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Explaining Recent Trends in Food Stamp Program Caseloads

Final Report

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Abstract

This report provides the results of a study on the effects of changes in the economy and recent policy changes on trends in food stamp caseloads during 1987-99 and seeks to account for the sharp decline in caseloads after 1994. The study analyzed food stamp receipt among different types of households, such as single- and multiple-adult households with children and adults and elderly persons living separately. The study found that the economy and recent policy changes affected different types of households in different ways. The economy had an especially strong effect on caseloads from multiple-adult households with children and on adults living separately. The economy explains at least 20 percent of the food stamp caseload decline between 1994 and 1999. Changes in several measures of specific components of Temporary Assistance for Needy Families (TANF) account for another 21 percent. Restricted eligibility for noncitizens and adults without dependents could account for perhaps 10 percent. While most of the findings appear robust, some findings should be viewed with caution. The estimated effects of TANF are sensitive to the inclusion of additional controls for other factors that may also influence caseloads. Furthermore, some estimated effects of TANF policies appear to persist among households that do not include children, even though this program principally serves households with children.

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Abstract

This report analyzes the possible effects of the economy and recent policy changes on trends in food stamp caseloads from 1987-1999, and seeks to account for the sharp decline in caseloads after 1994. The report studies food stamp receipt among different types of households – such as single- and multiple-adult households with children, and adults and elderly persons living separately –because recent policy changes probably had different impacts on different types of households. The proportion of the population receiving food stamps is estimated for each type of household and for each state and year from 1987 to 1999, using administrative data on food stamp participants and population data from the Current Population Survey. This report analyzes the relationship between these measures of caseloads and measures of economic trends and policy changes, taking advantage of the "natural experiment" provided by variation in policy changes across states and over time.

The main findings, which are estimated using minimal controls for other potential determinants of food stamp receipt, confirm that different types of households were affected in different ways by the economy and policy changes. The economy has an especially strong effect on caseloads from multiple adult households with children and adults living separately. Shorter recertification periods also reduce food stamp caseloads from these two types of households, which include many working poor food stamp participants. TANF sanctions reduce caseloads from households with children, and Electronic Benefits Transfer (EBT) systems increase caseloads. The main findings indicate that the economy explains at least 19 percent of the total caseload decline from 1994 to 1999, FSP reporting requirements explain another 8 percent of the decline, and several measures of specific components of TANF plans together account for another 21 percent of the decline. Restricted eligibility for non-citizens and adults without dependents could account for perhaps 10 percent of the decline. These main findings should, however, be viewed with caution because the estimated effects of TANF are sensitive to the inclusion of additional controls for other factors that may also influence caseloads, and because some of the estimated effects of TANF policies persist among households that do not include children. These findings show that it is not easy to separate the effects of policy changes and other factors on caseloads trends in the late 1990s. The results nevertheless indicate the recent policy changes may account for some of the recent food stamp caseload decline.

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Executive Summary

The recent, rapid decline in the number of participants in the Food Stamp Program (FSP) has led to renewed interest in understanding what causes these caseloads to rise and fall. Both the strong U.S. economy and numerous policy changes played some role in reducing caseloads, but the relative importance of economic trends and each policy change is unclear. In the debate over the reauthorization of PRWORA, understanding the reasons for this decline in caseloads is potentially important for designing policies to improve program accessibility, a key issue because the number of eligible non-participants appears to have increased from 1994-1999 (USDA, 2001). Explaining trends in food stamp caseloads is challenging, however, in part because the FSP serves so many different types of households that were affected in different ways by recent policy changes.

This report analyzes how policy changes and economic factors may have affected food stamp caseloads from different types of households from 1987-1999. The types of households consist of:

- single adults with at least one child;
- multiple adults with at least one child;
- one or more adults living separately, without children or elderly persons;
- one or more elderly persons living separately, without children or adults;
- elderly persons living with adults or children; and
- child-only units (child food stamp recipients with ineligible guardians).

This report differs from other recent studies in that it uses administrative data on FSP participants in these types of households to analyze the proportion of the population that uses food stamps. The FSP Quality Control (QC) Data, an annual administrative database with information on about 50,000 FSP households, are used to estimate the number of participants in each type of household and by year and state. The Current Population Survey (CPS), a large survey of households, provides estimates of the population in specific households by year and by state.

Recent Policy Changes

A wide range of recent policy changes may have affected recent trends in FSP caseloads. Because the FSP provides benefits for so many different types of households, changes in virtually any public assistance program for low-income persons could also affect food stamp receipt. The potential effects of each these policy changes are likely to vary considerably across different types of households.

AFDC and TANF: The Personal Responsibility and Work Opportunity and Reconciliation Act of 1996 (PRWORA) replaced the Aid to Families with Dependent Children (AFDC) program with Temporary Assistance for Needy Families (TANF), which places greater emphasis on increasing earnings and reducing welfare dependence. The rules of TANF include the following:[1]

- States must achieve minimum rates of participation in work and work-related activities.
- All states must impose a 5-year lifetime time limit on federal cash assistance, and may impose time limits on cash assistance that are less than 5 years. These time limits may trigger benefit termination, benefit reduction, or work requirements.
- States must impose at least partial sanctions for noncompliance with program requirements, and may impose full family sanctions. Sanctions under AFDC were typically milder.
- Under comparable disqualification, TANF sanctions directly reduce food stamp benefits, and several states have declared the entire household ineligible for food stamps when one member is in violation of TANF work requirements.[2]
- States may implement family caps that either eliminate or reduce additional TANF benefits for children who were conceived while the mother was receiving TANF.
- States may increase the level of earnings that is disregarded for the purpose of benefit determination, and allow families to keep more of their earnings.

During the years before PRWORA, states were also given waivers to change policies, and several states experimented with stronger work requirements, sanctions, and other program innovations.

The new rules of PRWORA and TANF were expected to reduce food stamp receipt as well as TANF receipt among households with adults and children. TANF may have encouraged families with children to increase their earned income by enough to make them ineligible for food stamps as well as TANF. Under comparable disqualification, some families lost food stamp benefits directly as a result of TANF sanctions. Other families that lost TANF benefits because of sanctions, time limits, or difficult work requirements may have left the FSP because they decided that the stigma and reporting burdens of welfare are worth bearing to receive both TANF and food stamps, but not food stamps alone. Some TANF leavers may not have been aware that they remained eligible for food stamps.

For other reasons, however, the ultimate effect of TANF on FSP caseloads may have been limited. Families that left TANF because of sanctions, time limits, and modest increases in earnings often still

[1] Early summaries of the rules of TANF can be found in Crouse (1999) and Gallagher et al (1998).

[2] GAO (2000)

qualified for food stamps. A study of AFDC and TANF leavers based on the National Survey of America's Families (Loprest, 2001) found that 29-31 percent of former AFDC/TANF recipients continued to receive food stamps. Some adults with disabilities may have left TANF for a combination of food stamps and Supplemental Security Income (SSI), the federal program for low-income persons with disabilities (Karoly, Klerman, and Rogowski, 2001). With the strong economy, many families were able to find jobs and leave TANF quickly, before the new rules had any effects.

Non-citizens and adults without dependents: PRWORA introduced new rules that reduced food stamp receipt for at least some persons in these two groups. PRWORA disqualified many non-citizens from the FSP. PRWORA also imposed a work requirement on able-bodied adults without dependents (ABAWDs), who are childless, non-disabled FSP participants between the ages of 18 and 49. Individuals subject to, but not meeting, the work requirement can receive food stamp benefits for only three months in a 36-month period.

Administrative features of the FSP: Reporting requirements encouraged by the Quality Control system may also have contributed to the recent caseload decline (Greenstein and Guyer, 2001). Some states tried to reduce error rates by requiring more information from participant households and by shortening recertification periods. Some working households may have responded to these additional reporting requirements by leaving the FSP. At the same time, the introduction of electronic benefits transfer (EBT) cards in the 1990s may have increased participation. EBT systems can make food stamps easier to use and reduce stigma, although some may be uncomfortable with the technology.

The EITC and the minimum wage: By increasing employment and probably earnings of low-income households, these policy changes may have hastened the departure from the FSP of some households, including eligible households eager to leave the program because of its stigma or reporting requirements.

Public health insurance: Expanded Medicaid eligibility, Transitional Medical Assistance (TMA) for families leaving welfare for work, and S-CHIP, a program that sought to insure children in working poor families, all could have increased or reduced food stamp receipt. By encouraging work, these programs could have encouraged some families to reduce reliance on both AFDC/TANF and food stamps. Expanded eligibility for public health insurance could have also increased food stamp receipt because some families may have learned about their eligibility for food stamps while enrolling in these health insurance programs.

The SSI program: The Supplemental Security Income (SSI) program may also have affected food stamp usage. In part because of changes in program rules, the number of child and adult recipients of SSI grew rapidly from 1982 to 1995. PRWORA reversed this trend and restricted eligibility for the program by narrowing the criteria for eligibility and by denying eligibility to many non-citizens. Increases in SSI receipt before PRWORA could have led to increases in food stamp receipt because some may have learned about food stamps through SSI. Similarly, declines in SSI receipt after PRWORA may have reduced food stamp receipt. The SSI program could also have limited the effect of TANF provisions on food stamp caseloads because some TANF recipients with disabilities may have chosen to escape the requirements of TANF by using a combination of food stamps and SSI.

Recent Caseload Trends

FSP participants include persons from several types of households (Figure ES-1). In 1994, the year in which the number of FSP participants peaked in the 1990s, about half of FSP participants[3] were in households that consisted of a single adult and at least one child. Another 28 percent of participants were in households that consisted of more than one adult and one or more children. Two percent of participants were children in "child-only" units that consisted of child participants and guardians who were not certified to receive food stamps. Another three percent of participants lived in households in which an elderly person resided with either children or adults or both. Adults living separately, without children or elderly persons present, accounted for another 11 percent of participants. Six percent of FSP participants were elderly persons living without adults or children.

The numbers of FSP participants in each of these major types of households have displayed unique trends (Table ES-1). These varied trends, and the wide range of policies that could have affected each of these groups of food stamp recipients, underscore the need to conduct separate analyses of the determinants of trends in caseloads from different households. For several groups, the annual rate of decline in the number of participants was far more rapid from 1996-1999 than from 1994-1996, even though the economy was steadily improving throughout this period. This especially rapid decline after 1996 suggests (but does not by itself prove) that PRWORA and TANF could have played a role in reducing FSP receipt.

[3] Throughout this report, "FSP participants" are those reported as certified to receive benefits in the QC administrative data. These persons are members of the "food stamp unit." Food stamp households include members of the unit and possibly additional persons who are ineligible for food stamps. In this report, food stamp households are classified into the categories in Figure ES-1 based on the number and ages of participants.

Figure ES-1: FSP Participants by Type of Household, 1994

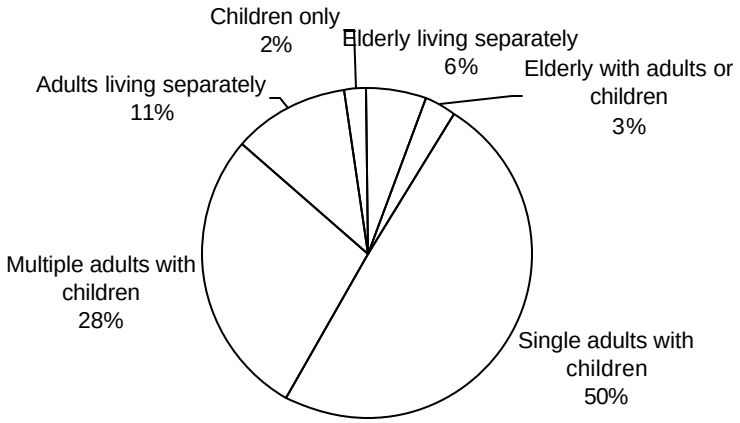


Table ES-1
Summary of Trends in the Number of FSP Participants

Type of Household	Percentage change in the number of FSP participants 1989-94	1994-96	1996-99	Percentage of the1996-99 change in the total number of participants
All FSP Households	47.8%	-7.5%	-30.0%	100.0%
Single adults with children	51.9%	-6.2%	-30.6%	50.9%
Multiple adults with children	42.8%	-13.5%	-39.2%	34.7%
Adults living separately	58.5%	-2.6%	-29.4%	11.6%
Elderly living separately	27.5%	-1.1%	-8.3%	1.7%
Elderly living with adults or children	8.9%	-14.2%	-24.4%	2.2%
Children only	147.9%	6.9%	14.7%	-1.3%

Source: FSP-QC data

Households are classified as consisting of single- and multiple-adult households with children, adults or elderly living separately, elderly living with others, or children only based on the participants in the household. The last column is equal to the change in the number of participants in each category divided by the change in the total number of participants.

The non-citizen rules of PRWORA can account for a limited share of the aggregate FSP caseload decline after 1996. Only about 7 percent of FSP participants were non-citizens in the years just before PRWORA. From 1996 to 1999, the number of food stamp participants who were non-citizens fell by about 60 percent – a rate of decline that was about twice the rate of decline in the number of food stamp participants who were citizens. PRWORA clearly played at least some role in reducing the number of these non-citizen FSP participants. Only about 15 percent of the decline in the total number of FSP participants from 1996 to 1999, however, is due to the decline in the number of non-citizen participants.

The share of the recent caseload decline that is accounted for by the decline in the number of non-citizen participants varies by type of household. The decline in the number of non-citizen participants after 1996 accounts for 9 percent of the decline in caseloads from households with single adults and children and less than 20 percent of the decline in caseloads from households with multiple adults and children and with adults living separately. The decline in the number of non-citizen participants after 1996 accounts for one-third of the decline among elderly persons living with others, and over 80 percent of the decline among elderly persons living separately. These figures exaggerate the impact of the non-citizen rules on caseloads because economic trends and other changes could also explain some of the decline in caseloads from households with non-citizens.

Assessing the impact of the non-citizen rules on caseloads is further complicated by the fact that most FSP households with non-citizen participants also included participants who were citizens. Consequently, the total effect of the non-citizen rules of PRWORA on food stamp caseloads depends partly on whether the citizens in households with non-citizens continued to receive food stamps. Many of these citizens were children living with non-citizen guardians. Among all FSP households, and several types of households, the number of citizen participants in households *with* non-citizens fell at a much faster rate than the number of citizen participants in households *without* non-citizens. This finding suggests that the non-citizen rules of PRWORA could have encouraged some citizens in households with non-citizens to leave the FSP.

Another post-PRWORA trend among households with non-citizens is that the number of child FSP participants in child-only units with ineligible non-citizens guardians rose sharply from 1996-1999. The rules for non-citizens apparently caused this sharp increase, which did not appear among households consisting of only citizens. Despite this trend, the total number of children in households with non-citizens that received food stamps declined markedly after PRWORA. In sum, these trends[4] together suggest that the non-citizen rules played at least some role in reducing caseloads.

An examination of simple caseload trends alone provides unclear evidence about the possible effects of TANF. In 1996, about half of FSP participants that included only citizens lived in households that received TANF benefits. The number of persons receiving both food stamps and TANF (without SSI or disability benefits) fell by about 50 percent from 1996 to 1999. These outcomes suggest that TANF policies could have played a major role in the recent FSP caseload decline, but the economy and several other policies could also have played a role. Among households with single adults and

[4] *The Decline in Food Stamp Participation: A Report to Congress* (USDA, 2001) also analyzed QC data and documented many of these trends in FSP caseloads from households with non-citizens.

children (and without non-citizens), the number of persons receiving food stamps with neither TANF nor Social Security income actually rose by 7 percent from 1996 to 1999. This increase suggests that the effect of TANF on FSP caseloads from this group was to some extent limited because some TANF leavers continued to receive food stamps.

The potential effects of recent policy changes on adults and elderly persons living separately can account for a very limited proportion of the entire caseload decline. The impact of the ABAWD rules on aggregate caseload trends was limited because only about 11 percent of the caseload in 1994 consisted of adults living separately. At most, only about 5 percent of FSP participants were subject to the ABAWD rules. Many adults met the work requirement, left the FSP because of the strong economy, or had a disability or received other exemptions from the ABAWD work requirement.[5] The number of food stamp participants who were elderly persons not living with adults or children changed very little after 1996. Most recent policy changes except for the non-citizen rules did not apply to these elderly persons. Trends in the number of elderly participants are explained by long-term demographic trends in addition to current economic conditions or recent policy changes.

Estimating the Effects of Policies and the Economy on 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. The main findings are based on an analysis of estimated number of participants as a percentage of the estimated population in similar types of households, such as single adult households with children. Aggregate caseloads are estimated as the total number of participants divided by the total population. The analysis examines 663 observations of these caseload measures, one from each of the 51 states and from each of 13 years. This report does not analyze FSP "participation rates," usually defined as the number of participants as a percentage of persons eligible for food stamps, because it is of interest to estimate the total effect of economic and policy changes on the proportion of persons who are both eligible for food stamps and choose to receive them.

The main findings are obtained using a simple statistical model that estimates the effects of measures of economic trends and policy changes on these measures of FSP caseloads. This basic model employs a minimum number of controls for factors other than unemployment rates and policy changes because of concern that real effects of policies may be obscured by the inclusion of measures

[5] Staviranos, Cody, and Lewis (1997) also show that only about 5 percent of the caseload was initially subject to the ABAWD rules.

of other factors that also happen to be correlated with the timing of recent policy changes. The basic model includes the following variables:

- Current unemployment rates for each state and fiscal year measure the state of the economy.
- An indicator variable measures the presence of a statewide EBT system.
- The FSP error rate, calculated for each state and year, for each group of households analyzed, is included to estimate the potential effect of administrative requirements on FSP caseloads. Higher error rates are assumed to be correlated with less demanding administrative procedures and larger caseloads.
- The "frequent recertification rate," defined as the percentage of working FSP households with recertification periods that are no longer than 3 months, is included as an additional measure of reporting requirements.
- An indicator variable measures the time at which families first meet TANF time limits that result in benefit termination, benefit reduction, or new work requirements.
- An indicator variable measures the imposition of TANF family caps.
- The amount of earned income that is disregarded for the purpose of determining TANF benefit levels when a family earns $750 is included as a measure of the extent to which TANF rules encourage work.
- Three indicator variables measure the imposition of partial TANF sanctions, delayed full family TANF sanctions, and immediate full family TANF sanctions;
- Two additional indicator variables measure the strongest form of comparable disqualification of food stamp benefits (in which the entire household is declared ineligible) and lifetime TANF sanctions. [6]

This strategy has some potential shortcomings. This model does not directly estimate the effects of several policies imposed at the national level, such as the non-citizen and ABAWD rules of PRWORA, the EITC, parts of TANF imposed nationwide, and changes in SSI and Medicaid. The policy variables cannot measure some important nuances of state TANF programs, such as the information and assistance given by local office staff, and the forcefulness of the "work first" message given to recipients. The estimated effects of policy variables could reflect the effects of these

[6] The state fixed effects and year effects 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 caseloads 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 do not take into account 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 explain variation in caseloads that occurs over time and within states.

unmeasured factors, as well as the effects of unmeasured trends in demographic factors, attitudes, and the economy. The estimated effects of TANF policies could also reflect a tendency to implement some provisions in states in which caseloads are generally falling or rising unusually slowly or rapidly.

Despite these potential problems, this estimation strategy provides one of the best available ways to assess the critical question of how recent policy changes have affected food stamp caseloads. Other research methods, such as exit studies, random assignment studies in the few states that have permitted them, and implementation studies of local office operations all provide valuable information but do not by themselves provide an estimate of the effect of policies on aggregate, national FSP caseloads.

Main Findings

The results obtained using the procedure described above confirm that recent policy changes have had different effects on FSP caseloads from different types of households. These results also show that the rules of TANF and administrative features of the FSP can explain some of the recent declines in FSP caseloads. These findings should be qualified for two reasons. First, as this section explains, some of estimated effects of TANF rules such as sanctions persist among households that do not include children and would not receive TANF. Consequently, the estimated effects of some TANF rules could reflect the role of unmeasured economic, demographic, and other changes rather than TANF. Second, as the next section explains, some –but not all – of these estimated effects decline in size when additional controls for economic, demographic, and other changes are taken into account.

Economic trends have the largest effect on food stamp receipt of those in households consisting of multiple adults with children, adults living separately, and elderly persons living with others. A one-percentage-point increase in the unemployment rate is associated with a 4 percent increase in aggregate FSP caseloads, and a larger 6-7 percent increase in caseloads from these three types of households. These three groups of households include many non-disabled adults who receive neither TANF nor SSI, who need to work, and whose economic status is closely tied to current economic conditions. Economic trends are associated with a much smaller effect on food stamp receipt among elderly persons living separately, a group whose economic status is often based on lifetime income and other factors rather than current economic conditions. Surprisingly, when lagged unemployment rates are not taken into account, current unemployment has a negligible effect on FSP receipt among those in single adult households with children.

Statewide EBT systems increased FSP caseloads from households with adults and children, but lowered FSP receipt among elderly persons living separately. EBT systems are associated with a statistically significant 6 percent increase in aggregate FSP caseloads, but some elderly persons may have found EBT intimidating and difficult to use.

Higher food stamp error rates are associated with increases in FSP caseloads from households with multiple adults and children. A one-percentage point increase in error rates is associated with a 0.8 percent increase in caseloads from these households, which include many working adults who may be close to leaving the FSP and who could be pushed to leave by added reporting requirements. Higher error rates are unexpectedly associated with reduced FSP receipt among elderly persons living separately. This estimated effect may reflect factors other than administrative features.

Increases in the "frequent recertification rate" reduced caseloads from households consisting of multiple adults with children and adults living separately. A ten-percentage point increase in this rate is associated with a 2.3-2.4 percent decrease in FSP caseloads from these two groups of households, which include many working poor adults who may have found recertification difficult.

TANF time limits are associated with a 7 percent reduction in FSP caseloads from single adult households with children. Time limits had a statistically insignificant effect on FSP caseloads from multiple adult households with children, a group that is less likely to receive TANF. The TANF time limits also had little effect on FSP receipt among elderly living with others; this group includes some TANF recipients, but many may be exempt from time limits because of the presence of an elderly person. As expected, time limits had no effect on FSP receipt among elderly persons living separately. An unexpected finding is that TANF time limits are associated with reduced food stamp among adults who live separately and who could not qualify for TANF.

Family benefit caps are associated with increases in FSP caseloads from households with children. It is possible that some benefit-capped households may require additional months of public assistance, including food stamp benefits, to acquire enough resources to become self-sufficient. Family caps are, however, also unexpectedly associated with increased food stamp receipt among adults who live separately.

Increases in the amount of earnings disregarded for the purpose of determining TANF benefit levels have mixed effects on FSP participation. In theory, increases in these earnings disregards could

increase or reduce FSP caseloads. A doubling (a 100 percent increase) in the amount of earnings that is disregarded leads to a 3 percent increase in aggregate FSP caseloads. Higher disregards are statistically linked to declines in FSP caseloads from single adult households with children, and increases in FSP caseloads from households consisting of multiple adults and children and elderly persons living with others. Increases in the earnings disregard are unexpectedly associated with increases in food stamp receipt among elderly persons living separately.

TANF sanctions for failure to comply with TANF work requirements reduced aggregate FSP caseloads. The evidence indicates that partial TANF sanctions, delayed full family sanctions, and immediate full family sanctions all reduced aggregate food stamp caseloads by 6 to 12 percent, relative to caseload sizes that would have appeared under the more lenient traditional rules of AFDC.

Partial TANF sanctions and comparable disqualification reduced FSP caseloads from single adult households with children. Delayed and immediate full family sanctions have no statistically significant effect on FSP caseloads from this group, even though these sanction policies reduce aggregate caseloads. It is possible that partial sanctions could have a greater effect on food stamp usage than full family sanctions if the former are more likely to be imposed or if local office staff are more diligent in helping families overcome full family sanctions than partial sanctions.

Partial TANF sanctions, full family TANF sanctions, and lifetime TANF sanctions reduced FSP caseloads from multiple adult households with children. The size of the effect on caseloads grows with the severity of the sanction. Multiple adult households with children include a greater share of more nearly work-ready adults who are close to leaving the FSP and can be more readily pushed to leave public assistance through additional program requirements. Lifetime full family TANF sanctions are associated with an additional 11 percent reduction in these FSP caseloads.

All of these measures of TANF sanctions have statistically insignificant effects on FSP caseloads from households consisting of elderly persons living with adults or children. Most of these households do not receive TANF. The TANF households in this group may have received exemptions from TANF sanctions because of the need to care for an elderly person. Surprisingly, several TANF sanction policies are associated with statistically significant, large declines in FSP receipt among adults or elderly persons living separately, without children.

Table ES-2
Proportion of the 1994-99 Decline in FSP Caseloads Explained by Economic Trends and Policy Changes

	All FSP Recipients	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Adults/ Children
Percentage decline in caseloads, 1994-99	-38.1	-38.8	-48.3	-37.8	-13.0	-37.3
Percentage of these declines explained by						
1. Economic trends	18.8	-2.7	37.0	39.3	71.6	62.1
2. EBT	-9.0	-14.3	-8.1	0.0	55.5	0.0
3. Error rates	1.1	0.0	4.0	0.0	-15.7	0.0
4. Frequent recertification	6.7	0.0	15.2	12.9	0.0	0.0
5. Time limits	5.1	10.1	0.0	--	--	0.0
6. Family cap	-10.5	-13.8	-7.9	--	--	-31.5
7. Earnings disregards	2.9	14.7	-10.7	--	--	-34.7
8. Sanctions	23.0	25.6	29.8	--	--	0.0
9. All TANF Policies (Sum of 5-8)	20.5	36.7	11.2	--	--	-66.2
10. All of these factors (1-8)	38.1	19.7	59.4	52.2	111.5	-4.1
11. Percentage of decline unexplained	61.9	80.3	40.6	47.8	-11.5	104.1
Total (Sum of 10-11)	100.0	100.0	100.0	100.0	100.0	100.0

These figures are based on the results shown in Table 6-1. The top row, "percentage decline in caseloads," is equal to the percentage decline in the ratio of the number of participants to the population in similar households (negative numbers are declines). The percentage of the actual decline in caseloads attributable to each variable (next rows) is equal to the estimated effect of each variable multiplied by the change in the mean of the each variable over these years, all divided by the actual percentage change in the caseload measure. When the percentage explained is less than zero, the economic or policy variable accounted for an increase rather than a decrease in caseloads. All coefficients of the economic variables (regardless of statistical significance) are used to obtain these results. Only coefficients that are statistically significant at the 10 percent level are used to calculate the change predicted by the other variables. Any estimated effects of TANF policy variables on households without children are not considered in these calculations.

Explaining recent caseload declines: According to these results, both economic trends and policy changes can explain a substantial share of the declines in FSP caseloads from 1994 to 1999. Policies and the economy contribute in different ways to the decline in FSP caseloads from each type of household. These results do not consider the unexpected effects of AFDC and TANF policies on households without children.

Single adults with children: Time limits, earnings disregards, and sanctions explain half of the decline in caseloads from these households. All measured AFDC and TANF policies explain about one-third of the decline because the effects of family caps offset the effects of time limits, disregards, and

sanctions. EBT increased caseloads from these households and partly offset the combined effect of all measured AFDC and TANF policies, so the total effects of all measured economic and policy factors explain about one-fifth of the 39 percent decline in caseloads from this group.

Multiple adults with children: For this group, the economy alone explains over one-third of the caseload decline from 1994 to 1999. The economy, reporting requirements, and TANF sanctions together account for 86 percent of the decline in caseloads from these households. EBT, family caps, and earnings disregards increased caseloads by about 27 percent. The estimated impacts of the measured AFDC and TANF policies offset one another to some extent but still explain about 11 percent of the decline in caseloads from these households. All measured economic and policy factors together account for 60 percent of the decline in caseloads from this group.

Elderly living with adults or children: Current unemployment rates explain almost two-thirds of the 1994-1999 decline in caseloads from these households, but family caps and earnings disregards increased caseloads by a similar amount. As a result, these factors together explain none of the 37 percent decline in the number of these participants.

Adults and elderly persons living separately: The economy and administrative features of the FSP explain a substantial share of declines in the number of these participants. Economic trends and shorter recertification periods account for 52 percent of the 1996-1999 decline in food stamp receipt among adults living separately. Economic trends and the effects of EBT account for more than the 13 percent decline in food stamp receipt among elderly persons living separately.

The combined effects of the measured policy and economic factors on each of these groups of households account for 38 percent of the decline in aggregate caseloads from 1994 to 1999. The estimated effect of each of these factors on aggregate caseloads is the weighted sum of the effects on each type of household; larger groups of participants receive greater weight. Based on this calculation, current unemployment rates explain about 19 percent of the decline in aggregate FSP caseloads from 1994 to 1999. Reporting requirements explain 8 percent of the decline, time limits and disregards explain 8 percent of the decline, and sanctions explain about one quarter of the decline. The effects of EBT and family caps offset these effects and increased aggregate caseloads. All AFDC and TANF policies together explain about one-fifth of the decline.

Findings Obtained Using Alternative Models

To explore the possible role of at least some of these factors, additional control variables were added to the basic model. These additional variables include:

- Lagged unemployment rates and employment growth rates;
- State minimum wages and the 20th percentile of weekly wages;
- Measures of demographic trends;
- Measures of political trends;
- State time trends intended to measure steady changes in FSP caseloads since the late 1980s, and lagged caseloads to incorporate the sluggish adjustment of caseloads over time.

The preferred model in this report omitted these additional variables because of concerns that they could "overcontrol" for trends in caseloads that were actually caused by policy changes that could be measured. Other similar studies prefer to include these additional variables because they could control for other factors that have truly affected FSP caseloads and that happen to be correlated with policy changes. The "natural experiment" provided by variation in policies, economic trends, and caseload trends across states and over time is highly informative but does not unambiguously distinguish the effects of the many factors that could affect caseloads and that were changing at about the same time. As a result, the choice of the "correct model" is unclear, although this study leans toward the simpler models.

When these additional controls are added to the model, many of the estimated effects of policies are remarkably persistent:

- The addition of lagged unemployment variables increases the effect of economic trends on caseloads. Caseloads from households consisting of multiple adults and children, adults living separately, and elderly living with others remain more cyclically sensitive than caseloads from other households. When lagged unemployment rates are considered, lower unemployment leads to decreases in caseloads from single adult households with children.

- In several models with additional control variables, EBT still increases FSP caseloads from households with adults and children.

- Higher error rates persistently reduce caseloads from multiple adult households with children.

- Shorter recertification periods continue to lower caseloads from households with multiple adults and children and adults living separately.

- TANF time limits continue to reduce caseloads from households with adults and children.

- In several models with additional control variables, comparable disqualification and partial sanctions reduce caseloads from single adult households with children, and lifetime sanctions and partial sanctions still reduce caseloads from multiple adult households with children.

- These additional variables also do not eliminate the unexpected effects of TANF policies on households without children.

Other findings change more substantially when other additional controls are taken into account. In models with state time trends, the effect of EBT on elderly persons living separately reverses, and EBT actually *increases* food stamp receipt for this group. The effect of EBT on households with adults and children is no longer statistically significant in the most complex model with lagged participation, state time trends, and all other variables. The estimated effects of family caps on households with adults and children decline sharply when additional controls are added. The total size of the estimated effects of sanctions on caseloads from multiple adult households with children also decline in the more complex models. When state time trends are added, some sanction policies are surprisingly associated with increases in caseloads. The sensitivity of some of these results to the use of additional variables indicates that it is difficult to distinguish the effects of policies and other simultaneous trends in the late 1990s.

Despite the sensitivity of these results, all models find that measured economic and policy factors can explain a substantial fraction of the decline in aggregate caseloads and caseloads from each type of household, although the role of each policy variables sometimes changes. As additional control variables are taken into account, the economy has a larger effect on caseloads, while EBT and family caps lead to smaller increases in caseloads, and time limits, reporting requirements, and sanctions still reduce caseloads. In the more complex models, all measured factors together explain 27 to 47 percent of the decline in caseloads from single adult households with children, 59-73 percent of the decline in caseloads from multiple adult households with children, and 49-54 percent of the decline in aggregate caseloads. PRWORA's rules for non-citizens and ABAWDs can explain perhaps an additional ten percent of the decline in aggregate caseloads.

Conclusions

These findings complement the findings of several other studies of FSP caseloads. This estimated effects of policies in this report are larger than those reported in Ziliak, Gundersen, and Figlio (2001) and Wallace and Blank (1999). Gleason et al (2001) found that a different set of measures of TANF rules -- strong, moderate, and weak work requirements of state AFDC and TANF policies -- explain only about 3 percent of the recent caseload decline. The study by Currie and Grogger (2001) also

examined the determinants of FSP caseloads for different types of households, but measured food stamp receipt using the Current Population Survey. Both this report and Currie and Grogger (2001) find that shorter recertification periods reduce caseloads. This report and Currie and Grogger (2001) differ in that the latter finds that a simple indicator variable for the implementation of TANF explains some of the decline in food stamp receipt, and that EBT only increases food stamp receipt among married couples without children. The use of different sources of information on food stamp receipt (survey or administrative data), different policy variables, and the analysis of different sets of years could explain these differences in findings.

Taken together, the results of this report are consistent with the view that policy changes have affected recent caseload trends. The evidence in favor of the contention that more reporting requirements reduce caseloads is especially persistent. The effects of EBT, sanctions, and time limits persist in many if not all of the more complex models with additional controls. One could interpret these estimated effects of TANF policy variables on households with children as genuine, even though some of these same policy measures have unexpected effects on households without children.

One could also interpret these estimates as showing that most recent policies, especially TANF, had little or no effect on recent caseload changes. The decline in the size of some of these effects when other controls are added could be seen as evidence that the estimated effects of policies in the simpler models reflect the role of other factors that were contemporaneous with the imposition of policies. The unexpected estimated effects of TANF policies on households without children could be seen as further evidence that these policies are measuring the effects of other factors that influence general caseload trends.

Although we will probably never precisely identify the effects of these policies on FSP caseloads in the late 1990s, the evidence shows that reporting requirements, TANF time limits, TANF sanctions for failure to comply with work requirements, and comparable disqualification may have reduced FSP caseloads in the late 1990s. Some households that may have left the FSP as a result of these policies became self sufficient, but other evidence (USDA, 2001) suggests that many non-participants remain eligible for benefits. Based on these findings, a case can be made for continued efforts to make the FSP more accessible as a "risk averse" response to concerns about food insecurity, especially if the economy begins to falter. USDA already took some steps to ease reporting requirements after 1999. The somewhat inconsistent evidence for an effect of sanctions and other policy changes suggests that new policies designed to improve program access should be aimed at a wide range of low-income families rather than just those incurring sanctions or time limits.

1. Introduction

The number of participants in the Food Stamp Program (FSP) declined by 30 percent from 1996 to 1999. This rapid decline has led to renewed interest in understanding what causes caseloads to rise and fall. Both the strong U.S. economy and recent policy changes played some role in reducing FSP caseloads. The Personal Responsibility and Work Opportunity and Reconciliation Act of 1996 (PRWORA) made many non-citizens ineligible for food stamps and imposed a time limit on food stamp receipt for many able-bodied adults without dependents (ABAWDs). PRWORA also introduced Temporary Assistance for Needy Families (TANF), a program with several provisions that may have reduced food stamp receipt among families with children. New reporting requirements for food stamp recipients, intended to reduce error rates, may have been too burdensome for some recipients. Increases in the minimum wage and the expansion of the earned income tax credit (EITC) raised incomes, but may have had the unintended effect of encouraging some eligible households to leave the FSP.

Explaining trends in food stamp caseloads is challenging in part because the FSP serves so many different types of households. Low-income households consisting of single adults with children, two adults with children, adults or elderly persons living alone, and elderly persons living with others can all receive food stamps. Economic growth and recent policy changes have probably had different effects on food stamp receipt among persons from each of these types of households. Economic trends have strong effects on food stamp usage among working poor households consisting of two adults and children, but weaker effects on food stamp usage among elderly persons living alone, who are retired and whose poverty stems from low lifetime incomes or the death of a spouse. TANF policies directly affect families with children, while the ABAWD rules affect adults without children, and the rules for non-citizens affect households with recent immigrants. Studies of the determinants of aggregate changes in FSP caseloads generally miss differences in trends in caseloads from these important subgroups.

This report analyzes how policy changes and economic factors may have affected trends in the number of food stamp participants from several different types of households from 1987-1999. The Food Stamp Quality Control (QC) Data, an administrative database with information on a large random sample of food stamp households, are used to estimate the number of participants in specific types of households by year and by state. The Current Population Survey (CPS), a large survey of households, provides estimates of the population in specific households by year and by state. This information is used to estimate the number of FSP participants as a proportion of the population in households consisting of single- and

multiple-adult households with children, adults and elderly persons living separately, and elderly persons living with adults or children. This report analyzes the effect of state-level policy changes and economic trends on these measures of food stamp usage, taking advantage of the "natural experiment" provided by variation in policies and economic trends across states and over time.

This research complements other recent studies of trends in food stamp receipt. Another recent report, *The Decline in Food Stamp Participation: A Report to Congress* (USDA/FNS, 2001), discusses recent changes in the rate of food stamp receipt among eligible households, recent changes in the numbers of these eligible households, and other topics. Two studies of FSP caseloads by state and year (Ziliak, Gundersen, and Figlio, 2001; and Wallace and Blank, 1999), focus mainly on aggregate FSP caseloads. A recent study by Currie and Grogger (2001) also analyzes FSP caseloads from several types of households, although this study estimates the number of FSP participants using information from the CPS, which generally understates public assistance receipt. Other recent studies by Gleason et al (2001) and by Jacobson et al (2000) estimate the effects of recent policy changes in FSP caseloads using other techniques. This report adds to the literature by analyzing trends in caseloads from a range of different types of households using administrative data, and by employing several detailed measures of state level policies, such as reporting requirements and sanctions of FSP benefits for TANF violations.

1.1. The Food Stamp Program: Eligibility and Benefits

The goal of the FSP is to enable low-income households to afford a more nutritious diet. During fiscal year 1999, the FSP served over 18 million persons in an average month, at a total cost of almost $18 billion. Food stamps are provided in the form of paper coupons or Electronic Benefits Transfer (EBT) cards, which can be used to purchase food in authorized stores. A "household," defined as persons who live in a residential unit and prepare food together, must pass income and assets tests to become eligible for food stamps.

Eligibility is based mainly on the monthly income and assets of the household members. The program has both a "gross" and "net" income test. Most households must have a monthly gross income at or below 130 percent of the poverty guideline.[1] Net income is determined by subtracting several deductions

1 In fiscal year, 1999, the HHS annual poverty income guideline was $8,050 for a single person, $10,850 for a two-person household, and $16,450 for a four-person household.

from gross income. Households receive a standard deduction of $134, an earned income deduction equal to 20 percent of earnings, and additional deductions for care of dependents, medical expenses for elderly and disabled members, child support payments, and excess shelter costs. To be eligible for the FSP, a household must have a net monthly income at or below 100 percent of the poverty guideline. Most households are permitted up to $2,000 in assets. Households typically qualify automatically if all members receive TANF, General Assistance (GA), or Supplemental Security Income (SSI).

These rules are somewhat more generous for households with elderly or disabled members. Some elderly and disabled persons who are unable to purchase and prepare food can apply as a separate household as long as the gross monthly income of the remainder of the unit is less than 165 percent of federal poverty guideline. Households with elderly or disabled members are not subject to the gross income test. The asset ceiling is $3,000 if a member is age 60 or older.

A household's monthly benefit is computed by subtracting 30 percent of its net income from the maximum benefit. This maximum benefit is based on each year's estimated cost of an economical and nutritious diet, based on the Thrifty Food Plan. A household with no net income receives this maximum benefit. The maximum monthly food stamp benefit in fiscal year 1999 in the continental U.S. was $125 for a single person and $419 for a four-person household.

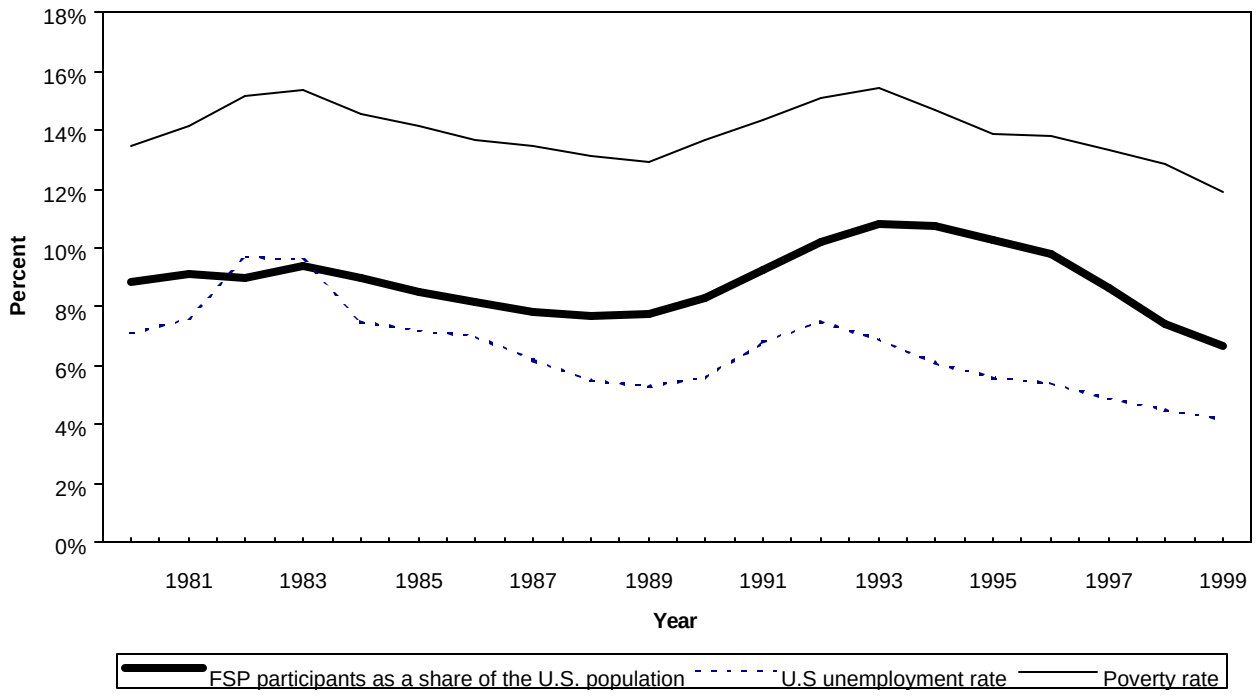
These rules allow a broad range of low-income families to receive food stamps and make the program an important safety net for a diverse range of low-income households. Before PRWORA, most households with or without children, adults, elderly persons, disabled persons, or non-citizens could receive food stamps if the household simply passed these income and asset tests. Many low-income households receive food stamps along with benefits from TANF, SSI, and Medicaid, or other programs targeted to more specific groups. Food stamps can be especially important for working poor families who do not receive TANF or other assistance. If a single household member worked 160 hours in a month at $5.15 per hour in 1999, the monthly food stamp benefit would be $72 for a two-person household, $171 for a three-person household, and $261 for a four-person household.[2]

2 These calculations assume the household uses only the standard deduction and the earned income deduction. More detailed summaries of the rules of the Food Stamp Program can be found on the USDA/FNS website (www.fns.usda.gov) and in *Characteristics of Food Stamp Households: Fiscal Year 1999* (USDA, 2000).

1.2 Recent Trends in Food Stamp Caseloads

This report and other recent studies of food stamp caseloads are motivated in part by the recent, dramatic decline in the number of food stamp participants. FSP caseloads and the unemployment rate are closely related, but the decline in food stamp caseloads after 1996 seems unusually steep relative to historic trends (Figure 1-1). The FSP caseload -- defined as the number of food stamp participants as a percentage of the U.S. population[3] -- peaked at about 10 percent in the early 1980s, when the unemployment rate was about 10 percent and the economy was in deep recession. As the economy improved and unemployment declined over the mid- and late-1980s, FSP caseloads also declined. From 1989 to 1994, unemployment rates rose, and caseloads increased by 39 percent. From 1994 to 1999, both unemployment and food stamp caseloads fell again. But while unemployment declined steadily after 1994, FSP caseloads declined by 9 percent from 1994 to 1996, and then declined abruptly by 32 percent from 1996 to 1999.

Figure 1-1: Food Stamp Program Participants, 1980-1999



3 The number of FSP recipients is obtained from *Characteristics of Food Stamp Households, 1999* (USDA, 2000).

FSP caseload trends are also closely linked to the poverty rate, but the recent decline in FSP caseloads is much more rapid than the recent decline in the poverty rate. Both poverty rates and FSP caseloads peaked in early 1983, declined from 1983 to 1989, increased from 1989 through 1993 and then declined from 1994 through 1999.[4] From 1996 to 1999, the poverty rate fell by only 14 percent, but caseloads fell by over 30 percent. Based on a review of these simple trends, the economy appears to explain much but perhaps not all of the recent decline in the number of FSP participants.

Numerous policy changes could also have contributed to the decline in FSP caseloads after 1996. Many but not all of these policy changes were introduced by PRWORA. Some of these policies included the following:

- Under PRWORA, AFDC was replaced by TANF, a new cash assistance program for low-income families with children. TANF instituted strong work requirements and gave states the flexibility to implement time limits on TANF receipt, sanctions for noncompliance with program requirements, narrower work exemptions, and other rules to encourage work and reduce TANF caseloads. The rules of TANF may have reduced FSP caseloads as well.

- PRWORA restricted eligibility for food stamps among non-citizens, although some of these restrictions were removed the following year.

- PRWORA instituted work requirements and a time limit on assistance for able-bodied adults without dependents (ABAWDs).

- To reduce FSP error rates and avoid the associated financial penalties, many states imposed additional reporting requirements on working families. These reporting requirements many have discouraged some eligible households from using food stamps.

- The EITC was expanded and the minimum wage was increased. These policy changes were intended to reduce poverty under the assumption that many low-income working families that receive the minimum wage and the EITC would also receive food stamps. However, these policy changes may have encouraged some persons to leave the FSP even though they were still eligible.

During these same years, other policy changes had uncertain effects on caseloads. Electronic Benefit Transfer (EBT) systems may have reduced program stigma and may have made food stamps easier to use, although some may found the new technology difficult to use. The SSI program and expanded eligibility

4 Data on persons in poverty and poverty rates are obtained from *Poverty in the United States* (U.S. Bureau of the Census). From 1996 to 1999, the number of FSP recipients fell by 7.8 million while the number of persons in poverty fell by about 4.2 million. During the 1990s, earnings of less skilled persons also increased; this trend could also explain at least some of the decline in caseloads (see Blank and Schmidt, 2001, and *Money Income in the United States*, U.S. Bureau of the Census)

for public health insurance could have had mixed effects on food stamp caseloads during these years. Although the contribution of all of these policy changes and economic trends to the decline in FSP caseloads in the late 1990s is uncertain, it seems clear that economic trends and policy changes are likely to have had different effects on different types of households.

In the debate over the reauthorization of PRWORA, understanding the reasons for this decline in food stamp caseloads is important for designing policies to improve program access. Many are concerned about the program's accessibility because the number of eligible persons who did not receive food stamps appears to have increased from 1994-1999 (USDA, 2001), and because a recent nationwide survey of providers of emergency food assistance (Ohls et al 2001) found that the demand for food assistance grew modestly in the late 1990s. Future changes in caseloads depend on the relative importance of economic factors and policy changes: during the next recession, caseloads will increase considerably if economic factors explain much of the recent caseload decline, but perhaps more modestly if policy changes explain much of the recent decline.

1.3 Organization of This Report

The next six chapters assess how the determinants of FSP caseloads differ for important subgroups of households. The second chapter of this report discusses how a wide range of recent policy changes could have affected different types of households. The third chapter shows that caseloads from each of several types of households have displayed unique trends since the late 1980s. The fourth chapter reviews the existing literature on FSP caseload trends and discusses how this study adds to the previous research. Chapter 5 provides a detailed description of the statistical models and variables used to estimate the effect of economic trends and policy changes on FSP receipt in this report. Chapter 6 presents the findings of this analysis of the determinants of FSP caseloads from different types of households, and Chapter 7 uses the results to assess how much of the recent decline in the number of food stamp participants can be explained by economic trends and policy changes.

2. The Policy Context

A wide range of policies may have affected recent trends in the number of Food Stamp Program (FSP) participants. Because the FSP provides benefits for so many different types of households, changes in virtually any public assistance program for low-income persons could also affect food stamp receipt. Some of the important policy changes include not only PRWORA and TANF, but also earlier changes in state-level AFDC policies under waivers, new administrative features of the FSP, the expansion of the EITC, the increase in the minimum wage, the expansion of Medicaid eligibility, and changes in the SSI program. The effects of these policies on food stamp usage are likely to vary for different types of households. This chapter reviews the anticipated effects of these policies in detail. Later chapters explore whether the empirical evidence is consistent with these anticipated effects.

2.1 AFDC and TANF

PRWORA replaced the Aid to Families with Dependent Children (AFDC) program, until then the nation's main cash assistance program for families with children, with TANF, a new program that places greater emphasis on increasing the earnings of recipients and reducing welfare dependence. TANF features some program requirements imposed nationwide and considerable flexibility for states to devise policies to promote work and financial independence. Some of the key provisions are as follows[1]:

- All states must achieve minimum rates of participation in work and work-related activities or face financial penalties. The required rates for all TANF families rose from 25 percent in 1997 to 35 percent in 1999.

- All states must impose a 5-year lifetime time limit on federal cash assistance, although states may continue providing assistance beyond the time limit using state funds. States may impose time limits on cash assistance that are less than 5 years. These time limits may trigger benefit termination, benefit reduction, or work requirements.

1 Some summaries of TANF rules can be found in Crouse (1999), Gallagher et al (1998), and The State Policy Documentation Project (SPDP), (www.spdp.org), a joint project of the Center on Budget and Policy Priorities and the Center for Law and Social Policy.

- States are required to impose at least partial sanctions for noncompliance with work requirements or other requirements, and may impose stronger sanctions. By the late 1990s, most state TANF programs imposed full family sanctions for either the initial or repeated instances of noncompliance. Sanctions under AFDC were typically milder.[2]

- Under PRWORA, TANF sanctions may directly reduce food stamp benefits through *comparable disqualification*. Food stamp benefits must not increase in response TANF sanctions. Some states automatically decrease food stamps by a specific percentage when a TANF sanction is imposed. 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 food stamp work requirements.[3] Several states have also chosen to declare the *entire* household ineligible for food stamps when one member is in violation of TANF work requirements.[4]

- States may implement family caps that either eliminate or reduce additional TANF benefits for children who were conceived while the mother was receiving TANF.

- States may increase the level of earnings that is disregarded for the purpose of benefit determination, and allow families to keep more of their earnings.

- PRWORA allows states to omit caretakers of children under the age of one year from the calculation of work participation rates. States have a financial incentive to set the child age exemption at one year or less, and most have done so. Under AFDC, caretakers of children under six years of age were typically exempt from work requirements.

- States may require job search for new TANF applicants or offer diversion programs that provide an initial amount of cash assistance in return for loss of eligibility for TANF in the future.

During the years before PRWORA, states were also given waivers to change policies, and several states experimented with stronger work requirements and sanctions, narrower exemptions, and other program innovations. These waiver programs often became the basis for state TANF plans.

These rules may have reduced TANF caseloads by encouraging some families to increase their earned income and become self-sufficient. More generous earned income disregards may have reduced TANF participation by encouraging families to find work while still receiving benefits, accelerating the

2 Under the earlier rules of AFDC, adults who did not comply with work requirements faced a series of sanctions consisting of the removal of the adult portion of the grant, for up to six months or until compliance.

3 In the Food Stamp Program, household members caring for children under six years of age are exempt from work requirements.

4 GAO (2000)

transition to self-sufficiency. Other families could have left TANF because they received full family sanctions, met the time limit, or found the new program requirements too burdensome.

The rules of TANF were expected to reduce food stamp usage among households with adults and children. TANF may have encouraged families with children to increase their earned income by enough to make them ineligible for food stamps as well as TANF. Under comparable disqualification, some families lost food stamp benefits directly as a result of TANF sanctions. Some families may have decided that the stigma and reporting burdens of welfare, including regular visits to welfare offices to comply with reporting requirements, are worth bearing to receive both TANF and food stamps, but not food stamps alone. When these families lost eligibility for TANF as a result of the TANF rules, they also left the FSP. Some TANF leavers may not have been aware that they remained eligible for food stamps. A study of low-income households (Ponza et al, 1999) found that over 70 percent of eligible low-income households were not aware that they could be eligible, and, hence, did not apply for benefits.

The effect of TANF on FSP caseloads could have been substantial or only modest. TANF policies probably had smaller effects on food stamp receipt than on TANF receipt. Families that left TANF because of sanctions, time limits, and modest increases in earnings usually still qualified for food stamps. A study of AFDC/TANF leavers based on the National Survey of America's Families (Loprest, 2001) found that about 30 percent of these leavers in 1997 and 1999 continued to receive food stamps. Some adults with disabilities who had been receiving TANF may have responded to TANF by opting for food stamps and Supplemental Security Income (SSI), the federal program for low-income persons with disabilities (Karoly, Klerman, and Rogowski, 2001). Transitional Medical Assistance, expanded Medicaid for children in working poor families, child care assistance, and other transitional services kept some TANF leavers "attached" to public assistance and better informed as to their food stamp eligibility.

The TANF rules could have had no effect on food stamp receipt among some families, and could even have caused others to spend more time on food stamps. Some families received exemptions from TANF work requirements and time limits. With the strong economy, many families were able to find jobs and leave TANF before the new rules had any effects. More generous earned income disregards may have made TANF more attractive, lengthening spells on both TANF and food stamps. If achieving self-sufficiency requires saving enough money to attend classes, move to areas with better jobs, or buy a car,

some families that lost TANF benefits may have needed additional months on food stamps to accumulate enough savings to become financially independent.

2.2 Non-citizens

PRWORA disqualified many but not all non-citizens from the FSP. PRWORA made most of one group of non-citizens --- permanent resident aliens, or PRAs -- ineligible for the FSP. Other legal aliens were exempt from this rule. PRAs with significant work history and those with military service to the United States were exempt.[5] Refugees, asylees and deportees were exempt for five years after they entered the country. Beginning in September 1996, new FSP applicants were subject to these alien restrictions. PRAs already receiving food stamps were not subject to the alien restrictions until their first recertification after March, 1997, or one year after the date PRWORA was enacted, whichever came first. Some non-citizens could regain eligibility for food stamps by attaining citizenship, although new legal resident aliens generally need to wait 3-5 years to become naturalized citizens.[6]

By November, 1998, subsequent legislation restored eligibility to some PRAs. Those who were legally in the United States in August, 1996 and who were age 65 or older, under age 18, or disabled or blind at that time were eligible for food stamps again.[7] In addition, non-citizens who arrived before August, 1996 could receive SSI, but those who arrived after this time remained ineligible for SSI and TANF.

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5 A more detailed summary of the rules for non-citizens discussed in this section is provided in USDA (2000) and Stavrianos, Cody, and Lewis (1997). Significant work history is defined as 40 or more quarters (10 or more years) of work experience in the United States and could be acquired either through an alien's own work, work by a spouse while married, work by a parent while a minor child, or any combination of the three. Individuals who were serving in the United States Armed Forces and veterans were also exempt, along with their spouses and minor children. Cuban or Haitian immigrants admitted under the Refugee Education Assistance Act, and Amerasian immigrants admitted under the Foreign Operations, Export Financing, and Related Program Appropriations Act, also remained eligible for food stamps.

6 To become a citizen, one must be at least 18 years old, be lawfully admitted as a permanent resident of the United States, and reside continuously in the United States for at least five years after being accorded permanent resident status. In addition, a person must 1) have been physically present in the United States for at least 30 months of the five years preceding the date of application, 2) live in the state or service district in which the alien seeks to apply for at least three months immediately preceding application3) reside continuously within the United States from the date of application for naturalization up to the time of admission to citizenship, and 4) be a person of good character. Spouses of citizens must continuously reside as a permanent resident in the U.S. for at least three years.

7 The Agricultural Research, Extension and Education Reform Act of 1998 was effective on November 1, 1998. Certain non-PRAs may also be eligible, provided they meet one of the criteria listed above. For example, some parolees, conditional entrants, and battered spouses and/or children are eligible if they meet one of the criteria listed above, even though they are not PRAs. Two additional groups of aliens may be eligible indefinitely, without meeting any of the above criteria. First, certain Hmong or Highland Laotians and spouse and children (many are admitted as refugees) are eligible. Second, American Indians born in Canada to whom section 289 of the INA applies, and members of Indian tribes defined in section 4(e) of the Indian Self-Determination and Education Assistance Act.

The non-citizen rules of PRWORA reduced the number of food stamp recipients, but these rules can account for only a fraction of the decline in the total food stamp caseload after 1996. In 1995, only about 9 percent of FSP units included at least at least one PRA that appeared to be subject to food stamp disqualification (Stavrianos, Cody, and Lewis 1997). The effect of the alien provision may also have been reduced by recent increases in the number of non-citizens who have obtained citizenship (Stavrianos, Cody, and Lewis, 1997; and Borjas 2001).

The effects of the non-citizen provisions also depend on the behavior of citizens in households with non-citizens. Just before PRWORA, about two-thirds of FSP units with PRAs contain both PRAs and citizens, and about half of these "mixed" food stamp units consist of adult non-citizen(s) and children who are citizens (Stavrianos, Cody, and Lewis 1997).[8] After PRWORA, the citizens in these households remained eligible for food stamps but may have left the FSP if the reduced benefits were not worth the program "hassles" or if families incorrectly believed they were ineligible. The extent of state-funded assistance programs that replace food stamp benefits for non-citizens, and informational "outreach" for households with non-citizens can vary considerably across the nation (Zimmerman and Tumlin 1999).[9]

2.3 Able-Bodied Adults without Dependents

PRWORA imposed a work requirement on able-bodied adults without dependents (ABAWDs), who are generally childless, non-disabled FSP participants between the ages of 18 and 49. ABAWDs receiving food stamps must now work at least 20 hours per week, participate in an employment and training program for at least 20 hours per week, or participate in a workfare or similar program. Individuals subject to, but not meeting, the work requirement can receive food stamp benefits for only three months in a 36-month period. An ABAWD who lost eligibility under the ABAWD provision can regain it by working or participating in an E&T program for 80 or more hours in a 30-day period or by complying with a workfare program for 30 days. If, after regaining eligibility, an individual again fails to meet the

8 The importance of "mixed households" containing citizens and non-citizens was also discussed in Fix and Zimmerman (1999).

9 FSP receipt among immigrants who are citizens could also have declined because of misinformation and the social climate resulting from the debate over public assistance and PRWORA. Fix and Passel (1999) suspect that the steep decline in welfare use among immigrants resulted from these "chilling effects" rather than real changes in eligibility. Borjas (2001) points out that welfare usage among immigrants declined especially sharply in California, where Proposition 187, a 1994 law that denied welfare to illegal aliens, may have made even legal immigrants reluctant to use public assistance.

work requirement, he or she remains eligible for three consecutive months starting on the date the individual no longer meets the work requirement. An ABAWD may only receive these 3 additional months once in any 36-month period.

Most adult recipients are exempt from these rules. Any individual under 18 or over 49, physically or mentally unfit for employment, pregnant, or a parent or other member of a household with responsibility for a dependent child is not subject to the work requirement. Other adults exempt from the provision are: those responsible for the care of an incapacitated person, students, those who participate in a drug addiction or alcoholic treatment program, those working at least 30 hours per week (or earning more than what would be earned if working 30 hours per week at the minimum wage), and those complying with a work requirement under some other programs. States may request additional exemptions. By March, 1999, 39 states had been allowed to exempt some adults because they resided in areas that have either an unemployment rate of over 10 percent or an insufficient number of jobs. The Balanced Budget Act of 1997 allowed states to exempt another 15 percent of their ABAWDs from these time limits.[10]

The ABAWD rules were expected to reduce food stamp usage among adults living separately, but only about 5 percent of all food stamp recipients were subject to the work requirement. Of the 27 million food stamp recipients in 1995, only about 2.5 million, or 9 percent, were childless adults between the ages of 18 and 50 (Stavrianos, Cody, Lewis, 1997). About half of these adults were either complying with the work requirements or exempt because of disabilities or other reasons. The rest could be subject to the three-month limit on assistance, but some of these adults received an exemption, subsequently conformed to the work requirements or would have left food stamps anyway. The size of the effect of this provision also depends on the extent to which local offices provide services for adults who are trying to comply with the work requirement.

2.4 Food Stamp Program Administration

Many believe that some administrative features of the FSP, including reporting requirements, could have discouraged food stamp usage. Dion and Pavetti (2000), Greenstein and Guyer (2001), and others have expressed concern that some longstanding administrative problems of the FSP may have magnified the

10 Additional details on the rules for ABAWDs is provided in USDA (2000) and Stavrianos, Cody, and Lewis (1997).

effect of PRWORA on caseload declines among working poor families. States and local offices may never have had clear procedures for educating TANF leavers about their continued eligibility for food stamps. Local office staff have always failed to process at least some food stamp applications in a timely fashion, and TANF diversion programs may have increased the number of times in which this lapse occurs. Some faulty automated systems and inadequately trained local office staff have applied the new, complex rules of PRWORA and TANF incorrectly, resulting in unlawful terminations from the Food Stamp Program. A GAO report (1999) indicates that at least some states employed administrative procedures that declared families ineligible for food stamps even though they remained eligible. The report also found that at least seven states incorrectly denied food stamps to households with children following a TANF sanction.

Reporting requirements encouraged by the Quality Control system may also have contributed to caseload decline. The purpose of the QC review is to determine whether a household received the correct food stamp benefit and to calculate an annual state error rate, which is equal to the sum of all errors[11] divided by the sum of all payments. States incur sanctions if the error rate is above the national average. States with especially low error rates receive enhanced funding. These rules provide strong incentives for states to reduce error rates. Errors are more likely among households with earnings, which vary from month to month and may be difficult to track. After 1994, some states tried to reduce errors by requiring more information from working families and 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. Because local welfare offices are often open only during working hours and recertification generally requires a time consuming visit to the local office, some households may have responded to these reporting requirements by leaving the FSP.[12]

In July, 1999, a new initiative gave states options designed to reduce error rates and ease the reporting burdens on participating households. These changes may eventually reduce reporting burdens and

11 Overpayments and underpayments are added, not netted.

12 Some evidence suggests that administrative factors could have contributed to the recent decline in food stamp caseload. Rosenbaum (2000) found that that the proportion of working food stamp households with children required to recertify at intervals of three months or less increased from 1994 to 1998, and that states with the largest increases in the rate of "frequent recertification" also experienced especially large declines in caseloads. Reports based on the National Survey of America's Families (Zedlewski and Brauner, 1999; Zedlewski and Gruber, 2001) found that the percentage of families who reported leaving the FSP because of administrative problems was 11 percent in 1997 and 21 percent in 1999.

increase food stamp participation among working families. However, they occurred too late to influence food stamp participation by the end of fiscal year 1999, the end of the period studied in this report.[13]

In theory, EBT systems could encourage food stamp receipt. One recent innovation -- the introduction of electronic benefits transfer (EBT) cards in the 1990s -- may have actually increased participation. A total of 35 states implemented EBT systems during the 1990s. EBT cards make the use of food stamps easier and less visible, reducing stigma and participation costs associated with the program.

2.5 Other Policy Changes

Other research suggests that the expanded earned income tax credit and the increased minimum wage may have reduced food stamp usage among households with earnings. The expansions in the EITC in the early 1990s could have had an even bigger impact on working poor families than welfare reform. The EITC, a refundable tax credit for low-wage workers in low-income households, reduces the tax burden on moderately low-wage workers and gives additional money to the poorest workers. For a single eligible worker with two children and annual earnings of $9720 or less, the EITC provides 40 additional cents for every dollar earned. The EITC declines gradually as earnings rise above this amount. The EITC increases the incentive to work among low-income families, and studies have found that the EITC has increased work among single mothers.[14] This increase in earnings may have encouraged some families to leave the FSP, including eligible families who were eager to leave the FSP because of its stigma or reporting requirements. The expanded EITC may not have affected the behavior of some families until after 1996 because some families may not have been immediately aware of the change in the tax rules.

The federal minimum wage increased from $3.35 in the early 1990s to $5.15 by 1999. Several states also increased their state minimum wages above $5.15. The higher minimum wage further increased the

13 See Rosenbaum (2000). Calculations of state error rates now make adjustments for the proportion of caseloads consisting of working families and families with recent immigrants. In addition, errors of less than $25 were ignored in the calculations of error rates. These changes reduced the quality control sanctions incurred by many states. After July, 1999, USDA also granted waivers to allow states to adopt longer recertification periods and less burdensome income reporting procedures. By now, most states have received these waivers. From 2000 onward, waivers could also be granted to allow recertification by mail.

14 See Eissa and Liebman, 1996; Meyer and Rosenbaum, 1999; Ellwood, 2000. According to Eissa and Hoynes (1999) the effect of the EITC on married women, who tend to have higher incomes than single parents, may be slightly negative. For those who already have earnings, the EITC has a theoretically unclear impact on earnings: the substitution effect tends to encourage more work, while the income effect may encourage less work.

incentive of less-skilled persons to obtain work. While the increase in the minimum wage could in theory increase unemployment, evidence suggests that the employment effects of these recent increases are modest at most. [15] Higher minimum wages could also have encouraged some persons to leave the FSP, even if they remained eligible.

Expanded eligibility for public health insurance had a theoretically uncertain effect on food stamp receipt. The expansion of eligibility for Medicaid may have encouraged work by ensuring that families that left AFDC or TANF could retain health insurance, a benefit often absent in low-wage jobs. Beginning in the mid-1980s, Medicaid eligibility was expanded to include many children in working poor families. In the late 1990s, this expansion of public health insurance continued with Transitional Medical Assistance (TMA) for families leaving welfare for work, and S-CHIP, a program that sought to cover even more children in working poor families. By encouraging work and "de-linking" public health insurance and AFDC/TANF, these programs could have encouraged some families to reduce reliance on both AFDC/TANF and food stamps.[16] On the other hand, expanded eligibility for public health insurance could have increased participation in food stamps because some families may have learned about their eligibility for food stamps while enrolling in these insurance programs. (Yelowitz,2000). Despite expanded Medicaid eligibility, enrollment in Medicaid fell after PRWORA,[17] and the overall effect of Medicaid on food stamp receipt is uncertain.

The SSI program could have affected FSP caseloads in several ways. From 1982 to 1995, the number of recipients of Supplemental Security Income (SSI), a federal program designed to provide income support to low-income elderly persons and blind or disabled adults and children, grew rapidly. The number of non-elderly adult recipients roughly doubled and the number of recipients under 18 more than quadrupled. The number of non-citizen recipients also grew quickly during these years.[18] Much of the

15 Bernstein and Schmidt (1998) conclude that these employment effects were negligible during the 1990s. Neumark (1999) concludes that the higher minimum wage reduced employment among unskilled young persons, but had minor effects for other groups.

16 Increases in child care assist ance and enhanced child support collection could have had a similar effect, increasing income for some low-income families and perhaps reducing the perceived need for food stamps. Garfinkel (2001) concludes that recent efforts have increased the amount of child support collected.

17 Dion and Pavetti (2000).

18 Karoly, Klerman, and Rogowski (2001).

large increase in the number of child recipients appears to have been caused by changes in program rules and the 1990 *Sullivan v Zebley* court ruling, which expanded the eligibility criteria for childhood SSI.

The 1996 welfare reforms responded to this rapid increase in the SSI caseload by restricting eligibility for the program. The definition of disability for children was tightened. Eligibility for legal non-citizens was substantially narrowed, although the 1997 Balanced Budget Act restored eligibility for non-citizens who arrived before August 1996. The drug addiction and alcoholism diagnosis (DA&A) was no longer considered a basis for eligibility. One study (Karoly, Hirscher, and Rogowski 2000) found that about 100,000 children lost eligibility because of the new rules. New child disability applications also declined by about 100,000 each year since 1996.

These changes may or may not have led to changes in the number of food stamp participants. Those who qualify for SSI often also qualify for food stamps. Declines in SSI receipt after PRWORA may have led to reduced food stamp receipt because fewer disabled persons may know of their eligibility for food stamps or because the participation costs of public assistance are worth accepting for SSI and food stamps but not food stamps alone. For similar reasons, increases in SSI receipt before PRWORA may have led to increases in food stamp receipt. On the other hand, the changes in the SSI rules could have had little impact on food stamp receipt if many of these low-income disabled persons would have received food stamps regardless of changes in the SSI program. The SSI program could also have limited the effect of TANF provisions on food stamp caseloads. TANF recipients with disabilities may have responded to the requirements of TANF by leaving cash assistance for a combination of food stamps and SSI, which does not have these strong work requirements (Karoly, Klerman, and Rogowski, 2001).

2.6 Conclusion

An analysis of the determinants of FSP caseloads is challenging in part because of the sheer number of policy changes that could affect caseloads from the many different types of households served by the FSP. The rules of TANF, PRWORA's rules for non-citizens and ABAWDs, administrative features of the FSP, the EITC, the increase in the minimum wage, the expansion of Medicaid eligibility, and the SSI program could all have affect food stamp receipt. The effects of these policies will clearly vary by type of household. TANF policies and Medicaid expansions will affect families with children. The ABAWD rules of the FSP affect mainly adults without children. The FSP's rules for non-citizens affect several

types of households with recent immigrants. Changes in reporting requirements of the FSP will tend to affect households with working adults. Households with persons with disabilities will be affected by changes in the SSI program. The next chapter confirms that FSP caseloads from these different types of households exhibited varied trends during the years in which these policies were imposed.

3: Trends in Food Stamp Caseloads, 1987-1999

Trends in the total numbers of food stamp participants are the sum of widely varying trends in the number of participants in different types of households. This chapter shows that the numbers of FSP participants in households consisting of single or multiple adults with children, adults or elderly persons living separately, and elderly persons living with adults or children have all changed in different ways since the late 1980s. Trends in caseloads from households with and without non-citizens have also diverged sharply. An examination of nationwide caseloads generally cannot directly reveal the impacts of specific policy changes. Nevertheless, this review of recent caseload trends raises several important issues for the statistical analysis presented later in this report.

This discussion of FSP caseload trends is based on the FSP-Quality Control (QC) microdata. These administrative data, which have been produced for each fiscal year since 1987, contain detailed information on a nationally representative annual sample of about 50,000 FSP units.[1] The main purpose of the QC review is to assess the accuracy of eligibility determinations and benefit calculations and to determine each state's error rate. These data also serve as an important source of detailed demographic and financial information on a large sample of active food stamp participants. The QC data have been used in numerous studies of the Food Stamp Program,[2] and are perhaps the best available data for a study of recent trends in FSP caseloads from important groups of households.[3] Using these administrative data avoids reporting biases that are present in data based on personal surveys.[4]

Classifying FSP households: In the Food Stamp Program, the terms "participant" or "recipient," "food stamp household," and "food stamp unit" have very specific meanings. FSP "participants" or "recipients" are defined as persons who are certified for and receive food stamps. FSP participants who generally live together and are certified to receive food stamps as a group constitute a "food

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1 Annual state samples ranging from 300 to 2,400 units. The QC data for fiscal years 1987 and 1988 contain smaller samples.

2 These studies include the annual USDA/FNS report entitled *Characteristics of Food Stamp Households*, and the QC Minimodel, a microsimulation model that estimates the impact of proposed reforms to the FSP on participants.

3 The QC data have some limitations. Information on the educational attainment of recipients is frequently missing, a problem that limits research on participation trends for those with more and fewer years of schooling. The QC data record the presence of some household members who are ineligible for food stamps, but no one knows how completely this information is recorded; some of persons who reside in the household but who are ineligible for food stamps could be missing. Exemptions from ABAWD provisions appear to be unreliably recorded.

4 The Current Population Survey under-reports the FSP caseload by about 17 percent (Wilde et al. 2000)

stamp unit." A "food stamp household" is generally a residence that includes the food stamp unit and any additional persons who are ineligible for food stamps and are who not food stamp participants. After PRWORA, for example, many disqualified non-citizens became ineligible non-participants who are in the food stamp household but not in the food stamp unit. The QC data consist of a series of records of food stamp units. These records identify participants in the unit and ineligible non-participants who are also in the household. In the late 1990s, about one in six FSP participants are in units in which ineligible non-participants are recorded by administrative data.[5]

This report places each food stamp unit record in the QC data into one of six mutually exclusive categories based on the age and number of participants – the members of the unit who are certified to receive food stamps. Adults are defined as those between the ages of 18 and 60; elderly persons are those older than age 60; and children are those under the age of 18. The six categories are:

- single adults with at least one child;
- multiple adults with at least one child;
- one or more adults living separately (without elderly persons or children);
- one or more elderly persons living separately;
- elderly persons living with adults or children; and
- the remaining group of that includes households in which the only participants are children.

Throughout this report, these six categories are described as "*types of households*." The focus of the report is on the unit members of households because published counts of "caseloads" generally include only those certified to receive benefits, and because trends in the number of participants are an important determinant of program costs. The last type of household – in which the only participants are children -- is typically known as a "child only unit." In these households, the adult or elderly guardians are not certified to receive benefits. These households may include children in foster care or, after PRWORA, children with guardians who are ineligible non-citizens.

3.1 FSP Caseload Trends by Type of Household

FSP participants include persons from a much broader range of households. Figure 3-1 shows the proportion of FSP participants from several types of households in 1994, the year in which the

[5] "FSP participants" are those defined in the QC data as "members of the FSP case under review."

number of FSP participants peaked in the 1990s. Most of these groups include children and could have been affected by the rules of TANF. About half of FSP participants were in households that consisted of a single adult and at least one child. Another 28 percent of participants were in households that consisted of more than one adult and one or more children. Two percent were children in "child only" units that include children in foster care and children whose guardian is ineligible for food stamps. Another three percent of participants lived in households in which an elderly person resided with either children or adults or both. Two other groups of households did not include children. Adults living separately, without children or elderly persons, accounted for another 11 percent of the caseload. This group includes adults subject to the ABAWD rules. Six percent of FSP participants were elderly persons living without adults or children.

Since the late 1980s, the numbers of FSP participants in each of these major types of households displayed unique trends (Table 3-1). The number of participants in single adult households with children rose by 52 percent from 1989-1994, remained fairly stable from 1994-1996, and then fell by 31 percent from 1996 to 1999. The number of participants in multiple adult households with children increased less rapidly from 1989 to 1994, but then fell more rapidly after 1994. From 1989-1994, the number of adult participants living separately rose by more (in percentage terms) than the number of participants in households with adults and children. After 1996, the number of adult participants living separately also fell dramatically. The number of participants in households with elderly persons living with others changed very little during the early 1990s but fell rapidly after 1994. The number of elderly participants living separately rose by over one-quarter in the early 1990s but declined only modestly after 1994. The number of participants in "child only" units displayed yet another trend: these more than doubled in the early 1990s and continued to increase even after 1994.

These trends suggest that policy changes and economic trends had different effects on food stamp receipt among persons in each of these types of households. For several groups, the average annual rate of caseload decline was far more rapid from 1996-1999 than from 1994-1996, even though the economy improved steadily after 1994. This especially rapid decline after 1996 suggests but does not prove that PRWORA and TANF could have reduced FSP receipt. The last column of Table 3-1 shows that most of the decline in caseloads after 1996 occurred because of declines in the number of participants in households consisting of either adults and children or adults living separately. These groups could have been affected by PRWORA and TANF, but the precise impact of these policy changes is unclear based on these trends alone.

Figure 3-1: FSP Participants by Type of Household, 1994

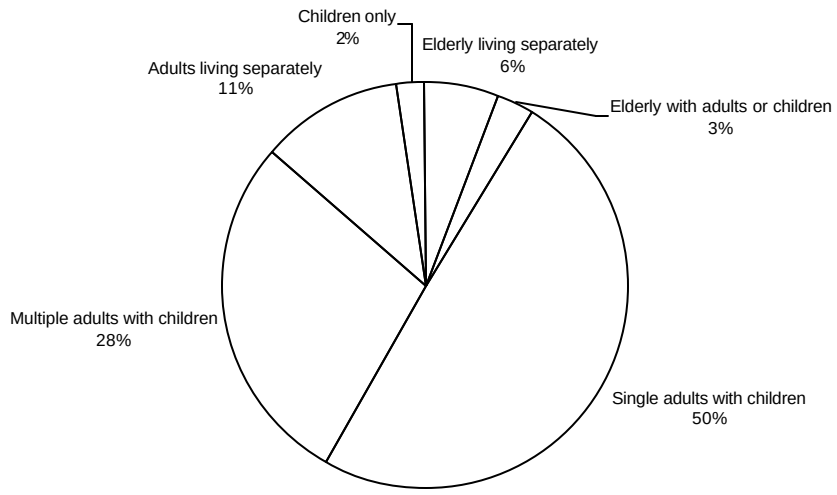


Table 3-1
Summary of Trends in the Number of FSP Participants

	Percentage change in the number of FSP participants			Percentage of the1996-99 change in the total number of participants
Type of Household	1989-94	1994-96	1996-99	
All FSP Households	47.8%	-7.5%	-30.0%	100.0%
Single adults with children	51.9%	-6.2%	-30.6%	50.9%
Multiple adults with children	42.8%	-13.5%	-39.2%	34.7%
Adults living separately	58.5%	-2.6%	-29.4%	11.6%
Elderly living separately	27.5%	-1.1%	-8.3%	1.7%
Elderly living with adults or children	8.9%	-14.2%	-24.4%	2.2%
Children only	147.9%	6.9%	14.7%	-1.3%

Source: FSP-QC data

Households are classified as consisting of single- and multiple-adult households with children, adults or elderly living separately, elderly living with others, or children only based on the participants in the household. The last column is equal to the change in the number of participants in each category divided by the change in the total number of participants.

Clearly, general population trends alone cannot account for the large changes in FSP caseloads that occurred during these years. As Table 3-2 indicates, the U.S. population in each of these types of households grew steadily over time. These population estimates are based on an analysis of households in the Current Population Surveys. Some of the earlier increases in FSP caseloads through 1994 can be explained by the fact that the population in each type of household increased during these years, so one would expect to see increases in caseloads even if the participation rate had not changed. A comparison of trends in FSP caseloads (Table 3-1) and population trends (Table 3-2) shows, however, that most of this earlier increase in FSP caseloads cannot be explained by population trends. Similarly, none of the abrupt declines in FSP caseloads after 1996 can be explained by

Table 3-2
Summary of Population Trends, by Type of Household

Type of Household	U.S. Population 1989	U.S. Population 1999	Percentage change in the U.S. Population 1989-94	1994-96	1996-99
All Households	243,684,941	271,742,834	6.6%	1.8%	2.8%
Single adults with children	15,038,599	18,653,304	16.6%	2.4%	3.9%
Multiple adults with children	113,280,902	122,839,895	6.7%	1.3%	0.4%
Adults living separately	59,571,332	69,176,211	5.1%	3.0%	7.3%
Elderly living separately	29,259,720	31,361,857	2.8%	1.6%	2.6%
Elderly living with adults or children	26,459,404	29,671,134	8.5%	0.8%	2.5%

Source: FSP-QC data

These figures are obtained from the March Current Population Surveys. The "unit of analysis" is the CPS household, rather than the CPS family. (Other tabulations of population changes may be based on counts of CPS families). Households are classified as consisting of single- and multiple-adult households with children, adults or elderly living separately, or elderly living with others based on the number and age of the persons in the CPS household.

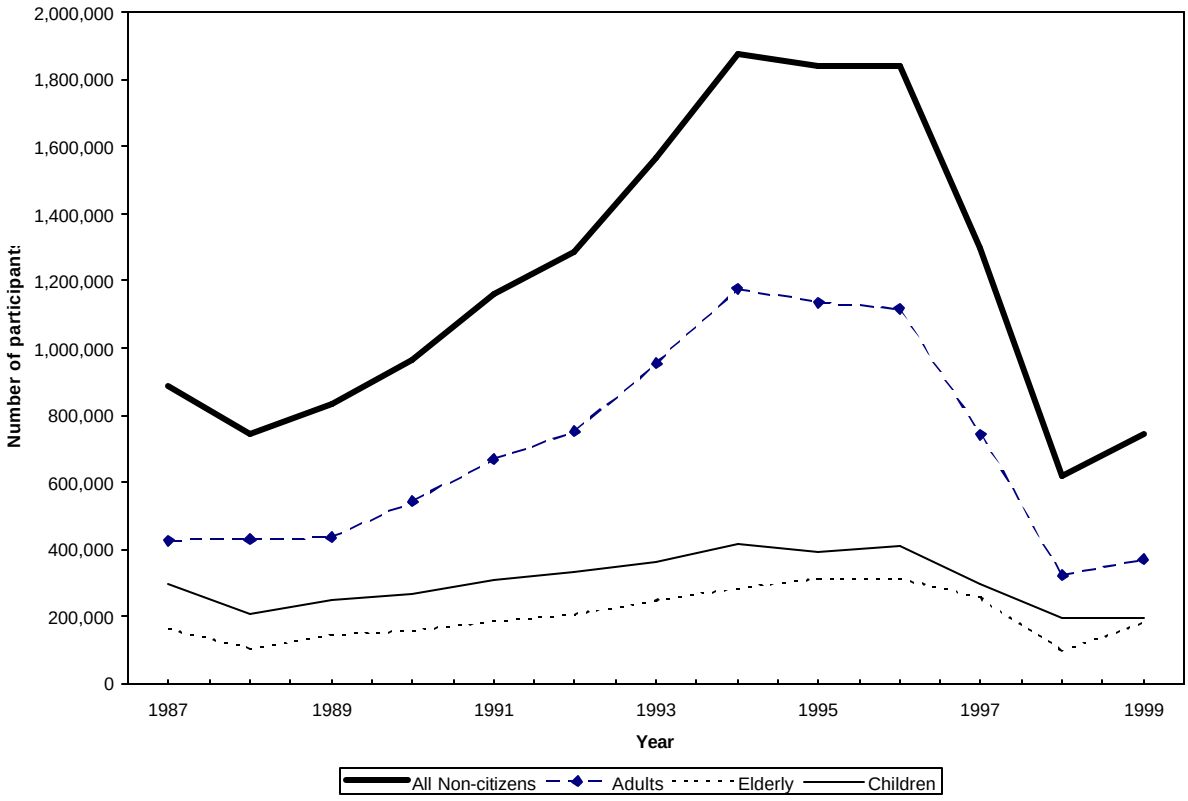
population trends within specific types of households. Some combination of changes in economic conditions, policies, and perhaps attitudes toward public assistance must account for most of these large swings in FSP caseloads.

3.2 Households with Non-citizens

Policy changes caused at least some of the dramatic changes in the numbers of non-citizen FSP participants. As Figure 3-2 shows, the numbers of non-citizen participants rose by about 150 percent from 1989-1994, remained steady from 1994 to 1996, and then fell by 60 percent from 1996 to 1999. Increases in the numbers of recent immigrants, improved access to food stamp offices, the recession, and perhaps expanded eligibility for Medicaid and SSI all may have contributed to the steep rise in the number of non-citizen participants from 1989-1994. At least some of the abrupt decline in the number of these participants after 1996 must have been caused by PRWORA, although the strong economy also played a role.

The end of the decline in the number of non-citizen participants after 1998 also suggests a role for policy changes. After 1998, the number of adult and elderly non-citizen food stamp participants increased slightly, and the number of non-citizen food stamp participants who were children stopped declining. By the end of 1998, PRWORA had already removed a large group of non-citizens from the FSP, leaving only those who were exempt from the legislation. After 1998, PRWORA continued to reduce the number of non-citizen participants by preventing smaller groups of non-citizens, including newly arrived non-citizens, from receiving food stamps for the first time. Any reductions

Figure 3-2: Non-citizen Food Stamp Participants, 1987-1999



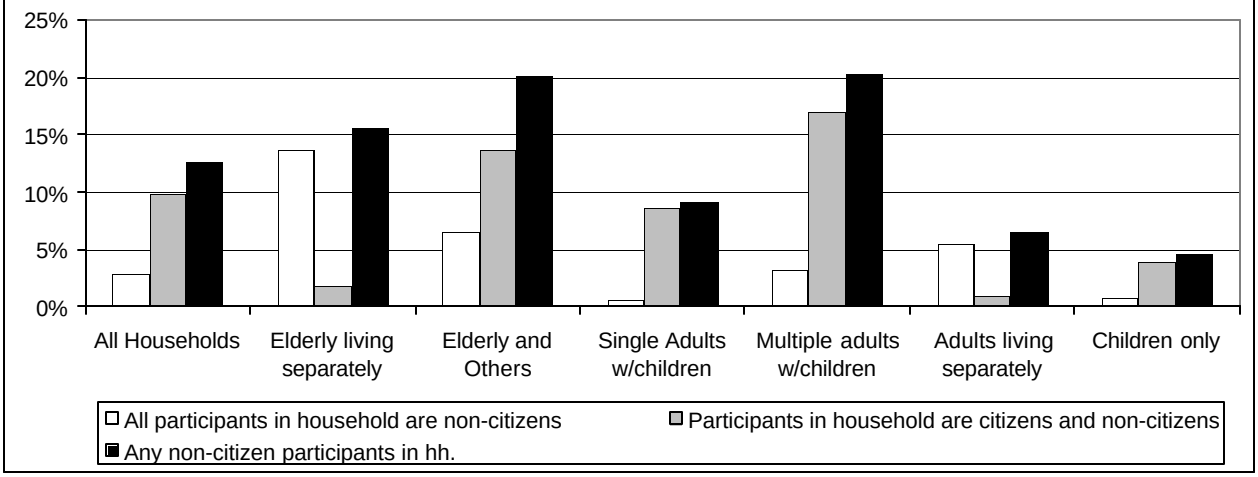
in the number of non-citizen food stamp participants caused by PRWORA after 1998 were offset by the 1998 legislation that restored food stamp eligibility to non-citizens who arrived before August, 1996 and who were elderly persons, children, or disabled adults. Some recent immigrants also regained eligibility for food stamps by obtaining citizenship.

The rapid decline in the number of non-citizen participants after 1996 can explain only a limited amount of the caseload decline from each of the major types of households. Only about 7 percent of participants were non-citizens just before PRWORA, and about 15 percent of the decline in the total number of FSP participants from 1996 to 1999 is due to the decline in the number of non-citizen participants. The share of the recent caseload decline that is accounted for by the decline in the number of non-citizen participants varies by type of household. The decline in the number of non-citizen participants after 1996 accounts for 9 percent of the decline in caseloads from households with single adults and children and less than 20 percent of the decline in caseloads from households with multiple adults and children and with adults living separately. The decline in the number of non-citizen participants after 1996 accounts for one-third of the decline among elderly persons living with

others, and over 80 percent of the decline among elderly persons living separately. These figures (not shown in tables) probably exaggerate the impact of the non-citizen rules on caseloads because economic trends could also have reduced caseloads from households with non-citizens.

The effect of the non-citizen rules of PRWORA on food stamp caseloads depends partly on the behavior of citizens in households with non-citizens. As Figure 3-3 shows, most food stamp households with non-citizen participants included participants who were *both* citizens and non-citizens. This finding persists for all types of households except those consisting of elderly persons or adults living separately, mainly because these households tend to consist of only a single participant. It is also important to note that in 1994, over 80 percent of households with non-citizens

Figure 3-3: Percentage of FSP Participants in Households with Non-citizen Participants, by Household Type, 1994



included children. Among food stamp households that included non-citizens and that consisted of children living with adults or elderly persons, about two-thirds were "mixed households" consisting of elderly or adult non-citizens living with children who were citizens.[6] Under PRWORA, the non-citizens in these "mixed" households lost their eligibility, but the citizens in these households remained eligible for food stamps. Some chose to leave the FSP – perhaps because of misinformation or because the reduced food stamp benefits were not worth the perceived costs of participation -- and some chose to continue to receive benefits.

[6] These results are very similar to those shown in a study of FSP-QC data by Stavrianos, Cody, and Lewis (1997). This report showed that in 1995, about 11 percent of FSP units contained at least one non-citizen and 8.8 percent include at least at least one permanent resident alien that appeared to be subject to the food stamp disqualification. About two-thirds of these units contained both PRAs and citizens; the rest consisted entirely of PRAs. Of these "mixed" food stamp units, over 90 percent contain at least one adult with children, and about half consist of an adult non-citizen and children who are citizens. This report also found that about three-quarters of PRAs live in only four states – California, New York, Florida, and Texas.

The QC data can provide some information on the possible effects of PRWORA's non-citizen rules. These data record the presence of not only non-citizens who are FSP participants, but also non-citizen household members who are non-participants. With this information, one can also compare trends on the number of participants in households that do and do not include non-citizens, regardless of whether these non-citizens are FSP participants. Table 3-3 summarizes this analysis and makes several points. In this table and the following discussion, "households with non-citizens" include households with non-citizens who were participants and households with non-citizens who were ineligible non-participants, as recorded in the QC data.

Declines in the number of participants from 1996-1999 tended to be far more rapid among households that include some non-citizens than among households that include only citizens. This trend can be observed by comparing the first and second sets of rows in Table 3-3. The last column of Table 3-3 shows that almost one-quarter of the total decline in FSP participants after 1996 is explained by these very rapid declines in numbers of participants in households with non-citizens. The non-citizen rules most likely caused less than one-quarter of the total caseload decline during these years because the economy and other factors also contributed to the decline in caseloads from households with non-citizens. Nevertheless, the relatively more rapid caseload declines among households with non-citizens must have occurred at least partly because of the non-citizen rules of PRWORA. The rapid caseload declines among households with non-citizens occurred among all households except child-only units, which are discussed below.

After 1996, the number of citizen participants in households *with* non-citizens tended to fall at a much faster rate than the number of citizen participants in households *without* non-citizens. The first set of rows in Table 3-3 shows trends in the number of citizen participants in households without non-citizens (that is, without non-citizen participants and without non-citizen non-participants). The third set of rows in Table 3-3 shows trends in the number of citizen participants in households with some non-citizens. Among all households, households with adults and children, and households with adults living separately, the number of citizen participants in households with non-citizens (third panel of Table 3-3) fell at a much faster rate than the number of citizen participants in households without non-citizens (first panel of Table 3-3). These results suggest the possibility that the non-citizen rules may have encouraged many citizens in households with non-citizens to leave the FSP, perhaps

Table 3-3
Trends in the Number of Food Stamp Participants in Households with and without Non-Citizens

	Percentage of all participants, 1994	Percentage change in numbers of participants			Percentage of 1996-1999 change in the total number of participants
		1989-94	1994-96	1996-99	
Households consisting of citizens only					
All participants					
All households	85.8%	38.5%	-8.0%	-26.9%	76.5%
Single adults with children	44.4%	45.2%	-5.9%	-28.0%	42.2%
Multiple adults with children	22.6%	29.6%	-16.2%	-32.5%	22.2%
Adults living separately	10.5%	53.6%	-2.8%	-26.6%	9.8%
Elderly living separately	5.0%	19.5%	-3.7%	-1.9%	0.3%
Elderly living with adults or children	2.3%	-2.7%	-9.7%	-20.7%	1.6%
Child only households	0.9%	89.2%	9.6%	-10.9%	0.4%
Households that include non-citizens who are either participants or non-participants					
All participants					
All households	14.2%	149.3%	-4.1%	-47.9%	23.5%
Single adults with children	4.8%	165.3%	-9.0%	-55.4%	8.8%
Multiple adults with children	5.8%	138.0%	-2.6%	-62.0%	12.5%
Adults living separately	0.7%	186.2%	0.7%	-67.3%	1.8%
Elderly living separately	0.9%	98.4%	12.7%	-37.5%	1.4%
Elderly living with adults or children	0.6%	106.0%	-32.3%	-44.0%	0.6%
Child only households	1.4%	207.5%	5.2%	31.3%	-1.6%
Participants who are citizens					
All households	7.5%	174.9%	-6.2%	-37.0%	9.4%
Single adults with children	3.0%	188.4%	-7.8%	-48.9%	4.8%
Multiple adults with children	2.9%	154.6%	-5.1%	-61.1%	6.0%
Adults living separately	0.1%	35.2%	57.1%	-70.8%	0.2%
Elderly living separately	0.1%	193.0%	-29.4%	41.5%	-0.1%
Elderly living w/adults or childrer	0.2%	178.8%	-63.6%	24.2%	-0.1%
Child only households	1.3%	212.2%	4.0%	30.0%	-1.5%
Participants who are non-citizens					
All households	6.7%	125.7%	-1.8%	-59.6%	14.1%
Single adults with children	1.9%	135.4%	-10.9%	-66.2%	4.0%
Multiple adults with children	2.9%	123.5%	-0.1%	-62.9%	6.6%
Adults living separately	0.7%	217.1%	-4.3%	-66.8%	1.6%
Elderly living separately	0.9%	94.0%	15.7%	-40.9%	1.5%
Elderly living w/adults or childrer	0.3%	74.3%	-10.6%	-63.3%	0.7%
Child only households	0.0%	116.3%	37.3%	57.7%	-0.1%

Source: FSP-QC data

because the reduced food stamp benefits were no longer worth the transactions costs or because of misinformation about eligibility. [7] Many of these former citizen FSP participants were children.

[7] Among households with elderly participants, the number of citizen participants in households with non-citizens displayed a different pattern, rising after 1996. One possible but unverifiable explanation is that the non-citizen rules increased the number of citizens and non-citizens that chose to live together in these households for financial reasons. These types of households with non-citizens make up less than one percent of the FSP caseload.

The number of child FSP participants in child-only units with non-citizens rose sharply after PRWORA, while the number of participants in all other types of households with non-citizens fell after PRWORA. Most of this increase occurred because of an increase in the number of citizen children who received food stamps and who resided in households with non-citizen guardians who became ineligible for food stamps. In the absence of PRWORA, many of these FSP households would have been classified as having both adult and child participants. Despite this sharp increase in the number of participants in child-only units with ineligible non-citizens, the *total* number of child FSP participants in households with non-citizens declined markedly after PRWORA.

Summary: A review of these trends confirms that policies played at least some role in the decline in FSP participants after 1996. The new rules for non-citizens clearly reduced the number of non-citizen participants. The evidence is also consistent with the possibility that the non-citizen rules also reduced the total number of citizen participants in households with non-citizens. These rules reduced the total number of child participants in households with non-citizens, but increased the number of child participants in child-only FSP units by making many non-citizen adults ineligible for benefits.

As Table 3-3 also shows, about three quarters of the total 1996-99 decline in the FSP caseloads occurred because of declines in the number of participants in households that include only citizens. Many of these households could have been affected by TANF and the rules for ABAWDs. Adults living separately in households without non-citizens accounted for 10 percent of the decline, while households with adults and children and without non-citizens accounted for almost two-thirds of the total decline. A comparison of Table 3-3 and Table 3-1 shows that, with the exception of child-only units, trends in the total numbers of FSP participants are mostly similar to trends in the number of participants in households without non-citizens. The next sections of this chapter provide more information on trends in participants in households without non-citizens.[8]

[8] PRWORA's rules for non-citizens could further complicate an analysis of participation rate trends by type of household because these rules could change the way "mixed" food stamp households are categorized into the types of households in Figure 3-1. The non-citizen rules could affect measured caseload trends by "moving" some households from one type to another. A household that had consisted of a single eligible non-citizen adult and eligible citizen children would appear in the QC data after PRWORA as a child-only household, causing the number of eligible recipients single adult households with children to fall. Households consisting of two adults -- a citizen and a non-citizen – and citizen children would appear in the QC data as a multiple adult household with children before PRWORA, but a single adult household with children after PRWORA. Trends in participation by type of household could be in part a reflection of these "classification effects" rather than changes in the total numbers of recipients in each type of household. Further analysis of the QC data indicates that there were only minor changes in the proportion of households with ineligible non-citizens within types of households other than child only units. These findings suggest that these "classification effects" played only a minor role in caseload trends of types of households other than child-only units.

3.3 Single Adults with Children

Trends in the numbers of these food stamp participants are not always closely linked to economic trends (Figure 3-4). In some years in the late 1980s and the mid 1990s, the number of food stamp recipients in single-adult households with children continued to rise even though unemployment was falling. Food stamp receipt for these historically low-income households may been affected by not only the economy, but also state-level AFDC waivers, state TANF plans, Medicaid expansions, the SSI program, the expanded EITC, and the increased minimum wage. Figure 3-4 and Table 3-4 present additional details on trends in the number of participants in these households. To control for the effects of the non-citizen rules, these figures are based on FSP households without non-citizens. [9]

These trends for single adult households with children are the sum of very different trends for three subgroups defined by the presence of other types of public assistance. In 1994, most of these participants -- and over one-quarter of the total FSP caseload -- were in households that also received AFDC or TANF, but no Social Security income. (Throughout this report, "Social Security income" includes Supplemental Security Income, disability benefits, and "old age" Social Security) These households were directly affected by the rules of TANF and most could not obtain an exemption because of a disability. Another large group of "working poor" participants received neither AFDC/TANF nor Social Security income, and include those who had left TANF or SSI (possibly as a result of policy changes) and those who had never received aid from these programs. A third group consists of households that receive food stamps and Social Security income. These participants may have been exempt from the work requirements of AFDC and TANF because of a disability, and some may have become FSP participants as a result of becoming eligible for Social Security income.

Some TANF leavers continued to receive food stamps; others may have switched from TANF to SSI; and still others may have received SSI continually. These outcomes could have limited the effects of TANF on food stamp receipt among single adults households with children. The number of persons who received both food stamps and AFDC/TANF (and not Social Security income) fell sharply by almost 50 percent from 1996-1999. TANF, economic trends, the expansions of the EITC and Medicaid eligibility, and the increased minimum wage could all account for some of this decline. The number of participants that received food stamps but neither AFDC/TANF nor Social Security

[9] That is, the sample includes participants from households without non-citizen participants and without non-citizens who are non-participants.

Figure 3-4: Food Stamp Participants, 1987-1999: Single Adults with Children, Households without Non-citizens

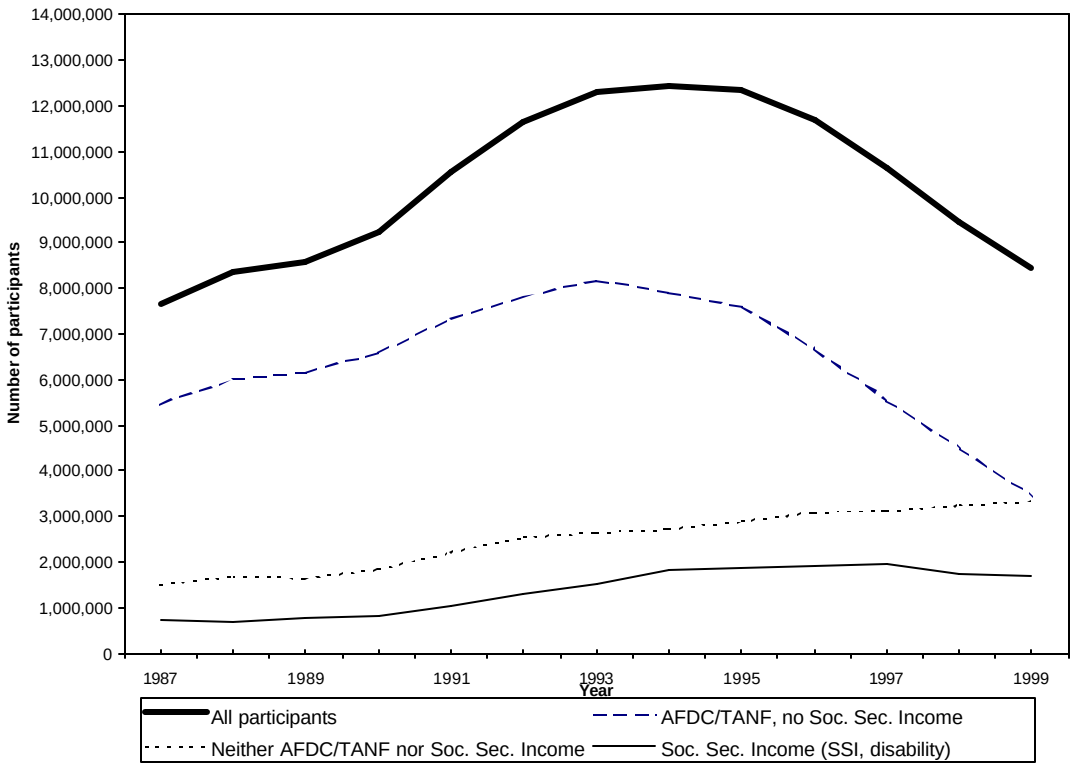


Table 3-4
FSP Particpants in Households with Single Adults and Children

	Percentage of all participants, 1994	Percentage change in numbers of participants			Percentage of the1996-99 change in the total number of participants
		1989-94	1994-96	1996-99	
Households consisting of citizens only					
Single adults with children	44.4%	45.2%	-5.9%	-28.0%	42.2%
AFDC/TANF, no Social Security inc.	28.3%	28.5%	-15.5%	-48.6%	41.8%
No AFDC/TANF, no Social Security inc.	9.7%	65.8%	13.9%	7.4%	-2.9%
Social Security income	6.5%	134.5%	6.8%	-13.4%	3.3%

Source: FSP-QC data

"Social Security income" includes SSI and disability. In this group of households, most recipients of "Social Security income" receive SSI.

income rose fairly steadily from 1987 to 1999. Because the economy continued to be strong after 1994, it seems unlikely that the number of single parent food stamp participants who never qualified for TANF would grow during these years. A more likely explanation for the increase in the number of these "food stamp only" participants in the late 1990s is that some TANF and SSI leavers continued to receive food stamps. TANF, expanded eligibility for Medicaid and the EITC, higher

minimum wages, and tightened eligibility rules for SSI could have encouraged families to leave TANF or SSI but retain food stamps.

The modest decline in the number of persons receiving food stamps and Social Security income after 1996 may have resulted from the tightening of the rules for SSI, economic growth, or some state TANF policies that did not exempt families with disabled persons. The decline in the number of FSP recipients after 1996 may have been modest because the TANF rules encouraged some families to switch from TANF to SSI.

Several explanations could account for the earlier increases in caseloads from these households. Many factors -- the recession, increases in the number of single parent households, and Medicaid expansions -- could explain the earlier increase in the number of participants receiving food stamps and AFDC or food stamps alone. The rapid rise in the number if persons in households receiving food stamps and Social Security income from 1989-1996[10] may have resulted from Medicaid expansions or policies that led to a general increase in the number of SSI recipients. Some of the new Medicaid and SSI eligibles could also have learned that they could qualify for food stamps. The effect of these programs on food stamp receipt during these years is hard to assess because some could have received food stamps regardless of the rules of these other programs.

3.4 Multiple Adults with Children

Food stamp receipt among these households could have been affected by many of the same factors that could have affected food stamp receipt among single adult households with children, although the size of the effects of policies and economic trends on these two groups of households could differ. Food stamp households with multiple adults and children are less likely than food stamp households with single adults and children to receive TANF. Trends in the number of participants from multiple adult households with children may be dominated by the behavior of "working poor" households that never received TANF.

Trends in caseloads from single and multiple adult households with children differed in several ways. Trends in the number of participants in multiple adult households with children (considering only

[10] While the data indicate the value of benefits a household receives from other public assistance programs, such as TANF or SSI, they may not accurately record which persons in each household are eligible for this benefit. In other words, one can tell whether a household received SSI but one may not necessarily know whether a child or an adult is eligible for this benefit.

Figure 3-5: Food Stamp Recipients, 1987-1999: Multiple Adults with Children, Households without Non-citizens

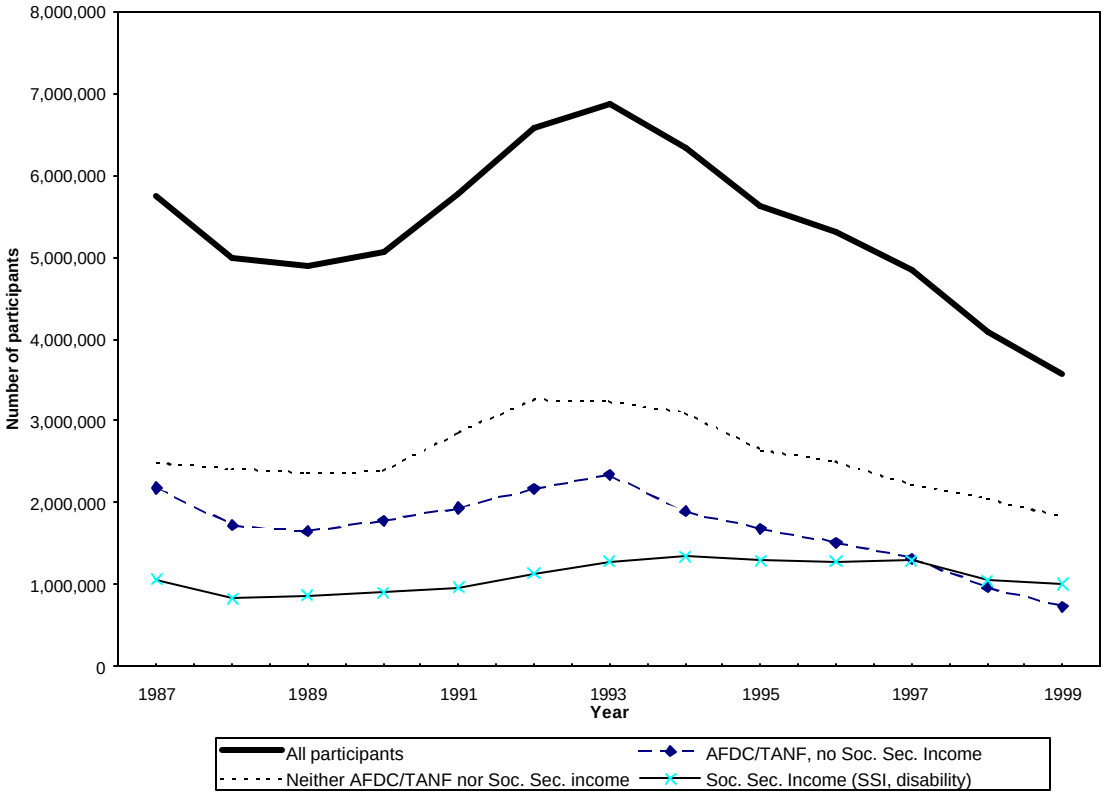


Table 3-5
FSP Participants in Households with Multiple Adults and Children

	Percentage of all participants, 1994	Percentage change in numbers of participants			Percentage of the1996-99 change in the total number of participants
		1989-94	1994-96	1996-99	
Households consisting of citizens only					
Mulitple adults with children	22.6%	29.6%	-16.2%	-32.5%	22.2%
AFDC/TANF, no Social Security inc.	6.8%	14.7%	-19.8%	-51.5%	10.1%
No AFDC/TANF, no Social Security inc.	11.1%	31.0%	-19.4%	-26.7%	8.6%
Social Security income	4.8%	54.6%	-3.9%	-21.4%	3.6%

Source: FSP-QC data

"Social Security income" includes SSI and disability. In this group of households, most recipients of "Social Security income" receive SSI.

households without non-citizens) appear to be relatively more clearly tied to economic conditions (Figure 3-5). Among both single- and multiple-adult households with children, there was a sharp decline in the number of FSP participants who received AFDC/TANF but not Social Security income after 1996 (Table 3-4, 3-5). During these same years, however, there was a substantial decline in the

number of FSP participants from multiple-adult households with children that received neither TANF nor Social Security income; this decline did not occur among single-adult households with children. After 1996, the number of FSP participants with Social Security income also declined more rapidly (in percentage terms) among multiple adult households with children than among single-adult households with children. Among multiple adult households with children, increases in the number of "food stamp only" households because of departures from TANF and SSI were more than outweighed by declines in the number of "food stamp only" households. In sum, trends in the number of FSP participants in single- and multiple-adult households with children are sufficiently different to justify a separate analysis of the two groups.[11]

3.5 Adults Living Separately

These food stamp households will be affected most directly by the ABAWD provisions, the rules of programs that assist persons with disabilities, the expanded EITC, and the increased minimum wage. The rules of TANF and AFDC probably had little or no effect on this group. The number of participants in these households is also very closely linked to economic conditions (Figure 3-6 and Table 3-6).

Participants that do and do not receive Social Security income (SSI or disability) exhibit very different trends. The number of food stamp participants receiving Social Security income almost doubled from 1989-1996 and then declined by only 5 percent from 1996-1999. Some of the earlier increase in the number of food stamp participants may have been a consequence of increases in the number of persons who received Social Security income, although the evidence is inconclusive. The decline in the number of food stamp participants who also received Social Security income after 1996 may have been modest because many disabled adults were unable to work even in a strong economy. The decline in the number of FSP participants without Social Security income was far more rapid.

The effect of the ABAWD provisions on food stamp receipt was limited by exemptions and other factors. The decrease in the number of participants after 1996 was driven by the behavior of persons who did not receive Social Security income, at least some of whom were affected by the ABAWD rules. Almost half of adults living alone were in households that also received Social Security income

[11] Not all of these food stamp households consist of a married couple with children. In recent years, 62-69 percent of persons in food stamp households with multiple adults appear to be in families consisting of a married couple and children. About 6 percent of persons are in households consisting of more than one adult, none of whom is married, and children. The remaining 25-32 percent of persons are in households consisting of a married couple, children, and other adults, most of whom are related to other household members. Recent trends in the number of recipients in these subgroups are very similar.

Figure 3-6: Food Stamp Participants, 1987-1999: Adults Living Separately, Households without Non-citizens

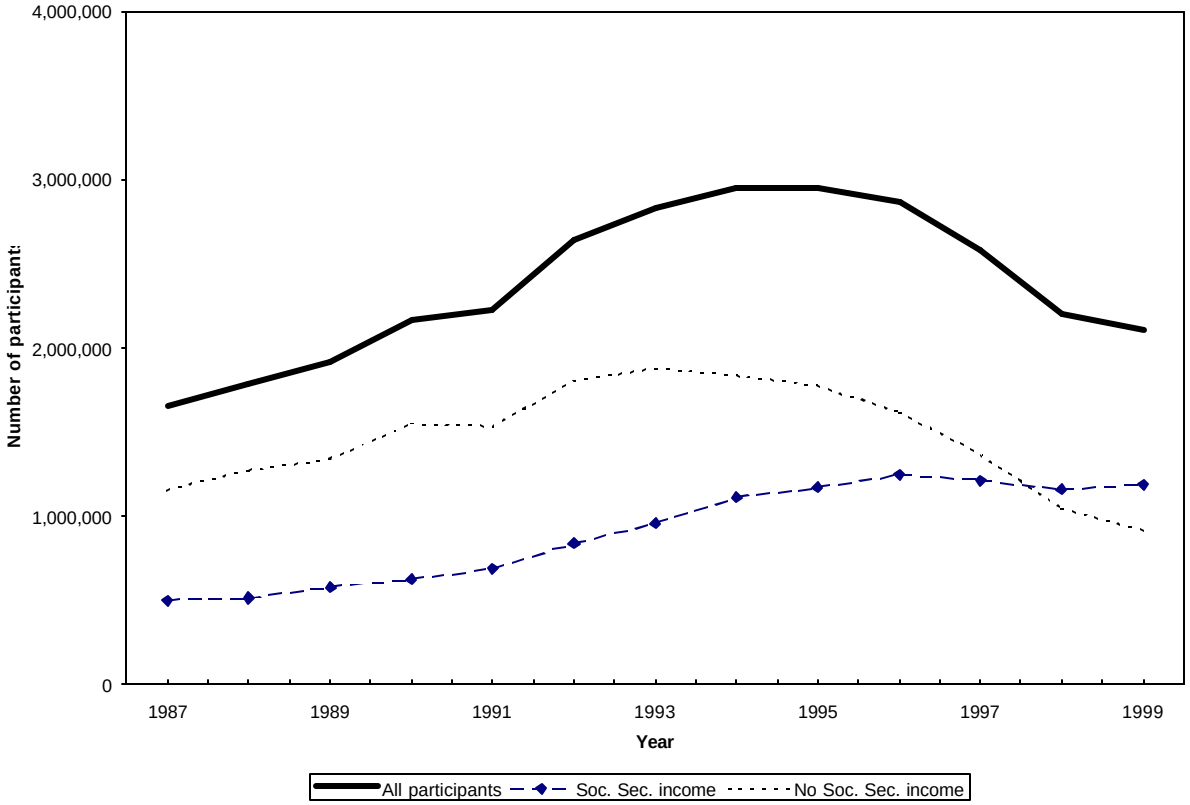


Table 3-6
FSP Participants in Households with Adults Living Separately

	Percentage of all participants, 1994	Percentage change in numbers of participants			Percentage of the1996-99 change in the total number of participants
		1989-94	1994-96	1996-99	
Households consisting of citizens only					
Adults living separately	10.5%	53.6%	-2.8%	-26.6%	9.8%
No Social Security income	6.6%	37.1%	-11.8%	-43.5%	9.1%
Social Security income	4.0%	91.9%	12.1%	-4.8%	0.8%

Source: FSP-QC data

"Social Security Income" includes SSI and Disability

and were most likely exempt from the ABAWD work requirement and time limit. Some adults with disabilities may have responded to the ABAWD provisions by qualifying for Social Security income. Economic trends already started reducing the number of non-disabled food stamp recipients from 1994-1996; continued growth could clearly explain some of the decline in food stamp recipients after 1996, even without the ABAWD rules.

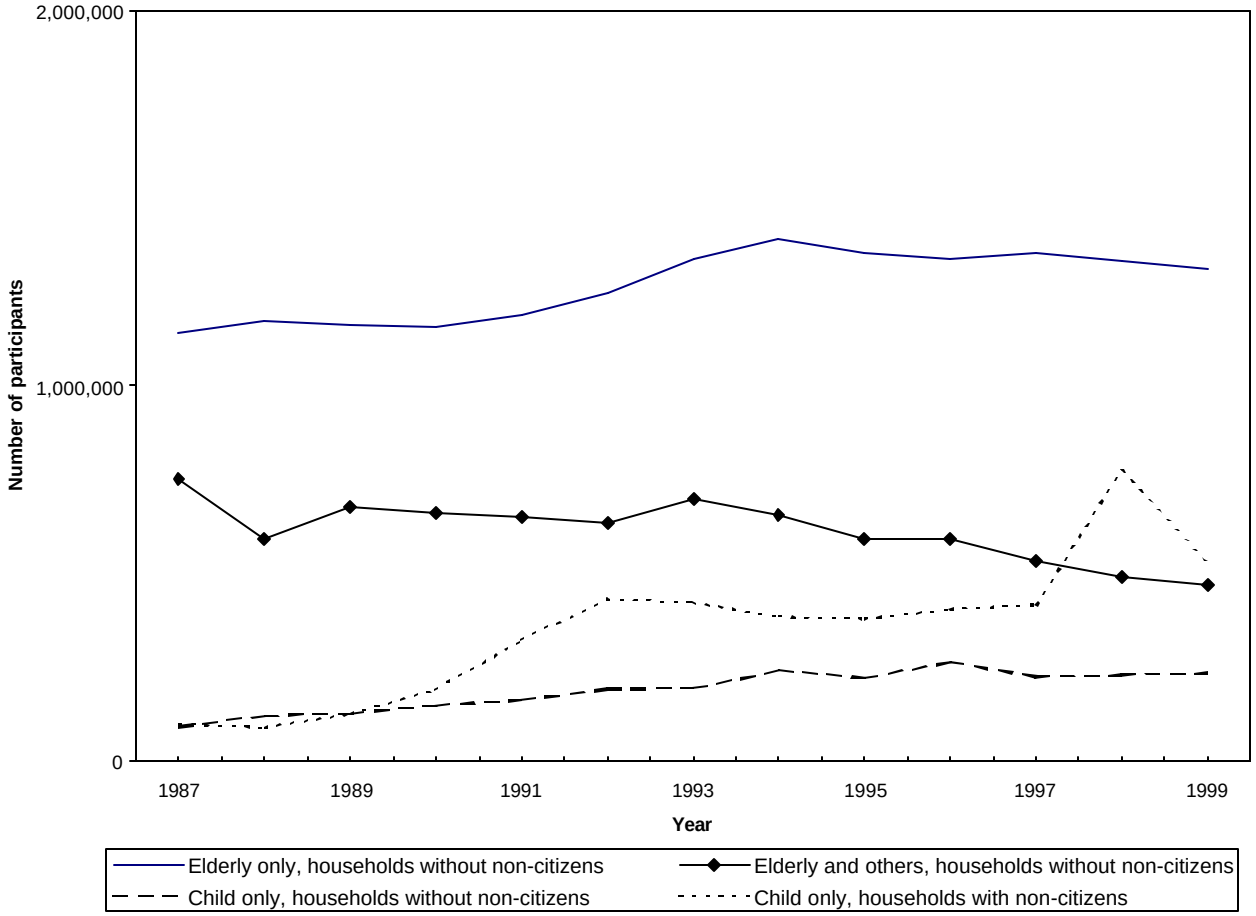
3.6 Other Types of Households

Elderly persons with adults or children: All of the policy changes discussed in Chapter 2 could have affected this group of households. In 1994, somewhat more than half of these FSP participants (considering only those in households without non-citizens) lived in households that included children, with or without adults. These households could receive TANF, but the effects of TANF on these households may have been diminished because many TANF plans exempt households with elderly persons from work requirements. The other FSP participants in this group were in households consisting of elderly persons and adults but no children. These adults may be subject to the ABAWD provisions but may receive an exemption because of a need to care for an elderly (and possibly incapacitated) person. The FSP's eligibility rules for households with elderly persons are more generous than for similar households without elderly persons. For all of these reasons, trends in FSP participation for these households are studied separately. As Figure 3-7 shows, the number of participants in this group of households without non-citizens rose by 9 percent from 1989-1994, fell by 14 percent from 1994 to 1996, and fell by 24 percent after 1996.

After 1996, trends in the number of these participants differed across households with and without children. (These trends are not shown in tables). There were large declines in the number of participants in households consisting of elderly persons living with two adults and children, and in households consisting of elderly persons living with adults but no children. On the other hand, there was almost no change at all in the number of participants in households consisting of elderly persons living with a single adult and children, or in households consisting of elderly persons living with children but no adults. One possible though unverified explanation for this pattern is that some single parent families responded to TANF by moving in with extended family members to address child care and other needs, or by allowing older relatives (who were exempt from TANF work requirements) to take care of children.

Child-only units and households consisting of elderly persons living separately: The number of food stamp participants in child-only units and "elderly only" households did not fall sharply in the late 1990s. The number of participants who were elderly persons not living with adults or children increased steadily from 1989-1994 and then changed very little afterward. These elderly persons are exempt from work requirements of TANF and the FSP. The number of poor elderly persons living alone is explained by aging of the population and other demographic trends in addition to current economic conditions.

Figure 3-7: Food Stamp Participants, 1987-1999: Other Types of Households



Child-only units consist of children in households in which the adult or elderly is ineligible for food stamps or will not accept food stamps. The number of these cases has risen steadily since the late 1990s. As the earlier analysis indicated, much of the increase in the number of these participants after 1996 occurred because of the non-citizen rules of PRWORA. These rules denied eligibility to adults and elderly persons in these households, so a number of low-income households with adults and elderly persons with children who are citizens appeared in the QC data as child only households.

3.7 Summary

The major types of households studied in this chapter each displayed unique caseload trends from 1987-1999. During these years, numerous policy changes most likely had different effects on different types of households. These different trends suggest that a study of the determinants of

caseloads from each of these groups of households might yield insights not obtained by a study of aggregate caseloads.

This review of general caseload trends provides some evidence consistent with the possibility that policy changes affected caseload trends. PRWORA's restriction of eligibility for non-citizens surely explains some of the abrupt decline in the number of non-citizen participants after 1996, the decline in the number of citizen participants in households with non-citizens after 1996, and the increase in child-only FSP households after 1996. The evidence for an effect of changes in the SSI program, the ABAWD rules, and TANF on FSP caseloads is less clear-cut. The ABAWD rules probably explain some of the recent sharp decline in the number of FSP participants who were non-disabled adults living separately, but economic trends could also account for some of this trend. The earlier, large increases in the number of persons who received both food stamps and Social Security income may have been driven by the growth in SSI and disability caseloads, although these participants could have received food stamps without Social Security income. The number of participants receiving food stamps with TANF fell dramatically after 1996, but economic trends and policy changes other than TANF contributed to this trend as well. A more detailed analysis of caseload trends by state and year is needed to learn more about the effect of TANF rules on caseloads. The next chapter reviews some of these more detailed studies.

4: Recent Research on Food Stamp and TANF Receipt

Several other studies have analyzed recent trends in food stamp and TANF receipt. These studies employ a wide range of methods and come to different conclusions as to the effects of recent policy changes on FSP caseloads. This chapter summarizes many of these recent studies, highlighting key differences in findings and methods used. A summary discusses the main lessons of this previous research and how this report adds to the previous literature on FSP caseloads.

An earlier study by Moffitt (1999) was one of the first to use econometric methods to study public assistance receipt by state and year among subgroups of households, rather than among all households. This study used Current Population Survey (CPS) data to analyze AFDC receipt from 1977-1996. It estimated the effects on AFDC receipt of economic trends, state-level AFDC policy changes, and other variables measuring factors that could influence AFDC receipt. These variables are similar to the variables used in the widely quoted Council of Economic Advisers (CEA, 1999) study of trends in AFDC caseloads. Moffitt (1999) examined AFDC receipt among subgroups of women grouped by age and education, and found that AFDC waivers reduced AFDC caseloads, and that the effect was larger for less educated women. Although Moffitt (1999) analyzed AFDC rather than the FSP, and analyzed households grouped in a way that differs from the household types studied in this report, the general idea of analyzing subgroups of the caseload in Moffitt (1999) is continued in this report. Since this report, other studies of TANF and food stamp caseloads have provided additional insights.

4.1 Studies of the Determinants of Food Stamp Receipt

Prompted by recent, rapid declines in FSP caseloads and concerns about the effects of PRWORA, researchers have produced several studies of the determinants of food stamp receipt during the last few years. Most estimate the relationship between a measure of FSP caseloads and measures of economic trends and policy changes. These studies, which are summarized in Table 4-1, employ many approaches.

Table 4-1: Some Studies of Food Stamp Program Caseloads

Study	Data, years analyzed	Policy measures used	Statistical methods	Some main findings
Wallace and Blank (1999)	Annual FSP caseloads (participants divided by population) by state and year, 1980-1996	Indicator for state AFDC waiver Max. AFDC benefit level	"Static model" without lagged caseload terms	Economy explains 28-44 percent of the 1994-96 caseload decline. AFDC waivers explain 6 percent of the decline.
Ziliak, Gundersen, and Figlio (2001)	Annual FSP caseloads (participants divided by population) by state and year, 1980-1999.	Indicators for state AFDC waiver or TANF plans Max. AFDC/FSP benefit level EBT systems ABAWD waivers FSP error rates	"Dynamic model" with lagged caseload terms	Economy explains up to 24 percent of the 1996-99 caseload decline. Waivers and TANF plans, EBT, and error rates explain none of the caseload decline.
Wilde et al (2000), based on Figlio, Gundersen, and Ziliak (2000)	Annual FSP caseloads (participants divided by population) by state and year, 1980-1998.	Indicators for state AFDC waivers or TANF plans Max. AFDC/FSP benefit levels EBT systems ABAWD waivers	Static and dynamic models	Economy explains up to 56 percent of the 1994-98 caseload decline. AFDC waivers and TANF explain 0-5 percent of the caseload decline.
Currie and Grogger (2001)	Annual FSP caseloads (participants divided by population) by state and year, 1980-98. Number of participants based on CPS data.	Indicators for state AFDC waivers or TANF plans Max. AFDC/FSP benefit levels EBT systems FSP recertification periods "Strong sanctions" TANF grant diversion Medicaid eligibility	Static model applied to entire caseload and several subgroups of households, such as single and married parent families, subgroups of households without children, and "low-income" families w/ income < 300 % of poverty.	Among low-income families, the economy explains 20% of the 1993-98 caseload decline; TANF explains 30 percent of decline. For some groups, EBT increased caseloads, and shorter recert. periods and sanctions reduced caseloads.

Study	Data, years analyzed	Policy measures used	Statistical methods	Some main findings
Gleason et al (2001)	Monthly FSP caseloads by month and state (from the FSP-QC data) from 1992-1999.	A single indicator for the post-PRWORA period; 3 indicators for "weak, moderate, and strong" AFDC/TANF: 1) "work requirement" policies, 2) "work encouragement" policies, and 3) time limit policies.	Monthly model with cubic time trend and other controls.	Economy explains 47 % of the 1994-99 caseload decline. Strong work requirement policies (sanctions, limited exemptions, job search) explain 3% of the decline. PRWORA indicator explains 26 % of the decline.
Jacobson et al (2000)	SIPP (Survey of Income and Program Participation) data from the early 1990s	Measures of TANF time limits, earned income disregards, AFDC/TANF work requirements, and child care subsidy programs.	Microsimulation models applied to predict how policy changes in the late 1990s could change caseloads	Half of the actual decline in caseloads after 1994 was predicted by the model. Two-thirds of the predicted decline was due to economic trends, one-third was due to policy changes.
Zedlewski and Brauner (1999); Zedlewski and Gruber (2001)	Nation Survey of America's Families, 1997 and 1999	None; not an analysis of caseload trends by state and year.	Studied FSP exit rates of TANF and non-TANF FSP participants	Former TANF recipients left the FSP at significantly higher rates than former non-TANF recipients.
The Decline in FSP Participation: A Report to Congress (USDA/FNS,2001)	Current Population Surveys, FSP-QC data, and other data	None	Estimated the percentage of the 1994-99 decline in FSP participation that was due to declines in the number of eligibles and that was due to changes in participation rates among eligibles.	About 35 percent of the decline was due to increased incomes that made fewer eligible. Over half of the decline was due to lower participation rates among eligibles.

Studies of state-level FSP caseloads: Three previous studies -- as well as this report -- analyze recent trends in caseloads measured as the percentage of the population receiving food stamps in each state, for the past several years. This measure of caseloads is not the same as a "participation rate" among those eligible for food stamps but is nevertheless of interest. In these three studies, the number of food stamp participants in each state and year is obtained using administrative data, and an estimate of the population in each state and year is obtained using the CPS. The studies analyze the statistical relationship between FSP caseloads and state-level AFDC and TANF policies, economic trends, and general demographic and political trends. These studies employ somewhat different statistical models and highlight important methodological disagreements in this literature.

Wallace and Blank (1999) studied annual AFDC/TANF and total food stamp caseloads -- measured as the number of participants divided by population -- by state and year from 1980 to 1996. The study analyzed the relationship between this measure of FSP caseloads and

- current and lagged unemployment rates, and the median and twentieth percentile of weekly wages;
- variables that attempt to control for effects of political and demographic trends on FSP receipt;
- maximum AFDC benefit levels (a measure of program generosity); and
- the presence of a AFDC waiver in a particular state and year. [1]

The analysis of annual panel data finds that the decline in unemployment rates explains 28-44 percent of the decline in food stamp caseloads after 1994, and that a one-percent decrease in unemployment reduces food stamp caseloads by 6-7 percent. Waivers explain only 6 percent of the decline in food stamp caseloads. Much of the decline in caseloads after 1994 is not explained by any of these variables. This study also examines the determinants of food stamp receipt for two subgroups -- AFDC- and non-AFDC households -- and finds that AFDC waivers reduced food stamp receipt but increased non-AFDC food stamp receipt, possibly because some AFDC leavers continued to receive food stamps.

A later study by Ziliak, Gundersen, and Figlio (2001) analyzed annual aggregate food stamp caseloads as a proportion of the population by state and year from 1980 to 1999. The study examines the relation between these rates and:

[1] This study and other similar studies also use state fixed effects to control for cross-state differences in FSP that always occurred during these years, and year effects to control for year-to-year changes in nationwide FSP caseloads that are not explained by the other variables.

- current and lagged unemployment rates, and employment growth rates;
- the maximum combined AFDC/food stamp benefit
- measures of state-level political trends
- the presence of state-level AFDC waivers (pre-PRWORA) and TANF plans (post-PRWORA);
- the presence of EBT systems,
- the proportion of recipients who were not granted an exemption from the ABAWD rule because of residence in a high-unemployment area; and
- FSP error rates, assumed to be inversely related to administrative burdens on recipients.

While the model employed by Wallace and Blank employs a "static model," the model in Ziliak, Gundersen, and Figlio (2001) employs a "dynamic model" which includes state time trends and 4 lagged values of food stamp participation rates and economic variables. The authors argue that welfare caseloads generally respond sluggishly to economic trends, so the dynamic model is more appropriate. The study concludes that policy factors, as measured by waivers and TANF plans, EBT systems, and error rates, together explain *none* of the 1996-1999 change in caseloads. Macroeconomic variables explain 19-24 percent of the decline. The proportion of persons who were not exempt from the ABAWD rule explains one-quarter to one-third of the 1996-1999 decline, but the authors caution that this variable may be indicating that caseload declines were more rapid in states without areas of high unemployment.

In a similar study, drawing on econometric analysis by Figlio, Gundersen, and Ziliak (2000), Wilde et al (2000) show the results of an analysis of aggregate FSP caseloads as a proportion of the population by state and year from 1980 to 1998. In their static model, indicator variables measuring the implementation of AFDC waivers and TANF account for 5 percent of the decline in FSP caseloads from 1994 to 1998. In their dynamic models, with lagged values of caseloads, policy factors explain none of the decline in FSP caseloads, and economic trends explain up to 56 percent of the decline. While the preferred model varies in these three studies, none finds that policies had a large effect on FSP caseload trends.

Household-level data on participation: A study by Currie and Grogger (2001) analyzed the probability that several different types of households reported receiving food stamps. The study was based on the March Current Population Surveys from 1980-1998. The authors analyzed food stamp receipt reported by all households, those with incomes under 300 percent of the poverty line, single parent families, married parent families, married couples without children, elderly persons without children, and adults living alone. The study analyzed how reported food stamp receipt was related to:

- Current unemployment rates;
- The implementation of an AFDC waiver or TANF plan;
- The maximum AFDC/TANF benefit; and
- Several measures of the demographic characteristics of the family, and indicators of residence in a central city, the rest of a metropolitan area, or a rural area.

Currie and Grogger found that among low-income households, 20 percent of the decline in FSP receipt from 1993 to 1998 can be attributed to lower unemployment, and 30 percent to the implementation of TANF, as measured by the TANF indicator variable. The effect of TANF was especially large among single parent families and, unexpectedly, elderly and adults without children, a group that would not ordinarily receive TANF. The authors note that other policies or the perceived stigma of welfare could have led to these unexpected effects.

The study also estimated the effects of several measures of more specific policy changes. The adoption of EBT systems, which may make food stamps easier to use and reduce stigma, increased participation among married couples without children. Longer recertification intervals among working FSP households, a measure of less difficult reporting requirements, were associated with increases in FSP receipt among single parent households. The estimated effect of especially strong sanctions was sensitive to the inclusion of state time trend terms. The estimated effects of the presence of a TANF grant diversion and the youngest child's eligibility for Medicaid were negligible.

Studies of caseload characteristics: Gleason et al (2001) study the effects of state-level policy changes and economic trends on the number of food stamp participants, rather than the proportion of the population that received food stamps or the probability that a family receives food stamps. The FSP-QC data from 1992-1999 provide estimates of the number of participants. The study estimates the relation between several characteristics of FSP caseloads measured on a monthly basis -- including the number of participants -- and:

- Economic factors, as measured by unemployment rates, average wages in manufacturing jobs, and poverty rates;
- A single indicator for the post-PRWORA period;
- Three indicators for strong, moderate, and weak AFDC/TANF work requirement policies.
- Three indicators for strong, moderate, and weak AFDC/TANF work encouragement policies.
- Three indicators for strong, moderate, and weak AFDC/TANF time limit policies.
- A cubic national time trend and state fixed effects.

The classification of state TANF policies is based on a review of several sources. Strong TANF work requirement policies 1) exempt only those with children under 12 months, 2) require immediate participation, 3) require more than 20 hours of participation per week, 4) require job search, and 5) feature full family sanctions for noncompliance. Strong work encouragement policies feature relatively more generous earned income disregards and vehicle exclusion restrictions. Strong time limit policies allow 24 or fewer months of TANF benefits and relatively few exemptions. Strong work requirement policies caused the largest reductions in FSP caseloads, but the reduction was only about three percent once the authors controlled for economic and other factors. These strong work requirements appeared to cause relatively more disadvantaged recipients to leave the FSP. Low-intensity work requirements and work encouragement policies appeared to increase the number of FSP recipients.

The authors assessed the proportion of the 1994-1999 decline in FSP caseloads that could be explained by the measured factors. They found that economic trends explain 47 percent of the decline, TANF work requirements explain only 3 percent of the decline, and PRWORA (as measured by the single indicator variable that measures the timing of the law and is constant across states) explains 26 percent of the decline. About half of the share of the total decline explained by PRWORA could be explained by the rules for ABAWDs and non-citizens; the authors thought much of the rest of the effect of PRWORA could be attributed to effects on changes in attitudes about public assistance.

Simulations of the effects of policies: Jacobson et al (2000) studied the possible effects of policies in the late 1990s using microsimulation techniques. The study was based on longitudinal surveys (the SIPP) of program participation in the early 1990s. Using microsimulation techniques, this study estimated how policy changes and other factors would affect individuals' employment and earnings, receipt of AFDC or food stamps, participation in employment and training activities, and receipt of child care subsidies. The authors used these estimated relationships to predict how caseloads would change in the late 1990s as a result of the policy changes during these years. The estimated model could predict about half of the actual decline in FSP caseloads after 1994. Of the predicted decline, about two-thirds could be explained by economic trends and about one-third could be explained by changes in welfare and child care policies. The substantial, unexplained decline in participation could have occurred in part because of the effects of policies that were unlike those in existence in prior years.

Results from the National Survey of America's Families. A study of the 1997 National Survey of America's Families by Zedlewski and Brauner (1999) found that former TANF recipients left the program at significantly higher rates than those who had not received TANF. This result was obtained even for persons that had income well below the poverty line and that appeared to remain eligible for food stamps. This study found that about two-thirds of those who left the Food Stamp Program appeared to be still eligible for food stamps. An updated study (Zedlewski, with Amelia Gruber, 2001) of the 1999 NSAF reached similar conclusions. Other survey evidence presented in these studies suggests that administrative practices of the FSP made continuing participation difficult for working poor families.[2]

4.2 Studies of AFDC and TANF Receipt Using Panel Data

Researchers have used similar techniques to analyze trends in AFDC and TANF caseloads by state and year. These cash assistance programs aid mostly single adult households with children, and a smaller number of two-adult households with children and "child-only" cases. The studies of AFDC and TANF caseloads are relevant for studies of FSP caseloads because the rules of TANF and other policies may affect FSP caseloads through their initial effects on cash assistance caseloads. In addition, many similar specification issues arise in the studies of cash assistance and food stamps.

The widely quoted 1999 CEA study analyzed AFDC/TANF, as a proportion of the population under 65, by state and year from 1976-1998. The statistical model included current and lagged unemployment rates and controls for the minimum wage, the state maximum AFDC/TANF benefit, the presence of an AFDC waiver or TANF plan, state and year effects, and sometimes time trends. The study also used controls for specific welfare policy variables indicating family caps; termination or work requirement time limits, exemptions based on the age of the youngest child, work sanctions, and a measure of earnings disregards. The specification that used a simple indicator for the implementation of state TANF plans attributed about one-third of the 1996-1998 decline in TANF receipt participation to TANF policies, about 8 percent to the decline in unemployment, and most of the remaining decline to unknown factors. The study found that different TANF policies have different effects; for example, caseload declines were

[2] Another study by Daponte, Sanders, and Taylor (1999) randomly assigned about 400 households in Allegheny County, Pennsylvania to a treatment group that received information about food stamp eligibility and benefit levels, or to a control that did not receive this information. The treatment group was more likely to accept food stamps, and respondents eligible for the largest benefits were the most likely to obtain food stamps when given the information. The findings imply that lack of information and program participation costs can limit food stamp receipt.

more rapid in states with stronger sanctions.

Ziliak and Figlio (1999) found that welfare reforms play a far more modest role in recent TANF caseload declines. The use of a dynamic specification, including lagged measures of participation rates and business cycle factors, appears to explain much of the difference between the results obtained by this paper and the results of the CEA study. Ziliak and Figlio (1999) also found that waiver reforms reduce caseloads by a somewhat larger amount in states with relatively stronger economies.

Blank (2000) found that increases in child-only AFDC cases explain about 71 percent of the rise in AFDC caseloads from 1984 to 1996. (The FSP-QC data also reveal an increase in the number of child-only food stamp households after 1987). These child-only cases include children in foster care, children who are citizens but whose parents are non-citizens, and children whose parent(s) receive SSI. The increases in child-only cases were driven by increases in immigration, increases in the use of SSI among disabled mothers, changes in the foster care system, and sanctions that removed mothers from AFDC cases. These factors could also explain some of the increase in food stamp cases during these years. Increases in two-parent families receiving benefits through AFDC-UP, which was expanded to all states by 1990, also explains some of the increase in the total number of AFDC cases from 1984-1996. The remaining increase in single-parent AFDC participation is well explained by the usual variables. The study also found that trends in two-parent AFDC-UP caseloads have been more cyclically sensitive than trends in single-parent AFDC cases. These results provide additional evidence that economic and program factors may affect important subgroups of welfare caseloads in different ways.

4.3 Other Recent Research

Two reports divided the recent decline in the FSP caseload into a part that occurred because of declines in the number of eligible households, and a second part that occurred because of a decline in the proportion of eligible households that actually received food stamps. These studies estimated eligibility by using information from the Current Population Survey (CPS). *The Decline in Food Stamp Participation: A Report to Congress* (USDA/FNS, 2001) found that:

- About 35 percent of the decline in the number of FSP recipients from 1994-1999 occurred because rising incomes and assets reduced the number of persons who were eligible for food stamps.

- Another 8 percent of the decline occurred because of PRWORA's restrictions on food stamp eligibility among adult without dependents and non-citizens.

- The remaining 56 percent of the decline in the number of FSP recipients occurred because fewer eligible persons received food stamps. The percentage of eligible persons who received food stamps fell from 74 percent in 1994 to 59 percent in 1999.

The report noted that the take-up rate among eligible persons may have declined for many reasons, including a perceived lack of need for assistance, lack of information about eligibility, an expectation of low levels of benefits, the program's reporting requirements, and stigma associated with public assistance.

Wilde et al (2000) also analyzed the decline in the number of FSP recipients from 1994-1999 and reached similar conclusions. This study found that 26 percent of the decline occurred because of a decline in the number of persons in households with annual incomes below 130 percent of the poverty line. Another 55 percent of the decline occurred because of an increase in the proportion of low-income persons who may have been eligible for food stamps but who did not receive them.

Several studies found that many families are eligible for food stamps but are not receiving them. In a study based in the National Survey of America's Families, Loprest (2001) confirmed that a substantial number of TANF leavers also left the FSP even though their incomes indicate that they remain eligible for food stamps. Studies of food stamp "exiters" by Mills and Kornfeld (2000) and Rangarajan and Gleason (2001) also showed that many FSP exiters had very low incomes and appeared to qualify for assistance. A recent nationwide survey of providers of emergency food assistance (Ohls et al 2001) revealed that the demand for food assistance grew modestly in the late 1990s. Studies by Nord (2000) and USDA (1999) showed that the number of families reporting food insecurity remains high.

The distinction between a decline in the number of eligible households and the decline in the participation rate among eligible households is clearly a crucial one since many are concerned about whether the program is serving needy families. However, this distinction does not distinguish the effects of the economy and policy changes. Both the economy and numerous recent policy changes could have increased the earnings of many households, thereby reducing the number that remain eligible for food stamps. Similarly, both the economy and policies could explain the reduction in the proportion of eligible persons receiving food stamps. Policy changes, such as increases in reporting requirements, time limits, and sanctions, may have reduced the proportion of eligible persons who receive benefits. The presence of non-participating eligibles after PRWORA does not, however, confirm that recent policy changes led to a

decline in the participation because, as the USDA (2001) study showed, some eligible persons failed to receive food stamps even before PRWORA. As the economy improves, more eligible persons may turn away food stamps and accept increased assistance from friends and family; more eligibles will get jobs and qualify for low levels of benefits that are not worth the costs of participating in the FSP; and more eligibles will forego food stamps because they believe their earnings will soon increase.

4.4 Conclusion

These studies together provide numerous insights about the effects of economic and policy factors on food stamp and TANF receipt. The economy consistently explains a significant portion -- as much as about one-half -- of the recent decline in FSP caseloads. A large portion of recent changes in caseloads consistently remains unexplained by economic trends, policy changes, or other variables. In these studies, the statistical models and the measures of policy changes vary considerably. Together, these studies make several important points:

The estimated effects of simple indicators of "AFDC waivers," "TANF," and "PRWORA" vary widely. Some studies found that these policy measures explained very little of recent caseload changes. Wallace and Blank (1999), Ziliak, Gundersen, and Figlio (2001); Figlio, Gundersen, and Ziliak (2000); and Wilde et al (2000) found that TANF implementation dates either explained only a minor reduction in FSP caseloads or had statistically insignificant effects on FSP receipt. Other studies found larger effects. In Currie and Grogger (2001), TANF explained almost one-third of the reduction in food stamp receipt among low-income households from 1993 to 1998. In Gleason (2001), an indicator for the nationwide implementation of PRWORA explained about one-quarter of the decline in FSP caseloads from 1994 to 1999. These results are difficult to compare, in part because each study analyzes slightly different years. Differences in the models employed could explain some of the variation in results: Ziliak, Gundersen, and Figlio (2001) found negligible effects using a dynamic model with lagged caseload terms, while Gleason et al (2001) and Currie and Grogger (2001) found larger effects with static models.

A problem with these simple indicators of implementation of waivers, TANF, and PRWORA is that their policy implications are unclear. Their estimated effects could have been produced by specific sanctions, time limits, exemptions, or other policies, as well as changes in attitudes about public assistance. The

debate on PRWORA reauthorization is likely to focus on whether each of these specific policies should be changed, rather than simply the effects of "TANF" or "PRWORA."

Some studies estimated the effects of a limited number of more specific policy changes on FSP caseloads. Currie and Grogger (2001) estimated the effects of EBT, recertification periods, a group of "strong sanction policies," and diversion policies; and find that recertification periods reduce FSP receipt. Gleason et al (2001) showed that a combination of several "work requirement policies" explains only 3 percent of the recent caseload decline. The CEA (1999) study estimated the effects of more and less strict sanctions, exemptions, time limits, family caps, and other policies on AFDC caseloads but not FSP caseloads. These previous studies of FSP receipt do not, however, focus on the effects of several specific, important policies such as full family sanctions, comparable disqualification, or time limits.

These studies provided some evidence that the effects of policies vary by type of household. Gleason et al (2001) analyzes several subgroups of FSP household, such as those with single adults with children, households with TANF, and households with earnings. Wallace and Blank (1999) find that TANF and unemployment rates have different effect on TANF and non-TANF parts of the FSP caseload. Moffitt (1999) analyzed subgroups of AFDC participants defined by age and education, and Blank (2000) provides some information on subgroups of the TANF population.

The approach taken to analyze FSP households in Currie and Grogger is most similar to the approach taken in this report, although Currie and Grogger (2001) and this report define specific types of households in slightly different ways. Currie and Grogger study food stamp receipt for specific types of households by using data on food stamp use reported by CPS respondents, rather than by administrative data. The authors provide evidence that the estimated effects of key variables on aggregate FSP receipt as measured by survey and administrative data sources are very similar, so that even if the CPS understates aggregate FSP receipt, it may depict trends in receipt fairly accurately. Nevertheless, the two data sources could produce different findings for subgroups of households.

The preferred specifications in these studies vary widely. An important controversy in the literature concerns the use of "static" versus "dynamic" models of participation, and the use of more or fewer explanatory variables to control for factors that may influence FSP receipt. Ziliak, Gundersen, and Figlio (2001) argued that a dynamic models using lagged participation rates are appropriate because food stamp

caseloads may change sluggishly in response to economic and program factors. Public assistance recipients may be hired only after prolonged economic expansion and may wait until recertification before they leave. Low-income families may choose to exhaust their assets before they accept benefits during a downturn. Blank and others are concerned that the relationship between lagged and current caseloads can reflect the effect of policy changes and economic forces that this literature attempts to identify:[3] while lagged caseloads are related to current caseloads in a strictly mathematical sense, the underlying causes of caseload trends are more relevant. Accordingly, statistical models should explain caseload trends based on measurable economic and policy variables.

A similar controversy exists over the use of state-level time trends. Ziliak, Gundersen, and Figlio (2001) used state time trends to control for persistent increases or decreases in participation that cannot be explained by policy changes occurring in the middle of the observation period. A steady change in attitudes toward welfare could lead to such a trend. If the time trends are omitted, the estimated effects of welfare reform could reflect merely the continuation of these pre-existing trends. On the other hand, Wallace and Blank (1999) argued that the estimated effects of policy changes may be incorrectly reduced by the inclusion of state-specific time trends since both sets of variables trend up or down gradually over time. The use of controls for political and demographic trends in these models may also be questioned. If these factors affect FSP participation and are correlated with welfare reforms, then omitting these variables could lead to biased estimates of the effect of welfare reform. But including them could "overcontrol" for trends in FSP participation that were actually caused by policy changes, and also lead to biased estimates of the effects of policies.

The central problem is that researchers lack a clear-cut, perfect natural experiment that shows the effects of policies in a way that unambiguously controls for the effects of other factors. The natural experiment that arises from variation in FSP caseloads, economic trends, policy changes, and other factors by state and year can be highly informative but falls short of such a perfect experiment. Inevitably, policy changes, economic growth, and other changes often occurred together within states, and this "collinearity" of events can make it difficult to separate the effects of all factors. In this situation,

[3] Bell (2001) reviews these issues in greater detail.

additional explanatory variables may provide a more realistic estimate of the effects of policies, or they may obscure the real effects of policies.

The time period analyzed varies across these studies and could account for some differences in results. Although several studies analyzed FSP caseloads from 1980 onward, the studies that use QC data cover the period from the late 1980s to the present because the QC data are not available in previous years. Moffitt (1999) found that the number of years used in the analysis can affect the findings: the effect of waivers on AFDC receipt changes as the analysis period changes from 1977-1987 to 1987-1996. It is not obvious that the use of additional years provides more reliable findings. The use of a longer time series may be a strength because it covers two full business cycles, one of which took place without PRWORA. On the other hand, if the underlying relationship between caseloads and macroeconomic and policy factors changed from the early 1980s to late 1990s, then information from the early 1980s may be less useful.

This report adds to the previous literature in several ways. It analyzes trends in FSP receipt for persons in several types of households that are likely to be affected in different ways by economic trends and recent policy changes. Food stamp caseloads are measured using the QC administrative data, a large representative database of food stamp households that avoids reporting biases in survey data. This report analyzes the effects of a wide range of policy measures on FSP receipt, and also analyzes whether the main findings are sensitive to the statistical models employed. The next chapter describes the models and variables used in this report.

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:

$$C_{ts} = a + b_{E'} E_{ts} + b_{D'} D_{ts} + b_{P'} P_{ts} + a_s + t_t + u_{ts}$$

where

- C_{ts} is the measure of the FSP caseloads for year "t" in state "s;"
- is the intercept;
- 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;
- 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;
- 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;"
- a_s is a set of state "fixed effects" for each of the states and DC;
- t_s 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[1], as reported by the QC data.[2] 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.[3] 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.[4] 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

[1] Fiscal year 1999 begins on October 1, 1998 and ends on September 30, 1999.

[2] 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). .

[3] 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

[4] 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.[5]

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

[5] 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
All FSP participants as a percentage of the U.S. population	7.8%	10.8%	6.7%	38.7%	-9.1%	-31.9%
Participants by type of household, as a percentage of the population in similar CPS households						
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%
Participants by type of household, as a percentage of the population in a similar age group						
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.[6]

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:

[6] 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
Unmployment 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.[7]

- 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. [8]

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.[9] The proportion of the recent decline in food stamp

[7] 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.

[8] 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.

[9] 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.[10]

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.[11] 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.[12] 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:

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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.

[10] See Bloom and Pavetti (2000) and Moffitt and Pavetti (1999) for discussions of the potential effects of time limits.

[11] In the Food Stamp Program, household members caring for children under six years of age are exempt from work requirements.

[12] 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.[13]

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

[13] 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 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.[14] 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).[15]

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.[16] These measures are admittedly

[14] 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.

[15] 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.

[16] 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.[17] One alternative measure of FSP

[17] 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.[18] 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.

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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.

[18] 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).[19]

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. [20] 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

[19] Also note that many states with child age exemptions for work requirements do not have child age exemptions for time limits.

[20] 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. [21]

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.

[21] Omitting this variable had little effect on the estimated effects of the other policy variables.

6: The Effects of Economic Trends and Policy Changes on FSP Caseloads

The estimates of effects of recent policy changes and the economy on FSP caseloads are presented in this chapter. These estimated effects are based on the statistical models described in the previous chapter. The review of key findings focuses on how the determinants of food stamp receipt differ for households consisting of single or multiple adults with children, adults or elderly persons living separately, and elderly persons living with others.[1]

The main findings confirm that policy changes and economic trends have different effects on food stamp caseloads from different types of households. The main findings also show that reporting requirements, time limits, and sanctions can account for recent declines in FSP caseloads, while EBT and family caps increase FSP caseloads. These main findings are based on a basic model of caseloads that was described in Chapter 5 and that employs a minimum number of controls for factors other than unemployment rates and policy changes. Additional controls are omitted because of concern that real effects of policies may be obscured by the inclusion of measures of other factors that also happen to be changing over time. After the main findings are presented, this chapter also explores how these findings change when additional explanatory variables are added to the basic model, and when alternative measures of caseloads are used (section 6.2). Although some of the main findings change when these alternative methods are used, many persist. The following section (section 6.3) summarizes how the estimated effects of the economic and policy measures vary across the major types of households. The next section (6.4) briefly summarizes results obtained using alternative measures of policy changes. The final section discusses conclusions.

- These results are based on analyses of FSP caseloads, usually measured in this report as the number of food stamp participants as a proportion of the relevant population. This report does not analyze FSP "participation rates," usually defined as the number of participants as a percentage of persons eligible for food stamps. Other studies, such as *The Decline in Food Stamp Participation: A Report to Congress* (USDA/FNS, 2001), provide estimates of changes in these participation rates.

[1] The small group of "child-only" food stamp units is included in the measures of aggregate caseloads, but a separate statistical analysis of this subgroup yielded few insights and is not shown. The definition of the relevant population for this group is unclear because these food stamp households do not actually consist of children living alone, but children who are in foster care or who are with adults who are ineligible for assistance. As Chapter Three indicated, the number of these households with ineligible non-citizens increased rapidly after 1996 because of the non-citizen provisions of PRWORA. The number of these food stamp households that include only citizens changed during these years in ways that generally seem unrelated to measurable economic and policy factors.

6.1 Main Findings

In the "basic model" described in detail in the last chapter, FSP caseloads are measured by dividing the number of participants in each type of household by the estimated population in similar households. Aggregate FSP caseloads are measured by dividing all participants by the total population. The basic model includes controls for current unemployment rates, measures of policy changes, state fixed effects, and year effects. The results, which are presented in Table 6-1, show that recent policy changes have had varying effects on FSP caseloads from different types of households. Later sections show that the results are somewhat sensitive to the use of additional control variables and alternative caseload measures.

Economic trends have the largest effect on food stamp receipt of those in households consisting of multiple adults with children, adults living separately, and elderly persons living with others. A one-percentage-point increase in the unemployment rate is associated with a 4 percent increase in aggregate FSP caseloads, and a larger 6-7 percent increase in caseloads from these three types of households. These results confirm that the strong economy in the late 1990s played at least some role in reducing food stamp receipt. These three groups of households included many non-disabled adults who received neither TANF nor SSI, who needed to work, and whose economic status was closely tied to current economic conditions. National trends in caseloads from households with multiple adults and children and adults living separately are clearly correlated with economic trends. National trends in caseloads from households consisting of elderly persons and others are less clearly linked to economic trends (Fig. 3-7), but the more detailed state-level analysis finds that the two trends are closely related. FSP caseloads from households living with others may be linked to the economy partly because some families choose to both to move in with elderly family members and to receive food stamps when the economy is weak.

Economic trends are associated with a much smaller effect on food stamp receipt among elderly persons living separately. Food stamp use among elderly persons is partly determined by current economic conditions because some elderly persons continue to work and some may receive assistance from younger relatives who work. For many elderly persons, however, food stamp use may be driven by lifetime income, the death of a spouse, or medical expenses rather than current economic conditions.

Economic trends are estimated to have a negligible effect on FSP receipt among those in single adult households with children. This result is somewhat surprising, in part because Figure 3-4 showed that

the total number of these participants and nationwide unemployment rates often moved together over time. In some years, however, these caseloads continued to rise while unemployment declined. Even in a strong economy, many single parents face especially large barriers to paid work. Policies and perhaps changes in attitudes could also have affected the number of FSP participants from this group. The weak association between unemployment rates and food stamp receipt for this group is not necessarily inconsistent with prior research (CEA, 1999 and others) that found that TANF caseloads declined as the economy improved. As Figure 3-4 showed, trends in the number of TANF and FSP participants were not identical. After 1996, some TANF leavers continued to receive food stamps.

Statewide EBT systems increased FSP caseloads from households with adults and children, but lowered FSP receipt among elderly persons living alone. Electronic Benefits Transfer systems were implemented in part to make food stamps easier to use and to reduce their stigma. EBT systems are associated with a statistically significant 6 percent increase in aggregate FSP caseloads and a 7-10 percent increase in caseloads from single- and multiple-adult families with children. These results indicate that in the late 1990s, EBT offset the effects of the economy and increased caseloads. EBT did not have a statistically significant effect on FSP receipt of adults living separately or elderly living with others.[2] The new technology reduced FSP receipt among elderly persons living separately by 9 percent. Some elderly persons, especially those with little prior experience with electronic banking, may have found EBT intimidating and difficult to use.

Higher food stamp error rates, a measure of relatively easier reporting requirements, are associated with increases in FSP caseloads from households with multiple adults and children. A one-percentage point increase in error rates is associated with a 1 percent increase in aggregate caseloads and a 0.8 percent increase in caseloads from multiple adult households with children. These households include many working adults who may be close to leaving the FSP and who could be pushed to leave by added reporting requirements. Changes in error rates can account for only a minor reduction in FSP caseloads in the 1990s, however, because average nationwide error rates changed only modestly during these years. Unexpectedly, higher error rates are associated with reduced FSP receipt among elderly persons living separately. Because less than 4 percent of these elderly recipients are employed, this estimated effect may be spurious, reflecting factors other than administrative features.

[2] Note that the differences in the estimated effect of EBT on adults living separately is not statistically significantly different (at the ten percent level) from the estimated effect of EBT on single- and multiple adult households with children.

Increases in the "frequent recertification rate," another measure of reporting burden, reduced FSP caseloads from households consisting of multiple adults with children and adults living separately. This rate is equal to the percentage of persons in working FSP households with recertification periods of 3 months or fewer. A ten-percentage point increase in this rate is associated with a 2.3-2.4 percent decrease in FSP caseloads from these two groups of households, and a 1.1 percent decrease in aggregate FSP caseloads. These two types of households include many working poor adults who may find frequent recertification difficult.

AFDC and TANF policies: Time limits and sanctions are associated with reduced FSP caseloads, while family caps are associated with increases in caseloads. However, the interpretation of these results can be questioned, in part because some measures of TANF policies unexpectedly "explain" reductions in FSP receipt among households that have no children and that would not be eligible for TANF. The estimated effects of TANF policies could reflect not only real effects of TANF but also other factors. These other factors could be the forcefulness of the "work first" message local office staff give to all public assistance recipients, or unmeasured trends in attitudes or economic and social factors. The estimated effects of TANF policies could also reflect a tendency to implement some provisions in states in which caseloads are generally falling or rising unusually slowly or unusually rapidly. Whenever TANF provisions affect FSP caseloads from households with and without children, one could still choose to interpret the estimated effects on households with children as genuine, but alternative interpretations are also reasonable.

Time limits that trigger work requirements or the reduction or elimination of TANF benefits are associated with a 7 percent reduction in FSP caseloads from single adult households with children. These households -- the group most likely to receive TANF -- may have responded to the TANF time limits by becoming self-sufficient. Others may have perceived the reporting requirements of welfare to be too large to bear for food stamps with reduced TANF benefits, and still others may have incorrectly believed that they had lost their eligibility for food stamps when they met the TANF time limit. Time limits had a statistically insignificant effect on FSP caseloads from multiple adult households with children, a group that is less likely to receive TANF. The TANF time limit also had little effect on FSP receipt among elderly living with others; this group includes some TANF recipients, but many may be exempt from time limits because of the presence of an elderly person. As expected, time limits had no effect on FSP receipt among elderly persons living separately. An unexpected finding is that TANF time limits are associated with reduced food stamp receipt among adults who live separately and who could not qualify for TANF.

Family benefit caps are associated with increases in FSP caseloads from households with children. Under family benefit caps, TANF recipients who have additional children do not receive increased TANF benefits. In the absence of additional TANF benefits for a new child, some households with children may have required additional months of food stamp benefits to make ends meet. Some single and multiple adult households with children subject to the family benefit caps may have responded by moving in with elderly relatives for additional assistance, while retaining their food stamp benefits. If so, this change in household composition may have increased the measured rate of food stamp receipt among households consisting of elderly persons living with others. The interpretation of these estimated effects may be questioned because family caps are also associated with increased FSP receipt among adults who live separately and who could not receive TANF.

Increases in the amount of earnings disregarded for the purpose of determining TANF benefit levels have mixed effects on FSP participation. In theory, increases in these earnings disregards could reduce FSP caseloads by accelerating the transition to self-sufficiency, or prolong food stamp receipt by increasing the number of households eligible for TANF and by making public assistance more attractive to working households. The results show that a doubling (a 100 percent increase) in the amount of earnings that is disregarded leads to a 3 percent increase in aggregate FSP caseloads. Higher disregards are statistically linked to declines in FSP caseloads from single adult households with children, and increases in FSP caseloads from households consisting of multiple adults and children and elderly persons living with others. Increases in the earnings disregard are unexpectedly associated with increases in food stamp receipt among elderly persons living separately, a finding that suggests that the estimated effects of earnings disregards could also reflect other factors.

TANF sanctions for failure to comply with TANF work requirements reduced aggregate FSP caseloads. The evidence indicates that partial TANF sanctions, delayed full family sanctions, and immediate full family sanctions all reduced aggregate food stamp caseloads by 6 to 12 percent, relative to caseload sizes that would have appeared under the more lenient traditional rules of AFDC. Because all states had imposed partial or full sanctions by the late 1990s, these three sanction variables together approximate a simple indicator for the post-TANF period. It is possible that a decline in participation associated with all three of these sanction variables could reflect a nationwide post-TANF decline in caseloads that could have happened for reasons other than sanctions. However, the results also indicate that the harsher full family sanctions --delayed or immediate -- are associated with larger declines in caseloads (in percentage terms) than the milder partial TANF sanctions. This pattern of results could be interpreted as consistent with a genuine effect of sanctions on caseloads.

Partial TANF sanctions and comparable disqualification reduced FSP caseloads from single adult households with children. Delayed and immediate full family sanctions have no statistically significant effect on FSP caseloads from this group, even though these sanction policies reduce aggregate caseloads. One may have expected harsher sanctions to have larger effects on caseloads. It is possible that partial sanctions could have a greater effect on food stamp usage than full family sanctions if the former are more likely to be imposed or if local office staff are more diligent in helping families overcome full family sanctions than partial sanctions.

Partial TANF sanctions, full family TANF sanctions, and lifetime TANF sanctions reduced FSP caseloads from multiple adult households with children. TANF sanctions have larger estimated effects on multiple adult households with children than single adult households with children, even though the latter are more likely to receive TANF. One explanation is that multiple adult households with children include a greater share of more nearly work-ready adults who are close to leaving the FSP and can be more readily pushed to leave public assistance through additional program requirements. The size of the effect on caseloads grows with the severity of the sanction: partial sanctions reduced caseloads by 8 percent, delayed full family sanctions reduced caseloads by 12 percent, and immediate full family sanctions reduced caseloads by 16 percent. Lifetime full family TANF sanctions are associated with an additional 11 percent reduction in FSP caseloads. For this group, comparable disqualification has no measured effect on FSP caseloads.

All of these measures of TANF sanctions have statistically insignificant effects on FSP caseloads from households consisting of elderly persons living with adults or children. Most of these households do not receive TANF. The TANF households in this group may have received exemptions from TANF sanctions because of the need to care for an elderly person.

Surprisingly, several TANF sanction policies are associated with statistically significant, large declines in FSP receipt among adults or elderly persons living separately. These households would not ordinarily receive TANF or be affected by TANF sanctions. Thus, the estimated effects of TANF sanctions on these and other households could reflect the role of other factors that influence caseloads and that are correlated with sanctions.

Summary. Economic factors, FSP administrative features, and AFDC/TANF policies clearly have different effects on different types of households. Reporting requirements, TANF time limits, and sanctions could have reduced FSP caseloads during the late 1990s. At the same time, the use of EBT systems and family benefit caps may have increased FSP caseloads. The estimated effects of AFDC

and TANF policies could, however, also reflect the role of unmeasured factors because their effects sometimes persist in groups that do not use TANF. The next section pursues these issues of interpretation issues further by exploring whether the main results change with the use of additional controls for other factors.

6.2 Alternative Models of FSP Caseloads

The main findings of this report are based on a "basic model" which employs a minimum of controls for other factors that could affect food stamp receipt. Other studies have analyzed food stamp receipt using additional controls, such as lagged caseloads, state-level time trends, and controls for demographic and political trends. If additional controls alter the estimated effects of policies, then important conclusions of this research may depend on one's (always debatable) choice of model. If additional controls reflect non-policy factors that explain a portion of recent trends in FSP receipt, then omitting these variables may result in incorrect, biased estimates of the effects of policies. These additional controls could even resolve some unexpected findings in Table 6-1, such as the estimated effects of TANF policies on groups without children. On the other hand, adding additional control variables correlated with policy changes and caseload trends may "overcontrol" for caseload trends that were caused by the policy changes, and lead to biased estimates of policy effects. This section summarizes how the main findings change when other models are employed.

Additional economic controls: Current-year state unemployment rates may not capture all economic forces that could influence food stamp caseloads. 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 consider public assistance only after a recession persists. Ziliak, Gundersen, and Figlio (2001) also use employment growth rates as a measure of economic activity. Table 6-2 shows the estimated effects of economic and policy variables on caseloads when three new variables -- two lagged values of unemployment rates and employment growth rates -- are added to the basic model.

The effect of a permanent change in the unemployment rate is larger when both current and lagged unemployment terms are considered. For many groups, lagged unemployment rates have a statistically significant relationship with current FSP caseloads. Because current and lagged unemployment rates so highly correlated, the regression models will not precisely estimate the effect of each unemployment rate variable, so this section considers the sum of the estimated effects of all three unemployment rate variables, regardless of their statistical significance. Under this assumption, a permanent one-percentage-point increase in unemployment rates increases FSP caseloads by 6

percent among all households, and by 10-11 percent among households consisting of multiple adults with children, adults living separately, and elderly living with others. FSP receipt among elderly persons living separately remains relatively less cyclically sensitive. Although the economy has the smallest measured effect on caseloads from single adult households with children, a permanent one-percent increase in the unemployment rate now leads to a 0.7-percent increase in FSP caseloads from these households. Employment growth has a statistically significant effect on FSP receipt.

With the addition of extra controls for economic trends, many of the estimated effects of the policy variables remain unchanged, but some estimated effects decline in size. EBT, higher error rates, and family caps are still associated with increases in caseloads. Shorter recertification periods, time limits, and sanctions are still associated with reductions in FSP caseloads. Higher earnings disregards still have mixed effects. The additional controls also do not eliminate the counter-intuitive findings in Table 6-1; TANF policies still have effects on non-TANF households. As one adds these controls (as one moves from Table 6-1 to Table 6-2), some results change:

- The estimated effects of TANF time limits are now also associated with declines in aggregate caseloads as well as caseloads from single adult households with children.
- Family caps are no longer associated with statistically significant increases in caseloads from multiple adult households with children.
- Higher earnings disregards no longer lead to statistically significant increases in caseloads from households with elderly persons living with others, or the entire population.
- The estimated effects of sanctions are smaller for the entire population and for those in households with multiple adult households with children.

The evidence in Table 6-2 remains consistent with the possibility that sanctions reduced food stamp receipt among multiple adult households with children, but the results are harder to interpret. The simpler model in Table 6-1 produced the plausible finding that full family sanctions reduced caseloads from this group by more than partial sanctions. But when additional economic controls are added, partial sanctions and immediate full family sanctions reduce caseloads by a similar amount while delayed full family sanctions no longer reduce caseloads. Because the effect of sanctions depends on factors other than their size, the findings in Table 6-2 could still reflect real effects of sanctions.

Additional controls for wage, demographic, and political trends: Table 6-3 adds still more explanatory variables that attempt to control for changes in other factors. The added variables are:

- Two measures of earnings opportunities for less skilled workers: the log of the 20th percentile of weekly wages of adults and the log of the amount earned in a month in a minimum wage job;
- The percentage of the population that is African American;
- The percentage of births to unmarried women;
- The number of new immigrants (lagged one and two years) as a percent of the state population;
- Three measures of trends in political attitudes: indicators for the presence of a Republican governor, Republican control of both state houses, and Democratic control of both state houses.

When additional controls for economic, demographic, and political trends are added to the basic model, the estimated effects of EBT, family caps, and sanctions decline. EBT, higher error rates, and family caps still generally increase participation. Shorter recertification periods, time limits, and sanctions still reduce participation. Earnings disregards continue to have mixed effects. Even with these additional controls, TANF policies still have effects on households without children. The results of this model (Table 6-3) and the main findings in Table 6-1 differ in some important ways:

- EBT no longer increases caseloads from multiple adult households with children.
- TANF time limits reduce FSP caseloads from both single and multiple adult households with children.
- Family caps no longer increase caseloads from households with adults and children, but they still increase caseloads from those in households consisting of elderly persons living with others.
- Only partial sanctions are associated with statistically significant reductions in aggregate caseloads and caseloads from single adult households with children. Only lifetime sanctions reduce caseloads from multiple adult households with children.

These diminished effects of sanctions, family caps, and EBT indicate that some policy changes are correlated with other social trends that could also have reduced caseloads. The estimated effects that are sensitive to the inclusion of additional explanatory variables could simply reflect the role of other factors. Despite the sensitivity of some findings, and despite the persistence of unexpected effects of some TANF policies on groups without children, the evidence is still consistent with the possibility that time limits, sanctions, and reporting requirements reduced FSP caseloads. [3]

[3] The estimated effects of the additional controls are only sometimes consistent with expectations. In Table 6-3 and other tables that use the additional controls, the wage variables occasionally reduce FSP caseloads as one would expect, but these variables are also unexpectedly associated with increases in caseloads. Republican governors and Republican control of statehouses are often associated with reduced caseloads, perhaps because these outcomes reflect changes in attitudes. However, among households with elderly persons, Republican control of statehouses is sometimes associated with increases in caseloads. Democratic statehouses are not associated with caseload increases.

State time trends. State time trend terms could control for steady, unmeasured changes in economic factors, demographic changes, and attitudes that may affect food stamp usage. If the time trends are omitted, the estimated effects of welfare reform could reflect merely the continuation of these pre-existing trends. State time trends could also incorrectly control for caseload trends actually caused by policies and incorrectly reduce the estimated effects of policy variables.

When state time trends and additional controls for economic, demographic, and political trends are added to the basic model (Table 6-4), the estimated effects of several policies change, and some of the estimated effects of policies are inconsistent with expectations. Many of the main findings in Table 6-1 are remarkably persistent in this more complex model. Caseloads are still most cyclically sensitive among households consisting of multiple adults with children, adults living separately, and elderly living with others. EBT increases caseloads from multiple adult households with children and the population as a whole. TANF time limits and higher earnings disregards still reduce caseloads from single adult households with children. Comparable disqualification still reduces caseloads from single adult households with children, and partial sanctions still reduce caseloads from multiple adult households with children and the entire population. TANF policies still unexpectedly affect caseloads from households without children.

A comparison of the main findings (Table 6-1) and the findings obtained from this more complex model (Table 6-4) reveals several changes. In the more complex model:

- EBT still increases caseloads among multiple adult households with children, but no longer increases caseloads from single adult households with children, and now *increases* rather than reduce food stamp receipt among elderly persons living separately.
- TANF time limits are associated with declines in caseloads from multiple adult households with children as well as caseloads from single adult households with children.
- Frequent recertification is also associated with declines in caseloads from single adult households with children as well as caseloads from multiple adult households with children and from households with adults living separately.
- Family caps no longer increase caseloads from households with adults and children, although this policy still increases caseloads from households consisting of elderly persons living with others.
- Higher earnings disregards still reduce caseloads from single adult households with children, but no longer increase caseloads from households consisting of multiple adults and children or elderly persons living with others.
- The total estimated effect of sanctions is smaller in the more complex model with state time trends, and some sanctions are unexpectedly associated with increases in caseloads.

Although the estimated effects of some sanction policies in this model could still reflect genuine effects of these policies, other estimated effects of sanctions are implausible. In the more complex model, immediate full family sanctions are associated with increases in caseloads from single adult households with children, relative to caseloads that would appeared under the more lenient AFDC rules. In the basic model (Table 6-1) both comparable disqualification and partial sanctions lowered FSP caseloads from this group. In the more complex model, only partial sanctions explain declines in caseloads from multiple adult households with children. In the basic model (Table 6-1), the effects of full sanctions and lifetime sanctions on this group were much larger. In the case of elderly persons living with others, the more complex model finds that comparable disqualification reduced caseloads but delayed full family sanctions unexpectedly increased caseloads. In the basic model, sanction variables have no effects on these households. Several types of sanctions and other TANF policies continue to affect the number of caseloads from households without children. In short, the model with additional explanatory variables and time trends finds that many policies could have affected FSP caseloads, but the evidence of these effects is less convincing than the evidence produced by models without state time trends.

Lagged caseloads: The addition of a lagged caseload term accounts for the possibility that caseloads could adjust sluggishly rather than immediately to economic and policy changes. While other reports analyzed a longer time series and were able to use several lagged caseload measures, this study employs only one lagged term, in part because only 13 years of data are available. The use of lagged caseloads limits the study to the years 1988-1999 because data on caseloads by type of household are unavailable for years prior to 1987. The results obtained with the most complex model, with lagged caseloads, state time trends, and all other variables, are shown in Table 6-5.[4]

When a lagged caseload term is added to the model with state time trends and all explanatory variables (Table 6-5), most of the results remain unchanged. The results from the model with a lagged caseload term, state time trends, and all other explanatory variables (Table 6-5) are mostly similar to the results from the model with state time trends and all other explanatory variables (6-4). The estimated effects of economic factors, FSP administrative variables, time limits, family caps, and earnings disregards are very similar in these two models. EBT still increases caseloads, although not among multiple adult households with children. Frequent recertification still reduces caseloads, although not among single adult households with children.

[4] With a lagged participation rate added as an explanatory variable, the long-run effect of a unit change of an independent variable is equal to the coefficient divided by one minus the coefficient of the lagged participation rate measure.

Sanctions are associated with increases and reductions in caseloads. The results now show that comparable disqualification reduces caseloads from single adult households with children, while partial sanctions reduce caseloads from multiple adult households with children. Several of the estimated effects are contrary to expectations: delayed full sanctions substantially increase caseloads from households consisting of elderly persons living with others; and sanctions strongly affect food stamp receipt among elderly persons and adults without children. Partial sanctions and comparable disqualification reduce aggregate caseloads, but full sanctions unexpectedly increase aggregate caseloads. Because of these and other counterintuitive findings, the results based on model with time trends and lagged caseload terms provide less convincing evidence of genuine policy effects than the results based on the simpler models. As other studies have indicated, it is difficult to separate the effects of policies from steady trends in caseloads that occurred for other reasons

Alternative measure of FSP caseloads based on the population of relevant age: So far, the measure of caseloads has been equal to the number of participants in a specific type of household divided by the population in similar households. This measure of FSP caseloads was chosen because it addresses a straightforward research question concerning FSP caseloads for distinct types of easily defined households. A shortcoming of this caseload measure is that it will not reflect changes in the rate of formation of these households. It is often thought that the proportion of children born to single mothers could have been affected by welfare reform. An alternative measure of caseloads employs a denominator equal to the estimated population in a relevant age group.[5] Changes in the alternative measure will reflect not only changes in caseloads from each type of household, but also changes in the rate of formation of each type of household. If policies affect the composition of households, then the estimated effects of policies on single parent and other households could be larger when the alternative caseload measure is used. The alternative caseload measure will, however, also reflect irrelevant population trends in other types of households, so estimated effects of policies might be smaller when the alternative caseload measure is used. Findings obtained using this alternative caseload measure, and a basic model using a minimal set of controls, are shown in Table 6-6.

The estimated effects of policies on FSP caseloads generally change little when one also considers their potential effects of welfare reform on the number of different types of households. A comparison of results obtained using the basic model (Table 6-1 and Table 6-6) shows that:

[5] The relevant population is the entire population for the estimate of aggregate food stamp caseloads, and caseloads from households with elderly persons living with others. The relevant population is the number of persons under age 60 for single or multiple adults with children, the number of persons over age 60 for elderly persons living separately, and the number of persons between the ages of 18 and 60 for adults living separately.

- The estimated effects of economic variables, EBT systems, frequent recertification, and earnings disregards on the two measures of caseloads are very similar.

- When this alternative measure of caseloads is used, higher error rates are associated with higher caseloads from single adult households with children, as well as caseloads from multiple adult households with children.

- When this alternative measure of caseloads is used, time limits reduce caseloads from multiple adult households with children. When the preferred measure of caseloads is used, time limits reduce caseloads from single adult households with children.

- When this alternative measure of caseloads is used, family caps remain associated with increases in caseloads from households with only adults and children, but no longer explain increases in caseloads from households consisting of with elderly persons living with others.

- The estimated effects of sanctions on the two measures of caseloads are generally similar, although the pattern of effects on single adult households with children is somewhat different.

- Several unexpected findings persist with both measures of caseloads: higher error rates are still associated with decreases in caseloads from elderly persons living separately; and time limits, family caps, earnings disregards, and sanctions still affect the number of caseloads from households without children.

When the preferred measure of caseloads is employed (Table 6-1), partial sanctions and comparable disqualification reduce caseloads single adult households with children. When the alternative measure is used, the effects of comparable disqualification are negligible but partial, delayed full family sanctions, and immediate full family sanctions are also associated with 7-10 percent reductions in caseloads. In short, the estimated effects of policies on caseloads are not dramatically larger when one considers their possible effects on the rate of formation of single parent and other households.

When all of the additional controls are added to the regressions that use this alternative measure of caseloads, (Table 6-7), the results change in ways that are generally similar to the changes that appear in Tables 6-2 through 6-5. Specifically, the estimated effects of EBT, family caps, and earnings disregards, and sanctions often become smaller, and in some instances, sanctions unexpectedly increase caseloads.

Households without non-citizens: Because of the restriction of eligibility for non-citizens under PRWORA, caseloads from households with and without non-citizens exhibit different trends. If the proportion of the population in low-income households with non-citizens across states is correlated with specific state-level policies, then estimates of the effects of policies could be biased, reflecting both the effects of the policies and the effects of the rules for non-citizens. To address this issue,

Table 6-8 shows estimates of the effects of policy measures on a third caseload measure equal to the log of the total number of participants in households without non-citizens (that is, without non-citizen participants and without ineligible non-citizens). The results indicate the effects on numbers of participants, rather than numbers of participants as a proportion of the relevant population.

The estimates of the effects of policies on FSP caseload trends generally persist when one attempts to control for the possible role of the PRWORA rules for non-citizens. The main findings in Table 6-1 generally persist or even grow stronger when the number of participants in citizen households is analyzed (Table 6-8), although the time limit does not reduce aggregate caseloads or caseloads from households with adults and children. When additional controls are added to the analysis of caseloads from household with only citizens (not shown), the estimated effects of EBT, family caps, and sanctions decline, although time limits reduce caseloads from households with adults and children. [6]

6.3 Summary of the Effects of the Economy and Specific Policies on FSP Caseloads from Different Types of Households

The previous section showed that, although some of the main findings persisted in more complex models, the estimated effects of sanctions and other policies are sensitive to the choice of statistical model. While it is important to show that these estimated effects are sensitive to estimation methods, this presentation of results based on a range of models makes it difficult to distill a "bottom line" set of conclusions about the potential effects of each policy. This section presents a summary discussion of how the effects of each policy vary by type of household, and whether these estimated effects are sensitive to the statistical model employed. In this summary, more emphasis is placed in results obtained by analyzing the preferred measure of caseloads (measured as a proportion of the population in similar households), but the results obtained using the alternative measure based on the population of similar age are also discussed.

Economic trends: Caseloads from households that consist of multiple adults and children, adults living separately, and elderly persons living with others are more cyclically sensitive than caseloads from households that consist of single adults with children and elderly persons living alone. When the effects of lagged unemployment rates are considered, the estimated effects of the economy become stronger.

[6] This caseload measure seems less preferable than the measure employed in Tables 6-1 to 6-7 because it does not express caseloads as a percentage of the relevant population. Estimated effects in Table 6-8 could reflect the role of state-to-state differences in general population trends that affect the size of caseloads. The other estimates correct for these general population trends.

EBT: Statewide EBT systems are associated with 4-6 percent increases in aggregate FSP caseloads in all models. The main findings (Table 6-1) indicate that EBT increases caseloads single and multiple adult households with children. In some of the more complex models, EBT continues to increase caseloads from single or multiple adult households with children. However, in the most complex model -- with lagged participation, state time trends, and all additional control variables -- the effect of EBT on these two groups is statistically insignificant at the ten percent level. Thus, the effects of EBT on these households could be genuine or reflect the role of other factors.

EBT accounts for *reductions* in food stamp receipt among elderly persons living separately in simpler models without state time trends, but *increases* in food stamp receipt for this group in models with state time trends. The estimated effect of EBT on this group therefore depends on whether one believes time trends belong in these models.

Error rates: Higher error rates, a measure of less burdensome reporting procedures, are associated with increases in FSP caseloads from households with multiple adults and children in all models. When the alternative measure of caseloads (based on the population of relevant age) is analyzed, higher error rates also increase caseloads from single adult households with children. An unexpected finding is that higher error rates are associated with reductions in caseloads from the two groups of households with elderly persons. This unexpected result may have arisen from unmeasured factors correlated with changes in error rates.

Frequent recertification: Increases in the "frequent recertification rate," another measure of reporting burden, reduce aggregate caseloads, caseloads from households consisting of multiple adults with children, and caseloads from households consisting of adults living separately. These two groups of households include substantial numbers of working adults who might be pushed from the program additional reporting requirements. In more complex models with state time trends, increases in the rate of frequent recertification may also reduce caseloads from single adult households with children. Increases in the rate of frequent recertification do not reduce caseloads from those in households with elderly persons.

AFDC/TANF time limits: The main findings indicate that time limits do not reduce aggregate FSP caseloads. The models with additional controls find that time limits are associated with statistically significant reductions in caseloads of 3-7 percent. Time limits reduce FSP caseloads from households with adults and children, but the specific findings are sensitive to specification. When the preferred measure of caseloads is analyzed, time limits reduce caseloads from single adult households with

children in all models, and time limits reduce caseloads from multiple adult households with children in all models with controls for demographic and political trends. When the alternative measure of caseloads is analyzed, time limits reduce caseloads from single adult households with children in models with state time trends, and time limits reduce caseloads from multiple adult households with children in all models.

Time limits do not reduce caseloads from households consisting of elderly persons living with others. Some of these households qualify for TANF but may receive exemptions because of the presence of an elderly person. Time limits on AFDC and TANF receipt are also unexpectedly associated with reductions in caseloads from households with adults and elderly persons living separately.

Family caps: Family caps increase FSP caseloads from all households and those with adults and children, but this effect becomes statistically insignificant in more complex models. The effect of family caps on aggregate caseloads becomes statistically insignificant in models with state time trends. Similarly, the effect of family caps on single adult households with children becomes statistically insignificant in models with additional controls for demographic and political trends. The effect of family caps on multiple adult households with children becomes statistically insignificant when any additional controls are added to the basic model. In the basic model and more complex models, family caps also increase caseloads from households consisting of elderly persons and others. These effects of family caps may be genuine but they may reflect the role of other factors, especially since family caps also affect caseloads from households without children in many models.

Earnings disregards: Higher AFDC/TANF earnings disregards, which could theoretically increase or reduce FSP usage, have mixed effects on FSP caseloads, and these effects vary with specification. The main findings show that higher earnings disregards are associated with increases in aggregate caseloads but this effect becomes statistically insignificant in other models. In the case of single adult households with children, higher earnings disregards reduce caseloads in all models when the preferred measure of caseloads is analyzed. In the case of multiple adult households with children, higher earnings disregards have the opposite effect, increasing caseloads, but this effect becomes statistically insignificant in models with state time trends. Among households consisting of elderly persons and others, higher earnings increase caseloads in the simpler models, but this effect tends to disappear when additional control variables are added. In some specifications, higher earnings disregards are associated with increases in caseloads from households without children.

Sanctions: Comparable disqualification and partial sanctions reduce FSP caseloads from single adult households with children in several models. Comparable disqualification reduces caseloads from this group in the simpler models (although not in Table 6-3) and in the models with state time trends when the preferred measure of caseloads is analyzed. Partial sanctions also reduce caseloads from this group, but this effect becomes statistically insignificant with the addition of state time trends. Full TANF sanctions also reduce caseloads from this group, but only in simpler models when the alternative measure of caseloads is analyzed.

Partial sanctions, full sanctions, and lifetime TANF sanctions are also associated with substantial reductions in FSP caseloads multiple adult households with children, but these estimated effects -- especially the effects of full sanctions -- tend to diminish when additional controls are added to the models. In the basic model, partial sanctions, delayed full family sanctions, and immediate full sanctions cause progressively larger reductions in FSP caseloads from this group, and lifetime TANF sanctions further reduce caseloads. When controls for demographic, economic, and political factors are added, only lifetime sanctions reduce caseloads. When state time trends and lagged caseloads are added, only partial sanctions reduce caseloads. When the alternative measure of caseloads is analyzed using the most complex models with all available controls, sanctions have no effect at all on caseloads. Consequently, the estimated effects of sanctions on this group could reflect the real effects of sanction policies or other factors correlated with the imposition of sanctions.

TANF sanctions do not reduce FSP caseloads from households with elderly persons and others; many of these households either do not receive TANF or are exempt from the work requirements. In the models with state time trends, delayed full sanctions are unexpectedly associated with large increases in participation, a finding that seems likely to have been caused by other factors. Sanction policies are also unexpectedly associated with changes in caseload levels from households with adults and elderly persons without children.

The effect of sanctions on aggregate caseloads is the sum of the effects on these subgroups. In the basic model, partial and full family sanctions reduce aggregate caseloads by progressively larger amounts. When other controls but no time trends are added, only partial sanctions reduce FSP caseloads. In the models with state time trends, but not in the simpler models, comparable disqualification also reduces aggregate caseloads. In the most complex model, with state time trends and lagged caseloads (Table 6-5), full sanctions unexpectedly increase aggregate caseloads.

6.4 Results Based on Other Measures of Policies

The results described in the previous sections are based on a single set of measures of policy changes. Researchers have also estimated the effect on caseload size of a large number of other policy measures. Because the policy changes of the last decade were so numerous and complex, more than one set of reasonable measures could clearly be used to estimate the effects of policies. This section briefly discusses results obtained using other measures of policies used in similar research. These alternative policy measures were described in section 5.3 of the previous chapter. To summarize, none of these alternative policy measures appears to be more capable of explaining recent changes in food stamp caseloads, and none provides additional insights as to how policies had different effects on caseloads from different types of households. These results are not shown in tables.

Simple indicators for the implementation of TANF: These indicator variables had statistically insignificant effects on FSP caseloads from each of the major subgroups of households. One explanation for this result is that specific components of TANF plans had offsetting effects: sanctions and time limits reduced caseloads, while family caps increased them.

Indicators for strong, medium, and weak TANF plans: Blank and Schmidt (2001) introduced this three-way classification of TANF plans. This categorization of state plans is based on the combined effects of sanctions, time limits, and disregards. The three indicator variables explained none of the recent decline in caseloads from any of the major types of households.

Indicators for grant diversion and up-front job search: These policies could discourage families from receiving food stamps, but indicators for the presence of these policies were not associated with statistically significant reductions in FSP caseloads.

Work exemptions: Narrower exemptions imply that a larger share of the caseload must face work requirements. The previous chapter described a set of three variables that were used in the CEA (1999) study and that grouped states according to the presence of exemptions based on the age of the youngest child. These three exemption variables do not account for reductions in the FSP caseload. In many cases, they are unexpectedly associated with increases in caseloads when are added to models using the other policy measures in Table 6-1. When a large number of policy measures are included in these models, sorting out the effects of each variable probably becomes increasingly difficult. These results do not necessarily mean that exemptions do not affect food stamp receipt.

These exemption variables do not measure other aspects of exemptions, such as exemptions for those with disabilities and "discretionary" exemptions granted by local office staff.

Reduction/elimination time limits: The estimated effects of TANF time limits were smaller when this measure reflects only benefit reduction/termination time limits, and not the "work trigger" time limits. This alternative measure of time limits did not explain a larger amount of caseload change than the measure used in this report. In future years, as more families become subject to the TANF time limit, a separate analysis of benefit reduction/termination time limits might be of greater interest.

Variables from the 1999 CEA study of TANF caseloads: The CEA (1999) study included a measure of time limits, three measures of sanctions (partial, delayed full, and immediate full family sanctions), the three exemption variables described above, and measures of family caps, earnings disregards, and the maximum AFDC benefit. The policy variables in the tables of this chapter classify sanction variables in a slightly different way and exclude the work exemption variables. When the CEA policy variables were used to analyze FSP caseload trends, they yielded findings that either were roughly similar to the findings in this report, or were less successful in explaining caseload trends.

Interactions of policy measures: Finally, the effects of several interactions of these policy measures were analyzed. The effects of time limits may vary depending on whether sanctions are also present, and the effect of sanctions depends in part of the state's policy toward exemptions. Additional policy variables measured the effect of combinations of policies, such as sanctions with and without narrow exemption policies, or time limits with and without sanctions. These variables yielded mostly statistically insignificant and counterintuitive results and did not improve the model's ability to explain changes in FSP caseloads.

6.5 Some Conclusions

Because the FSP serves such a diverse range of households, an analysis of the determinants of caseloads from specific types of households is far more important for the FSP than for other programs such as TANF, which serves mostly single adults with children and a smaller number of multiple adults with children. The main findings presented in this chapter show that the effects of economic trends and policy changes on FSP caseloads differ by type of household. Economic trends have the strongest effects on food stamp receipt households consisting of multiple adults with children, adults living separately, and elderly persons living with adults or children. EBT systems increase caseloads

from households with adults and children, but reduce food stamp receipt among elderly persons living alone. Higher FSP error rates increase caseloads from multiple adult households with children. Shorter recertification periods reduce FSP caseloads from households with multiple adults and children and with adults living separately. TANF time limits and sanctions reduce caseloads from households with adults and children, while family caps increase caseloads from these households.

This study of FSP caseload trends of distinct types of households also provides additional tests of the meaning of the policy variables. One expects reporting requirements to affect working households, and one expects TANF rules to affect only households with children. This study finds that several aspects of state TANF policies -- sanctions, time limits, and family caps -- also have estimated effects on food stamp receipt among adults and elderly persons living separately, without children. These unexpected findings suggest that the estimated effects of the policy variables -- including the more plausible estimated effects on households with children-- could reflect the influence of other factors that may be correlated with both the policy changes and caseload trends.

These other factors could include unmeasured trends in economic factors, prevailing wages, demographic factors, attitudes toward public assistance, or unmeasured policy changes, such as aspects of state TANF and Medicaid policies that are difficult to quantify. Nationwide policy changes, such as the changes in the SSI program, higher minimum wages, aspects of TANF imposed nationwide, and the expanded EITC could have different effects in different states. The tone of the "work first" message that local office staff give to all public assistance recipients could differ across states. States may also have a greater tendency to enact certain policy changes when general caseloads are already changing especially rapidly.

To explore the possible role of at least some of these factors, additional control variables were added to the basic model. These additional variables include lagged unemployment rates, prevailing wage rates, measures of demographic and political trends, state time trends intended to measure steady changes in FSP caseloads since the late 1980s, and lagged caseloads. The preferred, simpler model in this report basic omitted these additional variables because of concerns that they could "overcontrol" for trends in caseloads that were actually caused by policy changes that could be measured. Other similar studies prefer to include these additional variables because they could control for other factors that have truly affected FSP caseloads and that happen to be correlated with policy changes. The "natural experiment" provided by variation in policies, economic trends, and caseload trends across states and over time is highly informative but does not unambiguously distinguish the effects of the

many factors that affect caseloads and that were changing at about the same time. As a result, the choice of the "correct model" is unclear, although this study leans toward the simpler models.

When these additional controls are added to the model, many of the estimated effects of policies are remarkably persistent. In several models, EBT still increases FSP caseloads from households with adults and children. Higher error rates persistently reduce caseloads from multiple adult households with children. Shorter recertification periods continue to lower caseloads from households with multiple adults and children and adults living separately. TANF time limits continue to reduce caseloads from households with adults and children. Even in more complex models, the sanction variables can still account for reductions in caseloads from single and multiple adult households with children. These additional variables also do not eliminate the unexpected effects of TANF policies on households without children.

Other findings obtained with the basic model change more substantially when other controls are added. The effect of EBT on households with adults and children is no longer statistically significant in the most complex model with lagged participation, state time trends, and all other variables. In the models with state time trends, the effect of EBT on elderly persons living separately reverses, and actually increases food stamp receipt for this group. The estimated effects of family caps on households with one or more adults and children decline when additional controls are added. The estimated effects of sanctions on caseloads from multiple adult households with children also decline in the more complex models. When state time trends are added, some sanction policies are surprisingly associated with increases in caseloads.

Taken together, these results are consistent with the view policy changes have affected recent caseload trends. The evidence in favor of the contention that more burdensome reporting requirements reduce caseloads is especially convincing. The effects of EBT, some types of sanctions, and time limits persist in many if not all of more complex models with additional controls. If one has more confidence in the simpler models, then the evidence for the effects of sanctions, EBT, and family caps on caseloads is stronger. One could interpret these estimated effects of TANF policy variables on households with children as genuine, even though these policy measures also have unexpected effects on households without children.

One could also interpret these estimates as showing that recent policies, especially TANF policies, had little or no effect on recent caseload changes. The decline in the size of some of these effects when other controls are added could be seen as evidence that the estimated effects of policies in the

simpler models reflect the role of other factors correlated with the imposition of policies. The unexpected estimated effects of TANF policies on households without children could be seen as evidence that these policies are simply measuring the effects of other factors that influence general caseload trends.

Although we will probably never precisely identify the effects of these policies on FSP caseloads, the evidence shows that reporting requirements, TANF time limits, TANF sanctions for failure to comply with work requirements, and comparable disqualification may have reduced FSP caseloads in the late 1990s. Although some households that left the FSP as a result of these policies may have become self sufficient, other evidence suggests that many non-participants remain eligible for benefits. Based on these findings, a case can be made for continued efforts to make the FSP more accessible as a "risk averse" response to concerns about food insecurity, especially if the economy begins to falter. Measures to simplify the recertification process and to inform TANF leavers about food stamp benefits could be considered. USDA took some steps to ease reporting requirements after 1999.

These findings complement the findings of several other studies of FSP caseload trends summarized in Chapter Four. This estimated effects of specific policies in this report are larger than those reported in Ziliak, Gundersen, and Figlio (2001) and Wallace and Blank (1999). These studies found that indicators for welfare reform caused either only minor reductions in caseloads or had no effect at all on caseloads. Ziliak, Gundersen, and Figlio (2001) also found that EBT had no effect on caseloads, while this report found that EBT affected caseloads in several models. Gleason et al (2001) found that measures of strong, moderate, and weak work requirements of state AFDC and TANF policies explain only modest declines in caseloads. This report uses a larger number of measures of more specific policies and found larger effects of policies. Differences in the years analyzed, the policy measures employed, and the separate analyses of different households in this report could all explain these discrepancies in findings.

This report and the study by Currie and Grogger (2001), which also examined the determinants of FSP caseloads for different types of households but which relied on reported food stamp receipt in the Current Population Survey, reach somewhat different conclusions. Both studies find shorter recertification periods reduce caseloads, so the evidence that reporting requirements affect caseloads seems especially strong. Both studies find that measures of strong sanction policies may reduce food stamp caseloads, although the specific measures of policies are different in the two studies. In the study by Currie and Grogger, the indicator for the implementation of TANF explained a substantial decline in food stamp receipt, while a similar variable had a negligible effect on caseloads in this

report. Currie and Grogger also found that EBT had only a limited effect on caseloads, while this report found larger effects. The use of different sources of information on food stamp receipt (survey or administrative data) and the analysis of different sets of years could explain these differences in findings.

In this report, unlike most of the previous studies, a major theme is that policies and economic trends have different effects on trends in caseloads from different types of households. Another important issue discussed in many of these studies is the extent to which the selected measures of economic trends and policy changes explain the rapid decline in FSP caseloads in the late 1990s. The final chapter of this report uses the results in this chapter to assess how much of the recent decline in FSP caseloads could be explained.

Table 6-1
Estimated Effects of Economic Trends and Policy Changes on FSP Caseloads: Main Findings

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Unemployment rate	4.232 (0.546) ***	-0.436 (0.894)	7.107 (0.881) ***	7.041 (0.933) ***	2.944 (0.941) ***	6.289 (1.977) ***
EBT	0.055 (0.023) **	0.098 (0.037) ***	0.068 (0.038) *	0.056 (0.039)	-0.094 (0.041) **	-0.036 (0.084)
FSP error rate	0.950 (0.228) ***	0.055 (0.367)	0.807 (0.233) ***	-0.142 (0.236)	-0.491 (0.156) ***	-0.160 (0.117)
Frequent recertification	-0.112 (0.033) ***	0.004 (0.051)	-0.236 (0.051) ***	-0.229 (0.047) ***	-0.056 (0.049)	0.012 (0.080)
AFDC/TANF policy variables						
Time limit	-0.031 (0.024)	-0.069 (0.039) *	-0.040 (0.040)	-0.128 (0.040) ***	0.032 (0.042)	0.058 (0.089)
Family cap	0.071 (0.022) ***	0.098 (0.035) ***	0.068 (0.036) *	0.163 (0.037) ***	0.057 (0.038)	0.141 (0.080) *
Log earnings disregard	0.029 (0.015) *	-0.086 (0.024) ***	0.079 (0.024) ***	0.031 (0.025)	0.077 (0.025) ***	0.130 (0.055) **
Work sanctions						
Partial/partial	-0.063 (0.028) **	-0.119 (0.045) ***	-0.083 (0.046) *	-0.078 (0.047) *	-0.127 (0.049) ***	-0.121 (0.099)
Partial/full	-0.106 (0.031) ***	-0.061 (0.050)	-0.116 (0.051) **	-0.078 (0.052)	-0.101 (0.054) *	0.067 (0.115)
Full/full	-0.117 (0.035) ***	-0.075 (0.057)	-0.160 (0.058) ***	-0.120 (0.059) **	-0.119 (0.061) *	-0.097 (0.129)
Comp. disqualification	-0.028 (0.025)	-0.107 (0.041) ***	-0.001 (0.042)	-0.089 (0.041) **	-0.186 (0.044) ***	-0.126 (0.087)
Lifetime sanction	-0.029 (0.038)	-0.060 (0.061)	-0.111 (0.062) *	-0.149 (0.063) **	0.060 (0.065)	0.071 (0.139)
Sample size	663	663	663	663	663	663

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The measure of caseloads (the dependent variables in these regressions) is equal to the log of the ratio of the number of FSP participants in each type of household to the estimated population in similar households. All regressions include state and year effects. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-2

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using Additional Economic Controls

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Unemployment rate	0.020 (0.995)	-3.717 (1.690) **	0.450 (1.663)	1.852 (1.715)	2.339 (1.833)	-3.705 (3.843)
Unemployment rate, t-1	2.239 (1.184) *	2.167 (2.004)	5.017 (1.974) **	0.940 (2.029)	0.123 (2.180)	9.564 (4.566) **
Unemployment rate, t-2	4.068 (0.798) ***	2.316 (1.358) *	4.769 (1.328) ***	7.433 (1.367) ***	1.958 (1.472)	4.745 (3.061)
Employment growth rate	0.024 (0.332)	-0.239 (0.570)	0.494 (0.554)	-0.172 (0.568)	0.937 (0.609)	1.336 (1.292)
EBT	0.052 (0.021) **	0.096 (0.037) ***	0.063 (0.036) *	0.049 (0.037)	-0.094 (0.041) **	-0.044 (0.082)
FSP error rate	1.020 (0.214) ***	0.185 (0.368)	0.796 (0.221) ***	-0.075 (0.225)	-0.474 (0.156) ***	-0.168 (0.115)
Frequent recertification	-0.066 (0.031) **	0.034 (0.052)	-0.183 (0.049) ***	-0.181 (0.046) ***	-0.049 (0.049)	0.023 (0.078)
AFDC/TANF policy variables						
Time limit	-0.044 (0.023) *	-0.079 (0.039) **	-0.058 (0.038)	-0.146 (0.038) ***	0.028 (0.042)	0.048 (0.087)
Family cap	0.058 (0.021) ***	0.092 (0.035) ***	0.049 (0.034)	0.137 (0.035) ***	0.050 (0.038)	0.108 (0.078)
Log earnings disregard	0.004 (0.014)	-0.103 (0.024) ***	0.041 (0.024) *	-0.006 (0.024)	0.065 (0.026) **	0.076 (0.055)
Work sanctions						
Partial/partial	-0.058 (0.026) **	-0.119 (0.045) ***	-0.075 (0.044) *	-0.065 (0.045)	-0.121 (0.049) **	-0.102 (0.098)
Partial/full	-0.060 (0.030) **	-0.037 (0.050)	-0.045 (0.050)	-0.010 (0.051)	-0.076 (0.055)	0.168 (0.115)
Full/full	-0.076 (0.033) **	-0.054 (0.057)	-0.097 (0.056) *	-0.051 (0.057)	-0.090 (0.062)	-0.006 (0.128)
Comp. disqualification	-0.037 (0.024)	-0.111 (0.040) ***	-0.013 (0.039)	-0.099 (0.039) **	-0.190 (0.043) ***	-0.115 (0.086)
Lifetime sanction	-0.046 (0.035)	-0.073 (0.061)	-0.134 (0.059) **	-0.172 (0.060) ***	0.055 (0.065)	0.050 (0.136)
Sample size	663	663	663	663	663	663

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The measure of caseloads (the dependent variables in these regressions) is equal to the log of the ratio of the number of FSP participants in each type of household to the estimated population in similar households. All regressions include state and year effects. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-3

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using Additional Controls for Economic, Demographic, and Political Trends

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Unemployment rate	-0.023 (0.978)	-3.643 (1.732) **	1.429 (1.659)	0.939 (1.708)	3.648 (1.810) **	0.563 (3.917)
Unemployment rate, t-1	2.583 (1.129) **	2.555 (1.990)	4.879 (1.909) **	2.187 (1.964)	-1.105 (2.096)	7.579 (4.515) *
Unemployment rate, t-2	3.528 (0.805) ***	2.402 (1.425) *	4.156 (1.359) ***	6.806 (1.402) ***	0.782 (1.500)	5.173 (3.212)
Employment growth rate	0.201 (0.323)	0.028 (0.577)	0.604 (0.547)	0.259 (0.561)	0.690 (0.598)	1.051 (1.300)
EBT	0.046 (0.021) **	0.098 (0.038) ***	0.054 (0.036)	0.047 (0.037)	-0.088 (0.040) **	-0.011 (0.083)
FSP error rate	1.066 (0.205) ***	0.327 (0.368)	0.806 (0.215) ***	0.054 (0.223)	-0.269 (0.155) *	-0.296 (0.118) **
Frequent recertification	-0.085 (0.030) ***	-0.001 (0.052)	-0.200 (0.048) ***	-0.170 (0.045) ***	-0.047 (0.047)	0.050 (0.079)
AFDC/TANF policy variables						
Time limit	-0.049 (0.022) **	-0.069 (0.039) *	-0.081 (0.037) **	-0.140 (0.038) ***	0.026 (0.041)	0.041 (0.086)
Family cap	0.043 (0.021) **	0.060 (0.037)	0.037 (0.035)	0.110 (0.036) ***	0.047 (0.038)	0.136 (0.082) *
Log earnings disregard	0.016 (0.015)	-0.074 (0.026) ***	0.063 (0.025) **	0.015 (0.026)	0.017 (0.028)	0.087 (0.061)
Work sanctions						
Partial/partial	-0.046 (0.026) *	-0.087 (0.047) *	-0.068 (0.045)	-0.042 (0.046)	-0.125 (0.050) **	-0.079 (0.104)
Partial/full	-0.032 (0.029)	-0.019 (0.052)	-0.001 (0.050)	0.019 (0.051)	-0.054 (0.054)	0.189 (0.118)
Full/full	-0.044 (0.034)	-0.018 (0.062)	-0.052 (0.058)	-0.015 (0.059)	-0.076 (0.064)	-0.001 (0.138)
Comp. disqualification	-0.025 (0.024)	-0.065 (0.043)	-0.003 (0.040)	-0.101 (0.041) **	-0.218 (0.044) ***	-0.113 (0.090)
Lifetime sanction	-0.016 (0.033)	-0.056 (0.060)	-0.095 (0.057) *	-0.138 (0.057) **	0.041 (0.062)	0.010 (0.134)
Log monthly min wage	-0.071 (0.138)	-0.116 (0.261)	0.143 (0.234)	-0.218 (0.237)	-0.386 (0.266)	-0.690 (0.550)
Log20th wage percentile	-0.282 (0.121) **	0.276 (0.220)	-0.266 (0.204)	-0.236 (0.211)	-0.369 (0.226)	0.970 (0.486) **
Republican governor	-0.073 (0.011) ***	-0.060 (0.020) ***	-0.106 (0.018) ***	-0.111 (0.019) ***	-0.002 (0.020)	0.014 (0.043)
Both houses Republican	-0.045 (0.018) **	-0.090 (0.032) ***	-0.040 (0.030)	-0.070 (0.031) **	0.103 (0.032) ***	0.158 (0.072) **
Both houses Democratic	0.001 (0.015)	0.042 (0.028)	0.003 (0.026)	-0.019 (0.027)	-0.067 (0.029) **	0.099 (0.062)
Sample size	663	663	663	663	663	663

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The measure of caseloads (the dependent variables in these regressions) is equal to the log of the ratio of the number of FSP participants in each type of household to the estimated population in similar households. All regressions also include state and year effects, the percentage of the population that is African American, the percentage of births to unmarried women, and the number of new immigrants (lagged one and two years) as a percentage of the population. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-4

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using All Additional Controls and State Time Trends

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Unemployment rate	-0.195 (0.830)	-3.028 (1.679) *	1.299 (1.553)	0.173 (1.481)	1.266 (1.561)	4.264 (4.152)
Unemployment rate, t-1	2.045 (0.904) **	1.847 (1.817)	3.797 (1.678) **	1.968 (1.609)	-1.549 (1.709)	6.916 (4.450)
Unemployment rate, t-2	2.120 (0.687) ***	2.322 (1.381) *	2.409 (1.278) *	3.086 (1.232) **	0.116 (1.309)	3.992 (3.401)
Employment growth rate	0.029 (0.268)	-0.058 (0.546)	0.603 (0.497)	-0.517 (0.474)	0.900 (0.506) *	1.697 (1.324)
EBT	0.055 (0.022) **	0.062 (0.044)	0.089 (0.041) **	0.059 (0.039)	0.107 (0.043) **	0.037 (0.106)
FSP error rate	1.081 (0.201) ***	-0.163 (0.391)	0.668 (0.214) ***	0.328 (0.205)	-0.307 (0.137) **	-0.468 (0.120) ***
Frequent recertification	-0.108 (0.033) ***	-0.103 (0.061) *	-0.162 (0.057) ***	-0.175 (0.044) ***	0.033 (0.041)	0.085 (0.083)
AFDC/TANF policy variables						
Time limit	-0.065 (0.022) ***	-0.097 (0.045) **	-0.107 (0.041) ***	-0.120 (0.039) ***	-0.111 (0.042) ***	0.073 (0.108)
Family cap	-0.006 (0.025)	-0.011 (0.050)	0.049 (0.046)	-0.060 (0.044)	0.125 (0.047) ***	0.309 (0.122) **
Log earnings disregard	0.003 (0.015)	-0.062 (0.031) **	0.005 (0.028)	0.047 (0.027) *	-0.008 (0.028)	0.021 (0.075)
Work sanctions						
Partial/partial	-0.059 (0.024) **	-0.078 (0.048)	-0.103 (0.044) **	-0.096 (0.042) **	-0.169 (0.046) ***	-0.133 (0.115)
Partial/full	0.006 (0.029)	0.016 (0.058)	0.012 (0.054)	0.095 (0.051) *	-0.049 (0.055)	0.287 (0.144) **
Full/full	0.039 (0.033)	0.129 (0.068) *	-0.019 (0.062)	0.180 (0.059) ***	-0.110 (0.062) *	-0.148 (0.164)
Comp. disqualification	-0.093 (0.027) ***	-0.171 (0.055) ***	-0.075 (0.050)	-0.302 (0.048) ***	-0.088 (0.052) *	-0.285 (0.132) **
Lifetime sanction	-0.009 (0.038)	-0.047 (0.078)	-0.036 (0.071)	-0.272 (0.068) ***	-0.064 (0.072)	-0.129 (0.189)
Log monthly min wage	-0.014 (0.119)	-0.123 (0.255)	-0.009 (0.220)	0.005 (0.208)	-0.188 (0.232)	-1.053 (0.587) *
Log20th wage percentile	-0.176 (0.124)	0.062 (0.255)	-0.026 (0.229)	-0.155 (0.220)	-0.309 (0.234)	1.253 (0.602) **
Republican governor	-0.032 (0.012) ***	-0.010 (0.024)	-0.050 (0.021) **	-0.050 (0.021) **	-0.045 (0.022) **	-0.083 (0.056)
Both houses Republican	-0.013 (0.017)	-0.045 (0.035)	-0.020 (0.032)	-0.008 (0.031)	0.030 (0.032)	0.034 (0.087)
Both houses Democratic	-0.004 (0.016)	0.040 (0.034)	-0.013 (0.030)	-0.040 (0.029)	-0.074 (0.031) **	0.040 (0.079)
Sample size	663	663	663	663	663	663

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The measure of caseloads (the dependent variables in these regressions) is equal to the log of the ratio of the number of FSP participants in each type of household to the estimated population in similar households. All regressions include state and year effects and all variables in Table 6-3. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-5

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using All Additional Controls, State Time Trends, and Lagged Caseloads

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Lagged caseloads	0.264 (0.029) ***	0.155 (0.040) ***	0.167 (0.040) ***	0.144 (0.038) ***	0.003 (0.039)	-0.188 (0.042) ***
Unemployment rate	0.420 (0.569)	-1.594 (1.657)	1.989 (1.455)	-0.053 (1.355)	1.678 (1.452)	7.222 (3.934) *
Unemployment rate, t-1	1.515 (0.590) **	0.984 (1.715)	4.004 (1.506) ***	2.084 (1.406)	-1.426 (1.521)	5.783 (4.042)
Unemployment rate, t-2	1.924 (0.476) ***	2.126 (1.361)	1.975 (1.218)	2.584 (1.134) **	0.024 (1.216)	3.897 (3.225)
Employment growth rate	-0.113 (0.174)	-0.089 (0.511)	0.520 (0.442)	-0.746 (0.412) *	0.635 (0.444)	1.559 (1.189)
EBT	0.037 (0.014) ***	0.059 (0.041)	0.048 (0.036)	0.055 (0.034)	0.087 (0.038) **	0.056 (0.095)
FSP error rate	0.858 (0.144) ***	-0.487 (0.393)	0.583 (0.205) ***	0.219 (0.218)	-0.349 (0.134) ***	-0.309 (0.131) **
Frequent recertification	-0.065 (0.023) ***	-0.072 (0.065)	-0.158 (0.053) ***	-0.154 (0.044) ***	0.028 (0.036)	0.130 (0.078) *
AFDC/TANF policy variables						
Time limit	-0.031 (0.015) **	-0.071 (0.043) *	-0.078 (0.037) **	-0.112 (0.034) ***	-0.112 (0.037) ***	0.082 (0.098)
Family cap	-0.022 (0.016)	-0.017 (0.048)	0.006 (0.042)	-0.093 (0.039) **	0.077 (0.043) *	0.304 (0.113) ***
Log earnings disregard	0.008 (0.010)	-0.048 (0.029) *	0.012 (0.025)	0.046 (0.024) *	0.004 (0.025)	0.005 (0.069)
Work sanctions						
Partial/partial	-0.044 (0.015) ***	-0.048 (0.045)	-0.070 (0.039) *	-0.103 (0.037) ***	-0.170 (0.041) ***	-0.157 (0.105)
Partial/full	0.034 (0.019) *	0.055 (0.054)	0.004 (0.048)	0.159 (0.045) ***	-0.027 (0.049)	0.420 (0.132) ***
Full/full	0.037 (0.022) *	0.073 (0.065)	-0.003 (0.056)	0.161 (0.051) ***	-0.102 (0.055) *	-0.014 (0.148)
Comp. disqualification	-0.081 (0.018) ***	-0.153 (0.053) ***	-0.041 (0.046)	-0.263 (0.044) ***	-0.076 (0.047)	-0.214 (0.122) *
Lifetime sanction	-0.037 (0.025)	-0.077 (0.076)	-0.038 (0.065)	-0.282 (0.062) ***	-0.067 (0.066)	-0.298 (0.175) *
Log monthly min wage	-0.062 (0.080)	-0.208 (0.247)	-0.125 (0.203)	0.363 (0.194) *	0.199 (0.217)	-0.737 (0.593)
Log20th wage percentile	-0.003 (0.087)	0.023 (0.252)	0.163 (0.219)	-0.071 (0.206)	-0.293 (0.220)	1.235 (0.585) **
Republican governor	-0.023 (0.008) ***	-0.025 (0.023)	-0.049 (0.019) **	-0.024 (0.018)	-0.025 (0.019)	-0.119 (0.053) **
Both houses Republican	-0.014 (0.011)	-0.036 (0.033)	-0.026 (0.029)	0.000 (0.027)	0.037 (0.028)	0.018 (0.078)
Both houses Democratic	0.008 (0.011)	0.046 (0.032)	0.009 (0.027)	-0.025 (0.025)	-0.066 (0.028) **	0.016 (0.072)
Sample size	612	612	612	612	612	612

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The measure of caseloads (the dependent variables in these regressions) is equal to the log of the ratio of the number of FSP participants in each type of household to the estimated population in similar households. All regressions include state and year effects and all variables in Table 6-3. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-6

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using An Alternative Measure of Caseloads Based on the Population of Relevant Age

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Unemployment rate	4.232 (0.546) ***	0.493 (0.640)	7.412 (0.855) ***	6.429 (0.914) ***	2.332 (0.886) ***	7.622 (1.877) ***
EBT	0.055 (0.023) **	0.099 (0.027) ***	0.063 (0.037) *	0.055 (0.038)	-0.107 (0.038) ***	-0.015 (0.079)
FSP error rate	0.950 (0.228) ***	0.904 (0.265) ***	0.715 (0.226) ***	-0.061 (0.232)	-0.452 (0.147) ***	-0.174 (0.110)
Frequent recertification	-0.112 (0.033) ***	-0.016 (0.038)	-0.224 (0.049) ***	-0.229 (0.047) ***	-0.050 (0.046)	0.020 (0.076)
AFDC/TANF policy variables						
Time limit	-0.031 (0.024)	-0.020 (0.028)	-0.067 (0.039) *	-0.115 (0.040) ***	0.033 (0.040)	0.096 (0.083)
Family cap	0.071 (0.022) ***	0.058 (0.025) **	0.089 (0.035) **	0.141 (0.036) ***	0.026 (0.036)	0.117 (0.074)
Log earnings disregard	0.029 (0.015) *	-0.034 (0.017) *	0.084 (0.024) ***	0.011 (0.024)	0.077 (0.024) ***	0.146 (0.051) ***
Work sanctions						
Partial/partial	-0.063 (0.028) **	-0.068 (0.032) **	-0.089 (0.045) **	-0.089 (0.046) *	-0.107 (0.046) **	-0.075 (0.094)
Partial/full	-0.106 (0.031) ***	-0.100 (0.036) ***	-0.127 (0.050) **	-0.046 (0.052)	-0.096 (0.051) *	0.059 (0.107)
Full/full	-0.117 (0.035) ***	-0.088 (0.041) **	-0.196 (0.056) ***	-0.058 (0.058)	-0.108 (0.058) *	-0.080 (0.120)
Comp. disqualification	-0.028 (0.025)	-0.029 (0.029)	-0.015 (0.040)	-0.107 (0.041) ***	-0.161 (0.041) ***	-0.105 (0.083)
Lifetime sanction	-0.029 (0.038)	0.014 (0.044)	-0.123 (0.060) **	-0.119 (0.062) *	0.051 (0.061)	0.028 (0.128)
Sample size	612	612	612	612	612	612

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The "alternative caseload measures" (the dependent variables in these regressions) are equal to the log of the ratio of the number of FSP recipients in each type of household to the population of similar age. The "relevant population" is the number of persons under the age of 60 for families with adults and children, the number of persons between the ages of 18-59 for adults living separately, the number of persons age 60 and above for elderly living separately, and the entire population for elderly living with others and for all participants. All regressions include state and year effects. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-7

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using All Additional Controls, State Time Trends, Lagged Caseloads, and an Alternative Measure of Caseloads Based on Population of Relevant Age

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Lagged participation	0.264 (0.029) ***	0.215 (0.035) ***	0.170 (0.040) ***	0.138 (0.036) ***	-0.001 (0.040)	-0.224 (0.041) ***
Unemployment rate	0.420 (0.569)	-0.751 (0.799)	2.156 (1.384)	0.085 (1.266)	1.267 (1.355)	6.818 (3.618) *
Unemployment rate, t-1	1.515 (0.590) **	1.313 (0.831)	3.689 (1.432) ***	1.866 (1.314)	-1.186 (1.421)	7.030 (3.717) *
Unemployment rate, t-2	1.924 (0.476) ***	1.886 (0.665) ***	2.254 (1.160) *	3.090 (1.058) ***	-0.317 (1.131)	3.429 (2.974)
Employment growth rate	-0.113 (0.174)	-0.385 (0.245)	0.441 (0.420)	-0.314 (0.386)	0.716 (0.417) *	1.062 (1.085)
EBT	0.037 (0.014) ***	0.026 (0.020)	0.044 (0.034)	0.071 (0.031) **	0.077 (0.035) **	0.048 (0.089)
FSP error rate	0.858 (0.144) ***	0.380 (0.193) **	0.515 (0.194) ***	0.221 (0.202)	-0.296 (0.125) **	-0.249 (0.122) **
Frequent recertification	-0.065 (0.023) ***	-0.092 (0.032) ***	-0.129 (0.050) **	-0.146 (0.041) ***	0.033 (0.034)	0.132 (0.073) *
AFDC/TANF policy variables						
Time limit	-0.031 (0.015) **	-0.026 (0.020)	-0.096 (0.035) ***	-0.097 (0.032) ***	-0.068 (0.034) **	0.108 (0.090)
Family cap	-0.022 (0.016)	-0.030 (0.023)	-0.009 (0.040)	-0.076 (0.037) **	0.021 (0.040)	0.333 (0.105) ***
Log earnings disregard	0.008 (0.010)	-0.005 (0.014)	0.004 (0.024)	0.042 (0.022) *	-0.009 (0.023)	0.041 (0.063)
Work sanctions						
Partial/partial	-0.044 (0.015) ***	-0.025 (0.022)	-0.052 (0.038)	-0.131 (0.034) ***	-0.123 (0.038) ***	-0.141 (0.097)
Partial/full	0.034 (0.019) *	0.054 (0.026) **	-0.010 (0.046)	0.180 (0.042) ***	-0.006 (0.046)	0.427 (0.120) ***
Full/full	0.037 (0.022) *	0.046 (0.030)	-0.009 (0.053)	0.156 (0.048) ***	-0.060 (0.052)	0.089 (0.135)
Comp. disqualification	-0.081 (0.018) ***	-0.101 (0.025) ***	-0.060 (0.044)	-0.257 (0.041) ***	-0.050 (0.044)	-0.256 (0.113) **
Lifetime sanction	-0.037 (0.025)	-0.007 (0.036)	-0.050 (0.062)	-0.254 (0.057) ***	-0.080 (0.061)	-0.325 (0.159) **
Log monthly min wage	-0.062 (0.080)	-0.108 (0.111)	-0.165 (0.194)	0.358 (0.184) *	0.032 (0.199)	-0.846 (0.569)
Log20th wage percentile	-0.003 (0.087)	-0.274 (0.122) **	0.360 (0.208) *	-0.293 (0.192)	-0.378 (0.205) *	0.559 (0.538)
Republican governor	-0.023 (0.008) ***	-0.024 (0.011) **	-0.050 (0.019) ***	-0.021 (0.017)	-0.025 (0.018)	-0.117 (0.049) **
Both houses Republican	-0.014 (0.011)	-0.018 (0.016)	-0.041 (0.027)	0.025 (0.025)	0.009 (0.027)	0.017 (0.070)
Both houses Democratic	0.008 (0.011)	0.013 (0.015)	0.003 (0.026)	-0.014 (0.023)	-0.063 (0.026) **	-0.021 (0.067)
Sample size	612	612	612	612	612	612

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The "alternative caseload measures" (the dependent variables in these regressions) are equal to the log of the ratio of the number of FSP recipients in each type of household to the population of similar age. The "relevant population" is the number of persons under the age of 60 for families with adults and children, the number of persons between the ages of 18-59 for adults living separately, the number of persons age 60 and above for elderly living separately, and the entire population for elderly living with others and for all participants. All regressions include state and year effects and all variables in Table 6-3. The state/year observations in these regressions are weighted by the relevant state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

Table 6-8

Effects of Economic Trends and Policy Changes on FSP Caseloads, Estimated Using An Alternative Measure of Caseloads Equal to the Number of Participants in Households without Non-Citizens

	All FSP Participants	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Others
Unemployment rate	3.910 (0.577) ***	0.253 (0.638)	7.461 (0.892) ***	5.716 (0.901) ***	-1.991 (1.109) *	8.278 (2.025) ***
EBT	0.064 (0.024) ***	0.095 (0.026) ***	0.059 (0.038)	0.041 (0.037)	-0.099 (0.048) **	-0.034 (0.085)
FSP error rate	1.090 (0.236) ***	0.736 (0.259) ***	0.587 (0.221) ***	-0.016 (0.232)	-0.073 (0.149)	-0.118 (0.138)
Frequent recertification	-0.081 (0.035) **	0.017 (0.037)	-0.235 (0.051) ***	-0.260 (0.045) ***	-0.105 (0.052) **	0.030 (0.084)
AFDC/TANF policy variables						
Time limit	-0.015 (0.025)	-0.020 (0.028)	0.012 (0.041)	-0.085 (0.039) **	0.051 (0.049)	0.222 (0.089) **
Family cap	0.092 (0.023) ***	0.091 (0.025) ***	0.127 (0.036) ***	0.179 (0.036) ***	0.132 (0.045) ***	0.170 (0.081) **
Log earnings disregard	0.013 (0.016)	-0.051 (0.017) ***	0.086 (0.025) ***	-0.021 (0.024)	0.059 (0.030) **	0.215 (0.056) ***
Work sanctions						
Partial/partial	-0.069 (0.029) **	-0.065 (0.032) **	-0.115 (0.047) **	-0.070 (0.046)	-0.136 (0.058) **	0.008 (0.101)
Partial/full	-0.132 (0.033) ***	-0.118 (0.035) ***	-0.192 (0.052) ***	-0.069 (0.051)	-0.200 (0.064) ***	0.002 (0.117)
Full/full	-0.151 (0.037) ***	-0.138 (0.041) ***	-0.320 (0.059) ***	-0.103 (0.057) *	-0.075 (0.072)	-0.165 (0.130)
Comp. disqualification	-0.016 (0.027)	-0.012 (0.029)	-0.027 (0.042)	-0.061 (0.040)	-0.140 (0.051) ***	-0.144 (0.089)
Lifetime sanction	-0.028 (0.039)	0.027 (0.044)	-0.115 (0.063) *	-0.114 (0.061) *	-0.025 (0.076)	0.065 (0.141)
Sample size	663	663	663	663	663	663

* Statistically significant at the 10 percent level; ** at the 5 percent level; *** at the 1 percent level. Standard errors in parentheses. The caseload measure (the dependent variable in these regressions) is equal to the log of the ratio of the number of FSP participants in each type of household, counting only QC households without non-citizens (without non-citizen participants and without ineligible non-citizen household members). All regressions include state and year effects. These regressions are weighted by the state population and are based on fiscal year data from 1987-1999 from all 50 states and DC.

7: Explaining Recent Declines in FSP Caseloads

This report and similar research on FSP caseloads is in part a response to the steep decline in FSP caseloads in the late 1990s. This decline prompted widespread concerns because the poverty rate and the number of eligible households did not decline as rapidly during these years. The previous chapter showed that policy changes and economic trends have had different estimated effects on FSP caseloads from different types of households, and that these findings could explain at least some of the recent decline in FSP caseloads. This chapter assesses how much of the recent decline in FSP caseloads can be explained by the estimated effects of economic trends and policy changes.

The first section briefly describes how the results of the previous chapter can be used to estimate the proportion of the decline in FSP caseloads that could be attributed to economic trends and policy changes. The next section discusses how much of the decline in caseloads in the late 1990s can be explained by the report's main findings, which are obtained using the basic model described in Chapter 5. The following section describes how these results vary when one employs different statistical models with additional explanatory variables. The possible contribution to the decline in FSP caseloads of two important policies imposed at the national level under PRWORA -- the restrictions on eligibility for adults without dependents and non-citizens -- is also discussed.

7.1 Estimating the Effects of Policies and the Economy on Caseload Decline

The estimated effects of economic trends and policy changes can be readily used to estimate the contribution of these to the decline in food stamp caseloads from 1996 to 1999 (the years after PRWORA), or from 1994 to 1999 (the years after caseloads peaked). By multiplying the estimated effect of a policy by the change in the average percentage of the population subject to this policy change, one can estimate the change in caseloads caused by this policy. For example, suppose the percentage of the population in a specific type of household that was subject to a specific policy changed from zero in 1996 to 20 percent in 1999. Assume further that this policy is associated with an estimated ten percent reduction in FSP caseloads from this same subgroup. In this example, the policy led to a 2 percent (20 percent x 10 percent) reduction in the caseload from this subgroup.[1]

[1] Because the FSP caseloads are expressed in natural log form, the coefficients of the policy variables are a reasonable estimate of the percentage change in caseloads associated with each policy change.

This percentage reduction in the FSP caseload can be expressed as a proportion of the total decline in the FSP caseload from this subgroup. In the same example, if FSP caseloads from this subgroup declined by 20 percent from 1996 to 1999, then the policy accounts for ten percent of this decline.

When lagged FSP caseloads are added as an explanatory variable, estimating the effect of each policy variable on caseload decline is slightly more complicated. According to the standard formulas for models with lagged dependent variables, the estimated long-run effect of each variable is equal to the value of its coefficient divided by one minus the coefficient of the lagged caseload measure. The estimated effect of a policy is still directly related to the estimated coefficient, but it is also directly related to the coefficient on the lagged caseload measure.

Some additional, reasonable assumptions are also made in this examination of the recent decline in FSP caseloads. In estimating the contribution of economic factors to changes in caseloads, all estimated effects of economic variables are considered, including those that are statistically insignificant. Because current and lagged unemployment rates are strongly correlated, the separate effects of each variable are not estimated with precision. In estimating the contribution of policy measures to caseload declines only estimated effects that are statistically significant at the ten percent level will be considered. The unexpected and unrealistic estimated effects of TANF policies on households without children will be ignored.

The results for each of the major types of households can then be aggregated to assess the contribution of economic trends and each policy change to the recent decline in aggregate caseloads. The percentage change in aggregate caseloads that is explained by the effect of a specific policy on a specific type of household is equal to this household's share of the caseload in "base year" (1996 or 1994 in this chapter) multiplied by the percentage decline in caseloads from these households that is explained by the policy. In this aggregation, estimated effects on types of households with more participants will receive a greater weight than estimated effects of similar size on other types of households with fewer participants.

Continuing the example used above, suppose a policy explains a 2 percent decline in the caseloads from one type of household, whose members made up 50 percent of the entire caseload in 1996. The effect of this policy on these households would explain a 1 percent decline in aggregate FSP caseloads. By summing the percentage changes in aggregate caseloads explained by the effect of each variable on each of the types of households, one can estimate the total percentage change in aggregate caseloads explained by this policy. This total percentage change in aggregate caseloads

explained by a policy change may be expressed as a proportion of the total percentage decline in aggregate caseloads. [2]

7.2 Main Findings

Both economic trends and policy changes can explain a substantial share of the declines in FSP caseloads from 1996 to 1999. The main findings in Table 7-1 and 7-2 are based on the estimated effects in Table 6-1, which were obtained using the basic model described in Chapter 5. This model analyzes FSP caseloads, measured by dividing the number of participants in each type of household by the population in the same type of household. The explanatory variables in this model are current unemployment rates, the policy variables, state fixed effects, and year effects. As one would expect, policies and the economy contribute in different ways to the decline in FSP caseloads from each type of household. Table 7-1 focuses on the 1996-1999 decline and is discussed first; Table 7-2 focuses on the 1994-1999 decline.

7.2.1. Explaining the 1996-1999 Caseload Decline

Single adults with children: Time limits, earnings disregards, and sanctions explain 36 percent of the decline in caseloads from single adult households with children, while EBT and family caps increased these caseloads; together, the economy and policy changes explain 14 percent of the decline in caseloads from 1996 to 1999. Current unemployment and the measures of reporting requirements had little effect on these caseloads. EBT increased these caseloads, and offset the total decline in caseloads from this group by about 12 percent. Time limits reduced caseloads and explain about 9 percent of the total 33 percent drop in caseloads from this group. Family caps account for an almost identical increase in caseloads. Changes in earnings disregards explain about 4 percent of the caseload decline. Partial sanctions and comparable disqualification reduced caseloads and explain almost 23 percent of the decline in caseload from this group. All AFDC and TANF policies together explain 28 percent of the decline because the effects family caps offset the effects of time limits,

[2] This summation of effects over households is not a perfect aggregation of the effects of each variable, but it provides a reasonable sense of how much of the recent decline in caseloads can be explained. For several reasons, this type of summation of effects is less than perfect. The caseload measures for different types of households are based on different denominators (different population measures), although this may be a minor problem because trends in numbers of participants and these caseload measures in the late 1990s are very similar. Some policies could have the effect of changing the type of food stamp household to which a person belongs. If welfare policies encourage marriage, these policies reduce the number of recipients in single adult food stamp households with children. Some of these persons, however, may "reappear" as recipients who are part of multiple adult food stamp households with children. If so, the estimated effects of the policies on single adult food stamp households with children would exaggerate the effects of this policy on the entire caseload.

Table 7-1
Proportion of the 1996-99 Decline in FSP Caseloads Explained by Economic Trends and Policy Changes

	All FSP Recipients	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Adults/ Children
Percentage decline in caseload, 1996-99	-31.9	-33.2	-39.5	-34.2	-10.6	-26.3
Percentage of these declines explained by						
1. Economic trends	11.1	-1.6	21.5	23.0	41.3	36.4
2. EBT	-7.4	-11.7	-6.4	0.0	48.3	0.0
3. Error rates	0.0	0.0	0.2	0.0	-0.6	0.0
4. Frequent recertification	4.0	0.0	9.4	5.2	0.0	0.0
5. Time limits	4.6	9.2	0.0	--	--	0.0
6. Family cap	-6.3	-8.2	-4.9	--	--	-19.9
7. Earnings disregards	0.4	3.7	-3.6	--	--	-10.7
8. Sanctions	20.1	22.9	24.1	--	--	0.0
9. All TANF Policies (Sum of 5-8)	18.9	27.6	15.7	--	--	-30.6
10. All of these factors (1-8)	26.5	14.3	40.3	28.1	89.0	5.8
11. Percentage of decline unexplained	73.5	85.7	59.7	71.9	11.0	94.2
Total (Sum of 10-11)	100.0	100.0	100.0	100.0	100.0	100.0

These figures are based on the results shown in Table 6-1. The top row, "percentage decline in caseloads," is equal to the percentage decline in the ratio of the number of participants to the population in similar households (Table 5-1, top rows, negative numbers are declines). The percentage of the actual decline in caseloads attributable to each variable (next rows) is equal to the estimated coefficient of each variable multiplied by the change in the mean of the each variable over these years, all divided by the actual percentage change in the caseload measure. When the percentage explained is less than zero, the economic or policy variable accounted for an increase rather than a decrease in caseloads. All coefficients of the economic variables (regardless of statistical significance) are used to obtain these results. Only coefficients that are statistically significant at the 10 percent level are used to calculate the change predicted by the other variables. Any estimated effects of TANF policy variables on households without children are not considered in these calculations.

disregards, and sanctions. Together, the effects of these policies explain 14 percent of the 33 percent decline in caseloads from this group.

Multiple adults with children: The economy, shorter recertification periods, and sanctions account for 55 percent of the decline in caseloads from multiple adult households with children, but EBT, family caps, and earnings disregards increased caseloads, so the all these factors explain 40 percent of the decline in caseloads from this group. Current unemployment alone explains 22 percent of the decline in caseloads from this group. The measures of reporting requirements -- mainly shorter recertification rates -- explain nearly ten percent of the caseload decline. Partial TANF sanctions, full TANF sanctions, and lifetime TANF sanctions explain another 24 percent of the caseload decline.

EBT, family caps and earnings disregards increased caseloads from this group during these years, offsetting the caseload decline by about 15 percent.

A comparison of results in Table 7-1 for single and multiple adults with children illustrates the value of separate analyses of trends in caseloads from different households. The simple line graphs of trends in caseloads from these two groups are similar in many ways. Nevertheless, the contribution to caseload decline of time limits, reporting requirements, earnings disregards, and specific types of sanctions are clearly different for these two groups.

Elderly with adults or children: Economic trends explain over one-third of the decline in caseloads from households with elderly persons and adults or children, but family caps and earnings disregards increased caseloads by a similar amount. Measures of reporting requirements, EBT, time limits, and sanctions did not explain any of the decline in caseloads from this group. As a result, only 6 percent of the 26 percent decline in the number of these participants is explained by all economic and policy factors.

Adults and elderly living separately: The economy and administrative features of the FSP explain a substantial share of declines in food stamp receipt among adults and elderly persons living separately. Economic trends and shorter recertification periods account for 28 percent of the 1996-1999 decline in food stamp receipt among adults living separately. Economic trends and EBT explain almost 90 percent of the decline in food stamp receipt among elderly persons living separately. Economic trends explain over 40 percent of the modest decline in caseloads from this group, even though trends in caseloads of elderly living separately are less cyclically sensitive than trends in caseloads from other households. The estimated reduction in caseloads caused by EBT explains almost half of the caseload consisting of elderly living separately. The effect of error rates on the elderly, while inconsistent with theory, accounts for a negligible change in caseloads.

All households: The combined effect of economic and policy factors on each of these groups of households accounts for 27 percent of the decline in aggregate caseloads from 1996 to 1999; "TANF" accounts for 19 percent of this decline. The estimated effect of each of these factors on aggregate caseloads is the weighted sum of the effects on each type of household; larger groups of participants receive greater weight. Based on this calculation, current unemployment rates explain about 11 percent of the decline in aggregate FSP caseloads from 1996 to 1999. Shorter recertification periods explain 4 percent of the decline in FSP caseloads. Time limits and earnings disregards explain 5 percent of the total decline. Sanctions account for about one-fifth of the decline. EBT and family

Table 7-2
Proportion of the 1994-99 Decline in FSP Caseloads Explained by Economic Trends and Policy Changes

	All FSP Recipients	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Adults/ Children
Percentage decline in caseloads, 1994-99	-38.1	-38.8	-48.3	-37.8	-13.0	-37.3
Percentage of these declines explained by						
1. Economic trends	18.8	-2.7	37.0	39.3	71.6	62.1
2. EBT	-9.0	-14.3	-8.1	0.0	55.5	0.0
3. Error rates	1.1	0.0	4.0	0.0	-15.7	0.0
4. Frequent recertification	6.7	0.0	15.2	12.9	0.0	0.0
5. Time limits	5.1	10.1	0.0	--	--	0.0
6. Family cap	-10.5	-13.8	-7.9	--	--	-31.5
7. Earnings disregards	2.9	14.7	-10.7	--	--	-34.7
8. Sanctions	23.0	25.6	29.8	--	--	0.0
9. All TANF Policies (Sum of 5-8)	20.5	36.7	11.2	--	--	-66.2
10. All of these factors (1-8)	38.1	19.7	59.4	52.2	111.5	-4.1
11. Percentage of decline unexplained	61.9	80.3	40.6	47.8	-11.5	104.1
Total (Sum of 10-11)	100.0	100.0	100.0	100.0	100.0	100.0

These figures are based on the results shown in Table 6-1. The top row, "percentage decline in caseloads," is equal to the percentage decline in the ratio of the number of participants to the population in similar households (negative numbers are declines). The percentage of the actual decline in caseloads attributable to each variable (next rows) is equal to the estimated coefficient of each variable multiplied by the change in the mean of the each variable over these years, all divided by the actual percentage change in the caseload measure. When the percentage explained is less than zero, the economic or policy variable accounted for an increase rather than a decrease in caseloads. All coefficients of the economic variables (regardless of statistical significance) are used to obtain these results. Only coefficients that are statistically significant at the 10 percent level are used to calculate the change predicted by the other variables. Any estimated effects of TANF policy variables on households without children are not considered in these calculations.

caps increased aggregate caseloads. The use of several indicators of specific policies, rather than a single indicator for PRWORA or TANF, shows that some policies reduce caseloads while others increased them.

7.2.2. Explaining the 1994-1999 Caseload Decline

Economic and policy factors tend to explain a relatively larger proportion of the 1994 to 1999 decline in FSP caseloads. The time limit, earnings disregards, and sanctions explain 50 percent of the decline

in caseloads from single adult households with children; while EBT and family caps raise caseloads; these policies together explain 20 percent of the decline in caseloads from this group.

In the case of households with multiple adults and children, current unemployment rates explain 37 percent of the decline in caseloads, while measures of reporting requirements explain 20 percent of the decline, and sanctions account for another 30 percent of the decline. However, the combined effects of all of these economic and policy factors explain only 11 percent of the decline in caseloads from multiple adult households with children because EBT, family caps, and disregards increased these caseloads.

Economic trends and policy changes also account for some changes in caseloads from the other types of households from 1994-1999. Economic trends explain almost two-thirds of the decline in caseloads from households with elderly persons living with adults or children, but family caps and earnings disregards increased caseloads from this group by almost exactly the same amount. Economic trends and shorter recertification periods account for just over half the decline in FSP receipt among adults living separately, while economic trends and EBT account for slightly more than the 13 percent decline in food stamp receipt among elderly persons living alone.

All of these economic and policy changes explain 38 percent of the decline in aggregate caseloads from 1994 to 1999. Economic trends explain 19 percent of the decline, measures of reporting requirements explain 8 percent of the decline, time limits and disregards explain 8 percent of the decline, and sanctions explain almost one-quarter of the decline. EBT and family caps increase caseloads and partly offset these reductions.

7.3 Results Based on Other Models

The previous chapter showed the other reasonable models yielded somewhat different estimates of the estimated effects of the economy and policy changes on FSP caseloads. Some estimated effects changed little when different models were employed, while other estimated effects changed substantially. This section summarizes how the estimated contribution of economic and policy factors changes when alternative models are employed. This section concentrates on explaining the 1994-1999 decline in caseloads, measured as a proportion of the population in similar households. The results (Table 7-3) are based on the estimated effects of policies shown in Tables 6-1 to 6-5.

Table 7-3
Proportion of the 1994-99 Decline in FSP Caseloads Explained by Economic Trends and Policy Changes, Using Alternative Models

Percentage of decline in caseloads explained by economic and policy variables, using a model that includes:	All FSP Recipients	Single Adults with Children	Multiple Adults with Children	Adults Living Separately	Elderly Living Separately	Elderly with Adults/ Children
Additional controls for economic factors (Table 6-2)						
1. Economic trends	32.2	7.6	51.4	60.3	101.6	71.5
2. EBT	-7.4	-11.9	-6.2	0.0	44.9	0.0
3. Error rates, frequent recertification	5.3	0.0	13.0	9.6	-12.3	0.0
4. All TANF Policies	21.1	36.0	8.7	0.0	0.0	0.0
5. All of these factors (1-4)	51.3	31.7	66.8	69.9	134.2	71.5
6. Percentage of decline unexplained	48.7	68.3	33.2	30.1	-34.2	28.5
Total (Sum of 5-6)	100.0	100.0	100.0	100.0	100.0	100.0
Additional controls for economic, demographic, and political trends (Table 6-3)						
1. Economic trends	34.3	11.5	52.2	60.6	69.3	84.0
2. EBT	-5.4	-12.2	0.0	0.0	42.1	0.0
3. Error rates, frequent recertification	5.7	0.0	13.9	9.0	-7.0	-0.2
4. All TANF Policies	14.6	27.6	3.3	0.0	0.0	-16.7
5. All of these factors (1-4)	49.1	27.0	69.4	69.6	104.5	67.2
6. Percentage of decline unexplained	50.9	73.0	30.6	30.4	-4.5	32.8
Total (Sum of 5-6)	100.0	100.0	100.0	100.0	100.0	100.0
All additional controls plus state time trends (Table 6-4)						
1. Economic trends	23.9	9.6	37.6	30.9	-1.8	93.8
2. EBT	-3.8	0.0	-8.7	0.0	-51.3	0.0
3. Error rates, frequent recertification	8.0	6.3	11.3	9.3	-7.9	-0.2
4. All TANF Policies	20.7	30.7	18.3	0.0	0.0	-35.0
5. All of these factors (1-4)	48.8	46.7	58.5	40.2	-61.0	58.6
6. Percentage of decline unexplained	51.2	53.3	41.5	59.8	161.0	41.4
Total (Sum of 5-6)	100.0	100.0	100.0	100.0	100.0	100.0
All additional controls plus state time trends and lagged caseloads (Table 6-5)						
1. Economic trends	26.8	10.6	45.3	30.0	5.0	86.8
2. EBT	-0.7	0.0	0.0	0.0	-41.8	0.0
3. Error rates, frequent recertification	5.1	0.0	12.5	9.5	-9.1	-1.7
4. All TANF Policies	22.4	36.4	14.9	0.0	0.0	-37.0
5. All of these factors (1-4)	53.6	47.0	72.7	39.5	-45.8	48.2
6. Percentage of decline unexplained	46.4	53.0	27.3	60.5	145.8	51.8
Total (Sum of 5-6)	100.0	100.0	100.0	100.0	100.0	100.0

These figures are based on the results shown in Table 6-2 through 6-5. See Table 7-1 for notes.

In the more complex models, TANF policies can account for 28-36 percent of the decline in caseloads from single adult households with children; economic trends and all policy changes can account for 27 to 47 percent of this decline. As additional control variables are added to the basic model, sanctions sometimes reduce caseloads by smaller amounts, but the economy reduces caseloads by a larger amount (with lagged unemployment rates) and EBT and family caps no longer increase caseloads. As a result of these offsetting changes in estimated effects in these different models, all factors together always explain a substantial portion of the caseload decline. Current and lagged unemployment rates can account up to 12 percent of the decline in caseloads from this group. Time limits and earnings disregards each consistently explain 7 to 15 percent of the caseload decline. Family caps do not account for increases in caseloads in any models with controls for demographic and political trends. The effects of sanctions declines in the models with additional controls, although sanctions still explain 8-18 percent of the decline.

In models with additional controls, AFDC and TANF policies account for 3-18 percent of the decline in caseloads from multiple adult households with children, and all economic and policy measures together explain 58-73 percent of the decline in caseloads from this group. Current and lagged unemployment rates can account for 38-52 percent of the decline in caseloads from this group. Reporting requirements consistently account for 11-14 percent of the caseload decline, but the effects of other policies varied across these models. As additional controls are added, sanctions explain a smaller proportion of the caseload decline, while the economy and time limits explain a larger proportion of the caseload decline, and family caps and earnings disregards no longer increase caseloads variables. EBT increases caseloads in some but not all models.

In the more complex models, 48-71 percent of the decline in caseloads from households consisting of elderly living with others is explained by the economic and policy measures. Economic trends consistently explain most of the caseload decline. Family caps account for smaller increases in caseloads.

In the more complex models, economic trends and shorter recertification periods explain 40-70 percent of the decline in caseloads from households consisting of adults living separately. Shorter recertification periods consistently explain about ten percent of the caseload decline. Economic trends explain up to 60 percent of the caseload decline, but only 30 percent of the decline when state time trends are added to these models.

Economic trends and EBT can account for more than the 11 percent decline in caseloads from households with elderly persons living separately, in models without state time trends. In models with state time trends, EBT increases caseloads while economic variables explain very little, so none of the decline in caseloads is explained.

In the more complex models, AFDC and TANF policies explain 15-22 percent of the decline in aggregate caseloads from 1994 to 1999, and all policy changes and economic trends explain 49 to 54 percent of this decline. These factors consistently explain some of the decline in caseloads because many estimated effects persist in all models, and because some estimated effects change in offsetting ways.

7.4 PRWORA's Rules for Non-Citizens and ABAWDs

These important provisions of PRWORA were imposed nationwide and undoubtedly led to at least some of the decline in caseloads in the late 1990s. Some adults without dependents must have been unable to meet the work requirements for ABAWDs and hit the 3-month time limit, although the effect of this rule was limited because states could grant numerous exemptions, because the economy was strong, and because many ABAWDs have disabilities. As Chapter 3 showed, the decline in the number of non-citizen food stamp recipients after 1996 was especially dramatic, and the decline in the number of citizen recipients (often children) in households with non-citizens was larger than the decline in the number of recipients in households without non-citizens. These results strongly suggest that the non-citizen rules explain some of the decline in aggregate caseloads. It is difficult to estimate the size of the effect of these rules on the number of participants, however, because these rules were imposed nationwide, so we cannot observe states with and without these policies after 1996. This section discusses estimates of the possible contribution of these rules to caseload decline.

(High) upper bounds for the effects of these rules: One way to obtain an upper bound of the potential effect of the ABAWD rules on caseloads from households with adults living separately is to use the statistical models in Chapter Six to estimate the percentage of the decline in caseloads from this group that is unexplained by any of the variables in these models. This method assumes that any portion of the recent decline not explained by economic trends, policy variables, controls for demographic and political factors, and all other variables is caused by the ABAWD rules. Clearly, this upper-bound estimate could reflect other unmeasured factors, especially since these models always fail to explain large portions of the caseload decline. Nevertheless, this method still provides

an upper bound for the potential size of the effect of the ABAWD rule, after controlling for the role of a large number of other important factors.

Applying this method produces estimates of the contribution of these policies that are unrealistically high but still indicate that these rules can explain only a fraction of the total caseload decline. About 40 percent or more of the decline in caseloads from this group from 1994 to 1999 is unexplained by any of the variables. Even this very high upper bound indicates that at most only about 4 percent of the total decline in caseloads from 1994 to 1999 can be attributed to the ABAWD rule. Trends in the number of participants in households with non-citizens can be analyzed using the same models.[3] These results indicate slightly less than two-thirds of the decline in the number of food stamp participants from this group is unexplained by any of the variables used in this report. While the non-citizen rule undoubtedly caused a sharp reduction in the number of these participants, the total effect of the non-citizen rule is most likely less than this figure. This upper bound implies that the non-citizen rule can explain at most about 14 percent of the total decline in caseloads from 1994 to 1999.

Other estimates of the effects of these rules: Another estimate of the effect of the non-citizen rule is based on simple comparison of trends in food stamp caseloads from households with and without non-citizens (that is, without non-citizen participants and without ineligible non-citizen household members, as recorded in the QC data). From 1994 to 1999, the decline in caseloads from households with non-citizens was 50 percent, and the decline in caseloads from households without non-citizens was about 33 percent. If one interprets the approximately 33 percent decline among "citizens only" households as an rough estimate of the decline that would have occurred among the households with non-citizens in the absence of the non-citizen rules of PRWORA, then well under half of the decline in caseloads from households with non-citizens is attributable to the non-citizen rules. Using this method, about 7 percent of the total caseload decline was caused by the non-citizen rules.

Two other studies provide other estimates of the contribution of these two rules to caseload declines. The *Report to Congress* (USDA, 2001) found that these two rules together caused about 8 percent of the total decline in caseloads from 1994 to 1999 -- less than half of the upper bound estimates discussed previously. Gleason et all (2001) estimates that about 11 percent of the caseload decline

[3] It is be especially difficult to measure the effects of economic trends and AFDC/TANF policies on non-citizens. Among food stamp recipients, the number of non-citizens grew far faster than the number of citizens in the early 1990s, as immigration expanded and more non-citizens could gain access to food stamps. We cannot observe food stamp caseloads for a stable population of non-citizen households over one or more business cycles in the absence of major policy and demographic changes. It is therefore not be easy to isolate the effects of economic factors, although one can use the variation in economic trends by state over these years. PRWORA's rules also removed many of these persons from food stamps before many state TANF plans could take affect, we one cannot easily observe how the TANF rules would have affected these households in the absence of the PRWORA rules for non-citizens.

from 1994 to 1999 (about half of the total "PRWORA effect") can be explained by these two rules. All of these results suggest that the combined effect of the ABAWD and non-citizen rules of PRWORA can probably account for roughly ten percent of the total caseload decline from 1994 to 1999.

The combined effects of the ABAWD and non-citizen rules, economic trends, and all other measured policy changes can account for one-half to two-thirds of the 1994-1999 decline in aggregate caseloads. Even if one accepts the largest of these estimates, a substantial proportion of the decline remains unexplained. Unmeasured effects of the economy, demographic shifts, attitudes, or policies could all account for the unexplained proportion of the decline.

7.5 Conclusions

AFDC and TANF policies explain 15-22 percent of the decline in aggregate caseloads from 1994 to 1999, and the effects of AFDC and TANF policies, FSP administrative features, and economic trends together explain 38 to 54 percent of this decline. The effects of PRWORA's rules for ABAWDs and non-citizens can account for perhaps an additional ten percent of this decline. The estimated contributions of specific policies to caseload decline sometimes vary across the statistical models used in this report. AFDC and TANF policies still reduce caseloads in each of the models tested in the previous chapter, because many estimated effects persist in all models, and because some estimated effects change in offsetting ways. The contribution of estimated effects of policies and economic trends varies by type of household, a finding that underscores the value of conducting separate analyses of important subgroups of households. This analysis also illustrates the value of estimating the effects of specific policy changes rather than simpler indicators for TANF or PRWORA: time limits, sanctions, and reporting requirements reduced caseloads by different amounts, while EBT increased caseloads.

These results are consistent with some other recent research. Currie and Grogger (2001), a study of FSP caseloads from different types of households that relied on survey-provided data on food stamp receipt, also found that shorter recertification periods and TANF policies could explain some of the recent caseload decline, although this study employs somewhat different policy measures. Gleason et al (2001) find that indicators for strong work requirements and the imposition of "PRWORA" explain about 30 percent of the caseload decline from 1994 to 1999, while the economy can explain almost half of this decline. These results are inconsistent with Ziliak, Gundersen, and Figlio (2001), a study

that found that policies explain virtually none of the caseload decline. This report and the study by Ziliak, Gundersen, and Figlio (2001) differ in that the latter examines aggregate caseloads using a longer time series and a dynamic specification with several lagged caseload terms and simpler indicators for TANF plans and waiver policies.

All of the caveats about the estimated effects of the policy variables that were discussed in the previous chapter apply to the findings in this chapter as well. The estimated effects of policies could reflect the real effects of these policies, but they could also reflect other unmeasured factors. Some findings are sensitive to the choice of model and some estimated effects of TANF policies persist for households that do not contain children. Nevertheless, the results indicate that sanctions, time limits, and reporting requirements may have contributed to some of the recent caseload decline.

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