Assessment of Tennessee's Families First Caseload Trends

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Caseloads in Tennessee fell from a high of around 111,000 cases during the Aid for Families with Dependent Children (AFDC) program to just over 56,000 as part of the Families First program in 2000. Subsequently, caseloads began to rise, averaging 63,100 during 2002 and reaching 73,711 in September 2003. This dramatic increase in caseloads has caught the attention of policymakers and analysts, leading many to question why the increase was so precipitous during what was a relatively mild economic slowdown.

The Center for Business and Economic Research at the University of Tennessee (CBER) contracted with the Tennessee Department of Human Services (DHS) to undertake a study to identify the determinants of caseloads for the Families First program and to ascertain those factors that have led to an increase in Families First caseloads during the past several years. This brief report summarizes the findings from the analysis. The report is divided into two sections: the first describes the methodology, and the second summarizes the results of the statistical analysis of caseloads.

Methodology

The intent of this study is to examine the economic, demographic, and policy factors that are the underlying determinants of Temporary Assistance for Needy Families (TANF) caseloads (Families First in Tennessee), and then to use this information to examine why caseloads have been rising in recent years. Thus, development of a model of TANF caseloads must be the first step in the analysis. Then, these results can be used to examine why caseloads are changing. The model is developed using a panel of data on caseloads for all 50 states for the years 1990 to 2002 and a panel of data on the factors that are believed to be important determinants of TANF caseloads. It is necessary to use data for all states for many years in order to isolate how differing TANF policies and economic conditions affect caseloads. The data are used to estimate a regression to identify those factors that have a statistically significant relationship with the level of caseloads, both over time and across states. The use of data prior to TANF (1997 and before) expands the number of degrees of freedom used in the regression analysis and permits examination of how caseloads were affected by the transition from the AFDC program (AFDC) to Families First.

Caseloads relative to population are regressed on a series of economic, demographic, and policy variables. The factors included in each group of explanatory variables are given in Table 1. Caseloads are scaled in the regression analysis by population to reduce any concerns that the results are distorted by differing state population sizes.[1] A number of econometric approaches were investigated in designing the appropriate regression structure, including the use of models that incorporated random effects and fixed effects for states.[2] Random effects was selected as the preferred approach. Also, various means of accounting for a time trend were considered,

[1] Scaling by population reduces the concern that the regression is characterized by heteroskedasticity.

[2] Also, there was concern that simultaneous determination of many factors (such as TANF policy and caseloads) could result in biased regression coefficients. This was investigated by estimating the regression using lagged explanatory values for all variables in the regression equation. The results of the lagged equation were very similar to those reported here, and indicated no evidence of simultaneity bias.

including the use of dummy variables for specific years and a counter for time, time squared, and time cubed. Dummy variables for the year was the selected methodology.[3] Several other variables were investigated in other regression analyses. These include migration,[4] divorce and marriage rates.

Table 1: Variables Used in the Regression Analysis

Economic Variables	Poverty Rate (%)
	Retail Wage
	Median Income
	Job Growth (%)
	Manufacturing Jobs (%)
	Other Service Jobs (%)
	Retail Jobs (%)
	Real US GDP Growth Rate (%)
Demographic Variables	Population 0-14 (%)
	Population 15-19 (%)
	Population 65+ (%)
	High School or More (%)
Policy Variables	Average Benefit
	Block Grant Per Capita
	Child Care Spending Per Capita
	Diversion Payments
	60-Month Lifetime Limit
	1 to 60 Month Lifetime Limit
	Interim Time Limit
	Immediate Work Requirement
	Work Within 3 Months
	Total Work Requirement Hours
	Non-education Work Requirement Hours
	Allowable Work Activities (%)
	AFDC Year

*See Appendix Table 2 for more detail.

[3] Two years were omitted because of inclusion of a dummy variable for the years when AFDC was in effect.

[4] Some have suggested that Families First cases have risen because of people moving into Tennessee. Migration was statistically insignificant in the regression analysis. In any event, in-migration to Tennessee declined from 52,788 per year from 1993 to 1996 to 24,284 per year for 2001 and 2002. The largest decline was in domestic in-migration, as international immigration actually increased in the latter years.

Results

General Findings

This section discusses the statistical results as they apply to all states, and the following section draws specific conclusions for Tennessee. The detailed statistical results for the baseline regression are contained in Appendix Table 1, along with a description of the variables that are used in the analysis (Appendix Table 2). The results are summarized in Tables 2a and 2b.[5]

Table 2a: Factors Increasing Caseloads

Economic and Demographic Factors	Larger share of the population, 0-14 years*
	Higher share of the population in poverty
	Higher median income
	Higher manufacturing jobs share*
	Higher other service jobs*
	Higher retail job wages
Policy Factors	Larger per capita TANF block grant
	Longer time limits*
	Requiring more of the work requirement to be met with non-education hours
	Work requirements within 3 months

Table 2b: Factors Reducing Caseloads

Economic and Demographic Factors	Rapid job growth
	A greater share of the population with a high school education
	Higher retail jobs share
Policy Factors	Existence of diversion payments*
	Existence of interim time limit*
	Higher work requirement (more hours)
	Allowing more work requirement activities

*These variables show a tendency for the indicated effect, but the variable is not statistically significant.

Among the economic variables, caseloads (relative to the state's population) have a statistically significant positive relationship with the state's share of population in poverty, the state's median income, and the average wage paid in the state's retail sector. These findings are consistent with the idea that TANF cases are larger when states have a potentially larger client group (because of a higher poverty rate). Also, states with higher income appear to be willing to engage in more redistribution through TANF. Caseloads are negatively related to job growth, the share of jobs in the retail sector, and the percent of the population with a high school education. These findings mean that a stronger economy and a better-educated work force result in fewer people seeking assistance through TANF programs. The retail sector is the primary source of

[5] The reported equation is based on data from 1990 to 2000, since data on all variables were not available for 2001 and 2002. The equation was also estimated for 1990 through 2002 using the variables that were available and the results were essentially the same for the variables that could be included in the equation for all years.

jobs for TANF clients, so caseloads fall when relatively more jobs are available in the retail sector.[6] Retail wages appear to be a proxy for the different type of retail jobs available across states. The tendency for caseloads to rise with retail wages appears to evidence that higher paying retail jobs are less accessible to potential TANF recipients (particularly when considered across the states).

A number of policy factors are also linked to caseloads. TANF caseloads tend to be higher in states where the TANF block grant is larger, the maximum time limit is set longer, more of the work requirement must be met with work rather than education, and the work requirement must be met within three months of beginning TANF assistance. The results suggest that states offer more assistance, in terms of the number of clients assisted,[7] when the federal government provides a larger grant. Of course, the grant may be bigger because the federal government expects larger client pools in the state. Longer time limits and a greater share of the work requirement in non-education activities are evidence of a less restrictive TANF program, and not surprisingly, less restrictive programs result in greater caseloads. Thus, our statistical evidence indicates that states can lower their caseloads by imposing shorter time limits and allowing more of the work requirement to be met with education activities. The effects of an immediate or quick work requirement may evidence that some people come onto TANF expecting to receive the benefits while also being able to earn income from work. An example may be mothers who need TANF child care benefits in order to work.

Four policies directly reduce caseloads: existence of diversion payments, existence of interim time limits, higher work requirements, and more alternatives for meeting work requirements. The existence of diversion payments reduces caseloads, but costs of the diversion programs may result in less savings in total program costs. States may allow up to 17 different activities to meet their work requirement; Tennessee permits 14 of these options. The results suggest that giving people more alternatives allows TANF clients to develop the capacity to leave TANF more quickly.

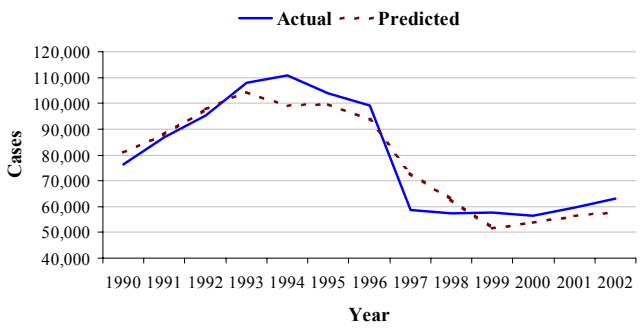
Tennessee Findings

A number of the findings from the statistical analysis can be applied specifically to Tennessee. These include the following:

- The equation reported in the appendix does a very good job of explaining caseloads in Tennessee. Figure 1 illustrates the Tennessee AFDC and TANF cases that would be predicted by the equation and the actual caseloads. Predicted and actual cases are very close in all years and follow the same pattern, including for 2001 and 2002.[8] Data are not available to estimate the 2003 caseload so it is not shown in the figure.

[6] See Table 6.21, Kind of Job Adults Held Most Often, *2000 Families First Case Characteristics Study*, Center for Business and Economic Research, The University of Tennessee, December 2001.
[7] The analysis does not consider how benefits per case are affected by the size of the TANF grant.
[8] Tennessee retail wages and median income were estimated for the calculations and the dummy variable for 2000 was also used for 2001 and 2002.

Figure 1: Average Monthly Families First Caseloads, 1990-2002



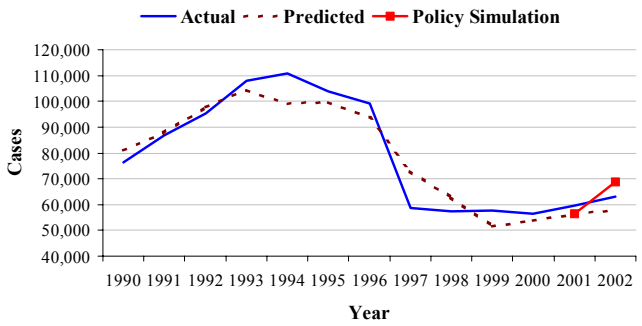
- The deteriorating economy during the business cycle is the most important explanation for the caseload increase in 2001 and 2002. Specifically, lower job growth resulted in a large increase in caseloads. Also, retail sector jobs appeared to be less available to the Families First client group during these years. A limited set of data is available for the first part of 2003. Job growth is slightly better[9] suggesting caseloads should have fallen to a small extent. However, the share of jobs in the retail sector and the client group's access to these jobs appear to have deteriorated again in 2003 and may help explain the caseload increase. Also, Tennessee's population is up about 2.5 percent since 2000, and this explains some of the caseload increase.

- Families First policy does not appear to have been a cause of the caseload increase during recent years. An obvious reason is that policy has not been altered significantly during the past several years, and any effects of policy on the overall caseload should have been felt earlier in the program.

- Caseloads under Tennessee's Families First program are lower than they would be if Tennessee had adopted policies that are similar to those being implemented in a number of other states. A simulation was conducted to estimate the Families First caseload if Tennessee adopted the policies that are used most often in other states. The result is an estimated increase of nearly 11,000 cases in Tennessee in 2002. This is illustrated in Figure 2 by the addition of a point showing what the predicted 2002 caseload would have been if Tennessee had the same policy structure as the typical state. Specifically, Tennessee's caseloads are lower than would otherwise have occurred because of the high work requirement, allowance of many alternatives for meeting the work requirement, a relatively low number of non-education hours to meet the work requirement, a binding interim time limit in Families First, and low benefit payments.

[9] Nonagricultural jobs declined 1.5 percent in 2001 and 0.8 percent in 2002. Nonagricultural jobs have risen 0.1 percent through October of 2003, which is still well below the long term average growth rate in Tennessee.

Figure 2: Average Monthly Families First Caseloads, including Policy Simulation, 1990-2002



- The best strategy for reducing Families First caseloads over the long term is to focus on the state's economy and its people. Stronger job growth and a greater pool of jobs that Families First clients can compete for are very important to reducing the caseload, and these are factors that Tennessee can influence. Also, better education achievement will have a long and lasting effect on lowering caseloads.

- About 8,000 of Tennessee's Families First cases are explained by unobservable factors that are not accounted for in the analysis.[10]

[10] The random effect for Tennessee in the equation is approximately 8,000 each year.

Appendix 1: Random Effects Regression Results

Case Population	Coefficient	Standard Error	z	p-value
Population 0-14 (%)	0.0192866	0.0168312	1.15	0.252
Population 15-19 (%)	-0.0342703	0.0396765	-0.86	0.388
Population 65+ (%)	0.0154021	0.0188977	0.82	0.415
Poverty Rate (%)	0.035255	0.0053795	6.55	0
Retail Wage	0.0000438	0.0000187	2.34	0.019
Median Income	9.24E-06	4.55E-06	2.03	0.042
Job Growth (%)	-0.0172168	0.0088458	-1.95	0.052
Manufacturing Jobs (%)	0.7750229	0.6496824	1.19	0.233
Other Service Jobs (%)	4.417569	4.019433	1.1	0.272
Retail Jobs (%)	-5.374771	3.171936	-1.69	0.09
High School or More (%)	-0.0135731	0.0055738	-2.44	0.015
Average Benefit	0.0000408	0.0001031	0.4	0.693
Block Grant Per Capita	0.000038	8.19E-06	4.64	0
Child Care Spending Per Capita	-8.60E-07	0.000019	-0.05	0.964
Diversion Payments	-0.056828	0.0376734	-1.51	0.131
60-Month Lifetime Limit	0.1758467	0.0507335	3.47	0.001
1 to 60 Month Lifetime Limit	0.0794583	0.0622285	1.28	0.202
Interim Time Limit	-0.0691721	0.0459996	-1.5	0.133
Immediate Work Requirement	0.1452314	0.0404598	3.59	0
Work Within 3 Months	0.0408843	0.0582386	0.7	0.483
Total Work Requirement Hours	-0.0080245	0.0027032	-2.97	0.003
Non-education Work Requirement Hours	0.0062022	0.0029699	2.09	0.037
Allowable Work Activities (%)	-0.2332362	0.0963514	-2.42	0.015
AFDC Year	0.4219278	0.0951325	4.44	0
Real US GDP Growth Rate (%)	0.0057634	0.0236538	0.24	0.807
Constant	0.6498761	0.9869193	0.66	0.51
Number of Observations = 550				
rho = 0.52097019 (fraction of variance due to u_l)				
R-sq Overall = 0.623				

Note: Regression also includes indicators for the year of the observation.

Appendix 2: Variable Descriptions

Variables	Definition
Cases/Population	AFDC/TANF Cases divided by population
Population 0-14 (%)	Percent of population younger than age 15
Population 15-19 (%)	Percent of population ages 15 to 19
Population 65+ (%)	Percent of population ages 65 and over
Poverty Rate (%)	Number of individuals in poverty divided by population
Retail Wage	Average annual wages in retail sector
Median Income	Median Income
Job Growth (%)	Year-over-year growth in total non-ag jobs
Manufacturing Jobs (%)	Share of total non-ag jobs in manufacturing sector
Other Service Jobs (%)	Share of total non-ag jobs in other services sector
Retail Jobs (%)	Share of total non-ag jobs in retail sector
High School or More (%)	Percent of population 25 or older with at least a high school diploma
Average Benefit	Average monthly AFDC/TANF benefit per case
Block Grant Per Capita	TANF block grant amount divided by population
Child Care Spending Per Capita	TANF spending on child care divided by population
Diversion Payments	Dummy for existence of diversion payment system
60-Month Lifetime Limit	Dummy for 60-month lifetime time limit
1 to 60 Month Lifetime Limit	Dummy for lifetime time limit between 1 and 60 months
Interim Time Limit	Dummy for existence of interim time limit
Immediate Work Requirement	Dummy for immediate work requirement
Work Within 3 Months	Dummy for work requirement within first 3 months but not immediate
Total Work Requirement Hours	Weekly hours of work in work requirement
Non-education Work Requirement Hours	Weekly hours of non-education work in work requirement
Allowable Work Activities (%)	Percentage of 17 activities that are allowable for work requirement
AFDC Year	Dummy for AFDC years (varies by state)
Real US GDP Growth Rate (%)	Real US GDP growth rate