based on a review of several widely recognized comprehensive studies:

- The CEA (1999) study of AFDC/TANF caseloads;
- A review of state policies from the US Department of Health and Human Services (Crouse 1999);
- A report summarizing new state policies from the Urban Institute (Gallagher et al, 1998);
- Reviews of FSP policy changes from the US General Accounting Office (1998 and 2000);
- The State Policy Documentation Project (SPDP), a joint project of the Center on Budget and Policy Priorities and the Center for Law and Social Policy.

**Table 5-2: Means of Important Measures of Policy Changes, Economic Trends, and Other Variables**

Variable	Details	Mean Values for Each Fiscal Year			
		1989	1994	1996	1999
Unemployment rate	Obtained from BLS	0.053	0.064	0.055	0.043
Employment growth rate	Obtained from BLS	0.022	0.023	0.013	0.014
EBT systems	Indicator variable*	0.000	0.019	0.107	0.504
FSP error rates	Total errors/total benefits; calculated for each subgroup	0.090	0.098	0.087	0.089
Frequent recertification rate	Percent of working FSP households with a recertification period of no more than 3 months; calculated for each subgroup	0.078	0.081	0.178	0.327
AFDC/TANF time limit	Indicator variable* for benefit termination, reduction, or work trigger time limits	0.000	0.000	0.042	0.485
AFDC/TANF family cap	Indicator variable*	0.000	0.053	0.239	0.526
AFDC/TANF earnings disregard	Earnings disregarded in TANF benefit formula when a family earns \$750 in a month, in 1998 dollars, divided by 100 and expressed in log form.	0.357	0.510	0.894	1.074
TANF partial sanctions	Indicator variable*	0.000	0.051	0.152	0.401
TANF delayed full family sanctions	Indicator variable*	0.000	0.001	0.123	0.347
TANF immediate full family sanctions	Indicator variable*	0.000	0.011	0.013	0.252
Comparable disqualification	Indicator variable*	0.000	0.000	0.000	0.387
Lifetime TANF sanction	Indicator variable*	0.000	0.000	0.000	0.116
Minimum wage	Monthly earnings (1998 dollars) from a minimum wage job in each state. Assumes 30 hours of per week for 4.3 weeks. Amount is divided by 100 and expressed in log form.	1.787	1.814	1.766	1.899
20th wage percentile	Twentieth percentile of weekly wages of employed persons age 18 and above. Expressed in 1998 dollars and in log form.	5.539	5.504	5.511	5.598
Republican governor	Indicator variable*	0.468	0.455	0.571	0.656
Both state houses Republican	Indicator variable*	0.064	0.094	0.329	0.302
Both state houses Democratic	Indicator variable*	0.672	0.524	0.326	0.379

\* Indicator variables are equal to 1 when a policy is implemented statewide, and zero otherwise. When policies are implemented in the middle of a fiscal year, these variables are equal to the proportion of the year (eg, 0.5) in which a policy is in effect. All of the variables in this table are calculated for each state, using appropriate weights; the aggregate values shown here are a weighted average of values by state, with the weights equal to the state population in each year.

Recent reports by Pavetti and Bloom (2001), and Blank and Schmidt (2001) also provide valuable information of TANF policies by state. This information can be used to devise indicator variables that measure the proportion of each fiscal year in which specific policies were imposed in each state. Although other studies have employed simpler indicators for the imposition of state TANF plans, the main results in this report are based on measures of specific policies such as sanctions and time limits. The ongoing policy debate is likely to focus on specific policies and not “TANF” in general.

**Time limits.** The measure of time limits used in this study considers not only “benefit/termination” time limits but also several “work trigger” time limits. The measure of time limits designates 23 states as having statewide time limits reached by some families by 1999. Of these 23 states, 7 had work trigger time limits at some time during the observation period. A review of several summaries of policy changes indicates the following:

- A total of 12 states (CT, FL, ID, LA, MA, NC, NE, NV, OR, SC, TN, and VA) have TANF benefit termination time limits that are less than 5 years. In these states, the first families reached the time limit during 1998 or 1999.
- Three states -- Arizona, Indiana, and Texas -- have imposed “reduction time limits” in which only the adult portion of the TANF grant is eliminated after 12-36 months.<sup>7</sup>
- In Wyoming, families that have received assistance for at least three years by January 1997 are eligible for only two additional years of assistance.
- Seven states (CA, DE, MT, NH, SD, VT, WI) have or previously have had time limits that triggered work requirements.<sup>8</sup>

This measure is very similar to the one used in the CEA (1999) study of TANF caseloads, with some additional information added for fiscal year 1999. The time limit variables in this study measure the time at which the first families reach the state's time limit.<sup>9</sup> The proportion of the recent decline in food stamp

---

<sup>7</sup> The Texas benefit reduction time limit occurs at 12, 24, or 36 months of benefits, depending on the education and work experience of the client. In Arizona and Indiana, the benefit reduction time limit occurs at 24 months.

<sup>8</sup> Five states (AR, DE, GA, OH, UT) have benefit termination time limits of less than 5 years, but the first families did not reach this limit after fiscal year 1999 (the end of the observation period for this study). A total of 23 states (AK, AL, CO, DC, HI, IA, IL, KS, KY, MS, MN, MO, MT, NH, NJ, ND, NM, OK, PA, SD, TX, WA, WI, WV) have imposed a 5-year benefit termination time limit. No families in these states had reached the time limit in these states by the end of fiscal year 1999. Five states (CA, MD, ME, NY, RI) have 5-year reduction time limits. Michigan and Vermont have no termination or reduction time limits.

<sup>9</sup> Although it is difficult to pinpoint when time limits begin to affect families – especially since some time limits are phased in across states over time – the evidence from demonstrations in Arizona, Connecticut, Delaware, Florida, and Virginia suggests that clients do not “bank”



caseloads that can be explained by the effects of termination or reduction time limits is therefore limited because most of the nation's TANF caseload did not meet the termination or reduction time limits by the end of 1999.

While these variables measure a very important aspect of TANF plans, the effects of time limits in these states may vary because of many factors that are difficult to quantify. States and local offices vary in terms of willingness to grant exemptions or extensions to time limits because of disabilities, the presence of young children or disabled family members, high unemployment, domestic violence, lack of child care, “good faith effort,” or other reasons. The extent to which local offices inform time-limited families about their eligibility for food stamps may also vary considerably. The effects of time limits may also depend on other TANF policies in ways that are difficult to predict. Strong sanctions and work requirements may reduce the effect of time limits because these policies will probably remove families from TANF before they would otherwise have reached the time limit. On the other hand, with strong work requirements, families that reach the time limit will tend to have earned income and may be more likely to decide to forego food stamps than time-limited families in states with weaker work requirements.<sup>10</sup>

**Sanctions.** By the late 1990s, all states imposed partial or full family sanctions for violations of work requirements. TANF sanctions can also directly reduce food stamp benefits under a rule known as *comparable disqualification*. If TANF work requirements are not met, the non-compliant adult head of household must be ineligible for food stamps as long as he or she is not exempt from the FSP work requirements.<sup>11</sup> Several states have imposed the strongest version of this rule, declaring the entire household ineligible for food stamps when one member is in violation of TANF work requirements. These full family sanctions of food stamp benefits can last up to six months.<sup>12</sup> The most recent information from the studies listed previously sometimes describe a state's sanction policies in different ways, but these sources generally agree that, by 1999:

---

months in anticipation of the time limit and that “pre-time limit” impacts of TANF policies are minimal. See Bloom et al (2000a), Bloom et al (2000b), Fein and Karweit (1997), Gordon and Agodini (1999), Kornfeld et al (1999), and Brown, Bloom, and Butler (1997). Grogger (2000), using CPS data, finds that “anticipatory effects” may have accounted for 16-18 percent of the caseload decline. Bloom et al (1998) finds very modest “pre-time limit” impacts in Vermont.

<sup>10</sup> See Bloom and Pavetti (2000) and Moffitt and Pavetti (1999) for discussions of the potential effects of time limits.

<sup>11</sup> In the Food Stamp Program, household members caring for children under six years of age are exempt from work requirements.

<sup>12</sup> States may also impose partial, but not full sanctions of food stamp benefits for noncompliance with other TANF requirements such as cooperation with child support enforcement. See GAO (2000).

- A total of 15 states (AR, AK, CA, DC, IN, ME, MN, MO, MT, NC, NH, NY, RI, TX, WA) imposed partial TANF sanctions for initial and subsequent TANF program violations (“partial/partial” sanctions.)
- Another 21 states (AL, AZ, CO, CT, DE, GA, IL, KY, LA, MA, MI, ND, NJ, NM, NV, OR, PA, SD, UT, VT, WV) imposed partial sanctions for the initial TANF program violation and then full family sanctions for repeated violations (“partial/full” sanctions).
- The remaining 15 states (FL, HI, IA, ID, KS, MD, MS, NE, OH, OK, SC, TN, VA, WI, WY) imposed full family TANF sanctions for the first and subsequent violations of work requirements (“full/full” sanctions).
- A total of 19 states (AL, AZ, DE, FL, GA, IA, KS, LA, MA, MS, NE, NJ, ND, OH, OK, SD, TX, UT, VA) imposed the strongest form of comparable disqualification, declaring the entire household ineligible for food stamps when a member is in violation of TANF work requirements.
- In 7 states (DE, GA, ID, MS, NV, PA, WI), full family TANF sanctions resulted in a lifetime ban on cash assistance. In other states, full family sanctions were imposed for a fixed period.

This study employs five sanction variables that measure the implementation of each of the five types of sanction policies listed above. These variables measure the effect of the sanction policies, relative to the older AFDC/JOBS sanction policy.

The effects of sanctions on TANF and food stamp benefit receipt, like the effects of time limits, depend on many factors that can be difficult to measure. Some states, such as Michigan, Pennsylvania, and Rhode Island, apply different sanctions to different subgroups, while other states may have changed sanction policies over time. The minimum length of sanctions varies. Strong sanctions and work requirements may or may not be offset by broader exemption policies. States and local offices vary in terms of how they warn clients about sanctions, offer support services and other assistance to help avoid sanctions, provide opportunities to change behavior, grant exemptions, and inform sanctioned TANF leavers as to their continued eligibility for food stamps.<sup>13</sup>

**Family caps:** Under waivers and TANF, states have had the option to implement family caps that either eliminate or reduce the additional benefit for children who were conceived while the mother was receiving AFDC/TANF. Based on a review of the recent comprehensive studies of state AFDC waivers and TANF plans, a total of 22 states (AZ, AR, CA, CT, DE, FL, GA, ID, IL, IN, MD, MA, MS, NE, NJ, NC, ND, OK, SC, TN, VA, WI) have imposed some sort of family cap. Idaho and Wisconsin provide flat

---

<sup>13</sup> Bloom and Pavetti (2001) review these issues in greater detail.

grants regardless of family size. Connecticut and Florida provide only partial increases in TANF assistance. Oklahoma and South Carolina provide some additional assistance in the form of a voucher. The family cap variable indicates the time at which the family cap was initially implemented.

**Earnings disregards:** Under waivers and PRWORA, states have been able to change the levels of monthly earnings that may be disregarded (for example, the first \$200) before additional earnings are subtracted from the maximum monthly TANF grant, according to the state's benefit calculation formula. From 1994 to 1999, 34 states substantially increased the level of earned income disregarded for the purpose of benefit calculation. Following the CEA (1999) study, the size of the earnings disregard is measured by the amount of earnings (inflation-adjusted) that is disregarded if the AFDC/TANF recipient earns \$750 per month.

### **5.3 Alternative models and policy measures**

The main findings in the next chapter are obtained using a basic model that employs only the variables described in the previous two sections. In this basic model, additional controls for lagged caseload trends, and economic, demographic, and political trends have been omitted because of concerns that these additional variables could control for caseload trends that are actually caused by policy changes. It is, however, also possible that additional variables could control for caseload trends driven by non-policy factors, and that using these additional controls could provide better estimates of policy effects. As the previous chapter indicated, this controversy is difficult to resolve because we lack a perfect natural experiment that clearly separates the effects of policy changes and other forces.

Other studies have raised convincing arguments for alternative models with additional controls for economic, demographic, and political trends, and lagged caseload measures and state time trends. Other reasonable measures of FSP caseloads and policy changes have also been employed in other studies. This report explores whether the main findings are sensitive to the use of these alternative specifications. This section reviews the key variables employed in these alternative models.

#### **5.3.1. Additional variables measuring economic, demographic, and political trends**

Additional economic variables: Lagged values of unemployment rates control for the possibility that less skilled persons may be the last to benefit from a strong economy and that some families may need to

consider public assistance only after a recession persists. A second measure of economic activity is the rate of growth in employment from the previous year. This variable, which was used in Ziliak, Gundersen, and Figlio (2001), was obtained from the BLS.

Prevailing wages: In states and years in which prevailing wages are relatively high, labor demand may be pushing wages upward and reducing unemployment. If so, one might expect welfare participation to be relatively lower. Following Wallace and Blank (1999), the log of the twentieth percentile of weekly wages (inflation adjusted) is used to control for general trends in wages. This variable is obtained from the CPS outgoing rotation group data.

Minimum wage. Increases in the minimum wage increase the incentive to work among less skilled persons and may lead to increases in their earned income and reduced likelihood of food stamp participation.<sup>14</sup> The federal minimum wage was increased to \$4.25 in 1991, to \$4.75 in 1996, and to \$5.15 in 1997. By 1999, some states, including Alaska, California, Connecticut, DC, Delaware, Oregon, Washington, Rhode Island, Vermont, and Washington, approved state minimum wages that were higher than the federal minimum. Following the CEA (1999) study, this variable is expressed in 1998 dollars as a monthly amount, assuming a person works 30 hours per week for 4.3 weeks.

Demographic variables. Several variables control for general demographic and social trends that may be correlated with the use of public assistance. The variables used are the proportion of the population that is African-American (from CPS outgoing rotation group data), the proportion of births to unmarried women (from Vital Statistics), and the proportion of the population that consists of new immigrants (current and lagged one and two years, from the INS).<sup>15</sup>

Political variables: Three variables indicating important political outcomes -- the presence of a Republican governor, Republican control of the State Senate and House, and Democratic control of the State Senate and House -- are included to control for trends in social attitudes that may have an effect on food stamp participation that is independent of specific policy changes.<sup>16</sup> These measures are admittedly

---

<sup>14</sup> Higher minimum wages could in theory reduce employment among less skilled workers, although Card and Krueger (1998) and other studies find that the employment effects have been minimal.

<sup>15</sup> The proportion of births to unmarried women may be endogenous if it has been affected by welfare policy. Omitting this variable has little effect on the estimates of the other parameters, however. Wallace and Blank (1999) also used the proportion of births to unmarried women and the proportion of the population which consists of new immigrants.

<sup>16</sup> Wallace and Blank (1999) and Ziliak, Gundersen, and Figlio (2001) also used similar measures of trends in political perspectives.

imperfect indicators of social attitudes about welfare reform, in part because changes in attitudes could occur with or without changes in the party in power.

State-level time trends and lagged dependent variables: State-level time trends control for steady changes in participation that occurred throughout the observation period. Lagged dependent variables control for serial correlation in participation rates. The arguments for and against the use of lagged dependent variables and state time trends were discussed in the previous chapter.

Potential collinearity problems: It is possible that the variables in the basic model and some of these explanatory variables could be highly correlated. Highly collinear independent variables tend to produce estimated effects that are unstable and unreliable, although the sum of the estimated effects of highly collinear variables can be estimated with reasonable precision. Further analysis showed that that the current and lagged unemployment rate variables are highly correlated, so the effect of the economy is estimated as the sum of the estimated effects of these variables. State fixed effects and time trends are correlated (as expected because these variables for a specific state are only greater than zero in observations for this state) but this is not a problem because we do not use these coefficients. The other pairs of correlation coefficients are not high enough to introduce problems of “multicollinearity.” More sophisticated analyses of potential multicollinearity problems, using “variance inflation factors” (VIF indices), did not find evidence that multicollinearity problems lead to unstable estimates of coefficients.

### **5.3.2 Alternative measures of FSP caseloads**

A shortcoming of the preferred measure of caseloads – participants as a proportion of the population in similar households -- is that it will not reflect changes in the rate of formation of these households. These changes could be the result of economic and policy changes. In particular, welfare reform could have affected the number of single parents. Another potential problem is that the FSP-QC data and the CPS data would not necessarily classify all households the same way.<sup>17</sup> One alternative measure of FSP

---

<sup>17</sup> The FSP-QC data may omit ineligible persons who reside in the household, and the CPS household could include persons who actually eat separately or might not be considered as part of the food stamp unit if the household actually received food stamps. These classification problems are perhaps most likely to occur in households with unrelated persons; these households are more common in the CPS data than in the QC data. Roughly ninety percent of CPS households contain only related persons. These CPS households contain a primary family, one of whose members serves as the reference person, and perhaps one or more related subfamilies, the most common example of which is a young married couple sharing the home of the husband's or wife's parents. About one in ten CPS households consist of persons living alone, unrelated subfamilies that do not include the householder or relatives of the householder, and/or unrelated individuals. An alternative way to classify CPS sample members into “households” places related persons in the same household but unrelated persons in a separate household (children who were unrelated to the primary family or related subfamilies and who did not reside with unrelated adults or elderly

caseloads estimates the number of FSP participants as a proportion of the population in the relevant age group, regardless of household membership. In the case of single or multiple adults with children, the relevant population is the number of persons under age 60.<sup>18</sup> Although this alternative measure of FSP caseloads has a less straightforward interpretation, changes in the alternative measure of FSP caseloads will reflect changes in the rate of formation of specific types of households.

A second alternative measure of FSP caseloads attempts to separate more clearly the effects of state TANF and other policies and the effects of the non-citizen rules of PRWORA. If the population of low-income households with non-citizens is correlated with state-level policies, then estimates of effects of policies on food stamp receipt will be biased, reflecting both the effects of policies and the effects of the rules for non-citizens. Unfortunately, the CPS does not ask about citizenship until 1994 and afterward, so it is not possible to estimate the population in households with non-citizens participation from 1987-1993. To address this issue, this report also briefly analyzes a second measure of FSP caseloads that is simply equal to the number of FSP participants in households without non-citizens (that is, without non-citizen participants and without ineligible non-citizen household members.)

### **5.3.3 Alternative AFDC/TANF policy measures**

Other studies have employed measures of policy changes that differ from those in the basic model. These alternative policy measures are summarized below:

Revised time limit variable: This measure considers only benefit termination or reduction time limits. By 1999, some families reached these time limits in 16 states.

Work exemptions: Under AFDC, recipients could be declared exempt from JOBS requirements if they were responsible for children under three years of age, or under six years of age if child care was not guaranteed by the state. PRWORA requires that states meet work participation rates, and allows states to omit only caretakers of children under one year from the calculation of these work participation rates.

---

persons were classified as belonging to the primary family and any related subfamilies.) The results of this report did not change appreciably when this alternative way to classify persons into households was employed.

<sup>18</sup> One could have followed Moffitt (1999) and Schoeni and Blank (2000) and used estimates of the population in specific age groups with low levels of education because these persons are more likely to need public assistance than those with higher levels of education. This strategy was not employed because of the high proportion of persons in the FSP-QC data whose level of education was missing.

States therefore have a financial incentive to set the age exemption at one year or less. According to Gallagher et al (1998) and the CEA (1999) study, five states had no exemptions based on the age of the child. A total of 14 states exempt caretakers of children whose age is 6 months or less. The remaining states other than New Hampshire, Texas, and Colorado exempt caretakers of children whose age is less than 3 years. This study explores the effects of three variables that measure these 3 categories of exemption policies listed above. These three variables are identical to the ones used in the CEA (1999) study. These three variables measure a critical aspect of exemption policy, but exemption rules differ across states for many other reasons that are difficult to measure. In some cases, the effect of stricter exemption rules may be offset by broadening allowable work activities (Thompson et al, 1998).<sup>19</sup>

Measures of sanctions obtained from the CEA (1999) study. This study and the CEA (1999) study classify the sanction policies of 9 states in different ways, perhaps because policies may change over time or because the classification of some state policies requires some judgment.<sup>20</sup> This study also examines the effects of the CEA's three-way classification of sanctions.

Other policy changes: Some states have offered diversion programs in which new applicants received a fixed sum in return for becoming ineligible for TANF benefits for a specific period. Still other states require initial job search for new applicants. These policies may discourage the use of food stamps. The simplest measures of TANF plans are indicators of the implementation of state TANF plans and AFDC waivers. Blank and Schmidt (2001) discuss a three way classification, labeling state TANF plans as "low, moderate, or high" intensity, based on their overall work incentives as determined by benefit levels, earnings disregards, sanctions, and time limits. These variables are also tested in this report.

This study does not control for the maximum AFDC/TANF benefit, as the CEA (1999) study and other studies have done. During the late 1990s, the maximum AFDC/TANF benefit in the vast majority of

---

<sup>19</sup> Also note that many states with child age exemptions for work requirements do not have child age exemptions for time limits.

<sup>20</sup> A comparison of the information in the CEA study and the State Policy Documentation Project reveals some differences in the way these 9 states are classified. Arkansas is classified as having full/full sanctions in the CEA study data but partial/partial sanctions in the SPDP, apparently because the state's policy changed. Delaware, Georgia, Nevada, West Virginia, and Pennsylvania are classified as having full/full sanctions in the CEA study data but partial/full sanctions in the SPDP. Pennsylvania's policy is difficult to quantify because sanctions become stronger after 24 months of assistance. Hawaii is classified as having partial/partial sanctions in the CEA study data but full/full sanctions in the SPDP. Iowa is classified as having partial/full sanctions in the CEA study data but full/full sanctions in the SPDP. Indiana, which has some policies that depend on the clients' work readiness, is classified as having partial/full sanctions in the later years of the CEA study data but partial/partial sanctions in the SPDP.

states changed very little in nominal terms, so there is little reason to expect that changes in the maximum benefit explain food stamp caseload decline.<sup>21</sup>

## 5.4 Summary and Key Issues

Several caveats should be kept in mind while reviewing the results. As this chapter has explained, the policy variables chosen measure the presence of extremely important TANF rules, but cannot measure many other potentially important elements of TANF policy. Many recent policies were imposed at the national level, so their effects cannot be estimated by comparing participation trends in states with and without these policies. Some elements of TANF, including the work requirements and the “message” of the importance of work, were imposed across the nation. The food stamp rules for ABAWDs and non-citizens, changes in the SSI program, the EITC, and other policies were also imposed nationwide. Subtle but potentially important variation in local office procedures for administering households subject to sanctions, time limits, and other policies also cannot be measured.

It is also unclear whether the models have correctly controlled for all extraneous demographic and social trends that could bias the estimated effects of policies. Sanctions may have a statistically significant association with caseload decline because sanctions actually reduce caseloads or because the imposition of sanctions tends to be correlated with other factors that may reduce caseloads, such as unmeasured changes in prevailing attitudes about welfare or demographic trends. Finally, at least some statistically significant findings may be attributable to chance alone. Whenever a large number of results are presented, conventional hypothesis tests will eventually indicate that some relationships are statistically significant even if no such relationships exist.

Despite these potential problems, the methods described in this chapter provide one of the best available ways to assess the critical question of how recent policy changes have affected food stamp participation trends. The policy measures employed are based on several widely respected studies of state policies. All other research methods, such as exit studies, random assignment studies in the few states that have permitted them, and process studies of local office operations provide valuable information but do not by themselves provide an estimate of the effect of policies on national food stamp caseload trends. The next chapter presents the findings of the statistical analysis of FSP caseloads.

---

<sup>21</sup> Omitting this variable had little effect on the estimated effects of the other policy variables.