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Factors Affecting Participation in the Food Stamp Program in Tennessee

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The goal of the Food Stamp Program (FSP) is to serve as a safety net for low-income families by providing assistance that will enable them purchase nutritious food. Eligibility to participate in the program is based on U.S. poverty guidelines and asset ownership of recipients. Recent welfare reform resulted in a decrease of participants in all federal welfare programs including food stamps. This paper reports results of an evaluation of county-level economic conditions and existing policy parameters that affect participation in the FSP in Tennessee and to derive implications for future policies. The results showed that there has been a significant decline in participation in the state, with a greater decline in metro counties over the same period. The trend is similar to that observed in other states. Regression analysis was performed on county-level data to identify the relationship between local economic conditions and participation in the FSP in Tennessee.

The Food Stamp Program (FSP) administered by the Food and Nutrition Service (FNS) is aimed at increasing the food-purchasing power of low-income individuals and families and improving the nutritional content of their diet. Benefits are available to all persons who meet the federally determined eligibility criteria related to income level, the value of assets, and certain non-financial criteria such as work registration. The benefits are fully funded by the Federal government, with administrative costs shared by State governments. States are responsible for certifying eligible households and calculating and issuing benefits using the Electronic Benefits Transfer (EBT) system. This study examined participation in the FSP using county-level data to conduct both descriptive and quantitative analysis. Introduction of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) increased flexibility for states to make choices in the FSP in two significant ways. First, PRWORA provided states with an array of Food Stamp (FS) policy options, particularly in areas that are designed to promote personal responsibility through work requirements and sanctions (USDA 1998). Second, some states with unemployment levels consistently above the national average have requested waivers for the three-month time limit on the Food Stamp program and USDA has been dealing with the issue on a case-by-case basis.

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There are several studies on participation in the Food Stamp program based on various considerations including welfare reform, urban rural taxonomy, macroeconomic conditions, and characteristics of recipients. Gunderson, Leblanc, and Kuhn (1999) show that welfare reform reduced funds from the FSP, lowering benefits per person, and introduced eligibility restrictions.

Nord (2000) argues that the increase in food insecurity among low-income households not receiving food stamps is mainly a result of lesser access to the program. In addition, McConnell and Ohls (2000) maintain that there are no significant differences between urban and rural areas in FS caseload changes. Gleason, Trippe, and Cody (2001) found that the number of long-term-employed recipients has grown compared to those depending only on welfare benefits. Wilde et al. (2000), using state-level data, show that 55% of the change in participation in the FSP was due to a decline in the proportion of low-income people who participate in the program. Ziliak, Gunderson, and Figlio (2000) analyzed the impacts of welfare reform and the business cycle on food stamp caseloads. They used a dynamic model and state-level panel data covering the period 1980–1999 and concluded that pre-PRWORA waivers and the pace of economic growth affected FS caseload changes. Mills et al. (2001) argue that one of the factors affecting exit from the FSP may be poor information about eligibility to participate in the program.

The main objective of this paper is to examine the participation level in the FSP at the county level in Tennessee. Analysis of participation of metro and

non-metro residents will also help to identify and understand local economic conditions that affect caseload changes in Tennessee. The USDA/ERS typology (Cook and Mizer 1989) is used to classify counties into metro and non-metro categories.

Data and Methodology

County-level monthly administrative data on FS caseloads were acquired from the Tennessee Department of Human Services while data on employment/unemployment and labor force was provided by the Tennessee Department of Employment Security Commission. Relevant county data from the Regional Economic Information System (U.S. Department of Commerce 2003) was also used.

Results

The county-level analysis of food stamp participation indicated declining participation between January 1990 and June 2000. Monthly participation in FS in Tennessee and by metro and non-metro counties is shown in Figures 1–4. The total number of FS participants was 635,078 in June 1996 and 461,722 in June 2000, a decline of 27.30%. This period was selected for analysis to capture the effects of policy changes in welfare programs. The county-level analysis showed that the decline in the participation rate was much higher in metro counties (32.44%), compared to adjacent (17.63%) and

non-adjacent (18.30%) counties respectively. Total number and percentage change in food stamp participation by county is shown in Table 1.

Regression Analysis

The following model was used to identify the relationship between local economic conditions and participation in the FSP in Tennessee:

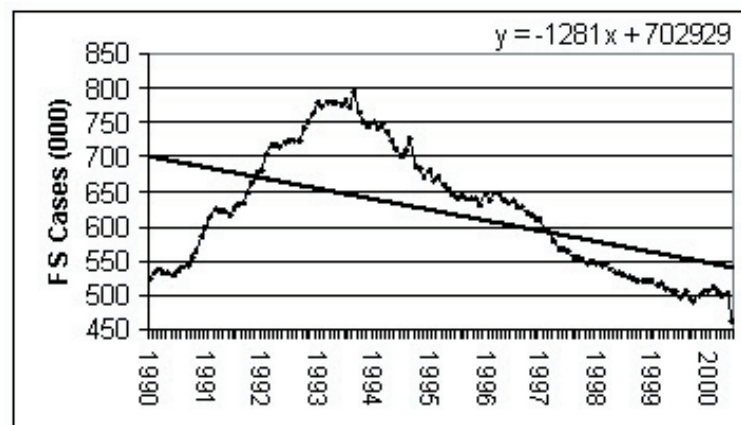
$$\text{PERCENT CHANGE} = \beta_0 + \beta_1 \text{DELUNEM} + \beta_2 \text{ICEN} + \beta_3 \text{JOBGROW} + \beta_4 \text{NONADJAC} + \beta_5 \text{RETAIL} + \beta_6 \text{URATE98} + \varepsilon_i$$

The variables included in the model representing local economic conditions are unemployment rate, job growth rate, number of available retail jobs, and adjacency to metro counties (see Table 2). It is hypothesized that a low unemployment rate and rapid growth in retail jobs will provide favorable conditions for a decline in FSP participation. Moreover, given the low education and skill levels of the recipients, growth in wage and salary jobs will not lead to a reduction in caseload.

Results and Discussion

Linear-regression results corrected using White's efficient-variance estimates are presented in Table 3. The R-squared value for the estimated model is 34%, which implies that 34% of variations in the dependent variable (caseload changes) is explained by or associated with the explanatory variables.

Figure 1. Monthly Participation in the Food Stamp Program (FSP) in Tennessee, January 1990–June 2000.



Source: Tennessee Department of Human Services.

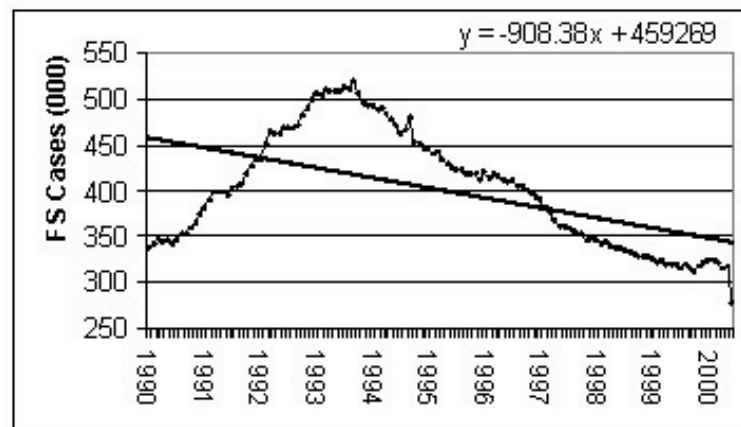
The statistically significant variables in this model that explain the decline in FS caseload are the unemployment rate and the number of retail jobs. The regression results showed that the unemployment rate in 1998 was associated with a smaller decline in the FS caseloads. In other words, if the unemployment rate in the county is high, the majority of the recipients will stay on the Food Stamp Program.

The results also indicated a larger number of jobs in the retail sector per FS recipient was associ-

ated with a significantly larger decline in caseload. This relationship confirms the fact that the majority of recipients are employed by the retail sector in the secondary labor market. In contrast, growth in wage and salary jobs did not contribute to a decrease in caseload.

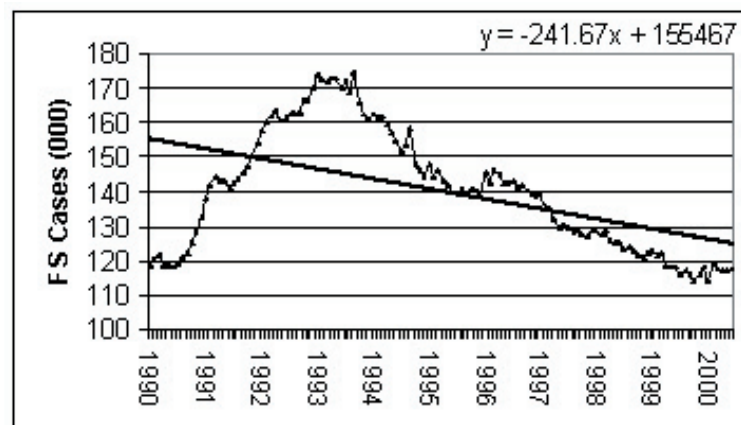
Tennessee received Federal waivers only a month before implementing its welfare program. Given this, welfare and FS caseloads remained high prior to the welfare reform law of 1996. The new law introduced changes that affected the FS

Figure 2. Monthly Participation in the Food Stamp Program (FSP) in the Metro Counties of Tennessee, January 1990–June 2000.

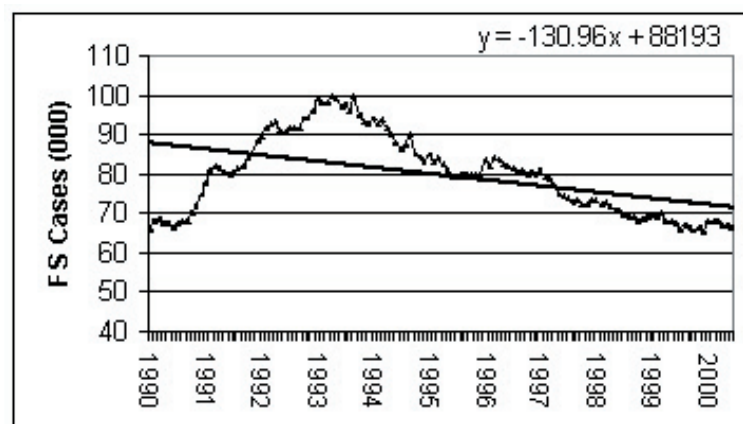


Source: Tennessee Department of Human Services.

Figure 3. Monthly Participation in the Food Stamp Program (FSP) in the Adjacent to Metro Counties of Tennessee, January 1990–June 2000.



Source: Tennessee Department of Human Services.

Figure 4. Monthly Participation in the Food Stamp Program (FSP) in the Non-Adjacent to Metro Counties of Tennessee, January 1990–June 2000.

Source: Tennessee Department of Human Services.

Table 1. Total Number and Percent Change in Food Stamp Participation by County in Tennessee, 1996–2000.

	Metro	Adjacent	Non-Adjacent	Total
Total Number of FS Participants in June 1996	410,645	142,740	81,693	635,078
Total Number of FS Participants in June 2000	277,414	117,568	66,740	461,722
Percent Change in FS Participants, June 1996-June 2000	-32.44	-17.63	-18.30	-27.30

Source: Computed from Tennessee Department of Human Services.

Table 2. Definition of Variables Used in the Regression.

Variables	Description
PERCENT CHANGE	Percent drop in FS recipients, March 94 to March 99
URATE98	Unemployment Rate, 1998 annual
DELUNEM	Change in Unemployment rate, 1998 to 1997
JOBGROW	Growth in Wage and Salary jobs, $\log(\text{jobs } 1997/\text{jobs } 1996)$
RETAIL	Retail jobs (1997) per FS recipients (1998)
INCEN	Wage and Salary earning per jobs per annual welfare grant
NONADJACENT	Non-adjusted rural county indicator variable (=1)

Table 3. Regression Model with Dependent Variable Percent Change and Standard Errors Based on White's Efficient Variance-covariance Matrix.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.359750	0.051067	-7.044713	0.0000
URATE98	1.942914	0.532205	3.650689	0.0004
DELUNEM	-0.269676	0.092474	-2.916223	0.0045
JOBGROW	1.059926	0.618724	1.713083	0.0902
RETAIL	-0.565853	0.195435	-2.895354	0.0048
INCEN	0.000353	0.000764	0.462629	0.6448
NONADJAC	0.027008	0.021782	1.239908	0.2183
R-squared	0.340796	Mean dependent var	-0.211875	
Adjusted R-squared	0.295850	S.D. dependent var	0.108163	
S.E. of regression	0.090763	Akaike info criterion	-1.890293	
Sum squared resid	0.724943	Schwarz criterion	-1.702113	
Log likelihood	96.78892	F-statistic	7.582377	
Durbin-Watson stat	2.277741	Prob(F-statistic)	0.000001	

program by granting flexibility to states in making policy choices and setting time-limit and eligibility requirements for recipients. This study used monthly county-level administrative data on FS caseloads and unemployment data from state agencies in combination with data on county economic conditions to analyze caseload changes in the state. A substantial decline in caseloads in the state was registered during 1996–1998, with a significantly larger decline in 1997 than in 1998 and thereafter.

Unlike other studies that used aggregate data and general economic measures that did not distinguish between low- and high-skill job categories, this study considered local economic conditions and the segment of the labor market in which FS recipients seek employment. Results show that local labor-market conditions are a significant determinant of changes in FS caseload. Changes in the availability of low-skill jobs are estimated to have a large impact on program participation. Similarly, the unemployment rate has a sizeable effect on recipients' participation in the labor force.

Two key conclusions emerge from this study. First, the skills of participants must be enhanced if they are to secure employment in the primary labor market. Not only would this provide recipients access to better paying jobs with benefits, it would also increase the potential for them to retain these jobs

and realize greater vertical mobility than they have in the secondary labor market, where those leaving the program have so far been finding employment. Second, there is need to promote job creation in areas where opportunities have been limited. The approach used in this study and the findings are expected to be useful for researchers and policy makers.

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