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United States
Department of
Agriculture

Food and
Nutrition
Service

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RECENT TRENDS IN FOOD STAMP PROGRAM PARTICIPATION

A PRELIMINARY REPORT TO CONGRESS

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Prepared for:

U.S. Department of Agriculture
Food and Nutrition Service
Office of Analysis and Evaluation

Submitted to:

Committee on Appropriations
United States Senate

July 31, 1990

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EXECUTIVE SUMMARY

Participation in the Food Stamp Program (FSP) has grown dramatically in the past 12 months. Between the second quarter of fiscal year 1989 (FY89.2) and FY90.2, the number of FSP participants rose by over one million. By March 1990 participation exceeded the 20 million mark for the first time since 1985. The growth in FSP participation has been widespread, extending to 44 states and the District of Columbia. But, the size and timing of the increase in participation have varied considerably by state. Texas, California, and Florida accounted for nearly half the increase in participation between FY89.2 and FY90.2. And, while participation has been growing in these and seven other states for several years, it has turned up for other states as recently as the first quarter of FY90.

The size of the recent increase in FSP participation is not unprecedented: between FY79.1 and FY80.1, participation increased by about four million individuals. Nor is the level of FSP participation unusually high: participation also exceeded 20 million from FY80.4 through FY84.3. What is remarkable about the recent growth in participation is that there is no consensus about its causes. It occurred even though there were no major changes in the FSP or in the economy (at least as measured by the national unemployment rate).

Congress, concerned about the recent increase in FSP participation, asked the U.S. Department of Agriculture, Food and Nutrition Service (FNS) to conduct a study "detailing specific factors and trends responsible for recent variations in food stamp program estimates" (U.S. Congress, 1990). In response to that request, this report analyzes the increase and its causes. But since that increase has been so recent, many of the data traditionally used to analyze FSP participation are not yet available for the period of increase. For this reason, the results and conclusions presented herein are preliminary.

In principle, a number of factors might have contributed to the increase in FSP participation. Among them are such economic factors as increases in unemployment, increases in the number of "working poor", increases in food prices, and changes in the distribution of income. They also include such demographic changes as an increase in the number of female-headed households. And they extend to changes in the number of eligible FSP households under the recent Immigration Reform and Control Act (IRCA), which affected undocumented aliens in the United States. Recent changes in the FSP--increases in the value of benefits, improved accessibility and simplified application procedures, and improved program outreach--might also have contributed to the rise in participation. And changes in other public assistance programs--such as the recent expansions in Medicaid eligibility for pregnant women and children, the wider availability of benefits from the Supplemental Food Program for Women, Infants, and Children (WIC), and program expansions in Aid to Families with Dependent Children (AFDC)--could have brought more people into the public assistance system and hence into the FSP.

To investigate the causes of the recent increase in FSP participation three research strategies were used. First, the magnitude and timing of changes in key variables were identified and compared with changes in FSP participation on a state-by-state basis. Second, the effects on FSP participation of economic factors, the legalization of undocumented aliens, and participation in AFDC, Medicaid, and WIC were estimated using national and state-level data by quarter. Third, data on households from the Food Stamp Quality Control databases for FY86 through

FY89 were examined to determine whether the increase in FSP participation was a result of more households entering the program, and whether the characteristics of households entering the program had changed recently.

This report finds that no one factor explains the recent increase in FSP participation. Most of the available evidence suggests that three factors--the expansion of Medicaid, the increase in state unemployment, and the legalization of undocumented aliens under IRCA--contributed, at least partly, to the increase in FSP participation during the past year. Our preliminary estimates suggest that these three factors may account for between 25 and 43 percent of that increase and a large group of other factors might be responsible for the remaining increase. But, the importance of each of the three factors and the extent to which they together explain the increase in FSP participation varies by state.

In some states--such as Texas, Arizona, New Jersey, Florida, and Pennsylvania--the expansion of Medicaid appears to be a major contributor but no clear regional pattern is evident. Our evidence on the importance of Medicaid expansion is relatively weak, however, as it is based upon projected (rather than actual) state-level counts of Medicaid recipients for FY90. And no household-level data are available for FY90 when many of the changes in Medicaid were expected to occur.

Increased unemployment was a key contributor to the increase in FSP participation in the northeast and north central states--but in the western and southern states, an increase in unemployment was much less important. In fact, unemployment declined in Arizona and Texas, two of the ten states that had the largest absolute increases in FSP participation.

The legalization of undocumented aliens under IRCA was an important explanatory factor in California, a state with roughly half the applicants granted resident status. It may also have been important in other southern and western states, such as Arizona, Florida, and Texas.

For other possible causes of the increase--changes in the economy not reflected in the unemployment rate, demographic and sociological changes, changes in the FSP, and expansions in WIC and AFDC--not enough data are available to evaluate their role, or the data fail to provide strong evidence for their importance. Some of these factors, such as economic and demographic changes, occur slowly and are unlikely to explain sudden increases in FSP participation, but they may explain long-term trends in FSP participation.

A striking similarity exists between the timing of the recent increases in FSP participation and increases in AFDC participation. But since the recent changes in the AFDC program--the creation of the Job Opportunities and Basic Skills program and the expansion of the AFDC-Unemployed Parents program--are just now being implemented on a widespread scale, it is unlikely that they caused the increase in FSP participation. Instead, factors that caused the

In short, the analysis found evidence for three likely contributing factors behind the recent increase in FSP participation, but it was not able to pinpoint precisely the causes of that increase or to forecast whether the increase will continue. When more data become available for FY90 and when additional research approaches have been explored, FNS may be in a better position to explain the increase in FSP participation.

PREFACE

Mathematica Policy Research prepared this report under contract no. 53-3198-9-31 with the U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis and Evaluation.

Walter Corson and Sheena McConnell are the authors of this report. They conducted their research and writing under the direction of Thomas Fraker. Many other individuals made important contributions to this report. Most notable among them are Steven Carlson, Marian Lewin, Ted Macaluso, and Christy Schmidt of the Food and Nutrition Service and Harold Beebout of Mathematica Policy Research.

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I. INTRODUCTION

The level of participation in the Food Stamp Program (FSP) has grown dramatically in the past 12 months. Between the second quarter of fiscal year 1989 (FY89.2) and FY90.2, an additional one million individuals participated in the program. By March 1990, FSP participation exceeded the 20 million mark for the first time since 1985. The growth in FSP participation has been fairly widespread across the United States. Forty-four states and the District of Columbia experienced a growth in FSP participation between FY89.2 and FY90.2. However, the size and timing of the increase in participation have varied considerably by state. Changes in FSP participation in three states--Texas, California, and Florida--accounted for nearly half of the total increase in participation between FY89.2 and FY90.2. And, while some states, mostly in the south and west, experienced a steady increase in participation throughout the previous three or four years, other states experienced declining participation followed by an upturn only during the first quarter of FY90.

The size of the recent increase in FSP participation is not unprecedented: between FY79.1 and FY80.1, participation increased by about four million individuals. Nor is the level of FSP participation unusually high: participation also exceeded 20 million from FY80.4 through FY84.3. What is remarkable about the recent growth in participation is that there is no consensus about its causes. It occurred even though there were no major changes in the FSP or changes in the national unemployment rate. But, as recently reported in The New York Times (Uchitelle, July 16, 1990), many states are showing signs of economic slowdown that are not reflected in national economic indicators.

Congress is concerned about the recent increase in FSP participation. The increase in participation caused total program benefit costs to increase more rapidly than projected, thus necessitating a supplemental appropriation for the FSP in FY90. Because of its concerns

regarding the growth of the FSP, Congress asked the U.S. Department of Agriculture, Food and Nutrition Service (FNS) to conduct a study "detailing specific factors and trends responsible for recent variations in food stamp program estimates" (U.S. Congress, 1990). In response to that request, this report analyzes the causes of the increase in participation.

We explore a variety of possible explanations for the increase. These include changes in economic factors not reflected in the national unemployment rate, changes in demographic factors, changes in immigration legislation, changes in the FSP itself, and increases in participation in other public assistance programs.

Since the increase in FSP participation has occurred so recently, much of the data which would help explain the increase are not available. For example, large data sets, such as the Survey of Income and Program Participation and the Current Population Survey, do not as yet cover this recent period. Hence, many of the techniques that have traditionally been used by FNS to analyze changes in FSP participation cannot be used to analyze the recent increase. Thus, in this report, we have adopted three alternative research strategies for assessing the causes of the increase in FSP participation:

1. Identifying the magnitude and timing of changes in key variables on a state-by-state basis and comparing them against the changes in FSP participation

2. Using national-level and state-level data to estimate regression models of FSP participation

3. Using household-level data to examine changes in the number of households entering the FSP, and changes over time in the characteristics of the entrants

As background for our discussion in this report, the next two sections of this chapter discuss the national and state trends in FSP participation levels. The final section describes the structure of the remainder of the report.

A. NATIONAL TRENDS IN FSP PARTICIPATION

Figure I.1 illustrates the time pattern of FSP participation and the level of unemployment between FY77 and FY90. FSP participation grew during three periods in the 1980s: (1) between FY79.1 and FY81.2, (2) between FY82.4 and FY83.2, and (3) the recent increase which, as explained below, started in FY89.3. Participation increased in the late 1970s and early 1980s in response to the elimination of the food stamp purchase requirement and other fundamental changes in FSP regulations that were mandated by the Food Stamp Act of 1977 (PL 95-113). A sharp economic downturn and an accompanying rise in unemployment precipitated the participation increase between FY82 and FY83.

After reaching its peak in FY83, FSP participation fell almost continuously until the beginning of FY88, when it leveled off. This level trend continued until the third quarter of FY89, when the number of participants in the FSP began to increase: between FY89.2 and FY90.2, FSP participation increased by about 5.6 percent. The decline in participation between FY83 and FY88 coincided with an economic expansion in which the unemployment rate fell from 7.5 percent in 1984 to 5.5 percent in 1988. However, in late FY89 and the first half of FY90, FSP participation continued to rise, even though the national unemployment rate had leveled off.

Participation in the FSP has traditionally followed a seasonal pattern: participation is highest during the second and third quarters of a fiscal year and lowest in the first and fourth quarters, with the peak occurring in March of each year. This seasonal pattern reflects the seasonal pattern of unemployment, which also peaks in the second quarter. In the first half of FY89, participation closely followed the regular seasonal pattern, peaking in March at 19.2 million and then beginning the usual seasonal decline. However, a break from the usual pattern was evident in the second half of the year. Rather than continuing the normal seasonal decline throughout the summer, participation dipped only slightly after May, with unusual seasonal growth

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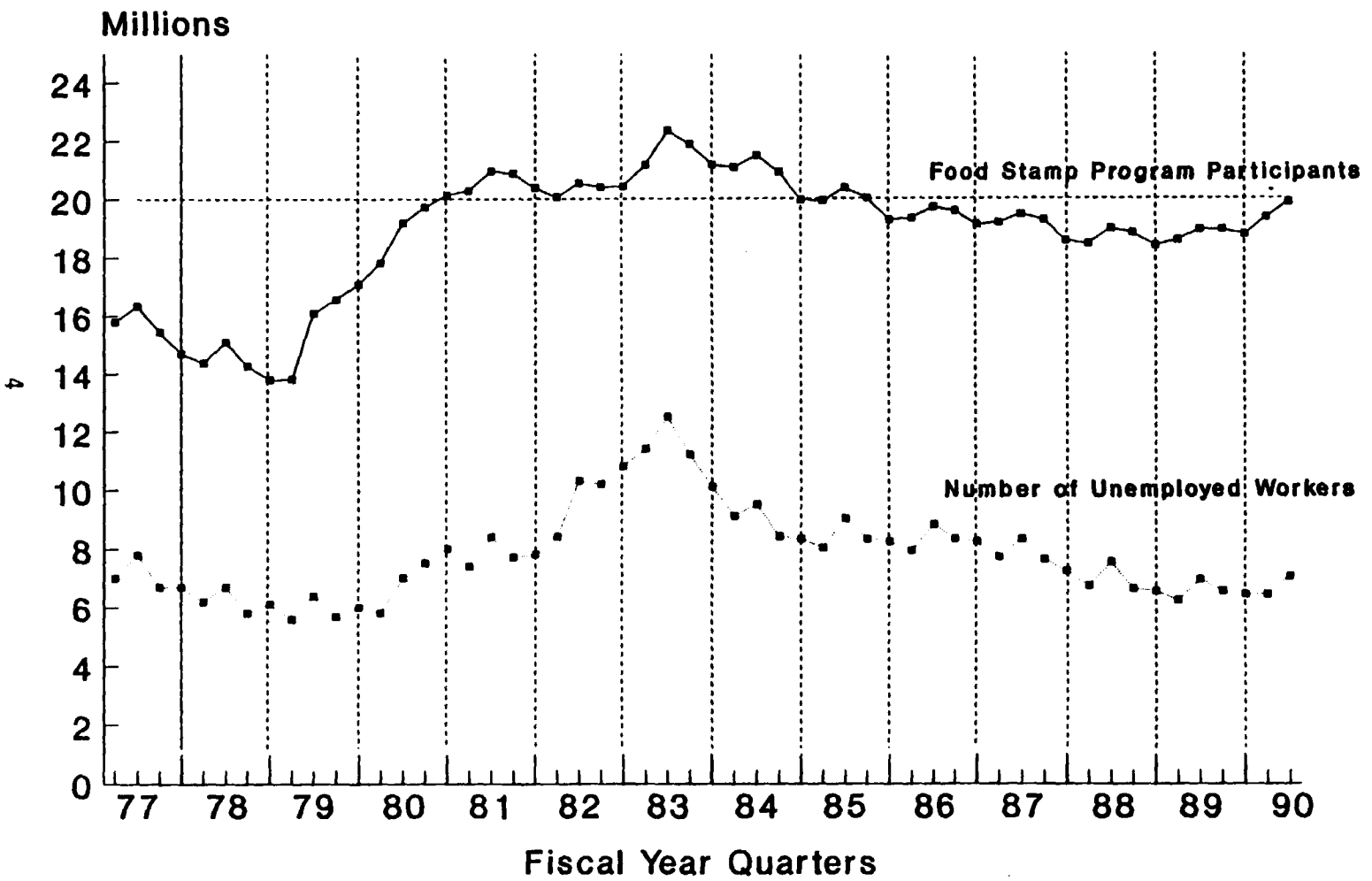
FIGURE I.1
Food Stamp Program Participants
(Monthly Average)



NOTE: Food Stamp Program Participants in Puerto Rico are not included.

beginning in August. This pattern would suggest that the shift in the trend of growth in FSP participation occurred in the third quarter of FY89.

The growth in FSP participation between FY89.2 and FY90.2 was accompanied by a similar growth in participation in Aid to Families with Dependent Children (AFDC). Figure I.2 presents plots of FSP participation, AFDC participation, and the unemployment rate between FY86.4 and FY90.2.[1] FSP participation and AFDC participation followed strikingly similar patterns for most of the period; the exception is between FY86.4 and FY87.3, when FSP participation declined and AFDC participation increased. Both AFDC and FSP participation began to increase in the middle of FY89, despite the fact that the unemployment rate leveled out.

B. STATE TRENDS IN FSP PARTICIPATION

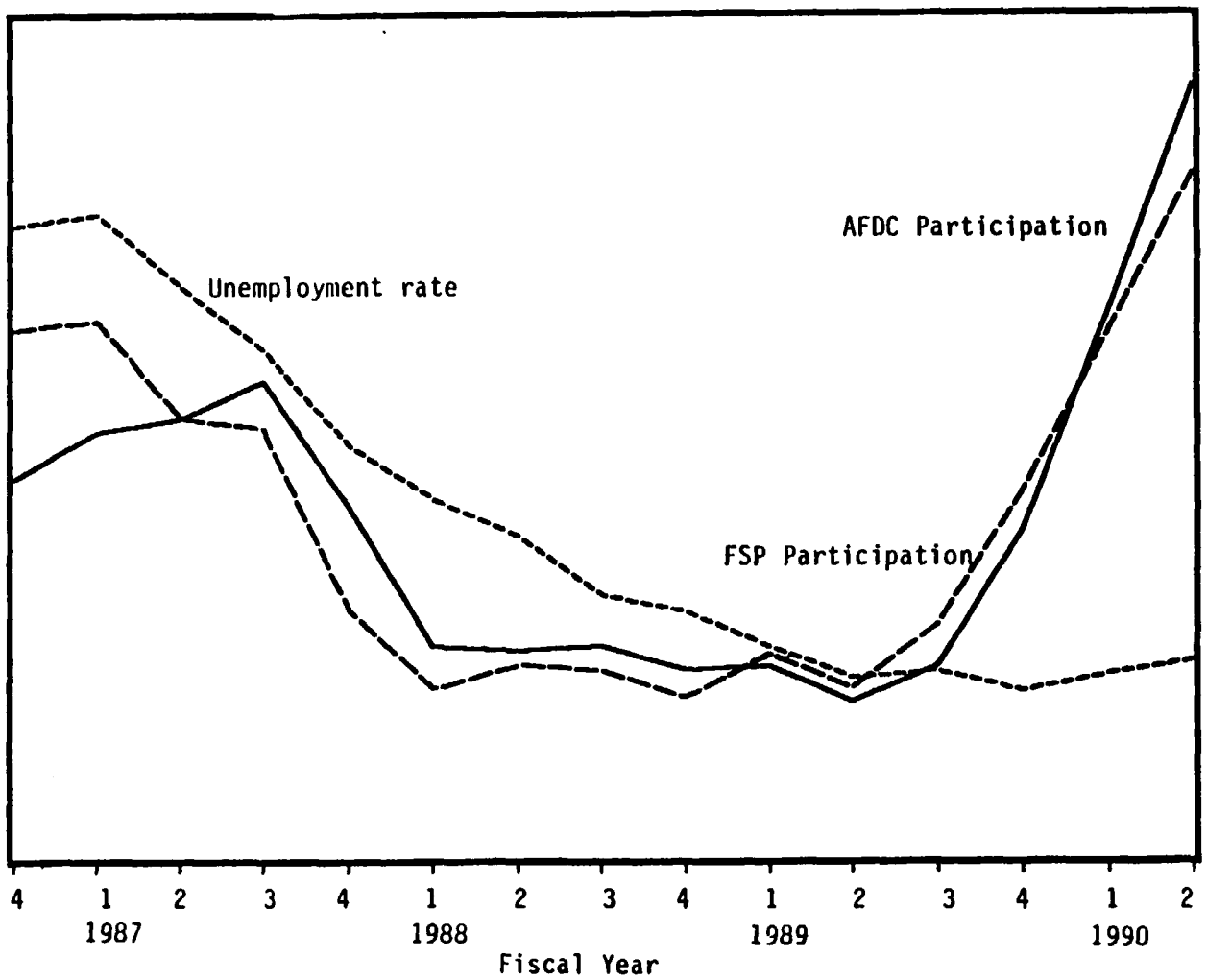
Although participation levels increased in the majority of states between FY89 and FY90, both the magnitude and timing of the changes varied widely across the country. Table I.1 presents the average monthly number of individuals who participated in the FSP by state during FY87, FY88, and FY89, and the first half of FY90; it also shows the absolute change in participation between FY89.2 and FY90.2, and the percentage change over the same period. The states are ranked in order of the absolute change in participation over the period.

Three states--Texas, California, and Florida--experienced increases of over 100,000 participants between the second quarters of FY89 and FY90; the percentage increases were 15.6 percent, 7.7 percent, and 17.9 percent, respectively. New Hampshire, Nevada, and Arizona experienced very large percentage increases in participation: 35.5 percent in New Hampshire,

[1] The series illustrated in the plots are deseasonalized monthly participation levels averaged over the quarter. We used the ratio-to-moving average technique available in the TSP computer package to deseasonalize the series. To make the plots of FSP participation, AFDC participation, and the unemployment rate comparable, we normalized each series by subtracting its mean and dividing by its standard deviation.

FIGURE I.2

FSP PARTICIPATION, AFDC PARTICIPATION, AND UNEMPLOYMENT RATE BETWEEN FY86.4 AND FY90.2



Note: The three series are deseasonalized. So that all three plots would fit on the same diagram, each series is normalized.

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TABLE I.1

AVERAGE MONTHLY NUMBER OF PARTICIPANTS IN THE FOOD STAMP PROGRAM BY STATE, RANKED BY THE ABSOLUTE CHANGE IN THE NUMBER OF PARTICIPANTS BETWEEN FY89.2 AND FY90.2

STATE	FISCAL YEAR 1987	FISCAL YEAR 1988	FISCAL YEAR 1989	FIRST TWO QUARTERS OF FISCAL YEAR 1990	ABSOLUTE CHANGE FY89.2-FY90.2	PERCENT CHANGE FY89.2-FY90.2
TEXAS	1,477,970	1,525,156	1,634,488	1,835,639	254,488	15.60%
CALIFORNIA	1,627,593	1,656,250	1,773,417	1,879,500	136,667	7.68%
FLORIDA	607,967	622,195	667,939	755,292	117,667	17.85%
NEW YORK	1,657,232	1,544,785	1,463,479	1,495,165	57,692	3.93%
ARIZONA	202,705	228,330	263,927	300,843	49,101	18.90%
GEORGIA	486,653	467,746	485,649	523,299	43,613	8.92%
MICHIGAN	887,759	873,414	874,155	896,997	37,701	4.30%
NEW JERSEY	383,733	356,578	352,977	376,813	35,759	10.22%
MASSACHUSETTS	305,174	301,566	314,494	340,927	31,888	10.16%
PENNSYLVANIA	976,745	939,299	916,189	938,913	29,172	3.15%
INDIANA	337,373	302,129	285,141	301,914	25,778	8.84%
MISSOURI	382,296	389,246	404,369	426,004	25,724	6.26%
NORTH CAROLINA	416,734	398,290	390,304	410,317	24,504	6.16%
TENNESSEE	502,335	491,904	499,996	518,886	21,099	4.14%
ALABAMA	457,208	437,829	435,545	451,845	19,416	4.42%
CONNECTICUT	115,946	108,542	113,539	126,836	17,522	15.56%
KENTUCKY	503,599	471,924	446,556	459,992	17,369	3.89%
WASHINGTON	303,958	307,402	320,995	334,399	16,261	4.98%
KANSAS	122,369	119,163	127,975	140,491	15,467	12.08%
MINNESOTA	233,376	236,170	245,233	254,897	14,187	5.82%
VIRGINIA	327,601	326,587	332,520	339,244	9,023	2.66%
NEVADA	35,593	36,601	41,353	48,040	8,788	21.12%
MISSISSIPPI	505,607	494,147	492,859	498,578	8,249	1.66%
ILLINOIS	1,079,357	1,031,571	989,500	995,207	8,133	0.81%
NEW HAMPSHIRE	19,830	18,491	21,866	27,458	7,856	35.46%
MAINE	99,837	85,755	84,335	90,167	7,562	8.70%
SOUTH CAROLINA	293,930	265,694	272,044	256,920	6,558	2.55%
ARKANSAS	238,353	229,932	227,330	233,655	5,606	2.40%
NEW MEXICO	159,340	151,046	150,520	154,606	5,414	3.54%
VERMONT	35,807	33,971	34,059	37,346	4,283	12.27%
LOUISIANA	721,558	727,212	724,735	728,230	3,872	0.53%
D.C.	61,170	58,804	58,498	60,647	3,697	6.44%
OREGON	220,236	210,828	213,217	217,133	3,638	1.64%
DELAWARE	29,401	28,866	29,722	32,257	3,544	11.88%
RHODE ISLAND	60,792	57,004	56,850	59,564	2,997	5.26%
COLORADO	195,176	204,075	211,306	216,159	2,990	1.37%
UTAH	86,150	90,306	94,999	97,911	2,694	2.76%
WEST VIRGINIA	268,935	261,550	259,228	262,507	2,412	0.91%
OKLAHOMA	279,070	278,769	260,804	264,266	1,918	0.71%
IOWA	202,355	179,261	168,045	169,476	1,816	1.06%
NEBRASKA	100,851	96,083	92,324	93,577	1,695	1.80%
MARYLAND	253,674	243,257	248,814	250,785	859	0.34%
WYOMING	29,041	27,469	27,286	27,672	605	2.14%
NORTH DAKOTA	36,776	37,094	38,672	39,116	289	0.72%
SOUTH DAKOTA	54,115	51,717	50,292	50,467	133	0.26%
MONTANA	60,846	58,145	55,847	56,033	(103)	-0.18%
HAWAII	85,451	79,443	78,112	77,361	(1,243)	-1.57%
IDAHO	60,938	61,685	61,190	60,540	(2,236)	-3.43%
WISCONSIN	346,853	314,341	290,794	286,365	(4,823)	-1.63%
ALASKA	31,589	28,515	26,137	22,298	(5,289)	-19.54%
OHIO	1,104,120	1,067,872	1,067,978	1,055,634	(17,399)	-1.62%
U.S. TOTAL	19,073,076	18,614,006	18,777,598	19,578,183	1,064,613	5.63%

SOURCE: USDA Food and Nutrition Service

percent in Nevada, and 18.9 percent in Arizona. Six states experienced a decline in participation over the same period.

We divided the states into four categories according to the time pattern of their participation levels:

- Those that experienced a generally steady increase between FY86.4 and FY90.2
- Those that experienced declining participation followed by an increase, with the turning point between FY87.4 and FY88.3
- Those that experienced declining participation followed by an increase, with the turning point between FY89.3 and FY90.1
- Those that experienced a generally steady decline between FY86.4 and FY90.2

Table I.2 lists the states that fall into each category. Four states--Idaho, Louisiana, New Mexico, and West Virginia--do not fit any of the categories.

Figure I.3 presents plots of the number of FSP participants in selected states between FY86.4 and FY90.2, together with a plot of FSP participation for the United States as a whole. Each figure illustrates the time pattern of participation for a state in one of the four categories described above. Appendix A provides plots of FSP participation in each state.

Ten states--accounting for just under one-third of total FSP participation in FY90--exhibited a steady increase in participation over the period. With the exception of Minnesota and Missouri, all the states in this category are southern or western states. Texas, Florida, and Arizona experienced accelerated growth in FSP participation during FY89. In Texas, for example, the rate of growth in participation increased in the second quarter of FY89. The upturn in FSP participation in the ten states with the steady increase in FSP participation occurred at different times in each state. Texas experienced an increase in FSP participation during most of the 1980s, with the exception of a small decline between FY83.2 and FY84.4, which reflected the

TABLE I.2

CATEGORIES OF STATES BASED ON THE TIME-PATTERN OF FSP PARTICIPATION LEVELS BETWEEN FY86.4 AND FY90.2

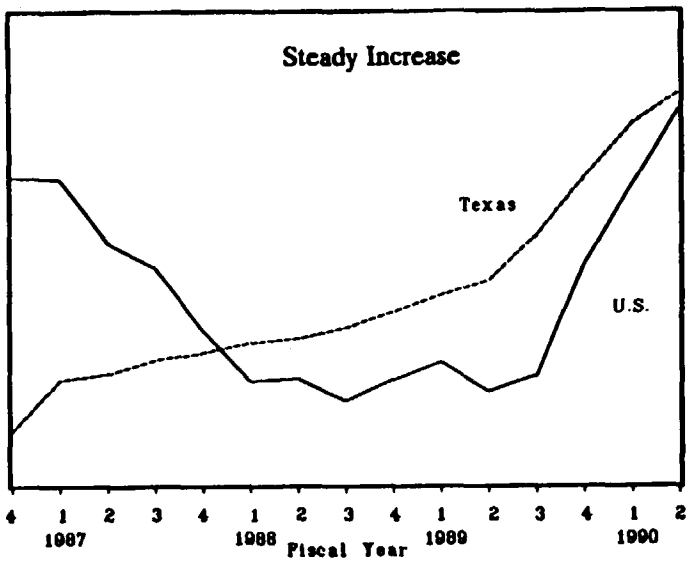
States with a Steady Increase in Participation	States with Turning Points between FY87.4 and FY88.3	States with Turning Points between FY89.3 and FY90.1	States with a Steady Decline in Participation
Arizona	Connecticut	Alabama	Alaska
California	Delaware	Arkansas	Hawaii
Colorado	Georgia	District of Columbia	Iowa
Florida	Kansas	Illinois	Montana
Minnesota	Massachusetts	Indiana	Ohio
Missouri	Maryland	Kentucky	South Carolina
Nevada	New Hampshire	Maine	South Dakota
Texas	North Dakota	Michigan	Wisconsin
Utah	Oregon	Mississippi	
Washington	Tennessee	Nebraska	
	Vermont	New Jersey	
	Virginia	New York	
		North Carolina	
		Oklahoma	
		Pennsylvania	
		Rhode Island	
		Wyoming	

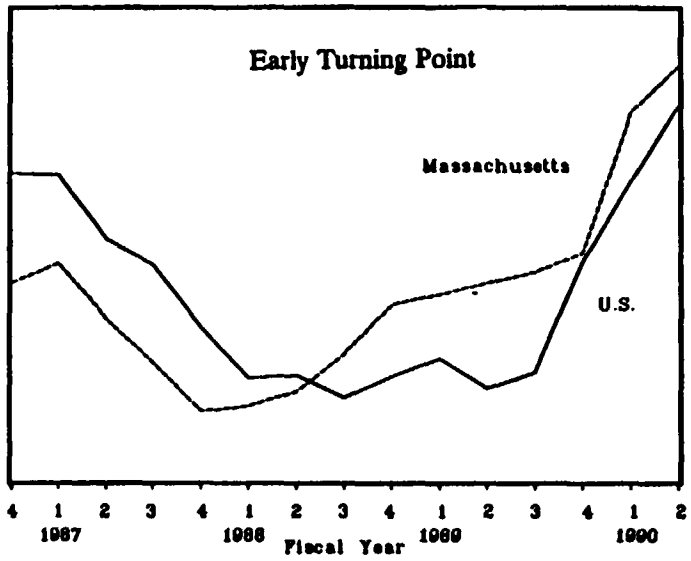
SOURCE: USDA Food and Nutrition Service.

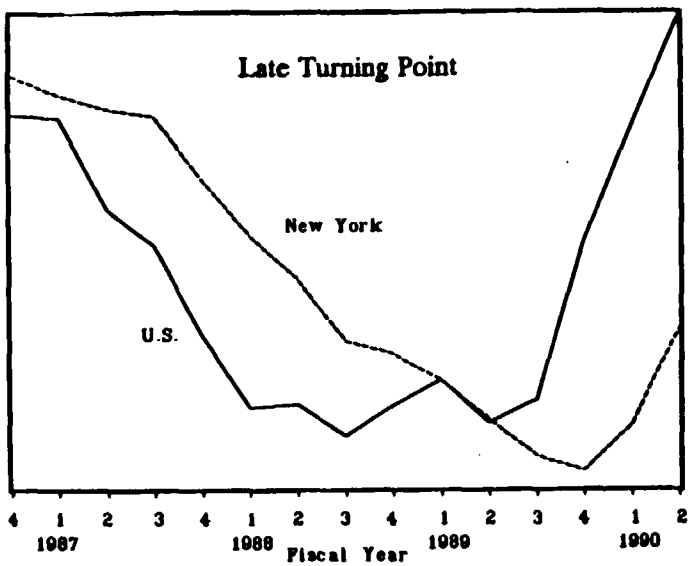
NOTE: Idaho, Louisiana, New Mexico, and West Virginia do not fit into any of these categories.

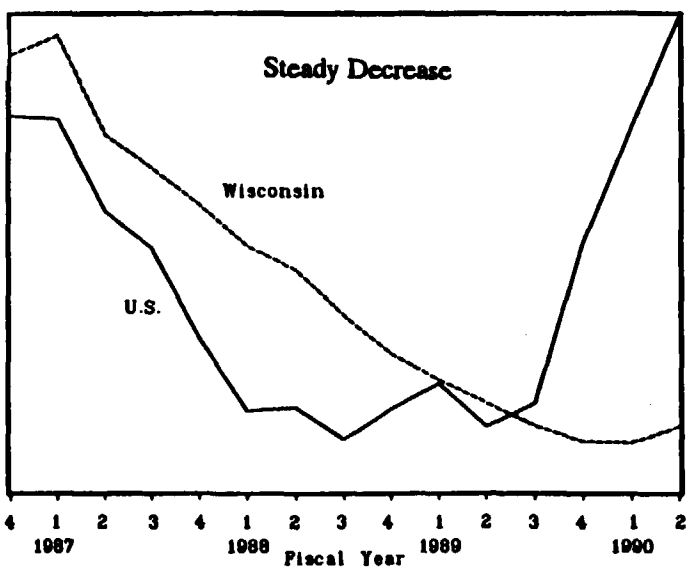
FIGURE 1.3

PLOTS OF FSP PARTICIPATION BY STATE BETWEEN FY86.4 AND FY90.2









economic prosperity associated with the oil boom. The increase in participation in California began in FY85.4--a number of years earlier than the upturn in aggregate U.S. participation levels. In Florida, the increase started in FY86.2.

Participation in twelve states exhibited an early turning point between the end of fiscal year FY87 and the third quarter of FY88. These states account for about 13 percent of total FSP participation in FY90. Most of the New England states fall into this category.

Among all states, the most common time-path for participation was a reduction in participation throughout FY87 and FY88, with a turning point that occurred between FY89.3 and FY90.1. Sixteen states, including three large Mid-Atlantic states, and the District of Columbia, exhibited this pattern. These sixteen states account for just under 40 percent of total FSP participation in FY90. Many of the states in this category exhibited fairly strong upturns. New York, Michigan, and New Jersey all experienced average increases of over 30,000 program participants per month after FY89.2.

Finally, eight states exhibited a persistent decline, and no substantial upturn, in participation between the end of fiscal year FY86 and FY90.2. However, three states in this category--Wisconsin, Hawaii, and South Carolina--experienced a slight upturn in the second quarter of FY90. The largest absolute reductions occurred in Ohio, where participation fell by over 17,000 (1.6 percent), and in Alaska, where it fell by over 5,000 (19.5 percent). The states in this category account for about 10 percent of total FSP participation in FY90.

We also categorized states according to whether changes in the level of state unemployment could explain some of the change in FSP participation. We focus on the period of the rapid increase in FSP participation between FY89.2 and FY90.2. We divided states into three categories: (1) states which generally experienced changes in FSP participation in the same direction as changes in state unemployment; (2) states which generally experienced changes in FSP participation in the opposite direction from changes in state unemployment; and (3) states

which experienced changes in FSP participation in both the same direction as and opposite direction from changes in state unemployment. Table I.3 lists the states which fall into each category.[2] Appendix B presents plots of FSP participation, AFDC participation, and the state unemployment rate for each state.

Sixteen states fall into the first category. Florida and Michigan experienced large increases in FSP participation and an increase in unemployment between FY89.2 and FY90.2. The increase in FSP participation in the New England states of Maine, Connecticut, New Hampshire, and Massachusetts also coincided with an increase in unemployment. Similarly, two Mid-Atlantic states--Pennsylvania and New Jersey--experienced increases in both FSP participation and unemployment. In five states, FSP participation and state unemployment diverged in the second quarter of FY90. For four of the five states--Iowa, Indiana, Michigan, and Oregon--FSP participation continued to rise despite a decline in the unemployment rate.

Thirteen states fall into the second category. Four states that experienced a steady increase in participation over the past three years--Arizona, Colorado, Texas, and Utah--experienced a decline in unemployment.

The remaining states (21 and the District of Columbia) experienced both changes in FSP participation associated with changes in unemployment and some changes in FSP participation that clearly were not associated with changes in unemployment.

C. OUTLINE OF REPORT

In Chapter II, we describe in detail each hypothesis about the cause of the recent increase in FSP participation. For each potential cause, we describe the mechanism by which a change in each factor may have affected FSP participation.

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[2]We divided the states into each category by examining plots of deseasonalized FSP participation and the state unemployment rate.

TABLE L3

CATEGORIES OF STATES BASED ON THE ASSOCIATION BETWEEN CHANGES IN FSP PARTICIPATION AND CHANGES IN STATE UNEMPLOYMENT FY89.2 TO FY90.2

States with Changes in FSP Participation in generally the Same Direction as Changes in State Unemployment	States with Changes in FSP Participation in generally the Opposite Direction as Changes in State Unemployment	States with Changes in FSP Participation in Both the Same and Opposite Direction as Changes in State Unemployment
Connecticut	Alabama	Alaska
Florida	Arizona	Arkansas
Iowa[1]	Colorado	California
Indiana[1]	Idaho	Delaware
Maine	Kansas	District of Columbia
Massachusetts	Louisiana	Georgia
Montana	Kentucky	Hawaii
Michigan[1]	Maryland	Illinois
New Jersey	Nebraska	Minnesota
New Hampshire	New Mexico	Mississippi
Oklahoma	Texas	Missouri
Oregon[1]	Utah	Nevada
Pennsylvania	Wyoming	New York
Rhode Island[1]		North Carolina
South Carolina[2]		North Dakota
South Dakota		Ohio
		Tennessee
		Vermont
		Virginia
		Washington
		West Virginia
		Wisconsin

[1] Association between changes in FSP participation and changes in unemployment weakened in FY90.2
[2] Abstracting from the effect of Hurricane Hugo

SOURCE: USDA Food and Nutrition Service

In Chapter III, we use both national-level and state-level data to estimate regression models of FSP participation. The purpose of the analysis is to estimate the magnitude of the impact of each factor on FSP participation. The advantage of using state-level data is that they enable us to explain changes in participation in different states by different factors.

In Chapter IV, we use data on FSP-participating households to analyze the causes of the increase in participation. Our analysis focuses on whether the number of households that enter the program has increased over time, and whether the characteristics of the entrants into the program have changed over time.

Our conclusions about the importance of the role of each potential factor in the increase in FSP participation are summarized in Chapter V. For those factors that are easily quantifiable, we estimate the proportion of the increase in participation that can be explained by each factor. We also discuss the likely causes of the remaining unexplained increase in participation.

In Chapter VI we discuss our future research. Along with extending some of the analyses presented in this report, we propose interviewing state administrators of the FSP and other public assistance programs. We hope that these administrators can provide insights into the causes of the increase in participation, in addition to providing some data about the FSP at the county level.

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II. HYPOTHESES ABOUT THE INCREASE IN FSP PARTICIPATION

Increases in FSP participation could occur because either (1) the number of persons who enter the FSP increases, or (2) the average length of time spent on the program increases. An increase in the number of persons who enter the program may occur because either the number of persons eligible for the program increases or the proportion of eligible participants who choose to participate in the program (the "participation rate") increases.

No major changes have been made to the rules governing eligibility for the FSP. However, the pool of eligible FSP participants may have increased due to changes in the economy, changes in the demographic composition of the population, or changes in the immigration status of some sections of the population. Changes in the rate of participation of eligible individuals in the program may have been caused by changes in the economy, changes in social attitudes towards receiving welfare, changes in the FSP program, or changes in other public assistance programs. These factors could have changed the rate of participation by (1) increasing the benefits from

- Changes in other public assistance programs

Table II.1 provides a summary of these factors. In this chapter, we discuss in more detail each of the possible explanations for the increase in FSP participation.

A. ECONOMIC, DEMOGRAPHIC, AND SOCIOLOGICAL CHANGES

Changes in the economy, the size and composition of the population, and immigration laws could have increased the size of the eligible pool of FSP participants. Changes in the economy and changes in attitudes towards welfare may have changed the rate at which eligible individuals participate in the program. Changes in the economy or changes in social attitudes may also have increased the average length of time spent in the program. We discuss each of these factors in turn.

1. Economic Factors

The health of the economy has historically been a good predictor of the number of participants in the FSP. Several recent changes in the economy could explain the rise in FSP participation.

a. Unemployment

While the national unemployment rate has remained fairly constant over the past 18 months, changes in regional unemployment rates have varied widely across the country. Unemployment increased between FY89.2 and FY90.2 in Florida, the Mid-Atlantic states, the New England states, and the Mid-West states of Illinois, Michigan, Missouri, Ohio, and Indiana. For example, in Florida, unemployment increased from 5.3 percent in FY89.2 to 5.8 percent in FY90.2. In other regions, states experienced declines in unemployment; for example, the unemployment rate in Arkansas was 8.1 percent in FY89.2 and only 7.1 percent in FY90.2.

TABLE II.1

SUMMARY OF HYPOTHESES REGARDING THE INCREASE IN FSP PARTICIPATION

A. ECONOMIC, DEMOGRAPHIC AND SOCIOLOGICAL CHANGES	
1. Economic changes	Increase in unemployment Increase in duration of unemployment and the number of unemployment insurance exhaustees Increase in unemployment among poorer individuals Increase in part-time workers and the number of discouraged workers Shift in composition of employment towards low-wage industries Increase in the number of persons in poverty Increase in the number of children in poverty Changes in the distribution of income Increase in food prices and the prices of other necessities
2. Demographic changes	Increase in the population Increase in female-headed households
3. Changes in Immigration Laws	Legally Authorized Workers program increased likelihood of U.S. born children of immigrants receiving food stamps Special Agricultural Workers program increased the number of eligible participants
4. Changes in attitudes towards welfare	
B. CHANGES IN THE FSP	
1. Increases in benefits	Increase in maximum allotment Minor increases in benefits for some households
2. Administrative changes	Joint application for public assistance and food stamps Shorter application forms Fewer in-office interviews and less monthly reporting Expedited service for homeless Change in the length of the application form Relaxed verification procedures Increase in the length of the certification period
3. Increased outreach activities	Increase in federal funding for outreach Increase in outreach by advocacy groups
C. CHANGES IN OTHER PUBLIC ASSISTANCE PROGRAMS	
1. Medicaid	Expansion of eligibility for pregnant women and children Expansion of eligibility for aged, disabled, and two-parent families in which the principal wage earner is unemployed Simplification of the application process Increase in outreach
2. WIC	Increase in participation due to infant formula rebate programs
3. AFDC	Increase in the number of states with AFDC-UP programs Increase in the number of states with JOBS programs

While these changes in unemployment almost certainly explain some of the recent changes in FSP participation, they cannot explain all of them. Many of the states with the largest increases in participation--Texas, California, and Arizona--experienced steady or declining unemployment rates over the past 18 months.

More individuals would become eligible for food stamps if the average length of time spent in unemployment increased, even if the unemployment rate did not change. However, the average duration of unemployment declined from 12.9 weeks to 11.6 weeks between FY89.1 and FY90.1 (U.S. Department of Labor, 1989b and 1990b). On the other hand, the number of individuals who had exhausted their unemployment insurance, and hence may become eligible for food stamps, increased by 7.4 percent from 486,000 in FY89.1 to 522,000 in FY90.1.[3]

Some other changes in the characteristics of the labor force may change the number of eligible FSP participants without changing the overall unemployment rate. For example, unemployment may have increased among the poorer workers and declined among the workers whose assets and other income make them ineligible to receive food stamps even when unemployed. Unemployment rates may also hide a rise in the number of individuals who are employed but are working an insufficient number of hours to receive enough income to place them above the FSP income eligibility thresholds. Furthermore, counts of the unemployed do not include those "discouraged workers" who no longer search for jobs because they believe that the probability of their finding a job is too small to be worth the job-search effort. Changes in both the number of part-time and the number of discouraged workers could affect participation in the FSP without affecting the unemployment rate. However, the number of workers who involuntarily work part-time for economic reasons declined by about 327,000 (7 percent) between

[3]Unpublished data from the U.S. Department of Labor.

FY89.1 and FY90.1 (U.S. Department of Labor, 1988, 1989a and 1990a). Furthermore, the number of persons who are not in the labor force and who do not actively seek a job because they believe that they will not find one fell from 954,000 to 827,000 (15 percent) between FY89.1 and FY90.1 (U.S. Department of Labor 1990b).

b. Low Wages

Nearly one-half of all families below the poverty line contain at least one employed worker (Economic Report of the President, 1990). An increase in the number of these "working poor" would increase the number of eligible FSP participants without affecting the unemployment rate. Average weekly earnings in the United States have fallen by just under 1 percent in real terms each year since 1986 (U.S. Department of Labor 1986-1989a). This drop may mask larger declines in the real wages of lower-paid workers. For example, weekly earnings in the retail sector, one of the lowest-wage sectors of the economy, fell in real terms by nearly 5 percent between 1986 and 1989 (U.S. Department of Labor 1987 and 1990a). The number of working persons in poverty grew by nearly 30 percent, from 6.5 million to 8.4 million, between 1979 and 1988 (U.S. Bureau of the Census, 1989).

c. Poverty

Increases in the number of persons in poverty are likely to increase both the number of persons eligible to participate in the program and the participation rate. However, since the early 1980s, the number of persons in poverty has declined. Between 1987 and 1988 (the latest year in which data are available) the number of persons in poverty fell by just over one percent, from 32.3 million to 31.9 million persons (U.S. Bureau of the Census, 1990). Similarly, the number of families with income below $10,000 (in constant 1988 dollars) declined as a percentage of all families, from 11.0 percent in 1987 to 10.8 percent in 1988. These changes reflect an increase of 4.3 percent in real per capita disposable income between 1987 and 1988 (U.S. Bureau of the

Census, 1990). While the total number of persons in poverty has not increased, the number of children in poverty increased by just over one percent, from 12.4 million in 1987 to 12.6 million in 1988. Because households that contain children are both more likely to be eligible for the FSP and more likely to participate in the program, an increase in the number of children in poverty could have increased FSP participation.

d. Prices

Since expenditures on necessities such as food, shelter, and medical care comprise a large proportion of the expenditures of low-income persons, a rise in the price of these items will disproportionately reduce the real discretionary incomes of such persons. This reduction in income may affect the rate of participation in the program; as a household's real discretionary income falls, the attraction of receiving food stamps increases and is more likely to outweigh the costs associated with obtaining and using the stamps. Moreover, if food prices rise faster than other prices, food stamps become more valuable relative to other income. Although the rate of inflation has remained fairly stable over the past few years, food prices have increased since 1986 at a faster rate than the increase in the overall Consumer Price Index. Between February 1988 and February 1990, prices for food-at-home rose 15 percent, compared with an increase of just over 10 percent in the Consumer Price Index (U.S. Bureau of Economic Analysis, 1989 and 1990).

2. Demographic Factors

Changes in the size and composition of the population could potentially explain the rise in FSP participation.

a. Population Changes

By itself, an increase in the size of the U.S. population is unlikely to explain the recent increase in FSP participation, since the annual rate of growth of the population has remained only at about 1 percent over the past decade. However, population increases may partially explain increases in FSP participation in particular regions. Between 1980 and 1988, the population of the south and west grew by 12.3 percent and 17.4 percent, respectively, while population growth in the northeast and midwest was only 3.0 percent and 1.7 percent, respectively (U.S. Bureau of the Census, 1990).

b. An Increase in the Number of Female-Headed Households

Female-headed households are disproportionately represented among families below the poverty level. In 1988, 33 percent of all female-headed households had incomes below the poverty level, compared with 10 percent of all families. Female-headed households are thus more likely than other households to be eligible for food stamps. Over the past decade, the number of births among unmarried women has increased steadily. In 1987, 24.5 percent of all births were to unmarried women, compared with 23.4 percent in 1986 and 18.4 percent in 1980. In 1988, women headed 16.5 percent of all families with children younger than age 18, compared with a corresponding figure of 15.1 percent in 1980.

3. Changes in Immigration Laws

The Immigration Reform and Control Act (IRCA, PL 99-603) of 1986 instituted two programs to legalize undocumented aliens residing in the United States.[4] The first program, the Legally Authorized Workers (LAWS) program (commonly referred to as the "Amnesty program"), was a one-time measure to permit illegal aliens who had been residing in the United States since

[4]For a description of IRCA and its implementation, see Bean, Vernez, and Keely (1989).

January 1, 1982 to apply for "permanent resident alien" status. Applications were taken over a 12-month period beginning in May 1987. Approved applicants were granted temporary alien status, and after 18 months they became permanent resident aliens. There were 1.7 million applications under the LAWS program, and 1.6 million were approved. Fifty-five percent of the approved applicants applied in California.

The second program, the Special Agricultural Workers (SAWS) program, authorized temporary resident status for agricultural workers in perishable crops. Permanent resident alien status was permitted after either a one- or two-year period, depending on the number of years of previous agricultural work. Through November 1988, 1.3 million applications were taken, a number considerably above the 350,000 that were expected. As of July 1990, 716,000 applications were approved; 509,000 are still pending. As with the LAWS program, a large percentage (53 percent) of the approved applicants applied in California.

Congress anticipated that a large increase in the number of legalized aliens, many of whom have low incomes, might be reflected in an increase in public assistance caseloads. For this reason, the legally authorized workers were prohibited from receiving most public assistance, including food stamps and AFDC, for a period of five years.[5] The special agricultural workers were also prohibited from receiving AFDC and other benefits from state programs, but, unlike legally authorized workers, they were permitted to receive food stamps after they received temporary resident status. Thus, the newly legalized special agricultural workers may account for some of the increase in FSP participation. If this is the case, FSP participation should increase in states that contain a substantial number of special agricultural workers.

[5]Elderly, blind, or disabled LAWS program participants (as defined by the Supplemental Security Income program) and certain Cuban/Haitian LAWS program participants were eligible to apply for food stamps.

While legally authorized workers were prohibited from receiving food stamps, the LAWS program may have an indirect effect on FSP participation. U.S.-born children of legally authorized workers are eligible for food stamps, and with the threat of deportation gone, some of these workers may now apply for benefits for their children. As with special agricultural workers, FSP participation should rise in states that contain a substantial number of legally authorized workers.

4. Attitudes Towards Welfare

One reason often cited for the low FSP participation rate is the stigma attached to receiving welfare payments. This stigma is especially true of the FSP because food stamp use can be highly visible. It is possible that social attitudes towards persons receiving government assistance have changed, and that people have become more willing to apply for food stamps. But, due to the difficulties of defining and measuring attitudes, we cannot test whether a change in social attitudes towards welfare receipt was a reason for the recent increase in FSP participation.

B. CHANGES IN THE FOOD STAMP PROGRAM

Congress made numerous changes to the FSP in the 1980s. The Omnibus Budget Reconciliation Act of 1981 (PL 97-35, OBRA-81) and the Omnibus Budget Reconciliation Act of 1982 (PL 97-253, OBRA-82) instituted a number of program changes that reduced eligibility and delayed benefit increases. In 1985, the Food Security Act (PL 99-198) significantly liberalized food stamp benefits and eligibility rules, and established categorical eligibility for households comprised entirely of AFDC or Supplemental Security Income (SSI) recipients.

In the late 1980s, Congress passed two pieces of legislation--the 1988 Hunger Prevention Act (PL 100-435) and the 1987 Stewart B. McKinney Homeless Assistance Act (PL 100-77). These pieces of legislation mandated three changes that could help explain the increase in FSP

participation: (1) an increase in the benefits available from the FSP, (2) changes in the administration of the FSP to improve accessibility and to simplify the application process, and (3) an increase in federal funding for "outreach" programs to inform low-income households about the FSP. By increasing the benefits of receiving food stamps and reducing the burden of the application process, the legislation may have increased the proportion of eligible households who feel that the benefits of receiving food stamps outweigh the disadvantages. In states that introduced outreach programs, those programs may also have increased the participation rate. This section reviews each of the changes in the FSP.

1. The Increase in Benefits

The food stamp benefit is calculated by subtracting 30 percent of a household's "net income" from a "maximum allotment." Net income is calculated by subtracting a number of deductions from gross income. These deductions include a standard deduction for all households, a deduction for earned income, and, in certain circumstances, deductions for child-care or other dependent-care expenses incurred while working or attending training programs, as well as medical expenses and housing costs. The maximum allotment is based on the cost of the Thrifty Food Plan, a nutritious low-cost model food plan.

Continuing the trend towards more generous benefits that began in 1985, the Hunger Prevention Act increased benefits by increasing both the maximum allotment and allowable deductions. The maximum allotment increased to 100.65 percent of the Thrifty Food Plan in October 1988 and to 102.05 percent of the Thrifty Food Plan in October 1989, and will increase to 103.00 percent of the Thrifty Food Plan in October 1990 and in subsequent years. These increases are in addition to increases in the maximum allotment due to inflation, and affect all FSP participants. The increase of 2.05 percent in the maximum allotment in October 1989 added five dollars to the monthly food stamp benefit of a family of three.

A number of minor changes also increased benefits:

- The McKinney Homeless Assistance Act provided separate household status for parents and their minor children living with relatives if they buy and prepare food separately from those relatives. This change in household status increased the benefits for some FSP participants living with their relatives because their household income fell once their relatives income was no longer counted as household income. This change also increased the number of individuals eligible for food stamps.

- The McKinney Homeless Assistance Act also increased the value of benefits paid to households with high shelter costs, and to homeless households that live in welfare hotels.

- Prior to 1988, the maximum allowable deduction for dependent care was $160 per household. The Hunger Prevention Act increased the maximum allowable deduction to $160 per dependent, thus increasing the value of the deductions to those with high dependent-care expenses and multiple dependents. This change became effective for newly certified households in October 1988, and for continuing food stamp recipients at their first recertification after October 1988.

- The Hunger Prevention Act widened the definition of a disabled person. Because disabled persons can deduct medical expenses and a greater amount of shelter costs, the individuals who were not previously defined as disabled but who now fall into this category will receive higher benefits. Because individuals who are defined as disabled receive special treatment in the determination of their food stamp eligibility, individuals who were previously ineligible for food stamps may now be eligible if they fall into the new definition of disabled.[6]

All of these minor program changes affected relatively few people, and thus were not likely to have been major contributing factors to the participation increase.

2. Administrative Changes

Congress was concerned that some low-income individuals might be discouraged from applying for food stamps because the process was complex and burdensome. Changes in the

[6]Eligibility requirements for disabled persons differ in that they (1) may claim medical-expense deductions, (2) have no limit on their excess shelter deduction, and (3) are exempt from the food stamp gross income eligibility test.

number of food stamp offices, the number of certification workers, and the food stamp office's hours of operation could all affect the burden of applying for food stamps. The objective of a number of provisions in the Hunger Prevention Act was to simplify the application and certification process. The 1977 Food Stamp Act (PL 95-113) required that states include a food stamp application form along with the application forms for such public assistance programs as AFDC, General Assistance, Old Age Assistance, Aid to the Blind, and Aid to the Permanently and Totally Disabled. It also required that states determine the household's eligibility for AFDC and food stamps in a combined interview. The OBRA-82 removed the requirement that the food stamp application accompany the application for public assistance. The Hunger Prevention Act subsequently reversed this decision and made joint applications for public assistance and food stamps mandatory. The Hunger Prevention Act also requires that states notify AFDC applicants of their right to apply for food stamps at the time of their AFDC application and to receive a single joint certification interview for both programs. These changes became effective on July 1, 1989.

States have the option of using the FSP application form provided by FNS or using their own application forms upon approval by FNS. The Hunger Prevention Act requires that the states' application forms be brief, easy to use, and readable, and provide clear instructions about the availability of expedited services. The Secretary of Agriculture and the Secretary of Health and Human Services have been directed to develop a program of assistance for state agencies to help them write their application forms. States are just beginning the process of designing new application forms.

In order to reduce the burden of the FSP monthly reporting requirement, the Hunger Prevention Act expanded the statutory exemptions for monthly reporting to seasonal farm workers and homeless individuals. The exemptions had previously applied only to migrant farm workers and the elderly and disabled with no income. This Act also introduced some changes to

simplify the reporting of medical expenses. A few minor changes were also made to relax the conditions under which the in-office interview could be waived.

The recent legislation also mandated two other changes in the FSP to make the overall food stamp "package" more attractive:

- The McKinney Homeless Assistance Act authorized expedited service in which homeless individuals and those with high housing costs can receive their benefits within five days after filing their application.
- The Hunger Prevention Act authorized that individuals who apply after the 15th of each month, and who are certified in the program, should receive pro-rated benefits for the remainder of the month and benefits for their first full month in the program in a combined payment within 30 days after filing their application. This provision was implemented in January 1990.

The Hunger Prevention Act reduced fiscal sanctions on states for erroneous benefit determinations. Consequently, some states may have relaxed their procedures for verifying FSP eligibility, thereby increasing the number of FSP-ineligible individuals who receive benefits and/or reducing the number of eligible individuals improperly denied benefits. But an examination of the Food Stamp Quality Control databases suggests that the proportion of FSP participants who are in fact ineligible declined between FY86 and FY89. However, more relaxed verification procedures may have increased the attractiveness of the program and thus the number of FSP-eligible participants who chose to participate.

To verify that FSP participants remain eligible to receive food stamps, the program recertifies all recipients at regular intervals. The length of the certification period varies according to the characteristics of the household and depends on the likelihood that the circumstances of the household will change. Typically, recipients do not exit from the program until their certification period ends. Hence, if the length of certification periods increased, the

rate of exit from the FSP would probably have declined, thus increasing the length of time spent in the program.

3. Outreach Activities

OBRA-81 prohibited federal funding of any outreach programs for the FSP. The McKinney Homeless Assistance Act gave state agencies the option of operating outreach programs for homeless individuals with a 50 percent federal cost-sharing grant. The Hunger Prevention Act expanded the scope of outreach activities eligible for the 50 percent cost reimbursement to encompass activities that provide information about the FSP to any low-income individual. However, states are currently not required to provide any outreach program. Estimates suggest that just over one-half of all eligible nonparticipants do not participate in the FSP because they are not aware that they are eligible (Coe, 1983). Hence, an increase in outreach efforts could substantially increase FSP participation. Only 9 states have currently taken advantage of the federal cost-sharing by implementing outreach programs. But, it is possible that more outreach by advocacy groups and other public assistance programs has increased awareness of the FSP.

C. CHANGES IN OTHER PUBLIC ASSISTANCE PROGRAMS

The increase in FSP participation has been accompanied by an increase in participation in other public assistance programs. The growth of participation in Medicaid, the Special Supplemental Food Program for Women, Infants, and Children (WIC), and AFDC could be due in part to recent legislative changes in those programs. The increase in the number of households participating in the welfare system as a whole may have increased the rate of FSP participation. Once in the welfare system, a household is more likely to be informed about the program and its eligibility status, and the additional costs of applying for the FSP may be lower. On the other hand, it is possible that no causal relationship exists between the growth of the FSP and the

growth of other assistance programs, but that the association is due to changes in economic and

mandated 60 days of postpartum coverage for all women whose Medicaid eligibility was based solely on pregnancy.

- The Omnibus Budget Reconciliation Act of 1986 (OBRA-86, PL 99-509) gave states the option of breaking the link between Medicaid eligibility and eligibility for AFDC cash assistance. Effective April 1987, states may extend eligibility to pregnant women and infants up to one year of age (with children younger than age six phased in over a five-year period) whose incomes are below a state-established level. The Act required that the state-established income threshold be above the AFDC standard but below the poverty level. The Act allowed states to waive the asset test for pregnant women and infants, thus allowing the financial eligibility criteria to be based only on income.

- The Omnibus Budget Reconciliation Act of 1987 (PL 100-203) increased the maximum eligible income level for pregnant women and children to 185 percent of the poverty level and accelerated the phasing-in of eligibility for children younger than age five whose income is below the poverty level. This Act also required that states provide coverage for all children younger than seven who met the income level criterion for AFDC but did not meet the definition of "dependent child."

- The Medicare Catastrophic Act of 1988 (PL 100-360) made many of the above changes mandatory. States were required to phase-in coverage by July 1989 to all pregnant women whose incomes are at or below 75 percent of the poverty line, and by July 1990 to all pregnant women whose incomes are at or below 100 percent of the poverty level.

- The Omnibus Budget Reconciliation Act of 1989 (PL 101-239) mandated that, effective April 1990, coverage be expanded to pregnant women and children younger than age six if family income is at or below 133 percent of the poverty level.

States were quick to adopt the option of increasing the income threshold for pregnant women and children. Only five states were affected by the minimum income thresholds mandated by the Medicare Catastrophic Act. The legislative changes prompted many states to increase the income threshold dramatically. For example, Mississippi increased the income threshold for pregnant women from 37.6 percent of poverty in 1986 to 185 percent in 1990. In January 1990, 23 states imposed an income threshold of 100 percent of the poverty level for pregnant women, and 15 imposed the maximum threshold of 185 percent of the poverty level. Thirty-one states

were affected by the new minimum threshold of 133 percent of poverty that became effective in April 1990.

The Medicare Catastrophic Act required that states pay Medicare program premiums, co-insurance, and deductibles for some elderly and disabled individuals whose incomes usually make them ineligible for the Medicaid program. These include individuals whose incomes are below 90 percent of the poverty level (the limit was 85 percent in 1989, and will be 100 percent in January 1992) and those whose resources are at or below twice the standard allowed under the Supplemental Security Income program. Even though the states are not required to provide these participants with the full range of Medicaid benefits, Medicare participants have a large financial incentive to participate in Medicaid. Once in the welfare system, they may then become informed about other welfare programs such as the FSP.

A number of other legislative changes have increased the number of Medicaid-eligible individuals:

- States were given the option of extending Medicaid coverage to aged and disabled individuals whose incomes did not exceed 100 percent of the poverty level (OBRA-86).
- States are now required to provide Medicaid for severely disabled persons who lose their eligibility for cash assistance due to their earnings (OBRA-86).
- States were mandated to extend Medicaid coverage for a period of 12 months to families who lose cash assistance due to earnings (1988 Family Support Act, PL 100-485).
- States were mandated to cover two-parent families in which the principal wage earner is unemployed. This mandate will be effective in October 1990 (the 1988 Family Support Act).

b. Simplification of the Application Process

Congress was concerned that pregnant women were not receiving Medicaid benefits quickly enough for them to receive adequate prenatal care. In response, OBRA-86 gave states the

option of granting "presumptive eligibility," under which pregnant women receive temporary eligibility either for 45 days or until their application is processed, whichever is shorter. Twenty-five states have chosen to grant presumptive eligibility. An additional nine states have introduced processes by which Medicaid applications for prenatal care are given priority in the eligibility determination process.

OBRA-86 also gave states the option of omitting the review of clients' assets when eligibility for pregnant women and children is determined; 44 states chose to exercise this option. This option simplified the determination process and allowed states to shorten their application forms. Nineteen states have recently shortened their application forms; the form in Vermont and Florida is only one page. OBRA-86 also gave states the option of continuing eligibility for pregnant women for 60 days postpartum without requiring redetermination.

According to the National Governors' Association (1990), states have implemented other changes to reduce the burden of the eligibility process. For example, 17 states station eligibility workers at sites where women receive prenatal care, such as hospitals, local health departments, prenatal care clinics, and Community and Migrant Health Centers. This change facilitates the enrollment process for women who have difficulty in obtaining transportation to a social services office.

c. Outreach Programs

Some states have recently adopted more aggressive programs to inform families about the Medicaid program (National Governors' Association, 1990). Activities have included distributing written materials and brochures, establishing hotlines and having public health nurses follow-up on calls, and developing multi-media campaigns, such as the "Baby your Baby" campaign in Utah, which involves television commercials and radio coverage.

d. Summary of Changes to the Medicaid Program

The changes in the Medicaid program are expected to have increased the number of Medicaid recipients by about 2.7 million between 1986 and 1990 (Committee on Ways and Means, U.S. House of Representatives, 1989). The total number of recipients increased only by 400,000, or 1.8 percent, between FY86 and FY88. However, we would expect that the largest expansion of the program will have occurred in FY89 and FY90, when the legislative changes will have been phased in completely and more eligible individuals become aware of the program.

For the ten states which experienced the largest absolute increases in FSP participation, Table II.2 summarizes the income threshold which determines the eligibility status of pregnant women and infants, and the maximum eligible age for children in households whose income is below 100 percent of poverty. It also indicates whether the state has dropped the asset test, introduced continuous eligibility, introduced presumptive eligibility, or stationed eligibility workers at sites where the care is provided.

No direct link exists between eligibility for Medicaid and eligibility for the FSP. However, many of the women and children who recently became eligible for Medicaid may also be eligible for food stamps if their gross income is below 130 percent of the poverty level. But, due to the burden of applying for food stamps or to an unawareness about the program, these eligible FSP participants may not have applied for benefits. Because their babies' health and the large medical expenses they incur at childbirth give pregnant women strong incentives to join Medicaid, Medicaid is often the first welfare program to which these women apply. Once the women are on Medicaid, they are more likely to participate in the FSP because:

- Medicaid workers may inform recipients about other welfare programs for which they are eligible. OBRA-89 mandated that states inform all Medicaid-eligible pregnant, breastfeeding, and postpartum women about the WIC program. It is likely that they would also inform these women about their eligibility for food stamps.

TABLE II.2

MEDICAID INCOME ELIGIBILITY THRESHOLD AND AGE LIMITS
FOR PREGNANT WOMEN AND CHILDREN AS OF JANUARY 1990

State	Income Threshold for Pregnant Women and Infants as a Percent of Poverty		Maximum Age of Covered Children under 100% of Poverty		Dropped Asset Test	Provides Continuous Eligibility	Provides Presumptive Eligibility	Outstations Eligibility Workers
	1988	1990	1988	1990				
Texas	100%	130%	2	4	No	Yes	Yes	Yes
California	185%	185%	-	-	No	No	No	No[a]
Florida	100%	150%	5	6	Yes	Yes	Yes	Yes
New York	82.4%	185%	-	-	Yes	Yes	Yes	No
Arizona	100%	100%	5	3	Yes	Yes	No	No
Georgia	100%	100%	2	4	Yes	Yes	No	No
Michigan	185%	185%	3	3	Yes	Yes	No	No
New Jersey	100%	100%	2	5	Yes	Yes	Yes	No[a]
Massachusetts	185%	185%	5	5	Yes	Yes	Yes	No
Pennsylvania	100%	100%	3	3	Yes	No	Yes	No

SOURCE: Hughes et al (1989), National Governors' Association (1990)

[a]There are plans to implement this at a later date.

- The transaction costs of applying for food stamps may be lower if individuals are already applying for Medicaid. In some states, the Medicaid office is located in the same building as the FSP office.

- The psychological barrier of joining a welfare program may be broken when individuals join Medicaid. Thus, they will be more likely to participate in other welfare programs such as the FSP.

2. WIC

The WIC program provides nutritional screening, food assistance, nutrition education, and informal health care to low-income pregnant women, breastfeeding women, postpartum women, infants, and children younger than age 6 who are at nutritional risk. The WIC program has been expanded considerably since its inception. Funding increased from $20 million in 1974 to over $2 billion in 1990. While the program experienced steady growth between 1974 and 1987, participation has increased tremendously since FY88, due primarily to savings from infant formula rebates. In October 1987, about 3.5 million persons participated in the program; by January 1990, there were nearly 4.4 million participants.

The Commodity Distribution Reform Act and WIC Amendments of 1987 (PL 100-237) mandated that all states adopt cost-containment initiatives such as rebates, competitive bidding, direct food distribution, and home delivery systems. The most important of these initiatives was the infant formula rebates, in which state agencies contract with one (or more) infant formula manufacturers and receive rebates on retail purchases of infant formula by WIC participants. These rebates generated considerable cost savings, which allowed states to expand the number of participants in the program without increases in federal funding. The first infant formula rebate contract was implemented in Tennessee in June 1987. By the end of FY89, 49 states had infant formula rebate programs. Texas, which began its formula rebate program in May 1988, has increased its WIC caseload by about 80,000. Similarly, the formula rebate program introduced in Florida in late 1987 has increased WIC participation in that state by an estimated 40,000.

FSP eligibility is not linked directly to WIC participation. However, many women and children who are WIC-eligible are also eligible to receive food stamps. In 1988, about 45 percent of WIC participants lived in households that also received food stamps. An increase in WIC participation may increase FSP participation if WIC eligibility workers inform applicants about their eligibility for food stamps when they apply to WIC.

3. AFDC

AFDC provides cash assistance to single-parent, low-income families with dependent children younger than age 18. Participation in AFDC has increased significantly over the past few years, mirroring the increase in FSP participation. Between FY89.2 and FY90.2, participation increased by nearly 400,000 (3.7 percent). Two major changes in the AFDC program may have affected participation: (1) an increase in the number of states with AFDC-Unemployed Parents (AFDC-UP) programs, and (2) the introduction of the Job Opportunities and Basic Skills (JOBS) program.

AFDC-UP provides benefits to two-parent families in which the principal wage earner is unemployed. The individual states currently have the option of providing this program. The Family Support Act of 1988 mandated that all states provide an AFDC-UP program by October 1990. In 1986, AFDC-UP programs were provided by 28 jurisdictions; in March 1990, the number of jurisdictions with AFDC-UP programs had increased to 29. These programs will increase the number of persons eligible for AFDC. The Committee on Ways and Means (1989) estimates that the introduction of AFDC-UP programs in all states in October 1990 could increase the number of new cases by 65,000 per month.

The JOBS program was authorized by the Family Support Act of 1988 to provide education, training, and employment opportunities to AFDC recipients. The Act mandated that states could begin the program as early as July 1989, but not later than October 1990. It is

possible that the services provided by the JOBS program have increased participation as the total AFDC "package" became more attractive. However, the work requirements may also discourage individuals from participating. Indeed, the long-term purpose of the program was to increase the rate of exit from the program and to reduce, not increase, participation. Moreover, only 15 states chose to begin the JOBS program in July 1989. Currently, 22 states still do not have JOBS programs. The target for the number of participants in the JOBS program is also fairly low--only 7 percent of the nonexempt AFDC caseload were required to participate by FY90.

Most AFDC recipients are categorically eligible for food stamps, and estimates suggest that over 80 percent of AFDC recipients participated in the FSP in 1985 (Doyle, 1990). Many of the same factors which affect FSP participation levels also affect AFDC participation. An increase in AFDC participation may increase FSP participation because (1) once an individual is applying for AFDC the cost of applying for food stamps is very low (a single application form and a single interview apply to both programs), (2) AFDC eligibility workers inform recipients about their eligibility for food stamps, and (3) once the individual has entered the welfare system the psychological burden of receiving additional welfare benefits may be reduced.

It is unlikely that the AFDC program changes affected enough people to have caused all of the recent increase in AFDC participation. Hence, the increase in AFDC participation is unlikely to have caused the increase in FSP participation. But, as we showed in Chapter I, the increases in AFDC participation and FSP participation are highly correlated suggesting that similar factors caused the increases in participation in both programs.

D. SUMMARY

This chapter has discussed a wide variety of possible explanations for the increase in FSP participation. Increases in unemployment, increases in the number of working poor, and changes in immigration legislation could all have contributed to the increase in FSP participation. The

other economic, demographic, and sociological factors--increases in the number of children in poverty, increases in the population, increases in the number of female-headed households, and changes in social attitudes towards welfare--could also be important. However, changes in these factors tend to occur slowly; these changes may have affected the trend in FSP participation, but they are less likely to have caused the sharp increases in participation that have occurred in some states.

The increase in food stamp benefits could be an important explanatory factor for the increase in participation. However, it is difficult to reconcile the large variation in participation increases in different states with the explanation that the increases were caused by an increase in the value of benefits. Administrative changes in the FSP and increased funding for outreach programs, while potentially important factors in determining future participation, are not yet fully implemented and thus are unlikely to have been a major cause of the recent increase.

An expansion of participation in other public assistance programs could also be a significant explanatory factor for the increase in FSP participation. Of the other public assistance programs, the Medicaid program has experienced the most important changes over the past two years. Although participation in the WIC program increased substantially, the absolute increase in WIC participants was not large enough to explain all of the increase in FSP participation. Changes in the AFDC program were not major and probably not important enough to explain the recent increase in FSP participation.

III. ANALYSIS OF AGGREGATE DATA ON FSP PARTICIPATION

In this chapter, we use national and state-level data to analyze the influence of economic, demographic, and other factors on FSP participation. Our discussion of the potential explanations for the recent increase in FSP participation in Chapter II guided our choice of variables; however, due to data limitations, we were unable to examine all the factors discussed previously. We use the results of this analysis later in this report to assess the likely importance of those factors in explaining the recent increase in FSP participation.

The discussion consists of four sections. The first section discusses the methodology used. The second section presents the results obtained with national-level data. The third section provides estimates that are based on state-level data and compares the results with those obtained based on national-level data. The final section provides a brief summary.

A. METHODOLOGY

The results presented in this chapter are based on a series of regression models that attempt to explain FSP participation as a function of economic, demographic, and other variables that are expected to affect participation. Before we present the results of these models, several methodological issues require discussion.

1. The Estimation Period

We estimated our models with quarterly data from FY82.3 through FY90.2. We chose FY82 as the starting point for the analysis both because some data series were available only beginning in FY82 and because major structural changes made in the FSP in the late 1970s and early 1980s were implemented fully by this point in time.[7]

[7]While all our data series were available beginning in FY82.1, our analysis period begins in the third quarter of FY82 because several variables used in our analysis have one- or two-quarter lags.

2. The Unit of Analysis

We estimated our models of FSP participation first with time-series data for the nation as a whole. Using national-level data was appealing, since data on a wide range of potential explanatory variables are available at the national level, thus enabling us to examine the effect of these variables. However, our ability to use national-level data to identify the effect of a wide range of variables on FSP participation was limited both by the small number of available observations (32 quarters) and by the fact that some data series of interest may exhibit similar time trends. For these reasons, we also used a combined time-series, cross-sectional data set that includes the 50 states and the District of Columbia. This data set gave us an opportunity to use differences in the characteristics and experience of states to identify the separate effects of the explanatory variables.

3. The Variables Used in the Analysis

The dependent variable in our analysis is the monthly number of food stamp recipients averaged over each quarter. Most of the independent variables (see Table III.1) are defined similarly. For example, we use the monthly number of AFDC recipients and the monthly number of unemployed workers averaged over the quarter. However, we use the cumulative number of LAWS and SAWS program participants who have been granted resident status, rather than the number who are granted resident status in a quarter, since it is the stock, or total number, of such individuals that we hypothesized is contributing to the FSP caseload.

Several further points about the independent variables in our models must be mentioned. First, we use the number of unemployed rather than the unemployment rate, since we believe that the number of unemployed is related more directly to the number of food stamp recipients.

TABLE III.1

MEANS AND STANDARD DEVIATIONS OF EXPLANATORY VARIABLES

	National-level Data		State-level Data	
	Mean (1,000s)	Standard Deviation (1,000s)	Mean	Standard Deviation
Number of Unemployed	8,400	1,625	164,698	189,011
AFDC Recipients	10,667	228	209,163	295,186
Medicaid Recipients	2,414	478	47,328	54,456
WIC Recipients	3,140	556	61,568	62,144
LAWS and SAWS	459	771	9,006	72,738
Households with Female Heads	7,032	359	n/a	n/a
Number Employed in Personal Services Industry	1,090	987	n/a	n/a
Sample Size	32		1,632	

NOTE: The means were taken over the sample period FY82.3 to FY90.2. The state-level data include quarterly data on 50 states and the District of Columbia. The number of unemployed individuals, Medicaid recipients, and WIC recipients were lagged one quarter. The Medicaid recipients are categorically needy recipients not receiving cash assistance. The number of LAWS and SAWS is the cumulative number granted residence status by the end of each quarter. This variable was lagged two quarters. The national data are in thousands.

n/a = not available.

Second, we use the total number of AFDC recipients in the regular and unemployed parents AFDC programs. In preliminary work we used separate variables for these two components of the AFDC program, but we combine the two variables in the analysis herein because we found that the estimates for the AFDC-UP varied considerably with the model specification. Third, we use the number of Medicaid recipients who were categorically eligible but did not receive cash assistance such as AFDC or SSI, rather than the total number of Medicaid recipients.[8] We do so in the belief that this category of recipient is the most likely to contain individuals who have become Medicaid recipients as program coverage was expanded to pregnant women, infants, and children who were not eligible for AFDC.[9] Fourth, we use the combined number of LAWS and SAWS program participants in our models rather than the two series separately. We do so because the correlation between the two series is quite high, thus making it difficult to identify the separate effects of the two types of immigrants.[10]

We use lagged values for most of the independent variables, since individuals who enter a new status that increases their likelihood of food stamp receipt (for example, unemployment) may take some time to apply for and receive benefits. We use a one-quarter lag for all variables other than the LAWS and SAWS variables, for which we use a two-quarter lag because it might take a relatively long time for newly legalized immigrants to apply for public assistance. We do not use a lag for the AFDC variable, since the joint application process for AFDC and food

[8]The Medicaid data are annual counts of recipients. Data for FY90 are projections obtained from the Health Care Financing Administration.

[9]The two main categories of Medicaid recipients excluded by this choice are (1) categorically needy persons who receive cash assistance and (2) medically needy persons.

[10]We did estimate models using the two series separately, and found that the coefficients varied considerably according to the extent to which the two series were lagged. The coefficient on the sum of the two series did not show the same degree of variation.

stamps should mean that an increase in AFDC recipients will quickly be reflected in an increase in food stamp recipients.

4. Estimation Issues

Our basic analytic strategy was to estimate either time-series or pooled time-series, cross-sectional regression models of the form:

$$(1) \quad P = a + bX + u,$$

where P is FSP participation, X is a vector of explanatory variables thought to affect participation, and u is a random error term. The observations are by quarter for the national-level analysis and by state and quarter for the state-level analysis.

We estimated a number of models which vary according to the variables included in the X vector of variables. By specifying the models in a number of different ways, we can assess the robustness of our estimates.

In the classical model, the error term (u) is assumed to have a mean of zero and a constant variance, and each error is assumed to be independent of all the other errors.[11] However, in time-series settings, the errors are commonly serially correlated, with positive errors in one period more likely to be followed by positive errors in the next period, and negative errors to be followed by negative errors. While estimates of b (in which we are interested) are unbiased when errors are serially correlated, the sampling variances of these estimates are large relative to those generated with a different method of estimation (Johnston, 1984).

In our preliminary analysis, we tested our models for serial correlation (using the Durban-Watson test), and we rejected the hypothesis that the errors were not serially correlated. For our

[11]This is the assumption used when regression models are estimated with ordinary least squares.

time-series models and for some of the time-series, cross-sectional models, we modified the regression model to give the error term a first-order autoregressive structure. Subsequent tests of the errors of these modified models indicated that the errors of these models were not serially correlated.

A further issue about the error term in our models arises for the time-series, cross-sectional analysis. In this case, the assumption that the error term has a constant variance across observations is likely to be incorrect, since the level of FSP participation varies substantially among states. That is, the variance of the error term is likely to be higher in larger states than in smaller states. As is the case with serially correlated errors, estimates of b that are generated in the presence of what is termed "heteroscedasticity" will be unbiased but inefficient (i.e., they will have large sampling variances). Given the likely presence of heteroscedastic errors in our cross-sectional models, we estimated our models both under the assumption that the errors have constant variance and under the assumption that the variance of the errors is proportional to the size of the labor force in each state.[12] In future work we will try alternative specifications.

Due to the large size differences among the states, we also used fixed-effects models for the state-level analysis. Fixed-effects models assume that the coefficients (b) of the explanatory variables are constant across states, but that the intercept (a) varies by state. Clearly, the assumption about the intercept is appropriate, since the dependent variable is FSP participation, whose magnitude varies considerably among states. Fixed-effects models can be estimated by

[12]While it would have been natural to use state population rather than the size of the labor force to make this adjustment, our data set contained a variable on the size of the labor force but not the population. Using the size of the labor force should make little difference to the estimates, since the important point is to use a variable that scales the states according to their relative size.

using a dummy (0,1) variable for each state. These variables take into account differences among states that are not directly controlled for by the X vector of explanatory variables.[13]

The recent rise in FSP participation has led some observers of the program to question whether the relationship between FSP participation and economic and other factors has changed in recent years. We examined this hypothesis by estimating models in which the coefficients of the main explanatory variables take on different values for the early (FY82.3 to FY88.2) and later (FY88.3 to FY90.2) parts of our estimation period. We derived these values by multiplying each of our main explanatory variables by a dummy variable that equalled one over the last two years (FY88.3 to FY90.2) and zero previously. We then entered both these new variables and the old variables into the model.

Finally, we controlled for seasonal influences by including quarterly dummy variables in all of our models. We included dummy variables for the second, third, and fourth fiscal-year quarters.

B. NATIONAL-LEVEL ANALYSIS

Table III.2 reports the results of a representative set of the models estimated with national-level data. The analysis yields several conclusions. First, the main variable that controls for economic fluctuations--the number of unemployed individuals lagged one quarter--has a statistically significant effect on FSP participation.[14] FNS has used this relationship to forecast FSP participation. The coefficient estimate was relatively stable among the models tested, implying that 343 to 612 individuals are added to the food stamp rolls for every increase of 1,000 in the number of unemployed. Although not shown in the table, we also used the number of

[13]See Maddala (1987) for a discussion of fixed-effects models.

[14]In this chapter, coefficients are "statistically significant" based on one-tailed, 95 percent confidence-level significance tests.

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TABLE III.2

NATIONAL-LEVEL REGRESSION ANALYSIS
OF FSP PARTICIPATION

Explanatory Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Number of Unemployed	0.350 (0.083)	0.512 (0.091)	0.360 (0.086)	0.347 (0.083)	0.521 (0.095)	0.343 (0.081)	0.485 (0.098)	0.612 (0.069)
Households with Female Heads	--	2.446 (1.608)	1.202 (1.236)	--	--	--	--	--
AFDC Recipients	2.119 (0.530)	--	1.990 (0.538)	1.833 (0.587)	0.881 (0.612)	2.304 (0.508)	1.109 (0.672)	--
Medicaid Recipients	--	--	--	--	0.041 (0.173)	--	-0.019 (0.192)	0.168 (0.169)
WIC Recipients	--	--	--	--	1.416 (0.455)	--	1.242 (0.500)	1.920 (0.368)
LAWS and SAWS	--	--	--	--	--	0.375 (0.188)	0.279 (0.195)	0.213 (0.183)
Number Employed In Personal Services Industry	--	--	--	-1.735 (1.555)	--	--	-0.810 (1.458)	--
R^2	0.978	0.968	0.979	0.979	0.983	0.981	0.984	0.983

NOTE: All models were estimated over the FY82.3 to FY90.2 period. All models included three quarterly dummy variables to control for seasonal fluctuations and all models were estimated assuming that the errors have a first-order auto-regressive structure. Standard errors of the coefficient estimates are in parentheses.

unemployment insurance exhaustees in our model and found that this variable was not statistically significant when the number of unemployed individuals was also included in the model. We also found this result in our state-level analysis.

Second, we found that the number of AFDC recipients had a positive and statistically significant effect on FSP participation,[15] as was expected since the rate of FSP participation among AFDC recipients is high.[16] However, in most of the models, the coefficient estimate was greater than one, implying that each increase in the number of AFDC recipients generates a greater increase in the number of FSP participants. While this situation may arise when an AFDC household is part of a larger food stamp household, it is likely that the AFDC variable is also picking up the effect of variables that are excluded from the models and that are correlated with AFDC receipt. We included one such potential variable--the number of female-headed households--in several models. This variable had the expected positive sign, but was not statistically significant. For this reason, and because we can measure AFDC recipients by state but not the number of female-headed households, most of our models use AFDC recipients.[17]

Third, we tried several variables in our models other than the number of unemployed, to capture the economic conditions that face likely food stamp recipients. These variables include the number of workers in the personal services industry, in order to capture changes in the

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[15]The AFDC coefficient seems to be quite sensitive to the time period used for estimation, the choice of the lag structure, and the choice of estimation procedure to correct for serial correlation.

[16]Although not shown in the table, we did estimate several models in which we included a variable for the number of AFDC emergency cases. The coefficient of this variable was negative, and, while it was not statistically significant in the national-level models, it was statistically significant in the state-level models. The negative sign suggests that food stamps and emergency AFDC payments may be used as alternative sources of support.

[17]When we estimated a model to explain the number of AFDC recipients, we found that the number of female-headed households was an important and significant explanatory variable, with a coefficient that implies that each female-headed household contains 1.1 AFDC recipients.

availability of low-wage jobs; real hourly wage rates averaged over several low-wage industries; average disposable income; and the price of food at home relative to the Consumer Price Index, in order to capture the pressure on household food budgets. These variables generally had statistically insignificant coefficients or, for the real wage rate, coefficients that were the wrong sign and of a magnitude that did not make any sense.[18]

Fourth, in most models, the Medicaid and WIC recipient variables had the expected positive signs, indicating that an increase in participation in these programs in one quarter increases FSP participation in the next quarter. However, the coefficient for the Medicaid variable was not statistically significant, and the WIC variable, while statistically significant, had a coefficient that was greater than one, a magnitude which seems too large (see discussion of the AFDC coefficient).

Fifth, we used a variable that equalled the cumulative number of LAWS and SAWS program participants who were granted resident status (lagged two quarters). We hypothesized that the increase in legalized aliens represents an increase in the number of individuals who could potentially collect food stamps, even though the LAWS program participants themselves are prohibited from receiving such benefits.[19] We found a positive coefficient for this variable that was statistically significant in one of the models. The coefficient ranged from .21 to .38 in the models reported in Table III.2 indicating an estimated increase of between 210 and 380 new FSP participants for each additional 1,000 LAWS and SAWS program participants.

Finally, we estimated a model (model 8) that included the main explanatory variables except for the AFDC variable. The argument for excluding this variable rests primarily on the

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[18]The estimates of the model which includes all these variables are not presented in this report. Table III.2 presents estimates of models which include the number of workers in the personal services industry.

[19]As mentioned in Chapter II, the U.S.-born children of LAWS program participants can receive food stamps.

view that the recent changes in the AFDC program (i.e., the expansion of AFDC-UP and the JOBS program) have not yet had an impact on AFDC participation. Since no other major changes in the AFDC program occurred during our estimation period, any effect of changes in AFDC should be captured by the other variables in the model, which themselves affect AFDC. The impact of this assumption was to increase the coefficient estimates for the number unemployed, Medicaid recipients, and WIC recipients but not for the LAWS and SAWS variable, suggesting that LAWS and SAWS program participants have had little impact on AFDC.

In summary, the national-level analysis suggests that unemployment, the recent legalization of resident aliens, and participation in other public assistance programs affect participation in the FSP. However, given the small number of time periods available for the national-level analysis, our estimates of the size of these effects varied considerably with the model specification.

C. STATE-LEVEL ANALYSIS

To the extent possible, we reexamine the findings on the national-level data here with state-level data. Table III.3 reports the results of this analysis. In general, the findings are similar to those found with the national-level data analysis; however, since the results are more stable than the national-level results, it is worth discussing them.

First, in the models that include the AFDC variable, the estimated effect of unemployment was quite stable; the coefficient suggests that every 1,000 additional unemployed individuals generates 392 to 472 additional FSP participants. The estimate changed little when we changed the error term specification.

Second, the coefficient estimate for the AFDC variable was also quite stable regardless of the estimation method. The coefficient implies that an increase of 1,000 AFDC recipients increases FSP participation by 1,040 to 1,235 individuals.

TABLE III.3

STATE-LEVEL REGRESSION ANALYSIS OF FSP PARTICIPATION

Explanatory Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
1. Number Unemployed	0.458 (0.014)	0.463 (0.020)	0.392 (0.021)	0.472 (0.023)	0.759 (0.021)	0.870 (0.018)	0.733 (0.025)	0.460 (0.021)
2. AFDC Recipients	1.235 (0.032)	1.169 (0.041)	1.040 (0.033)	1.173 (0.047)	--	--	--	1.072 (0.044)
3. Medicaid Recipients	--	0.228 (0.043)	0.295 (0.051)	0.193 (0.041)	0.401 (0.052)	0.461 (0.065)	0.363 (0.048)	0.031 (0.052)
4. WIC Recipients	--	-0.522 (0.073)	0.175 (0.098)	-0.882 (0.082)	0.381 (0.081)	1.879 (0.103)	-0.095 (0.089)	-0.332 (0.089)
5. LAWS and SAWS	--	0.169 (0.016)	0.042 (0.025)	0.286 (0.028)	0.273 (0.019)	0.038 (0.031)	0.400 (0.033)	0.246 (0.024)
Additional Impact After FY88.3								
6. Unemployed	--	--	--	--	--	--	--	0.166 (0.037)
7. AFDC	--	--	--	--	--	--	--	-0.071 (0.020)
8. Medicaid	--	--	--	--	--	--	--	0.264 (0.041)
9. WIC	--	--	--	--	--	--	--	-0.325 (0.070)
R^2	0.994	0.995	0.985	0.994	0.992	0.976	0.992	0.995
Error Term	Classical	Classical	Auto-regressive	Proportional	Classical	Auto-regressive	Proportional	Classical

NOTE: All models were estimated over the FY82.3 to FY90.2 period. All models included three quarterly dummy variables to control for seasonal fluctuations and all models were estimated with fixed effects for each state. Standard errors of the coefficient estimates are in parentheses.

Third, unlike the national-level estimates, the estimated effect of participation in Medicaid was also statistically significant in models 1 to 7. In the models that included the AFDC variable the estimate implies that an increase in 1,000 Medicaid recipients (categorically needy recipients who do not receive cash assistance) generates an increase of 193 to 295 FSP participants. The WIC recipient variable was also statistically significant in most of the models. However, because the sign of the coefficient varied with the estimation method, it is not clear what effect WIC participation really has on FSP participation.

Fourth, the estimated effect of the LAWS and SAWS variable, while statistically significant, varied considerably according to the estimation method. In the models that included the AFDC variable, the estimates suggest that every 1,000 LAWS or SAWS program participants who receive permanent resident status increase FSP participation by 42 to 286 individuals.

Fifth, as we found with the national-level analysis, the estimated effects of our explanatory variables increased (except for the LAWS and SAWS variable) when we assumed that participation in the AFDC program had no independent effect on FSP participation. In the models that excluded the AFDC variable, the estimates suggest that an increase of 1,000 unemployed individuals generates an increase of 733 to 870 FSP participants, and an increase of 1,000 Medicaid recipients generates an increase of 363 to 461 FSP participants. The coefficient estimate for the WIC variable continued to vary considerably in these models.

Finally, we estimated a model that permitted the impact on FSP participation of unemployment, AFDC, Medicaid, and WIC to differ before and after the beginning of FY88.3. The estimates of this model are presented under model 8 in Table III.3. The impact of each of these four factors before the beginning of FY88.3 is given by the respective coefficient from the first four rows. The impact of each of these factors after the beginning of FY88.3 can be calculated by adding its coefficient from the first four rows to the "additional impact" coefficient from rows 6 to 9. The estimates suggest that the impact of each factor changes significantly after

the beginning of FY88.3. Both state unemployment and the number of Medicaid recipients had a larger impact on FSP participation in the later period. But, changes in WIC and AFDC played a less important role in the later period. These results suggest that a structural shift occurred around the beginning of FY88.3--after the beginning of FY88.3 the relationship between FSP participation and unemployment, AFDC, Medicaid, and WIC is fundamentally different from the relationship in the earlier period. However, these results should be viewed as preliminary until we have experimented with different specifications of the error term and with different dates on which the structural shift may have occurred.

D. SUMMARY

The national and state-level models in this chapter indicate that changes in the number of unemployed individuals, the number of AFDC recipients, the number of Medicaid recipients (categorically needy recipients who do not receive cash assistance), and the number of newly legalized immigrants (LAWS and SAWS) help explain changes in the number of FSP participants. Estimates of the effect of WIC participation on FSP participation vary widely, ranging from positive to negative.

Our estimates of the magnitude of these relationships differed somewhat when we estimated the models with national or state-level data, but in most cases using alternative estimation strategies had relatively little effect on the magnitude of the estimated effects. Because the estimates based on state-level data appear to be more stable than those based on national-level data, we use these estimates later to assess the impact of recent changes in these variables on FSP participation.

IV. ANALYSIS OF HOUSEHOLD DATA ON FSP PARTICIPATION

In this chapter, we use household-level data from the Food Stamp Quality Control (QC) databases to analyze the causes of the increase in FSP participation. These household-level data allow us to examine (1) whether the increase in FSP participation was due to an increase in the number of households that entered the program or to an increase in the length of time spent in the program, and (2) whether the characteristics of households that enter the program changed over time.

We derived the QC databases from a national sample of food stamp cases selected randomly each month. The unit of observation in the QC databases is a FSP-participating household.[20] We examine data for FY86 through FY89.[21] Unfortunately, the QC data are not yet available for FY90, thus limiting our analysis to the earlier period of increases in FSP participation.

The databases contain the following information on a sample of households that participate in the FSP:

- The amount of food stamp benefits and deductions for each household, and whether the household received expedited service
- The date on which the household was certified for the program
- The income and assets of each household
- The demographic characteristics of each household
- The types of other public assistance benefits received by each household

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[20] A household is defined as a group of individuals who live together and purchase and prepare food together.

[21] The data come from the "full-year unedited" QC databases for FY86, FY87, FY88, and FY89.

The first section of this chapter examines the extent to which the recent increase in FSP participation was caused by an increase in the number of households that entered the program, rather than by an increase in the length of time that households spent in the program. The second section describes the changes in the characteristics of households that enter the program which occurred with the increase in FSP participation. We conclude with a brief summary.

A. CHANGES IN ENTRY INTO AND EXIT FROM THE FSP

The QC databases do not provide information on the length of time that each household spends in the program. But any change in the average length of time spent in the program will be reflected in changes in the number of households that leave the program. Although we cannot observe which households leave the FSP, we can calculate the number of households that leave the program.

We calculated the number of households that leave the program each month by using a simple identity: the change in the number of households that participate in the program is equal to the difference between the number of households that enter the program and the number of households that leave the program. We identified a household as entering the program if it was newly certified in the month in which it was sampled. We calculated the number of households that exited the program each month by subtracting the change in the number of participating households from the number of households that entered the program.

The monthly averages of the change in the number of households that participate in the FSP, the number of households that entered the program, and the number of households that exited the program are presented in Table IV.1. The figures in Table IV.1 represent population totals. We generated them from the QC sample by weighting each observation so that the weighted number of observations in each state was equal to the state caseload.

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TABLE IV.1

AVERAGE MONTHLY CHANGE IN THE NUMBER OF HOUSEHOLDS PARTICIPATING IN THE FSP AND AVERAGE MONTHLY NUMBER OF HOUSEHOLDS ENTERING AND EXITING THE PROGRAM

Fiscal Quarter	Average Monthly Change in Household Participation		Average Monthly Number of Households Entering FSP		Average Monthly Number of Households Exiting FSP	
	Average Over Quarter	Average Over Year	Average Over Quarter	Average Over Year	Average Over Quarter	Average Over Year
FY 86.1	33,865[1]		233,958[1]		200,093[1]	
FY 86.2	44,791		247,642		202,851	
FY 86.3	(62,087)[2]		236,501		298,588	
FY 86.4	(19,775)	(3,953)	235,502	238,805	255,277	242,758
FY 87.1	28,959		259,961		231,001	
FY 87.2	40,889		259,095		218,206	
FY 87.3	(71,049)		204,594		275,643	
FY 87.4	(60,012)	(15,303)	252,444	244,023	312,456	259,327
FY 88.1	19,587		251,684		232,097	
FY 88.2	87,347		270,083		182,737	
FY 88.3	(58,592)		226,576		285,168	
FY 88.4	(14,298)	8,511	250,299	249,661	264,597	241,150
FY 89.1	45,023		275,656		230,633	
FY 89.2	65,709		307,167		241,458	
FY 89.3	(31,502)		270,286		301,788	
FY 89.4	22,367	25,399	306,906	290,004	284,539	264,605

[1]Average taken over November and December only.

[2]Parentheses indicate a negative number.

SOURCE: Food Stamp Quality Control databases.

FSP participation by households follows a pattern similar to the pattern of FSP participation by individuals discussed in Chapter I. Throughout FY86 and FY87, participation by households followed a downward trend. This trend reversed itself in FY88.1--between FY88.1 and FY89.3, participation increased by 327,000 households (4.7 percent). The increase in participation by households of 4.7 percent between FY88.1 and FY89.3 exceeded the 2.6 percent increase in participation by individuals over the same period. Thus, average household size declined over the period.

The number of households that entered the FSP each month followed an upward trend between FY86 and FY89. The average number of households that entered the FSP increased by over 20 percent, from an average of 239,000 each month in FY86 to 290,000 in FY89. The proportion of all FSP-participating households that were newly certified also increased, from 3.4 percent in FY86.2 to 4.2 percent in FY89.2. The number of households entering the FSP is generally highest in the first two quarters of the fiscal year and lowest in the third and fourth quarters.

The number of households that left the program each month generally increased throughout FY86 and FY87. After dipping in the first half of FY88, the number of households that left the program again increased throughout the remainder of FY88 and FY89. The number of households leaving the FSP is generally highest in the third and fourth quarters of the fiscal year and lowest in the first and second quarters.

Over most of the period of increases in FSP participation, the increases were caused by an increase in the number of households that entered the program, and not by a reduction in the number of households that left the program. In fact, the average monthly number of households that left the program increased throughout the second half of FY89 and FY90. An exception is the period between FY88.1 and FY88.2, when the increase in household participation was caused

by both an increase in the number of households that entered the program and a reduction in the number of households that left the program.

B. THE CHARACTERISTICS OF HOUSEHOLDS THAT ENTERED THE FSP

An important reason for the increase in FSP participation was an increase in the number of entrants to the program. An examination of the characteristics of these entrants provides clues about the cause of the participation increase.

The characteristics of households that entered the FSP between FY86 and FY89 are shown in Tables IV.2 and IV.3. In addition, the tables show the change in the proportion of households with each characteristic between each consecutive year, and the test statistic associated with that change. A test statistic greater than 1.96 denotes a change which differs from zero at the 95 percent level of confidence.

Eight significant changes in the characteristics of households that entered the program coincided with the increase in FSP participation between FY88 and FY89.

1. A reduction in the size of households caused by a reduction in the proportion of households with children, and an increase in households that contain only a single adult and no children

2. An increase in the number of households with no adult food stamp recipients, i.e., households in which the only food stamp recipients are under 18. These include households with a household head under 18, households with foster children, and households in which an adult participates in the LAWS program.

3. An increase in the proportion of households with zero net income and an increase in the proportion of households whose gross income is above 131 percent of the poverty level

4. An increase in the proportion of Hispanic heads of household

TABLE IV.2

CHARACTERISTICS OF HOUSEHOLDS ENTERING THE FSP
BETWEEN FY86 AND FY89

Characteristic	FY86 Number (Thousands)	FY86 Percent	FY87 Number (Thousands)	FY87 Percent	FY88 Number (Thousands)	FY88 Percent	FY89 Number (Thousands)	FY89 Percent	Change 87-86 Percent	Change 87-86 Standard Error	Change 87-86 Test Statistic	Change 88-87 Percent	Change 88-87 Standard Error	Change 88-87 Test Statistic	Change 89-88 Percent	Change 89-88 Standard Error	Change 89-88 Test Statistic
Households With																	
Earnings	72	29.8%	70	28.8%	73	29.1%	82	28.3%	-1.0%	1.7%	-0.60	0.3%	1.6%	0.17	-0.8%	1.6%	-0.49
AFDC	41	16.8%	39	15.9%	55	22.1%	55	19.0%	-0.9%	1.3%	-0.66	6.2%	1.4%	4.42	-3.1%	1.4%	-2.20
Medicaid	196	81.1%	198	81.2%	190	76.4%	235	81.0%	0.0%	1.4%	0.03	-4.7%	1.5%	-3.22	4.6%	1.4%	3.19
Zero Gross Income	66	27.1%	68	28.0%	73	29.2%	92	31.8%	0.8%	1.6%	0.51	1.2%	1.6%	0.75	2.6%	1.6%	1.60
Zero Net Income	106	44.0%	110	44.9%	110	44.1%	141	48.6%	0.9%	1.8%	0.50	-0.8%	1.8%	-0.46	4.6%	1.7%	2.61
Expedited Service	53	22.0%	50	20.6%	66	26.4%	87	29.9%	-1.4%	1.5%	-0.96	5.8%	1.5%	3.78	3.5%	1.6%	2.25
Households by Gross Income as % of Poverty																	
0%	66	27.1%	68	28.0%	73	29.2%	92	31.8%	0.8%	1.6%	0.50	1.2%	1.6%	0.73	2.6%	1.6%	1.62
1-50%	77	31.9%	72	29.4%	69	27.5%	76	26.2%	-2.5%	1.7%	-1.49	-1.9%	1.6%	-1.18	-1.3%	1.6%	-0.86
51-100%	80	33.2%	86	35.1%	88	35.3%	98	32.6%	1.9%	1.7%	1.10	0.2%	1.7%	0.09	-2.7%	1.7%	-1.62
101-130%	19	7.7%	17	7.1%	20	7.9%	24	8.3%	-0.6%	1.0%	-0.61	0.8%	1.0%	0.84	0.4%	1.0%	0.38
131%+	0	0.0%	1	0.4%	0	0.1%	3	1.2%	0.3%	0.2%	2.20	-0.2%	0.2%	-1.40	1.1%	0.3%	3.85
Households by Level of Food Stamp Benefit																	
<=$10	8	3.2%	8	3.2%	7	2.7%	6	2.1%	-0.0%	0.6%	-0.08	-0.5%	0.6%	-0.84	-0.5%	0.5%	-1.03
11-25	15	6.1%	15	6.3%	15	6.1%	15	5.1%	0.2%	0.9%	0.28	-0.2%	0.9%	-0.26	-1.0%	0.8%	-1.22
26-50	32	13.4%	33	13.8%	26	10.6%	35	12.1%	0.2%	1.2%	0.18	-3.0%	1.2%	-2.52	1.5%	1.1%	1.35
51-75	41	17.2%	39	16.1%	41	16.3%	46	16.0%	-1.1%	1.4%	-0.81	0.2%	1.3%	0.18	-0.3%	1.3%	-0.23
76-100	40	16.6%	40	16.3%	42	16.9%	52	17.9%	-0.3%	1.3%	-0.22	0.6%	1.3%	0.45	1.0%	1.3%	0.73
101-150	46	19.2%	46	18.9%	40	16.2%	45	15.4%	-0.3%	1.4%	-0.21	-2.7%	1.4%	-1.94	-0.8%	1.3%	-0.62
151-200	25	10.3%	25	10.3%	36	14.5%	40	13.9%	0.0%	1.1%	0.03	4.2%	1.2%	3.53	-0.6%	1.2%	-0.47
201+	34	14.1%	37	15.3%	42	16.7%	50	17.4%	1.3%	1.3%	0.97	1.3%	1.3%	1.02	0.7%	1.3%	0.56
Households With																	
Children	146	60.6%	149	61.2%	157	63.1%	166	57.2%	0.6%	1.8%	0.33	2.0%	1.8%	1.12	-5.9%	1.7%	-3.46
Elderly	21	8.6%	20	8.4%	17	6.7%	22	7.7%	-0.2%	1.0%	-0.19	-1.6%	1.0%	-1.70	0.9%	0.9%	1.01
Alien	2	1.0%	2	1.0%	3	1.0%	3	1.1%	-0.0%	0.4%	-0.01	0.0%	0.4%	0.06	0.1%	0.4%	0.23
Single Nonelderly Adults	61	25.2%	63	25.7%	63	25.4%	80	28.1%	0.5%	1.6%	0.33	-0.4%	1.6%	-0.23	2.7%	1.5%	1.73
Single Elderly	12	5.1%	11	4.5%	9	3.8%	13	4.5%	-0.6%	0.8%	-0.83	-0.7%	0.7%	-0.90	0.7%	0.7%	1.02
Single Adults w/Kids	68	28.0%	79	32.3%	90	36.4%	95	33.4%	4.3%	1.7%	2.58	4.1%	1.7%	2.39	-3.0%	1.7%	-1.79
Multiple Adults w/Kids	73	30.1%	66	27.1%	63	25.5%	62	21.7%	-3.0%	1.6%	-1.85	-1.6%	1.6%	-0.99	-3.8%	1.5%	-2.54
Multiple Adult w/o Kids	22	9.1%	21	8.5%	18	7.3%	26	9.2%	-0.6%	1.0%	-0.57	-1.2%	1.0%	-1.24	1.9%	1.0%	2.01
No Adults	6	2.5%	5	1.9%	4	1.7%	9	3.1%	-0.6%	0.5%	-1.05	-0.3%	0.5%	-0.60	1.4%	0.5%	2.71

TABLE IV.2 (continued)

Characteristic	FY86 Number (Thousands)	FY86 Percent	FY87 Number (Thousands)	FY87 Percent	FY88 Number (Thousands)	FY88 Percent	FY89 Number (Thousands)	FY89 Percent	Change 87-86 Percent	Change 87-86 Standard Error	Change 87-86 Test Statistic	Change 88-87 Percent	Change 88-87 Standard Error	Change 88-87 Test Statistic	Change 89-88 Percent	Change 89-88 Standard Error	Change 89-88 Test Statistic
Households by Household Size																	
1	77	31.7%	76	31.0%	74	29.5%	96	33.1%	-0.7%	1.7%	-0.40	-1.5%	1.7%	-0.90	3.5%	1.6%	2.17
2	46	19.2%	51	20.8%	58	23.3%	69	23.7%	1.6%	1.5%	1.07	2.5%	1.5%	1.70	0.4%	1.5%	0.27
3	49	20.5%	50	20.4%	54	21.8%	60	20.7%	-0.0%	1.5%	-0.03	1.4%	1.5%	0.94	-1.1%	1.4%	-0.78
4	34	14.1%	37	15.0%	33	13.3%	34	11.7%	0.9%	1.3%	0.69	-1.7%	1.3%	-1.33	-1.6%	1.2%	-1.40
5	21	8.6%	19	7.9%	20	7.9%	19	6.7%	-0.7%	1.0%	-0.74	-0.0%	1.0%	-0.01	-1.2%	0.9%	-1.32
6+	14	5.8%	12	4.8%	10	4.1%	12	4.1%	-1.0%	0.8%	-1.19	-0.7%	0.7%	-0.99	0.0%	0.7%	0.03
Gender of Household Head																	
Male	91	38.3%	90	37.4%	83	33.7%	100	34.8%	-0.9%	1.7%	-0.51	-3.8%	1.7%	-2.22	1.2%	1.7%	0.71
Female	146	61.7%	150	62.6%	164	66.3%	187	65.2%	0.9%	1.7%	0.51	3.8%	1.7%	2.22	-1.2%	1.7%	-0.71
Gender of Adult Participants*																	
Male	138	39.9%	130	38.6%	130	38.7%	147	38.5%	-1.3%	1.5%	-0.87	1.0%	1.5%	0.07	-0.2%	1.5%	-0.14
Female	208	60.1%	207	61.4%	206	61.3%	234	61.5%	1.3%	1.5%	0.87	-1.0%	1.5%	0.07	0.2%	1.5%	0.14
Race of Household Head																	
White	141	60.3%	140	58.6%	137	56.0%	155	54.4%	-1.7%	1.8%	-0.93	-2.6%	1.8%	-1.42	-1.6%	1.8%	-0.92
Black	63	27.0%	64	26.8%	75	30.5%	83	29.2%	-0.2%	1.6%	-0.12	3.6%	1.6%	2.20	-1.3%	1.6%	-0.77
Hispanic	24	10.0%	28	11.7%	26	10.5%	40	13.9%	1.6%	1.1%	1.42	-1.1%	1.1%	-1.00	3.4%	1.2%	2.92
Other	6	2.7%	7	2.9%	7	3.0%	7	2.5%	0.2%	0.6%	0.40	0.1%	0.6%	0.14	-0.5%	0.6%	-0.86
Employment Status of Household Head																	
Employed Part-Time	15	6.2%	14	5.9%	14	5.6%	16	6.2%	-0.3%	0.9%	-0.37	-0.3%	0.9%	-0.36	0.6%	0.8%	0.76
Employed Full-Time	27	11.7%	30	12.8%	26	10.7%	29	11.7%	1.1%	1.2%	0.87	-2.1%	1.2%	-1.75	0.9%	1.1%	0.83
Employed--other	2	0.7%	2	0.9%	2	1.0%	2	1.0%	0.2%	0.3%	0.55	0.1%	0.4%	0.25	0.0%	0.3%	0.00
Unemployed	88	38.0%	85	36.1%	84	34.6%	**	--	-1.9%	1.8%	-1.05	-1.6%	1.7%	-0.91	--	--	--
Not Employed	101	43.3%	104	44.2%	117	48.1%	150	59.6%	1.0%	1.8%	0.52	3.9%	1.8%	2.13	11.5%	1.8%	6.55
Total Number of Entering Households	242,000		244,000		250,000		290,000										
Sample Size	2,860		2,681		2,952		3,035										

SOURCE: Food Stamp Quality Control databases.

NOTE: Sample sizes used in calculating individual standard errors may differ due to missing data.

* Data on participants are by person rather than by household. Sample sizes are 4,101, 3,683, 4,019, and 4,059 for 1986-1989 respectively.

** The number of household heads counted as unemployed in the last two quarters of FY89 is extremely low and hence viewed as incorrect.

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TABLE IV.3

CHARACTERISTICS OF HOUSEHOLDS ENTERING THE FSP
BETWEEN FY86 AND FY89

Characteristic	FY86	FY87	FY88	FY89	Change 87-86			Change 88-87			Change 89-88		
	Value	Value	Value	Value	Value	Standard Error	Test Statistic	Value	Standard Error	Test Statistic	Value	Standard Error	Test Statistic
Average Values													
Gross Income	455	466	455	465	11.0	13.95	0.79	-11.0	13.77	-0.80	9.9	13.46	0.73
Net Income	314	323	293	311	8.8	11.86	0.74	-29.4	11.46	-2.56	17.5	11.25	1.56
Total Deductions	141	143	162	154	2.1	6.38	0.34	18.4	6.65	2.76	-7.6	6.52	-1.17
Food Stamp Benefit	110	112	120	121	2.5	2.86	0.88	7.8	2.98	2.62	0.8	2.89	0.27
Household Size	2.7	2.7	2.6	2.5	-0.0	0.06	-0.50	-0.0	0.06	-0.87	-0.1	0.06	-1.97
Sample Size	2,860	2,681	2,952	3,035									

SOURCE: Food Stamp Quality Control databases

NOTE: Sample sizes used in calculating individual standard errors may differ due to missing data.

TABLE IV.3

CHARACTERISTICS OF HOUSEHOLDS ENTERING THE FSP
BETWEEN FY86 AND FY89

	FY86	FY87	FY88	FY89	Change 87-86			Change 88-87			Change 89-88		
Characteristic	Value	Value	Value	Value	Value	Standard Error	Test Statistic	Value	Standard Error	Test Statistic	Value	Standard Error	Test Statistic
Average Values													
Gross Income	455	466	455	465	11.0	13.95	0.79	-11.0	13.77	-0.80	9.9	13.46	0.73
Net Income	314	323	293	311	8.8	11.86	0.74	-29.4	11.46	-2.56	17.5	11.25	1.56
Total Deductions	141	143	162	154	2.1	6.38	0.34	18.4	6.65	2.76	-7.6	6.52	-1.17
Food Stamp Benefit	110	112	120	121	2.5	2.86	0.88	7.8	2.98	2.62	0.8	2.89	0.27
Household Size	2.7	2.7	2.6	2.5	-0.0	0.06	-0.50	-0.0	0.06	-0.87	-0.1	0.06	-1.97
Sample Size	2,860	2,681	2,952	3,035									

SOURCE: Food Stamp Quality Control databases

NOTE: Sample sizes used in calculating individual standard errors may differ due to missing data.

7. An increase in the proportion of Medicaid participants

8. A reduction in the proportion of AFDC participants

In the remainder of this section, we discuss how these changes and the lack of changes in other characteristics of the entrants support or refute many of the various explanations for the increase in FSP participation.

1. Economic, Demographic, and Sociological Changes

The proportion of all household heads who were characterized as "not employed"--students, homemakers, those who are incapacitated, and those who, for other reasons, do not seek employment--increased from 48.1 percent in FY88 to 59.6 percent in FY89. This increase is consistent with the hypothesis that an increase in the number of "discouraged" workers has increased FSP participation. But other factors, such as an increase in the number of students, could also be responsible for this increase.

No conclusive evidence exists to support the hypothesis that an increase in the number of working poor increased FSP participation. No statistically significant change occurred in the proportion of households with earnings, or the proportion of household heads who were employed. However, between FY88 and FY89, the number of households with earnings entering the FSP increased from 73,000 to 82,000.

No increase in the proportion of entering households with female heads occurred between FY88 and FY89. The proportion of female-headed households increased from 61.7 percent in FY86 to 66.3 percent in FY88. But the increase in FSP participation between FY88 and FY89 was accompanied by a reduction in the proportion of female-headed households of 1.2 percentage points--although this change does not differ statistically from zero.

Two pieces of evidence support the hypothesis that the IRCA immigration legislation was an important factor in the increase in FSP participation. First, households headed by Hispanics

represented a higher proportion of all entering households in FY89 than in the preceding three years. The proportion of Hispanic household heads increased from 10.5 percent in FY88 to 13.9 percent in FY89--an increase of 14,000 Hispanic household heads. Most of the workers who were granted permanent residence under IRCA were Hispanic. Second, households that did not contain an adult food stamp recipient represented a higher proportion of all entering households in FY89 than in FY88. The proportion of all entering households that did not contain an adult food stamp recipient increased from 1.7 percent (4,000 households) in FY88 to 3.1 percent (9,000 households) in FY89. This increase is consistent with the hypothesis that, once legal, the workers who were granted resident status under the LAWS program were more likely to apply for food stamps for their U.S.-born children.

The evidence to support the hypothesis that the recent increases in FSP participation were caused by changes in immigration legislation are persuasive, but not conclusive. Neither the number, nor the proportion, of households that contained an alien increased between FY88 and FY89. Also, much of the increase in FSP participation occurred in states with large Hispanic populations--for example, California. Thus, it is unclear whether changes in participation in these states were caused by the fact that more Hispanics entered the program, or whether other factors, specific to those states, caused more households, including those headed by Hispanics, to enter the program.

2. Changes in the FSP

Between FY88 and FY89, the proportion of household entrants that received expedited service--benefits within 5 days after initial application--increased from 26.4 percent to 29.9 percent. The number of households receiving expedited service increased from 66,000 to 87,000. This may reflect an increase in the number of homeless entering the FSP, the number of households with high shelter costs entering the FSP, or the number of households with little or

no income (the number of households with zero net income increased by 31,000 between FY88 and FY89). However, we have no evidence that an increase in the availability of expedited service caused the increase in participation.

The QC data do not support the hypothesis that an increase in the length of the certification period contributed to the increase in FSP participation. Two factors contradict this hypothesis. First, the average certification period for all FSP-participating households fell from 9.8 months in FY88 to 9.7 months in FY89.[22] Second, the number of households that left the program increased between FY88 and FY89.

3. Changes in Other Public Assistance Programs

The QC data provide contradictory evidence about whether the expansion of Medicaid eligibility was an explanatory factor in the increase in FSP participation. The proportion of households that entered the FSP which also participated in Medicaid increased from 76.4 percent in FY88 to 81.0 percent in FY89. Between FY88 and FY89, an additional 45,000 households receiving Medicaid entered the FSP. Yet neither the proportion of women who entered the program nor the proportion of households that entered the FSP with children changed, even though the changes in the Medicaid program affected primarily women and children. Similarly, although no data are available on the number of FSP households that participate in WIC, the absence of an increase in women and children who entered the program suggests that expansions in the WIC program were not an important reason for the increase in FSP participation.

The increase in AFDC participation between FY88 and FY89 was not mirrored by an increase in the proportion of AFDC-recipient households that entered the FSP. Although the number of AFDC-recipient households that entered the program did not change, the proportion of AFDC-recipient households that entered the FSP declined from 22.1 percent in FY88 to 19.0

[22] These figures are not shown in Table IV.2 or Table IV.3.

percent in FY89. Between FY87 and FY88, the proportion of entering AFDC-recipient households increased by over 6 percentage points, but this increase did not coincide with the increase in FSP participation.

C. SUMMARY

The increase in FSP participation between FY88 and FY89 was due primarily to an increase in the number of households that entered the program, and not to an increase in the length of time spent on the program. In fact, the average number of households that entered the program each month generally increased between FY86 and FY89.

Our analysis with the QC data supports the hypothesis that the changes in immigration legislation contributed to the increase in FSP participation. Evidence from the QC data does not clearly support any of the other explanations. The QC data contradict the following explanations for the increase: (1) increases in female-headed households, (2) increases in the length of certification periods, and (3) increases in participation in AFDC. Evidence for the explanations that increases in the number of working poor and expansions in Medicaid eligibility caused the increase in FSP participation is mixed.

While these results provide clues about the reason for the recent increase in participation, they should be treated with caution. Three qualifications should be recognized. First, if many factors contributed to the increase in participation, we may not be able to identify those factors by examining the composition of entering households. For example, if expansions in the AFDC program caused some, but not most, of the increase in participation, then the proportion of AFDC-recipient households that entered the FSP may not increase and could even fall. Second, we do not have QC data for the first half of FY90, when much of the increase in participation occurred and when increased unemployment appeared to be a particularly important factor. We propose expanding this analysis to include data for the first half of FY90 when they become

available. Third, the nationwide analysis of the characteristics of households that entered the FSP could hide important variations by state. However, the number of observations in the sample are too few to discern small changes over time in the characteristics of households at the state level. In future work, we propose examining the data aggregated by broad geographical region and by sets of states categorized by similar time-patterns of FSP participation.

V. SYNTHESIS AND CONCLUSIONS

This chapter draws together the analyses in the previous chapters to present our findings to date on the reasons for the recent rise in FSP participation. These findings are based on our initial analyses of aggregate and quality control data, and, for that reason, should be viewed as preliminary. In future work, which we discuss in the next chapter, we expect to expand these analyses. We also expect to conduct interviews with state and local administrators to obtain information on changes in the characteristics of new entrants to the program, FSP administrative procedures and benefits, and other features of related programs such as AFDC, and their perceptions of factors that have contributed to recent changes in FSP participation.

In Chapter I we presented data which showed that participation in the FSP increased by roughly 1 million individuals between FY89.2 and FY90.2. This growth in participation has been fairly widespread across the United States. Forty-four states and the District of Columbia experienced a growth in participation between FY89.2 and FY90.2. However, the size and timing of this increase have varied considerably by state. Three states--Texas, California, and Florida--accounted for nearly half of the increase in participation between FY89.2 and FY90.2. Participation has been growing in these and a few other states for several years, while other states have experienced an upturn in participation as recently as the first quarter of FY90.

A number of factors may have contributed to the increase in FSP participation. These include economic factors, such as increases in unemployment and changes in the availability of low-wage jobs; demographic changes, such as an increase in the number of female-headed households; and changes in the number of eligible FSP households generated by the recent IRCA legislation (the LAWS and SAWS programs) that affects undocumented aliens who reside in the United States. Recent changes in the Food Stamp Program, such as increases in the value of benefits, may also have contributed to the rise in participation. Changes in other public assistance

programs, such as the recent expansions in Medicaid eligibility for pregnant women and children and the wider availability of WIC benefits, may have brought more individuals into the public assistance system and hence into the FSP.

In the analysis conducted to date we have been able to examine the effect of some of these potential explanations for the increase in FSP participation. Specifically, we have been able to examine the influence of several economic and demographic factors, as well as the legalization of undocumented aliens. We have also examined the effect of changes in recipients in the AFDC, Medicaid, and WIC programs, but have not been able to examine directly the effect of changes in the FSP.

A first step in assessing the extent to which we can explain the recent rise in FSP participation is to examine data on changes in key explanatory variables to determine whether these variables have moved in ways that may explain the increase. Table V.1 provides national data on changes in the major variables used in the regression models examined in Chapter III.[23] Changes for two time periods--FY88.2 to FY90.2 and FY89.2 to FY90.2--are reported. An examination of the data in the table indicates that:

- Increases in unemployment are unlikely to explain much of the increase in FSP participation. Unemployment declined by 314,000 over the two-year period, although it rose last year (by 163,000).
- The number of AFDC recipients rose substantially, with the increase occurring in the last year. This large increase in recipients under the regular AFDC program is clearly correlated with the increase in FSP participation.

[23]The variables are lagged in the same way as they were in the regressions. For example, the unemployment data are lagged by one quarter, so that the change from FY88.2 to FY90.2 is really the change from FY88.1 to FY90.1.

TABLE V.1

CHANGES IN FSP PARTICIPATION AND KEY EXPLANATORY VARIABLES:
NATIONAL DATA

(thousands)

	FY88.2	FY89.2	FY90.2	Change FY88.2 to FY90.2	Change FY89.2 to FY90.2
Food Stamp Program Participation	18,923	18,907	19,972	1,049	1,065
Number of Unemployed (lagged one quarter)	6,666	6,189	6,352	-314	163
AFDC Recipients	10,785	10,753	11,143	358	390
Medicaid Recipients[a] (lagged one quarter)	2,873	2,873	3,867	994	994
WIC Recipients (lagged one quarter)	3,319	3,745	4,316	997	571
LAMS and SAMS (lagged two quarters)	642	1,888	2,111	1,469	223

[a]Medicaid recipients are categorically needy recipients not receiving cash assistance.

- The number of Medicaid recipients who are categorically needy but not receiving cash assistance did not rise between FY88 and FY89, but this category of Medicaid recipient is projected to rise substantially between FY89 and FY90.[24] If this increase is occurring, it is likely to affect FSP participation.

- The number of WIC recipients also rose during the last two years. This increase might also have contributed to the increase in FSP participation.

- A substantial number of aliens were granted resident status during the last two years as part of the LAWS and SAWS programs. This increase in the legalized population may also have had an impact on FSP participation.

In order to assess the impact of these changes in key explanatory variables on FSP participation, we multiplied the changes in the explanatory variables by our regression model coefficients and compared the results with the overall change in FSP participation. The purpose of this exercise was to indicate the degree to which any one factor may have contributed to the rise in participation, as well as the extent to which the overall increase can be explained by our models. Table V.2 reports the results of these calculations for the national change in participation over the last year. We provide a high and a low estimate based on the range of coefficient estimates that we found.[25] We used the state-level results for these estimates, since we believe that they provide more stable estimates of the coefficients than do the national-level results. We also used the coefficients in the models that included AFDC as an explanatory variable. In the text we comment on the implications of the models that excluded the AFDC variable. We do not provide estimates for the WIC program, since our analysis of its effect on FSP participation was inconclusive.

[24]As noted previously, Medicaid data for FY90 are not yet available. We have used FY90 projections in our analysis.

[25]The table footnotes indicate which specific coefficient estimates were used.

TABLE V.2

THE EFFECT OF CHANGES IN KEY EXPLANATORY VARIABLES
ON FSP PARTICIPATION:
FY89.2 TO FY90.2

	Predicted Change in the Number of FSP Participants (thousands)	Percent of Change in FSP Participation
Actual Change in FSP Participation	1,065	100.0
Number of Unemployed	64 to 102	6.0 to 9.6
Medicaid Recipients	191 to 293	17.9 to 27.5
LAWS and SAWS	9 to 63	0.9 to 5.9
Change in FSP Participation Explained by Unemployment, Medicaid, and LAWS and SAWS	264 to 458	24.8 to 43.0
AFDC Recipients	390 to 457	36.6 to 42.9
Total Explained Change in FSP Participation	654 to 915	61.4 to 85.9

NOTE: The estimates in this table were computed by multiplying the change in the explanatory variable reported in Table V.1 by the estimates of the effect of each variable. The coefficient estimates were taken from state-level models 2, 3, 4, and 8 in Table III.3.

An examination of the results in Table V.2 indicates that, overall, the four main explanatory variables included in the table explain 61 to 86 percent of the increase in FSP participation that occurred in the last year. By variable, the results suggest that:

- The change in unemployment explains some of the change in FSP participation (6 to 10 percent), but this factor clearly does not account for most of the change.

- The large increase in AFDC recipients in the last year appears to be the key variable that is correlated with the increase in FSP participation. This variable appears to explain 37 to 43 percent of the increase.

- The projected increase in Medicaid recipients also appears to be an important factor, explaining 18 to 28 percent of the increase in FSP participation.

- The recent legalization of undocumented aliens under the LAWS and SAWS programs appears to explain relatively little of the increase in FSP participation in the last year (1 to 6 percent). However, this result is due partially to the fact that our model assumes that an increase in legalized immigrants affects food stamp participation with a two-quarter lag. If we used a longer lag, we would attribute a larger share of the last year's increase in participation to this factor. Since our models did not enable us to determine the best lag for this variable, we should focus solely on the effect of the LAWS and SAWS programs over a several-year period, rather than to try to estimate its effect in any one year. Using a two-year period and the average of our regression coefficients, our results suggest that the newly legalized aliens accounted for 26 percent of the increase in FSP participation.

These findings suggest that three factors--the expansion of Medicaid, increased unemployment, and the legalization of undocumented aliens under IRCA--explained between 25 and 43 percent of the increase in FSP participation experienced in the last year. The findings also suggest that the increase in AFDC participation was an important factor. However, since we did not identify any major changes in the AFDC program that were expected to cause large increases in AFDC participation during the last year, this finding does not really explain the rise

in FSP participation.[26] Rather, it suggests that we should explore the reasons for the increase in AFDC recipients.

Table V.3 shows the estimated effect of key explanatory variables on FSP participation for the 10 states that showed the largest increase in FSP participation in the last year.[27] The results show some interesting regional patterns. First, the expansion of Medicaid appears to have been quite important in some states--Arizona, Florida, New Jersey, Pennsylvania, and Texas--but it appears that the program grew little if at all in the other states. Florida and Texas are two of the three states that had a large increase in the income threshold for pregnant women and infants since 1988 (see Table II.2).

Second, increased unemployment was a key contributing factor toward the increase in FSP participation in the northern and eastern states--New York, Massachusetts, Michigan, New Jersey, New York, and Pennsylvania. In some of these states, New York in particular, it was clearly the major explanatory factor for the rise in FSP participation. In the western and southern states, increased unemployment was much less important in explaining the rise in FSP participation. In fact, unemployment declined in Arizona and Texas during the last year.

Third, the legalization of aliens under IRCA was most important as an explanatory factor in California, a state with roughly half of all the LAWS and SAWS applicants granted resident status. This factor also appears to have had some effect in Arizona, Florida, and Texas.

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[26]The only major recent changes in the AFDC program itself are the creation of the JOBS program and the expansion of AFDC-UP to all states. While the JOBS program provides some additional benefits to AFDC participants that may increase the attractiveness of AFDC, its purpose is to increase the likelihood that recipients leave the AFDC rolls. Moreover, this program and the expansion of AFDC-UP are just now being implemented. For these reasons, they are unlikely to have accounted for the rise in AFDC participation experienced in the last year.

[27]As shown in the table, the procedure for calculating the effect of the explanatory variables can lead to the anomalous situation that more than 100 percent of the change in FSP participation is "explained." One should view the results as indicating the relative importance of the explanatory variables in each state.

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TABLE V 3

Finally, a concomitant increase in AFDC participation occurred in all but two of the states that experienced a large increase in FSP participation. In these two states--New York and Pennsylvania--the number of AFDC recipients declined over the last year. In summary, our preliminary findings from the aggregate data suggest that three factors--the expansion of the Medicaid program, increased unemployment, and the legalization of undocumented aliens under IRCA--contributed to the increase in FSP participation. The importance of each of these factors, and the extent to which the three factors explain the increase in FSP participation, varies by state.

Our preliminary analysis of the household-level QC data also provides some supporting evidence for the hypotheses that IRCA legislation and the expansion of the Medicaid program contributed to the increase in FSP participation. The household-level data indicate that much of the increase in participation is due to an increase in the number of entrants to the program, rather than to an increase in the length of time that households spent in the program. This finding supports the IRCA and Medicaid hypotheses, since they rest on the notion that new individuals are entering the FSP. Some of the data on the characteristics of FSP entrants also provide some evidence to support these hypotheses--we found that a larger percentage of recent entrants are in households headed by Hispanic persons and households containing no adult food stamp recipients (supporting the IRCA hypothesis), and that a larger proportion of recent entrants received Medicaid. However, the findings from the household-level data should be interpreted cautiously, since we have not yet examined QC data for FY90.

The increase in FSP participation was strongly correlated with the increase in AFDC participation. But, since the recent changes in the AFDC program have not yet been implemented on a widespread scale, it is unlikely that increases in AFDC caused the increase in FSP participation. Instead, factors which caused the increase in FSP participation were probably also responsible for the increase in AFDC.

It is unlikely that the expansion of the Medicaid program, changes in unemployment, and IRCA legislation explain the entire increase in FSP participation. Other factors, such as changes in the economy that are not reflected in the unemployment rate, along with demographic and sociological changes, changes in the FSP, and the expansion of WIC, might have contributed to the increase in FSP participation. But, we do not have enough data available on these factors to enable us to evaluate their role, or the data fail to provide strong evidence for their importance.

In this report our analysis has focused on explaining the increase in FSP participation between FY89.2 and FY90.2. But many of the states with large absolute increases in participation over this period have experienced steady increases in participation over the past three or four years. While long-term trends in economic or demographic factors are unlikely to have contributed to the sudden increase in FSP participation in some states during the past year, these factors may explain longer-term trends in FSP participation.

The results in this report are preliminary. We have been unable to pinpoint the causes of the recent increase, and, hence, we can not predict future trends in FSP participation. Moreover, available evidence on the magnitude of the effects and the process by which Medicaid expansions, increased unemployment, and the legalization of undocumented aliens under IRCA have led to the increase in FSP participation is relatively weak. A further investigation of the causes of the increase in FSP participation is clearly warranted.

VI. FUTURE WORK

In this chapter we describe further research that we propose undertaking to supplement our analysis in Chapters II, III, and IV of this report. This research will entail (1) extending the analysis of the aggregate data discussed in Chapter III, (2) performing further analysis of household data from the Food Stamp Program Quality Control (QC) databases, (3) conducting a survey of state and county directors of the FSP and state directors of other public assistance programs, and (4) analyzing whether the increase in participation occurred as a result of changes in the number of eligibles or changes in the participation rate using data from a large-scale household survey.

A. FURTHER ANALYSIS OF AGGREGATE DATA

Our analysis of the aggregate data can be extended by:

- Estimating the proportion of longer-term changes in FSP participation, for example changes over the past three of four years, that can be explained by unemployment, expansions in Medicaid, and the IRCA legislation.
- Experimenting with specifications of the model that allow the impact on FSP participation of the explanatory variables to change over time.
- Including other explanatory variables in the regression models. Possible candidates for inclusion include state population, food prices, employment in low-wage industries, and participation in other public assistance programs such as SSI, if they can be obtained by state or region.
- Using data on the number of Medicaid recipients in categories other than those who are categorically needy and do not receive cash assistance.
- Estimating the regression model separately for two categories of FSP participants: (1) those who receive cash assistance from other programs, and (2) those who do not receive any cash assistance. This allows us to determine whether the various factors differ in their impact on the number of FSP participants in each of these categories.
- Experimenting with alternative specifications and estimation techniques.

The analysis presented in Chapter III found that AFDC participation was one of the most important explanatory variables for FSP participation. Since we did not observe any major changes in the AFDC program, the causes of the increase in AFDC participation are elusive. A better understanding of the reasons for the increase in AFDC participation may shed light on the reasons for the increase in FSP participation. We will adopt two research strategies to investigate the causes of the increase in AFDC participation. First, we will investigate whether changes in the AFDC program (other than the introduction of the JOBS and AFDC-UP programs) can cause the increase in participation. For example, an increase in the real value of benefits could cause an increase in AFDC participation. Second, we will estimate regression models similar to those reported in Chapter III in which we will use AFDC participation, rather than FSP participation, as the dependent variable.

B. FURTHER ANALYSIS OF THE HOUSEHOLD DATA

To date, we have used household-level data from the QC databases for FY86, FY87, FY88, and FY89, but since much of the growth in FSP participation occurred in early FY90 it would be useful to extend the analysis to FY90 when the data become available.

In addition, further work can be done with the FY86 through FY89 data sets. This work will entail examining the characteristics of the ongoing caseload over time. It may also be illuminating to compare the characteristics of entrants across different groups of states. States may be grouped according to their time-pattern of participation (identified in Chapter I), or by broad geographical region. In addition, we can assess whether the characteristics of particular groups of entrants--such as households with earnings--changed over time. However, the usefulness of this analysis of separate groups of households will be limited by the relatively small number of households in each group.

C. SURVEY OF STATE PROGRAM ADMINISTRATORS

We will conduct a telephone interview survey with about 15 state FSP directors, two or three county FSP directors in each of the 15 states, state directors of Medicaid, WIC, and AFDC, and the directors of relevant advocacy groups. The interviews will collect data on the FSP program and other assistance programs that are not available from other sources. The data collected will be both quantitative and qualitative and will be used to conduct case studies of the increase in FSP participation in the selected states. In addition, we expect that FSP administrators will provide us with useful insights about the causes of the increase in FSP participation in their states.

The survey will request the following information from state and county FSP directors:

- What factors do they believe were responsible for the changes in the caseload size?
- Has the caseload size changed more dramatically in certain areas of the state or counties than in others? What are those areas or counties?
- Have changes in the size of the food stamp caseload been caused primarily by changes in the number of newly certified cases or by changes in the duration of spells of receipt?
- Do the characteristics of new applicants differ now from what they were before the caseload size began to change?
- Have changes been made to program operations, such as outreach efforts or longer office hours, that might have contributed to the change in the caseload size?

Similar information will be obtained from the directors of advocacy groups for low-income persons. The survey will also obtain more limited information on Medicaid, WIC, and AFDC from the state directors of those programs. The survey will collect the following information from the directors of other public assistance programs:

- Recent state and county trends in program caseloads

- Changes in program operations and other factors that may explain the trends in program caseloads
- Referrals to the FSP

The fifteen states chosen for the case studies are Arizona, California, Florida, Georgia, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Oregon, Texas, and Wisconsin. We did not select these states randomly, but according to the following five criteria:

1. We chose some states because they showed a large absolute change in the number of participants over the period. Three states--Texas, California, and Florida--together account for an increase in participation of over 650,000 persons between FY87 and FY90.

2. We chose some states which exhibit each of the four distinct patterns of FSP participation (see Chapter I). We selected at least two states from each category.

3. We chose states from each broad geographical region of the country, which will enable us to compare states which have experienced different changes in their economy and demographic composition.

4. We chose only states with fairly large food stamp caseloads, so that any change in participation in one of those states could have a significant impact on overall participation. All the states that we chose have caseloads of over 200,000 persons.

5. We chose some pairs of states whose geographical location and economy are similar but which showed disparate changes in participation levels. For example, Minnesota experienced a large increase in participation over the past three years, while Wisconsin experienced a decline in participation over the same period. Michigan and Ohio also showed disparate participation levels during that period.

We anticipate that the interviews will provide us with several types of information not available from other sources.

1. County-Level Data

Program directors may be able to provide us with up-to-date data on FSP participation at the county level. More disaggregated data supplied by county FSP directors would help us pinpoint the possible causes of the increase in FSP participation. For example, if the increase in participation is concentrated in counties with large immigrant populations, it would suggest that the changes in immigration laws may be an important explanatory factor for the increase in FSP participation.

2. Changes in the FSP

Many of the changes in the FSP are introduced at the state rather than the national level. State and county FSP directors will be able to provide detailed information on program operations--such as the working hours of the benefits office, the number of caseworkers, the length of certification periods, and any changes in the application process. We also hope to learn about outreach programs that may have been implemented and their target groups.

3. Changes in Other Public Assistance Programs

By asking the directors of other public assistance programs about the reasons for any increase in participation in their programs, we hope to distinguish between (1) factors that increased participation but are unique to those programs (for example, changes in eligibility rules), and (2) factors that increased participation but are common to many public assistance programs, including the FSP (for example, worsening economic conditions). This distinction will shed light on whether the relationship between participation in the FSP and other programs is due to the fact that an increase in participation in other programs caused an increase in participation in the FSP, or whether the association is due to similar factors that influenced participation in all programs. We will also ask program directors for their opinion about how changes in participation in their programs may affect participation in the FSP.

4. Information on Factors That Are Not Easily Measurable

A number of factors that may have increased participation are very difficult to measure. For example, an increase in homelessness, an increase in the number of dysfunctional families, or changes in social attitudes towards welfare may have increased FSP participation. It may be that program directors, especially at the county level, will have acquired knowledge about the importance of these factors from having worked more closely with individual cases. We expect that program directors will also be more knowledgeable about recent economic conditions (for example, reductions in the demand for agricultural labor due to bad weather, reductions in the staff or work hours at major factories, sluggish wage growth, etc.) that may affect FSP participation but are not reflected in the available unemployment data.

D. ANALYSIS OF HOUSEHOLD SURVEY DATA

With the data currently available we cannot determine whether the recent changes in FSP participation occurred because of: (1) an increase in the number of FSP-eligible households, or (2) an increase in the proportion of FSP-eligible households who choose to participate (the participation rate). To address this issue, we need data on households who do not participate in the FSP in addition to data on households who participate in the program. Two potential data sources are:

- The Current Population Survey (CPS), an annual national survey of households containing demographic and economic information on households
- The Survey of Income and Program Participation (SIPP), a nationally representative survey of individuals in the U.S. designed to provide information on wealth, monthly income, household composition, and program participation

An analysis of trends in participation rates between 1975 and 1987 using the CPS will be undertaken shortly. An analysis of participation rates in the past two years can be undertaken

using either the CPS or SIPP when these data eventually become available. These data will also provide us with a richer source of information on the characteristics of households participating in the program.

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APPENDIX A

PLOTS OF FSP PARTICIPATION BY STATE
FY86.4 TO FY90.2

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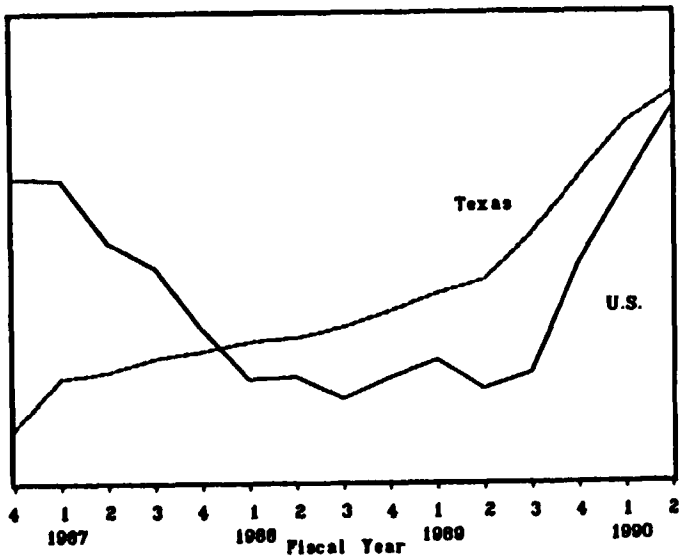
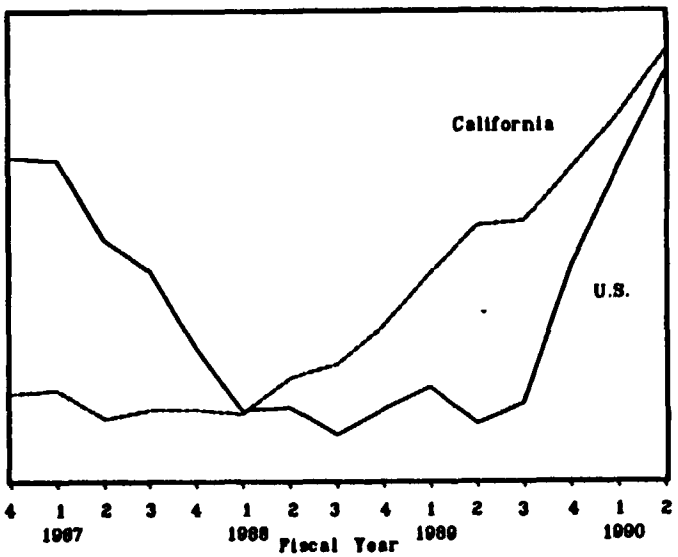
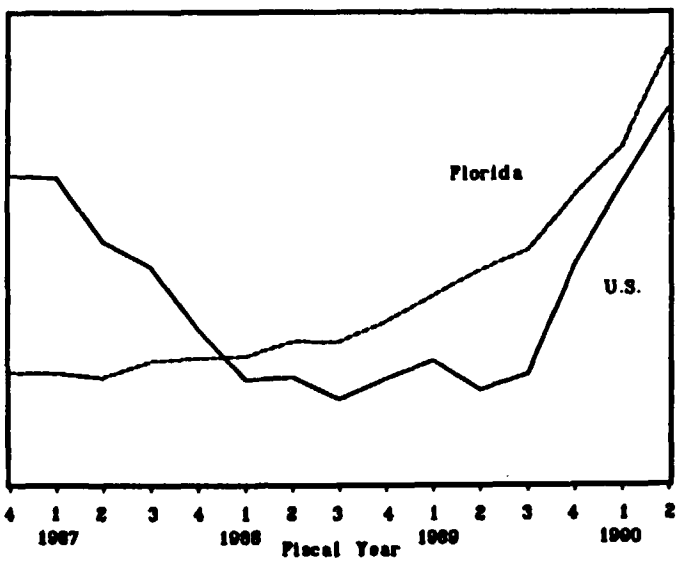
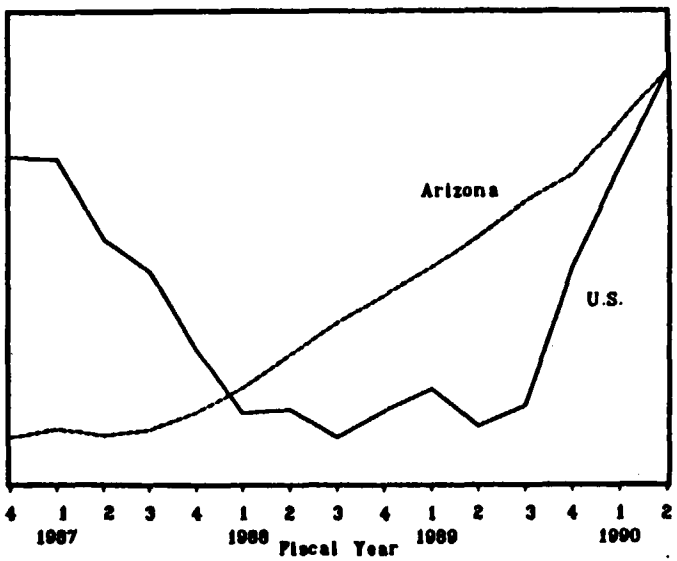
STATES WHICH EXHIBIT A STEADY INCREASE IN PARTICIPATION BETWEEN FY86.4 AND FY90.2









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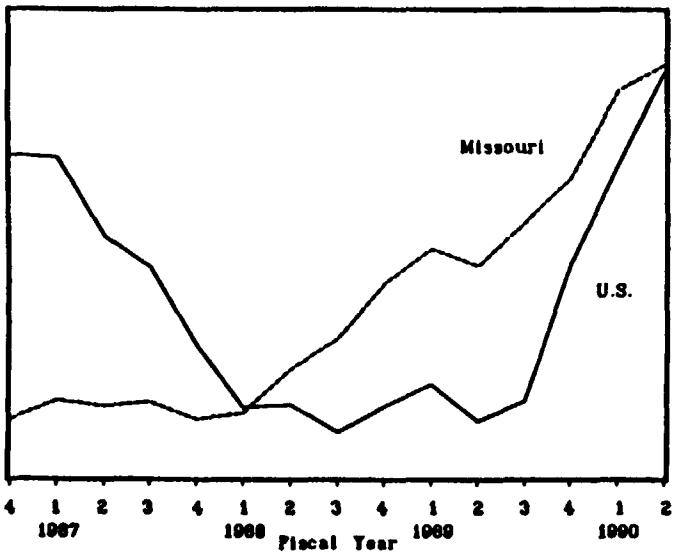

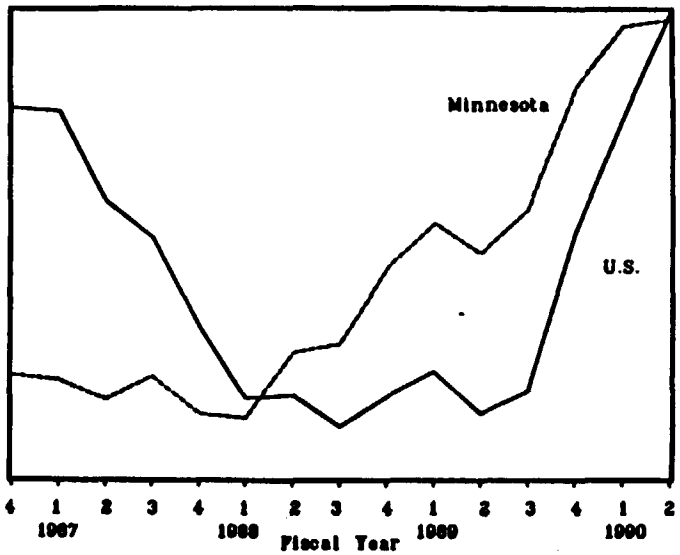

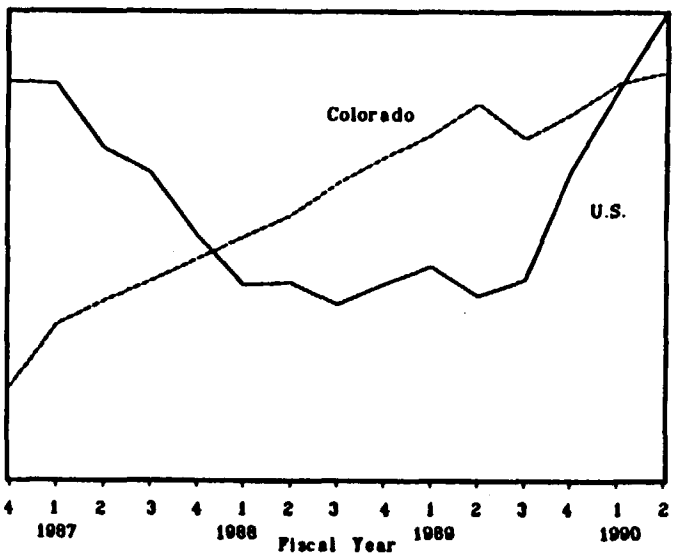

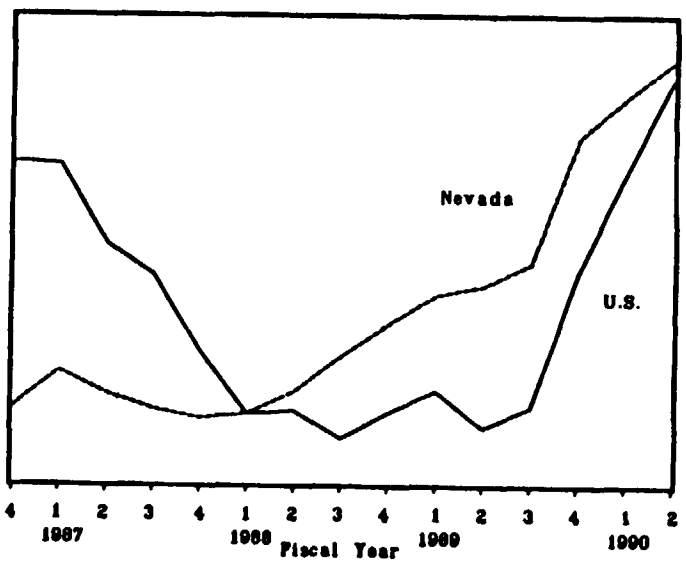

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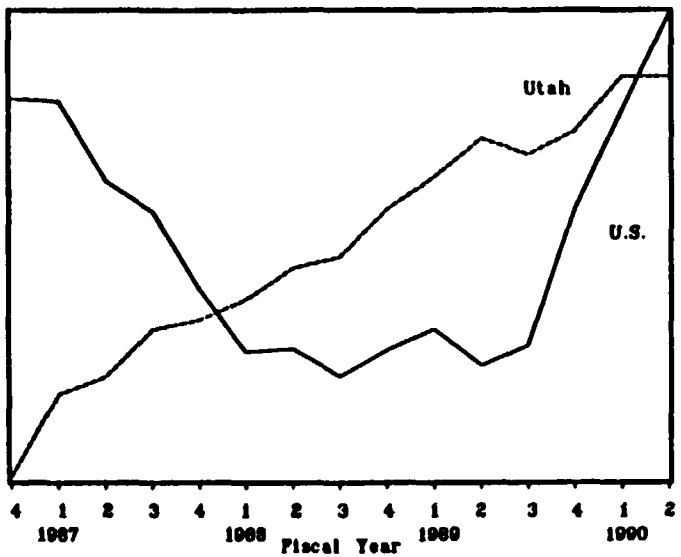
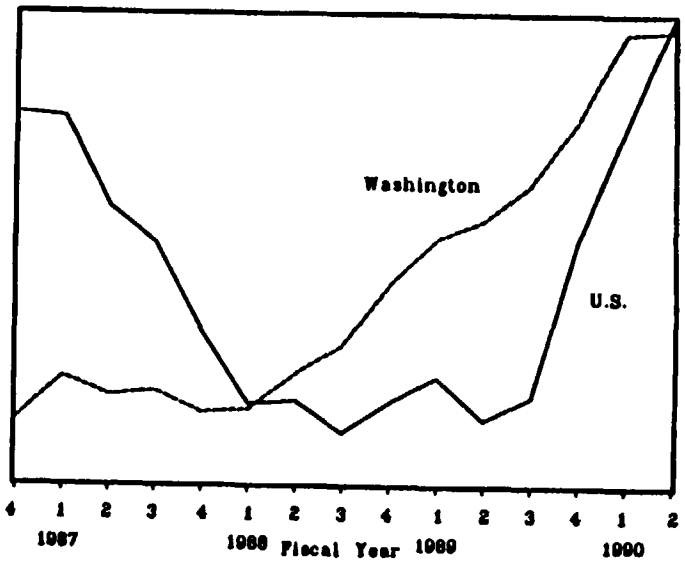
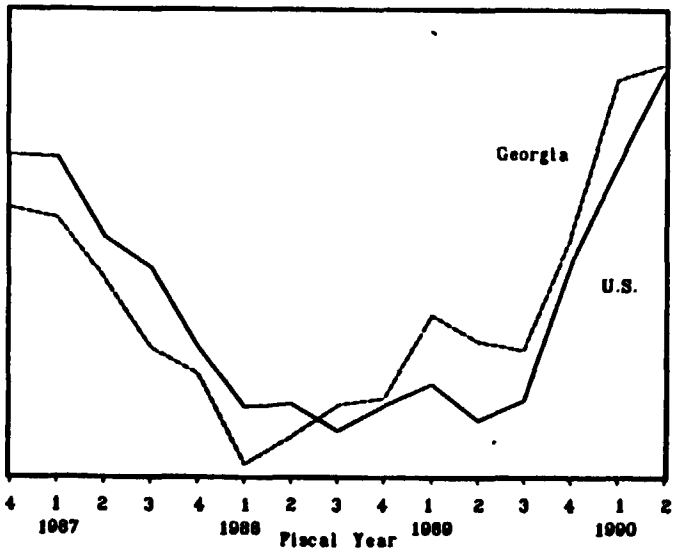
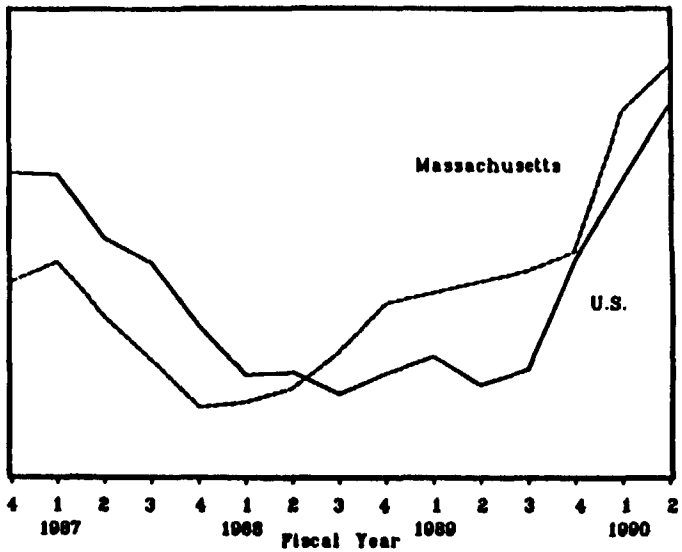
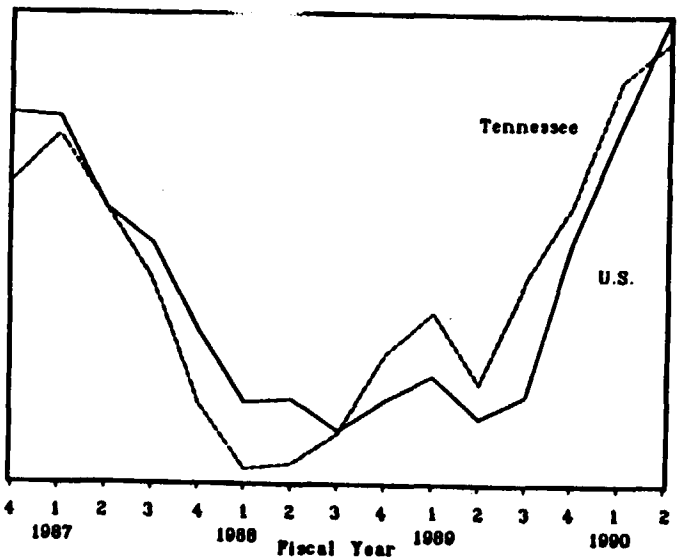


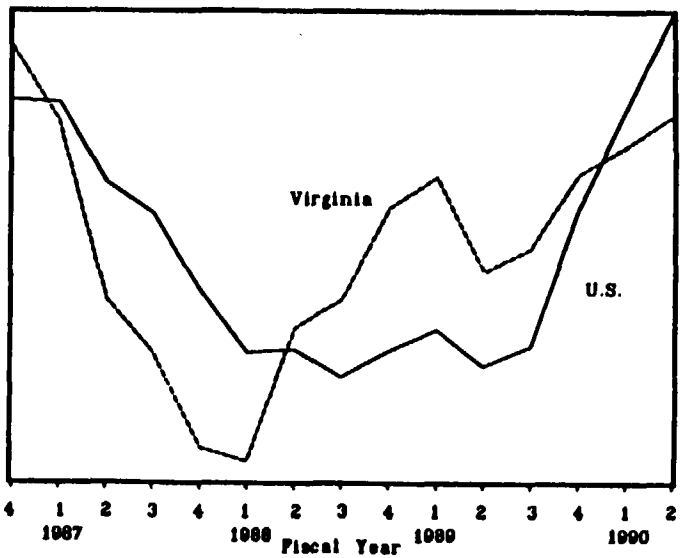


STATES WHICH EXHIBIT AN EARLY TURNING POINT IN PARTICIPATION BETWEEN FY87.4 AND FY88.3

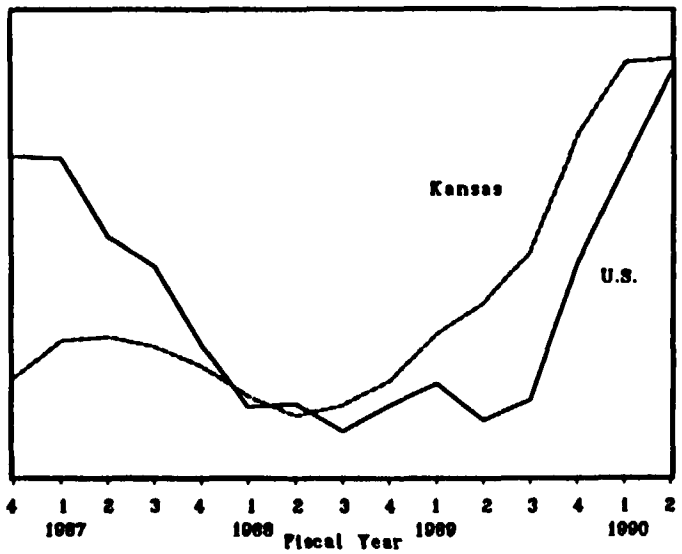


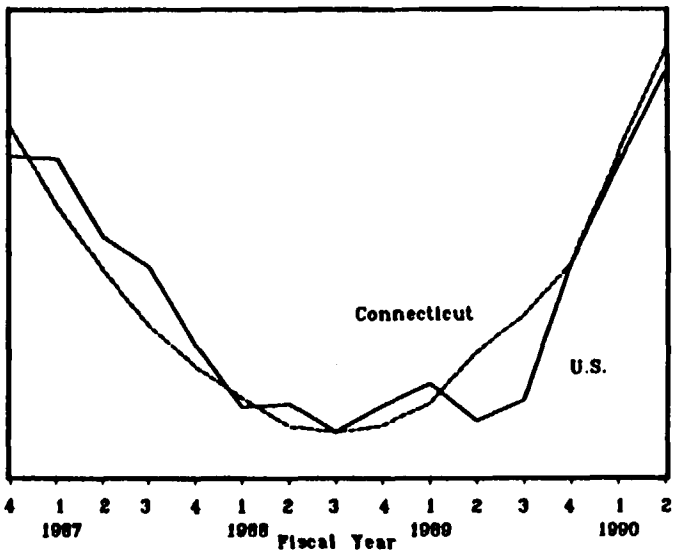


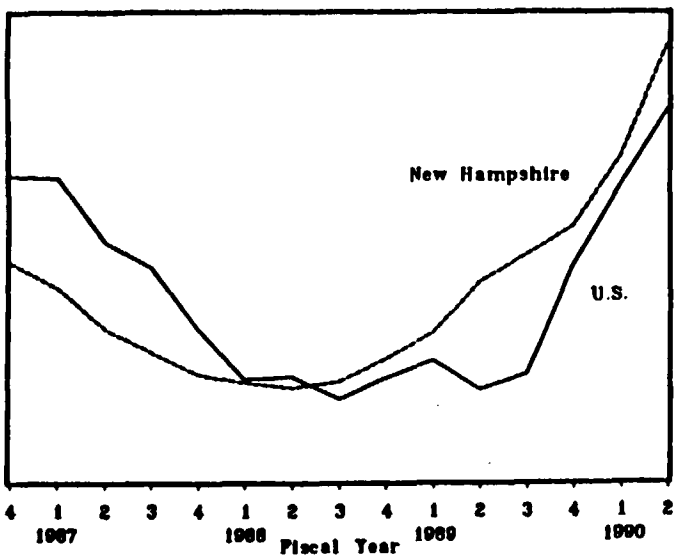


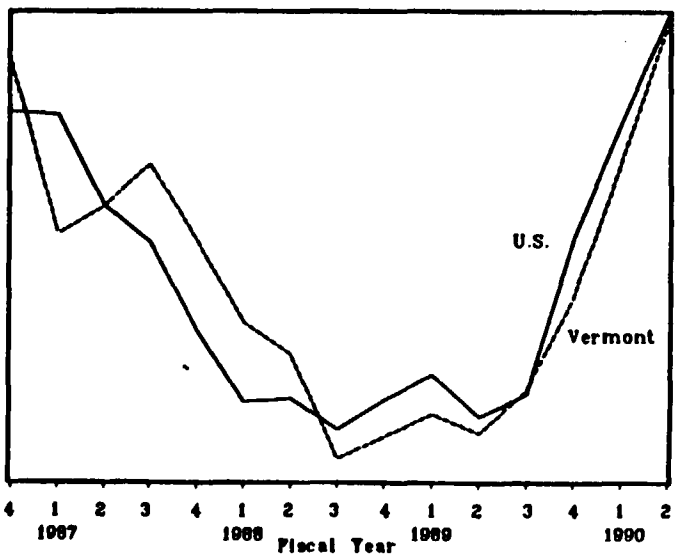


STATES WHICH EXHIBIT AN EARLY TURNING POINT IN PARTICIPATION BETWEEN FY87.4 AND FY88.3









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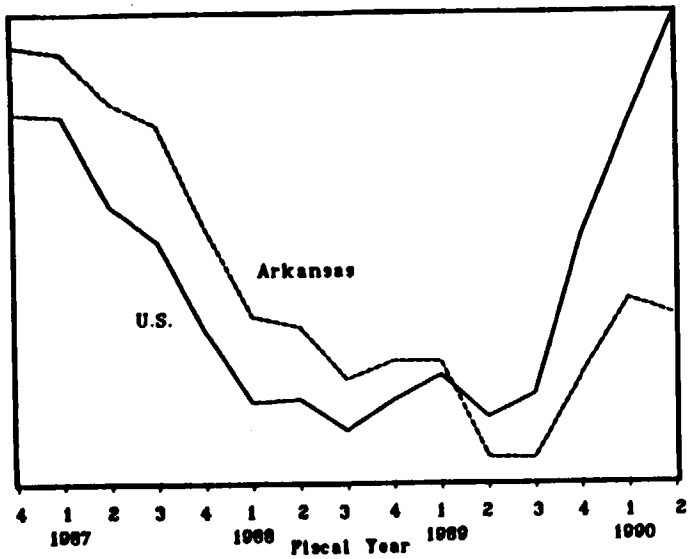
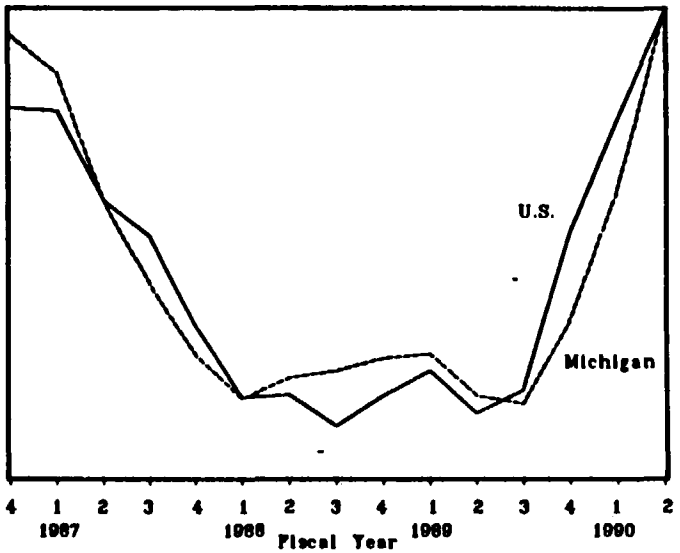
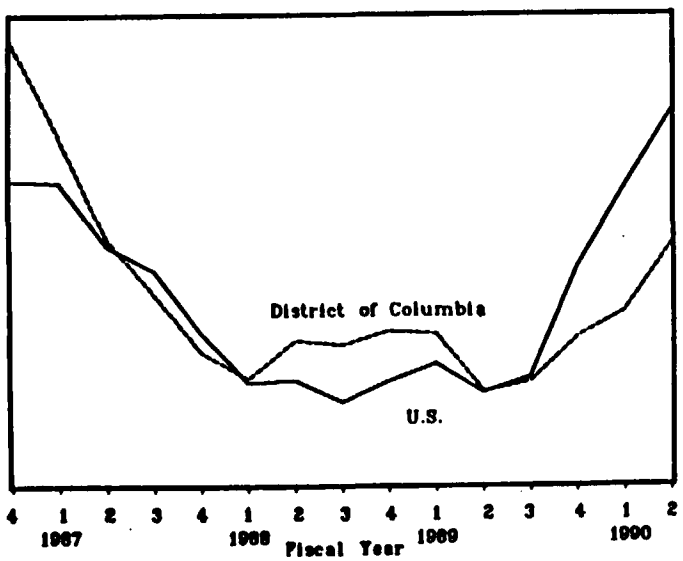
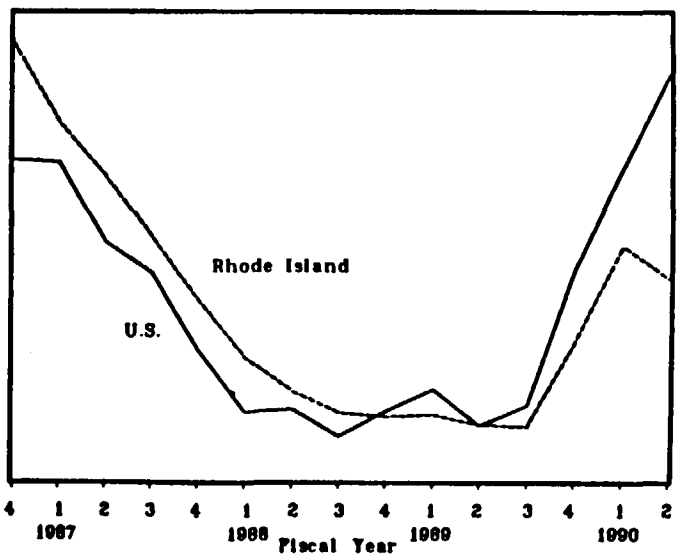
STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1









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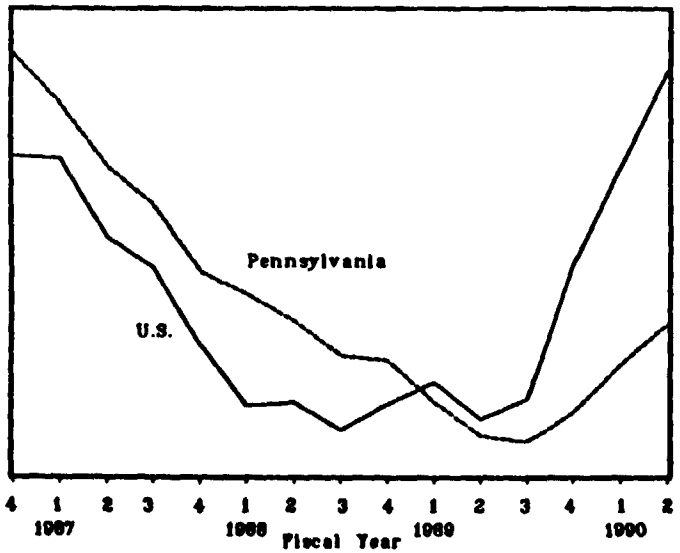
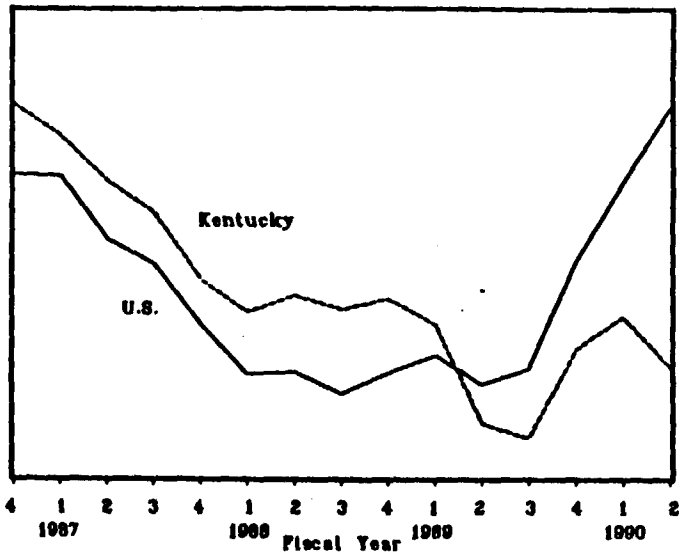
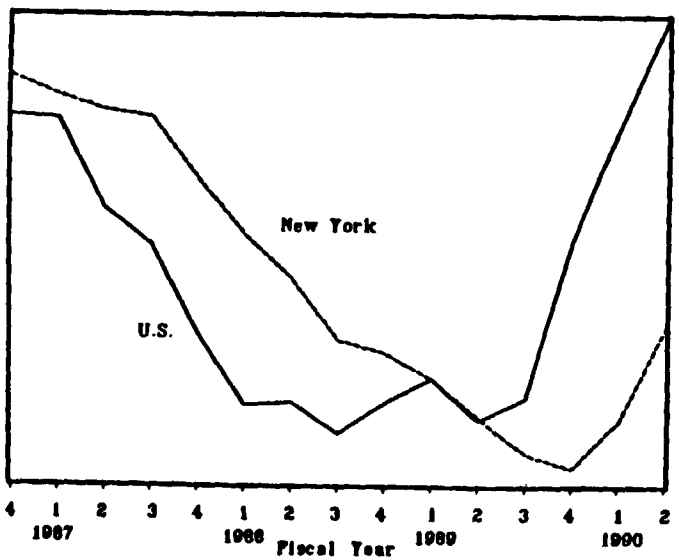
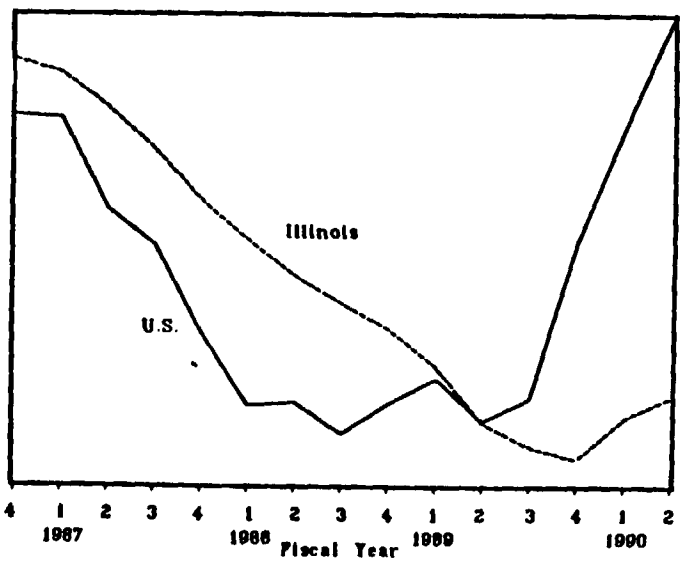
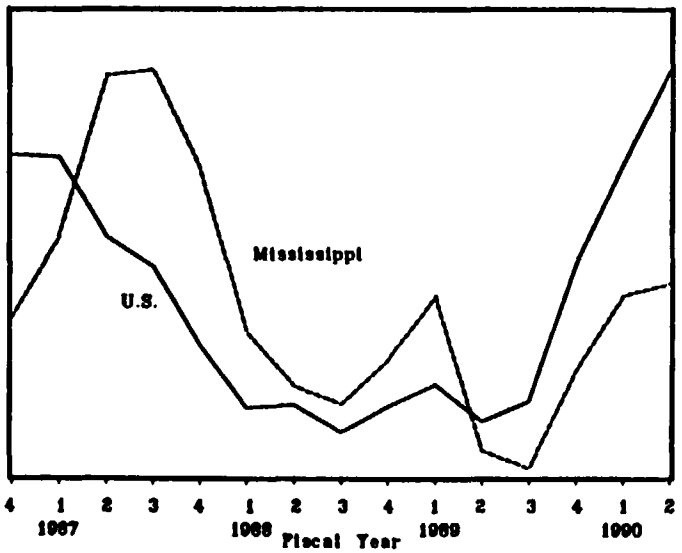


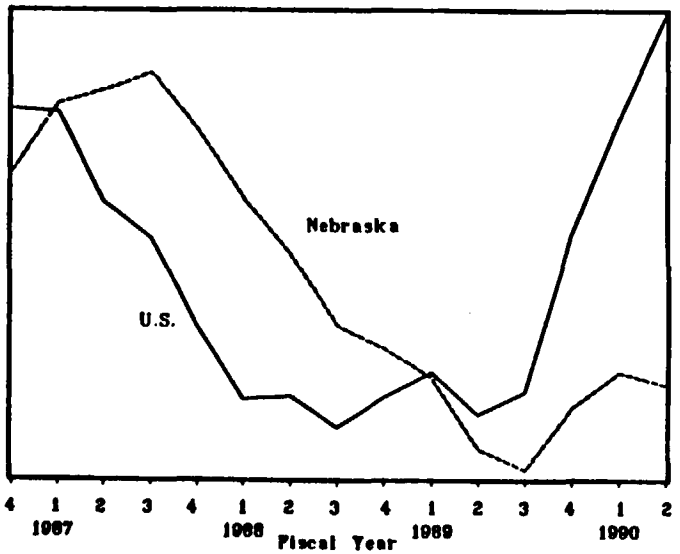


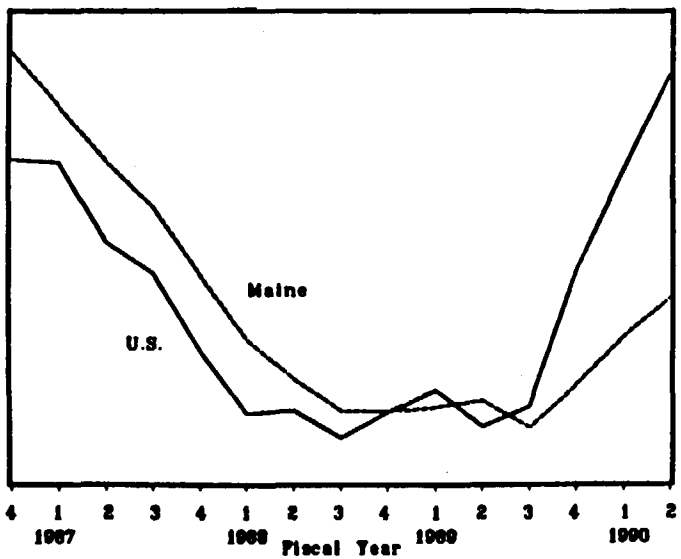


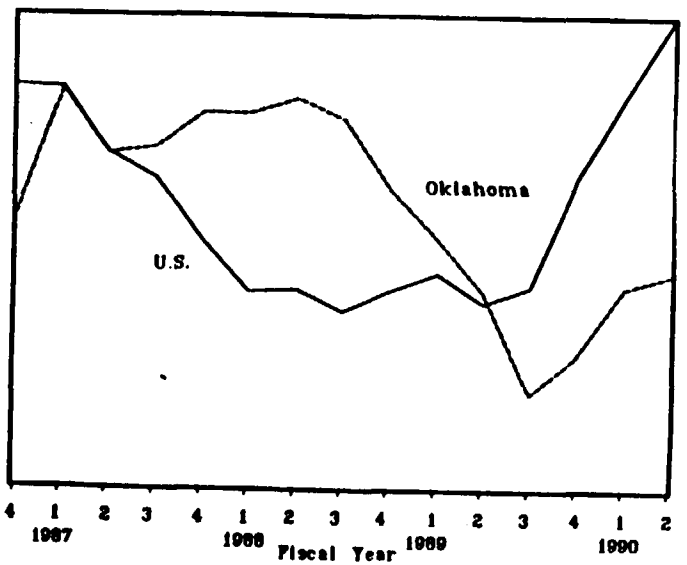


STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1

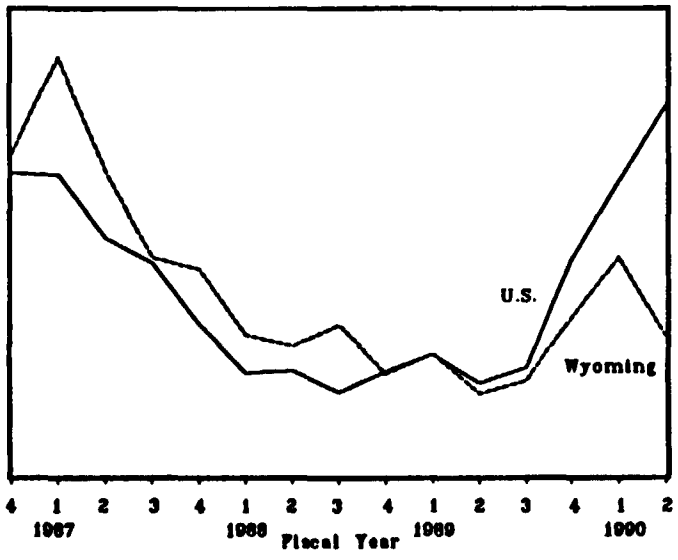


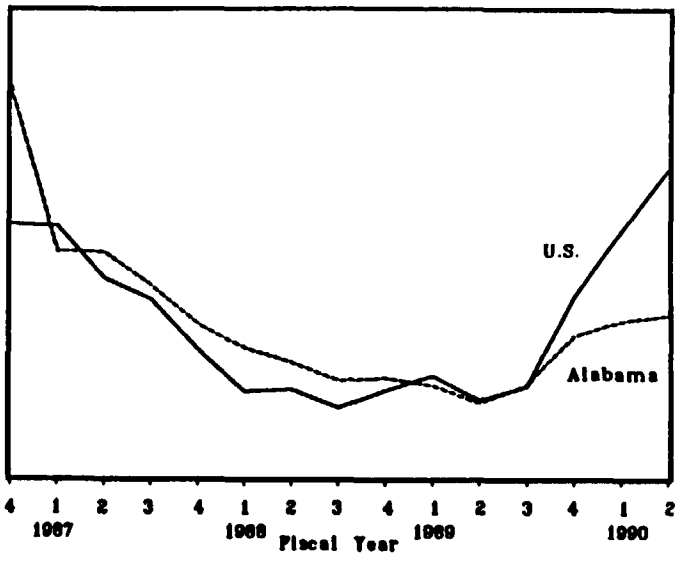


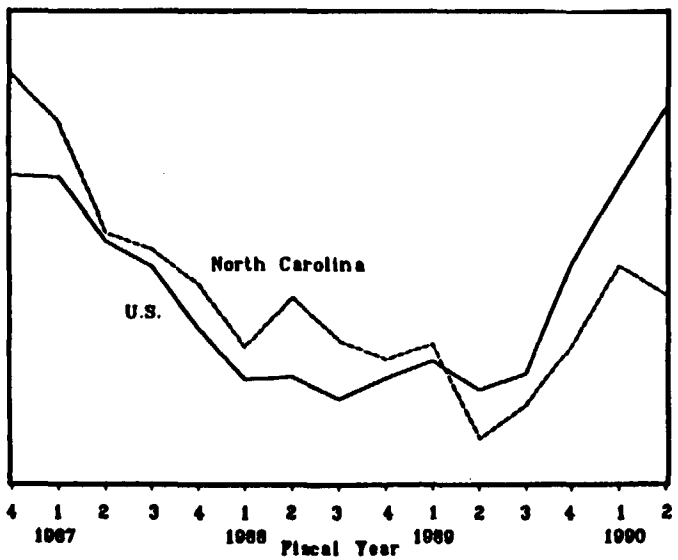


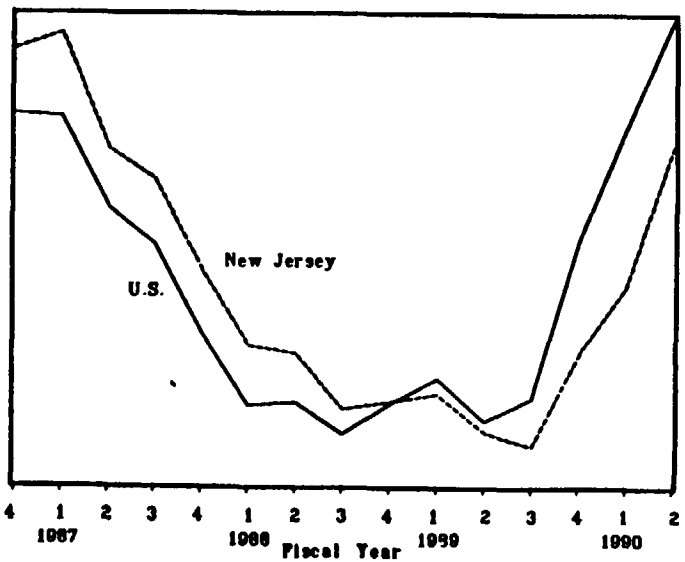


STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1









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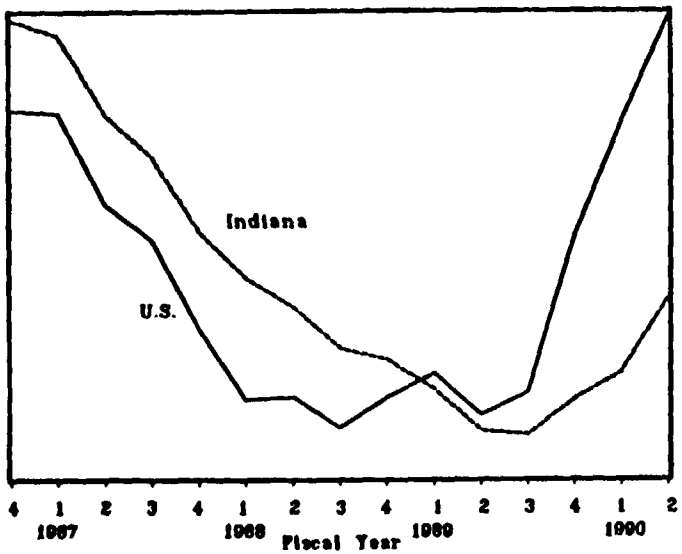
STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1



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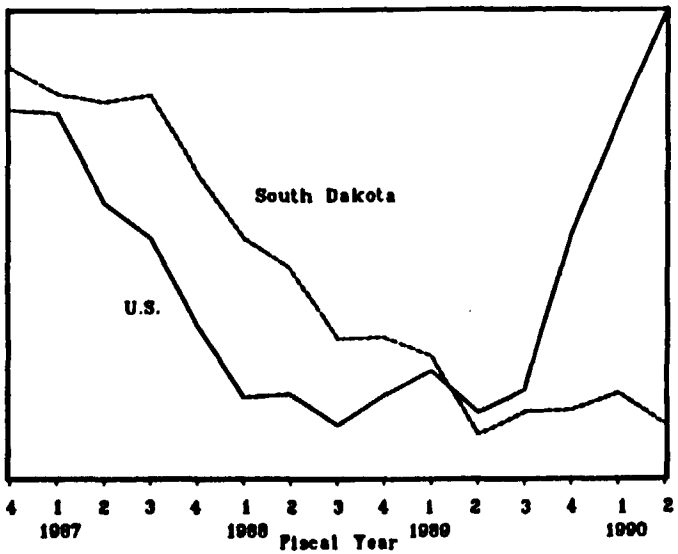

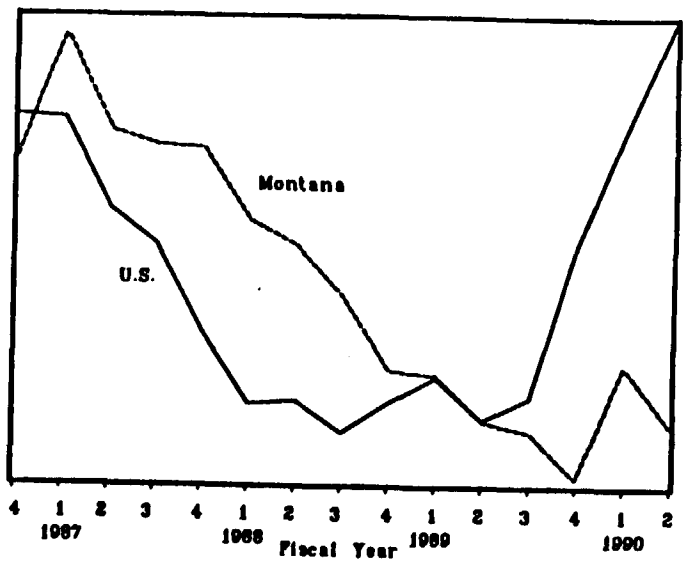

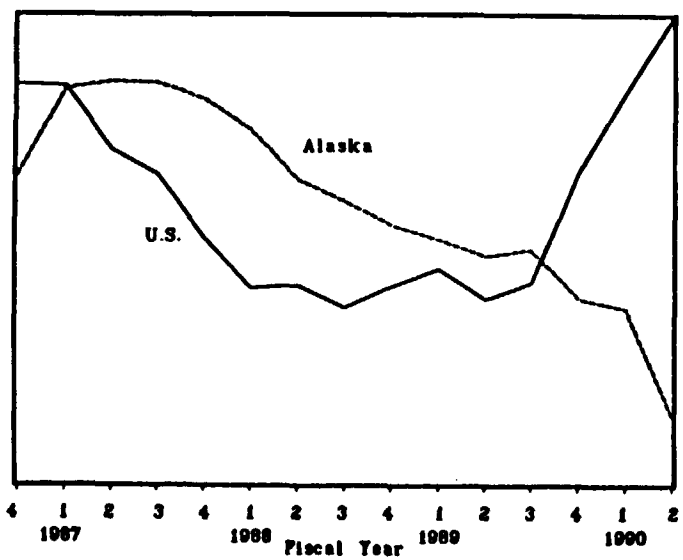

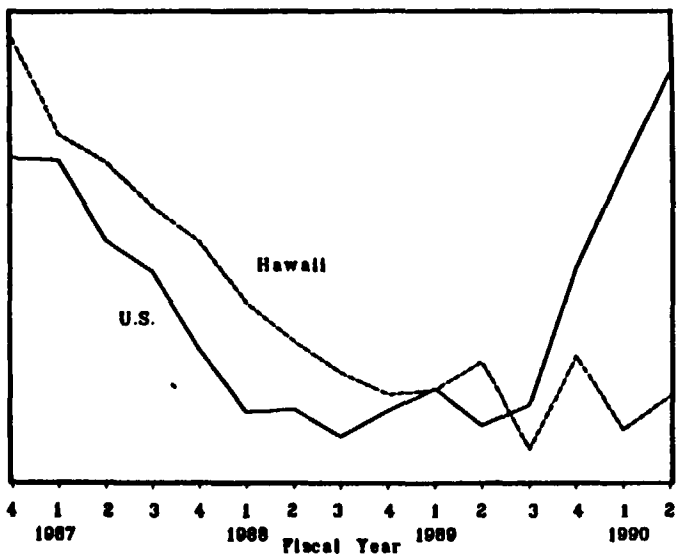

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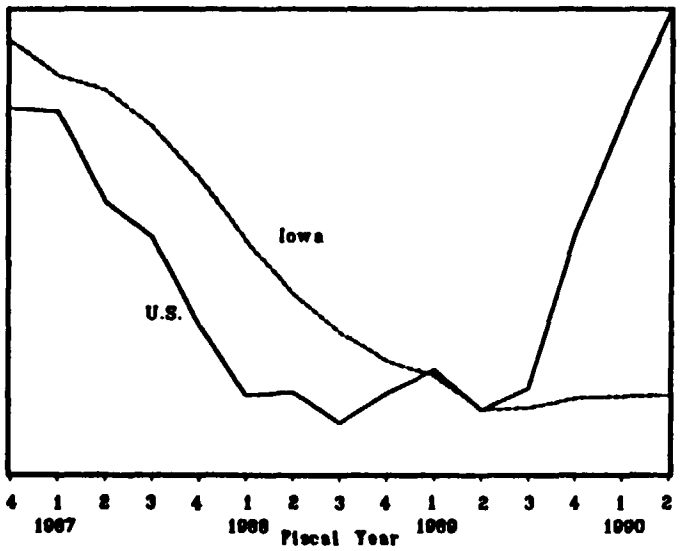
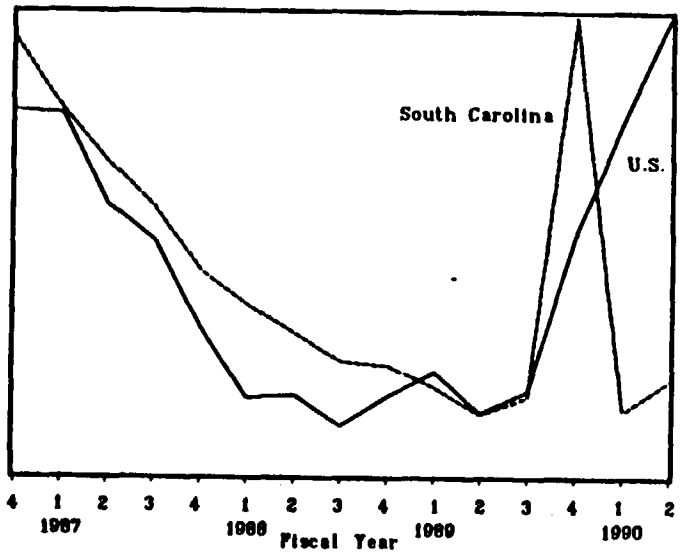
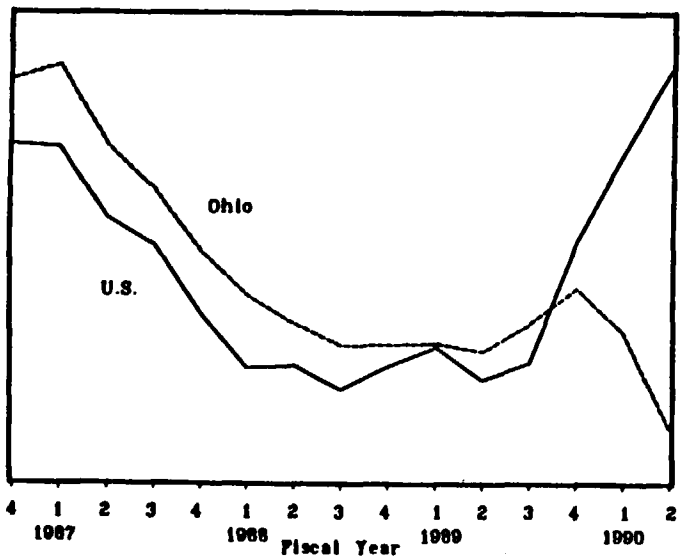
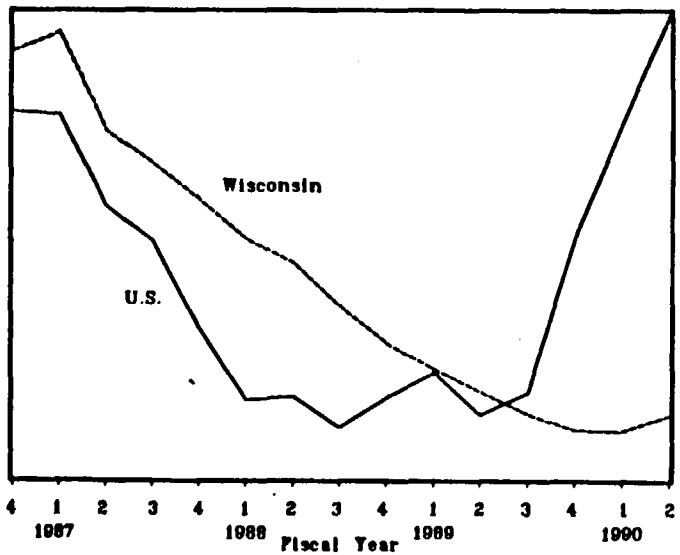
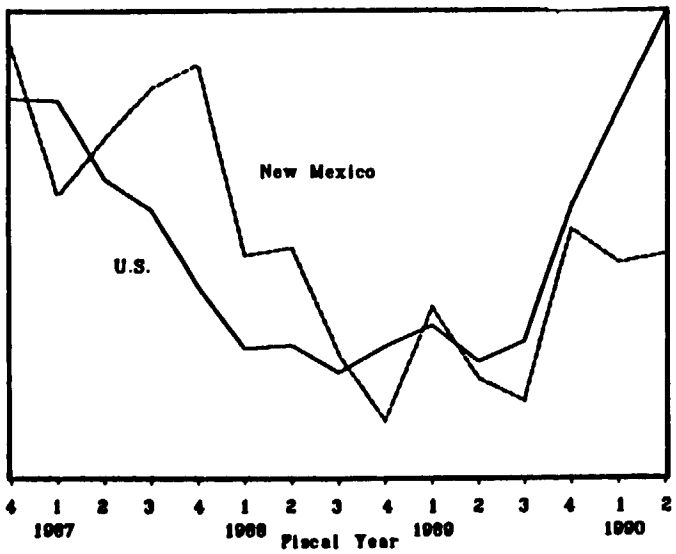


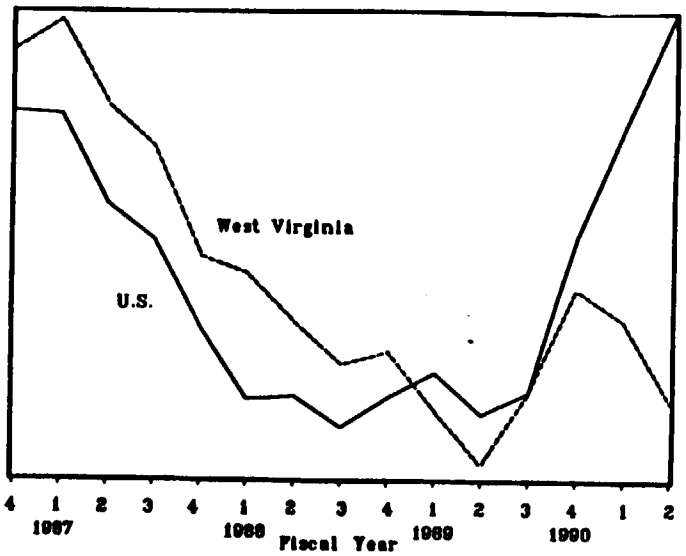


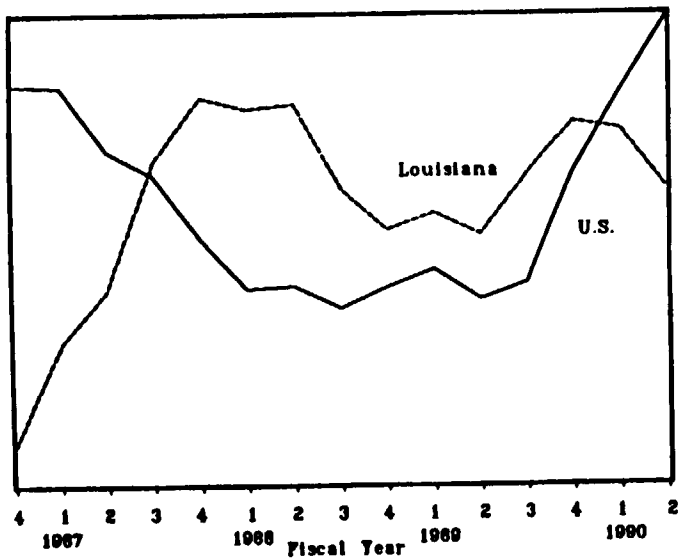


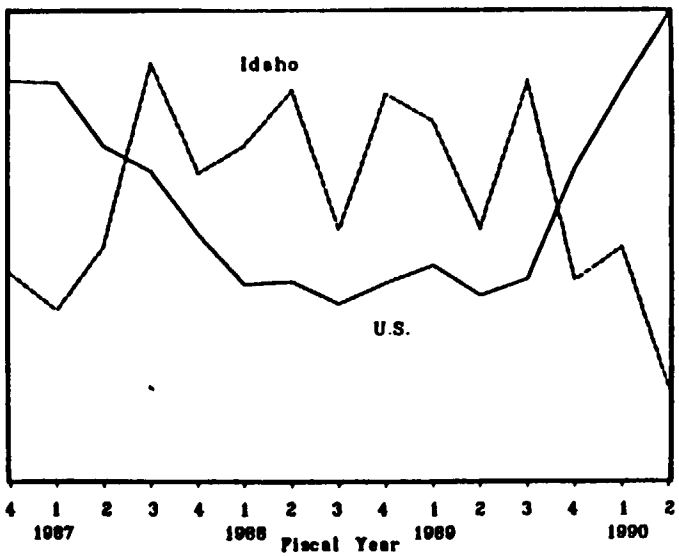


STATES WHICH DO NOT FALL INTO ANY OF THE FOUR CATEGORIES









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APPENDIX B

PLOTS OF FSP PARTICIPATION, AFDC PARTICIPATION, AND UNEMPLOYMENT RATE BY STATE FY86.4 TO FY90.2

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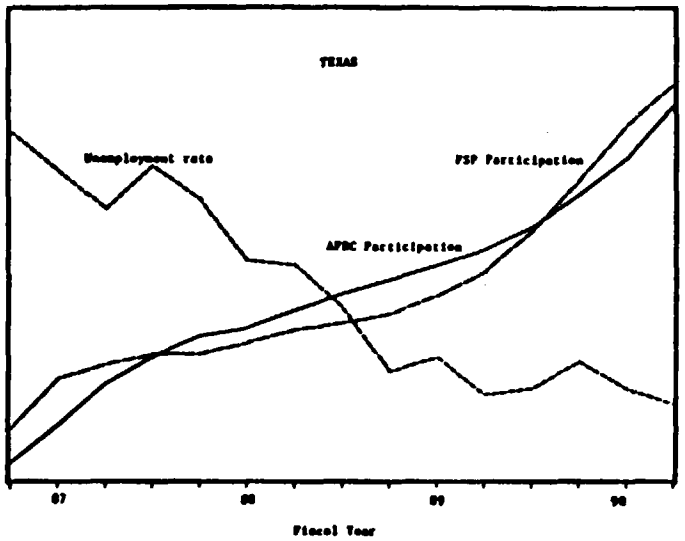

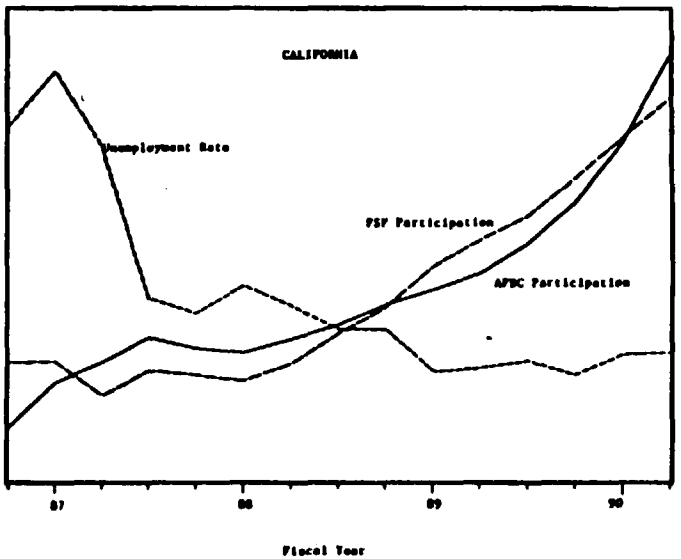

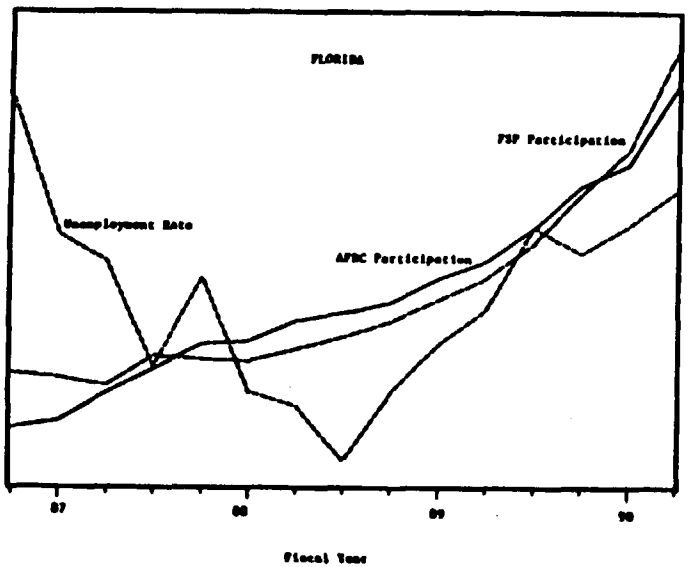

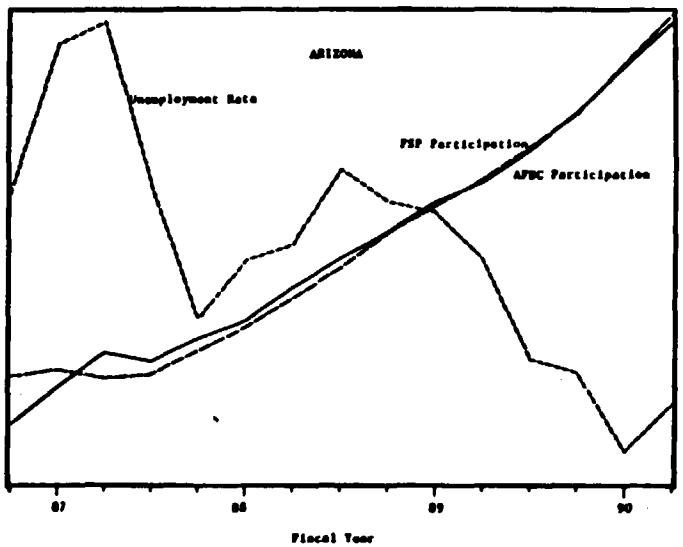

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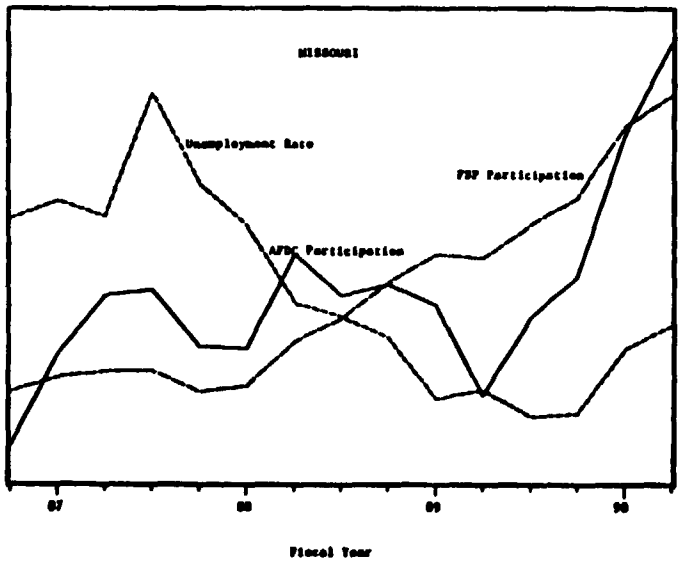
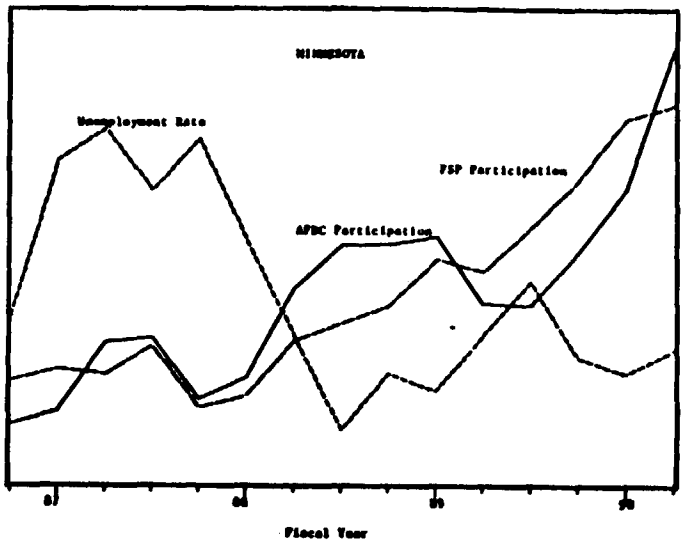
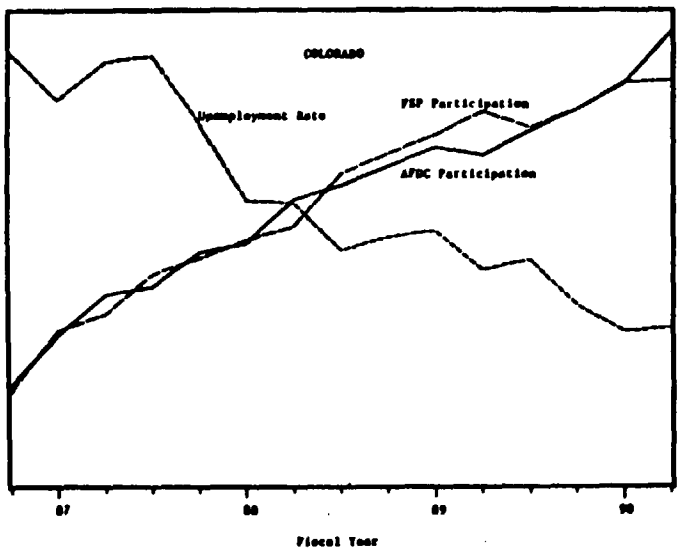
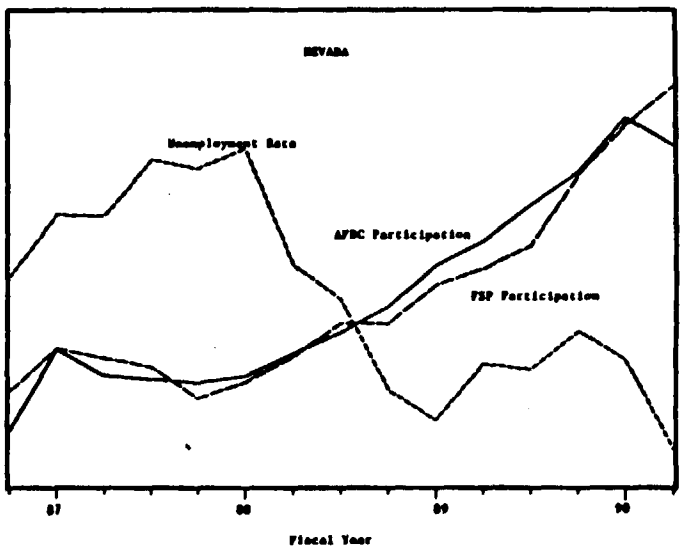
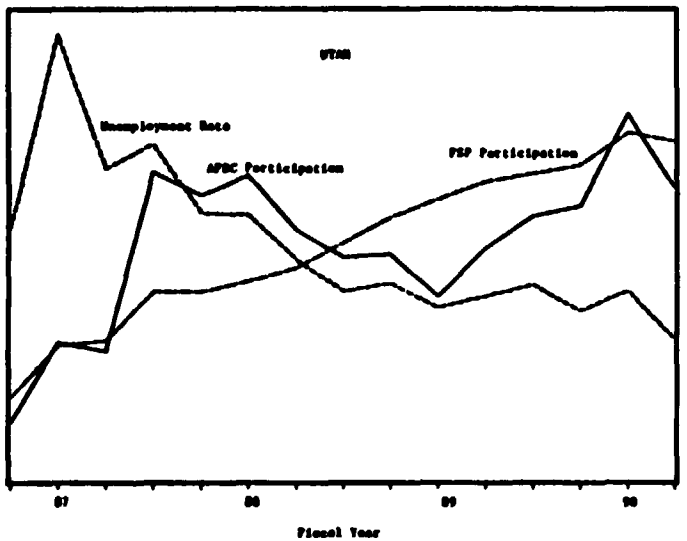


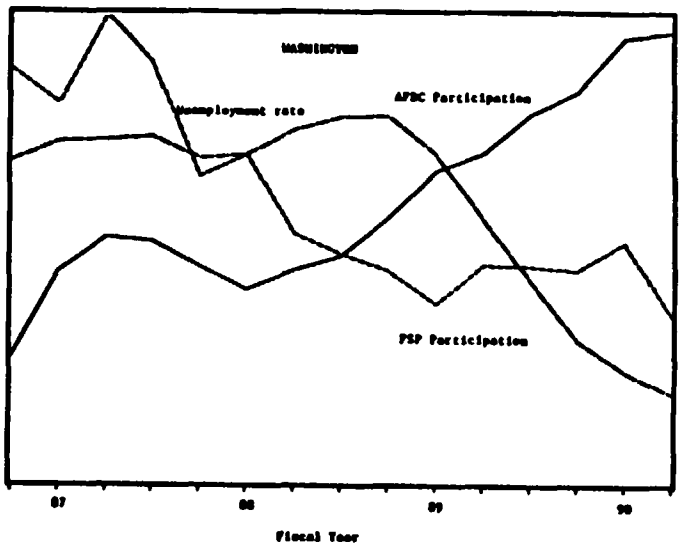






STATES WHICH EXHIBIT A STEADY INCREASE IN PARTICIPATION BETWEEN FY86.4 AND FY90.2





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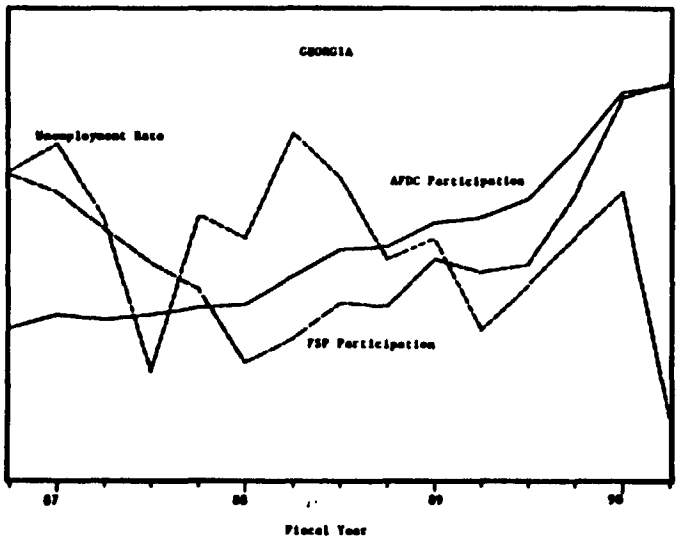

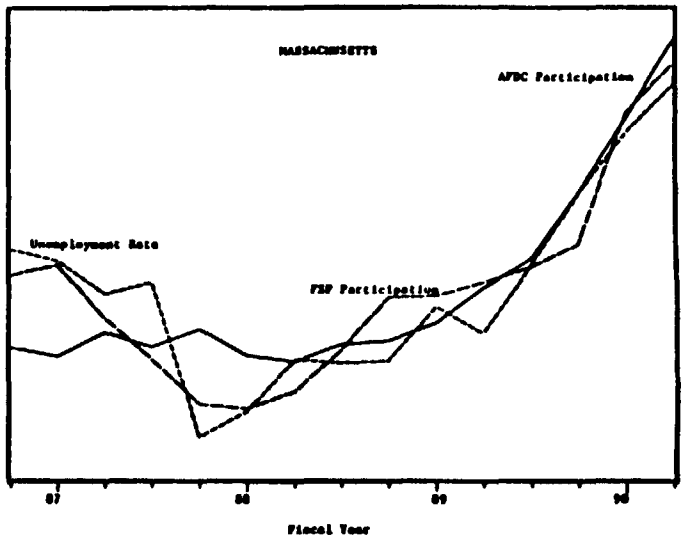

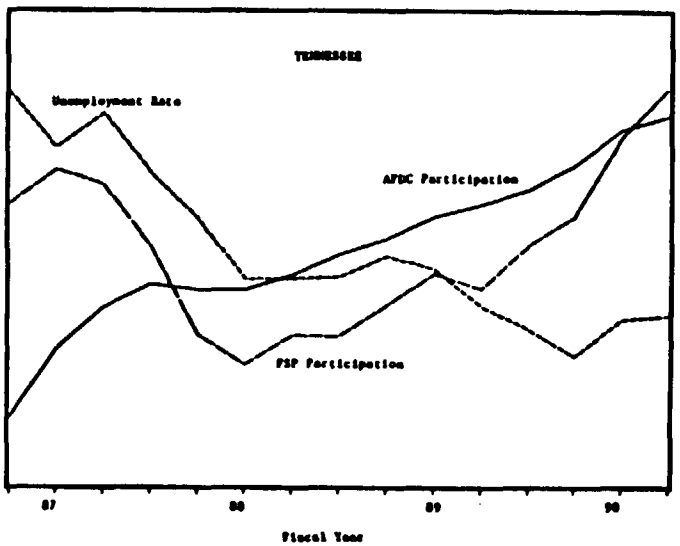

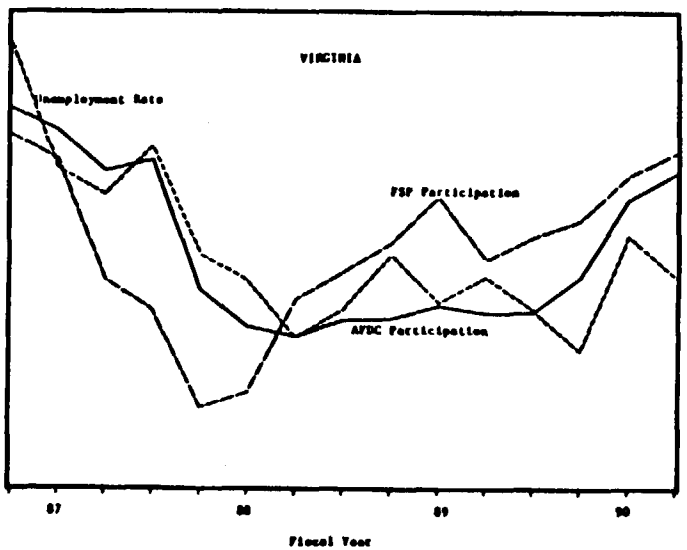

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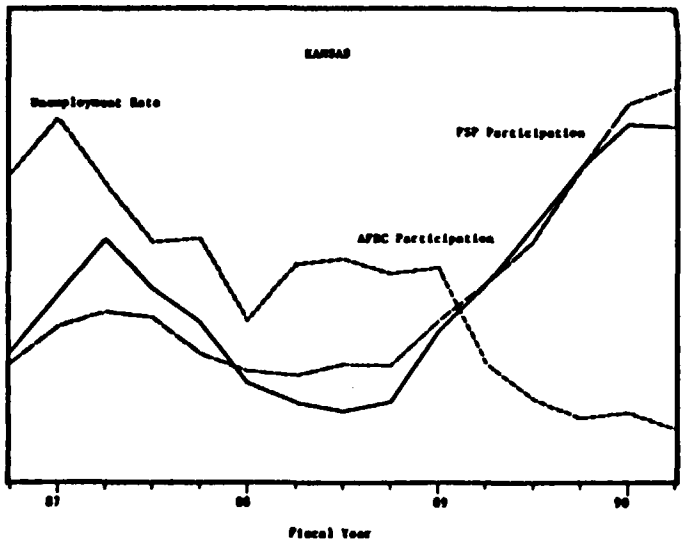
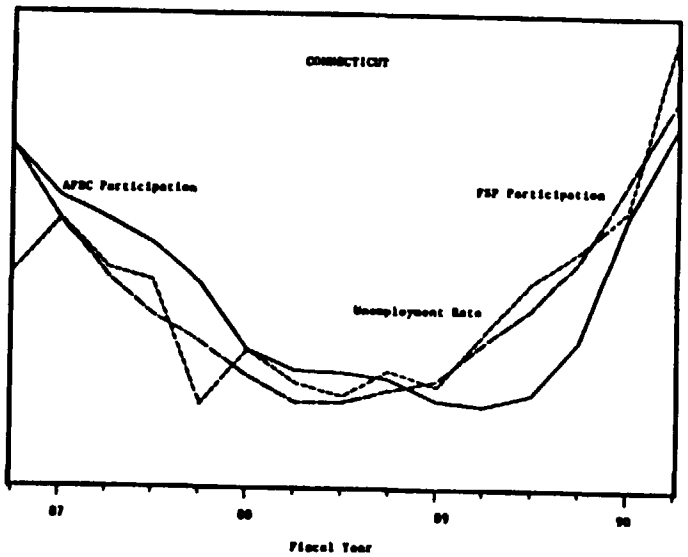
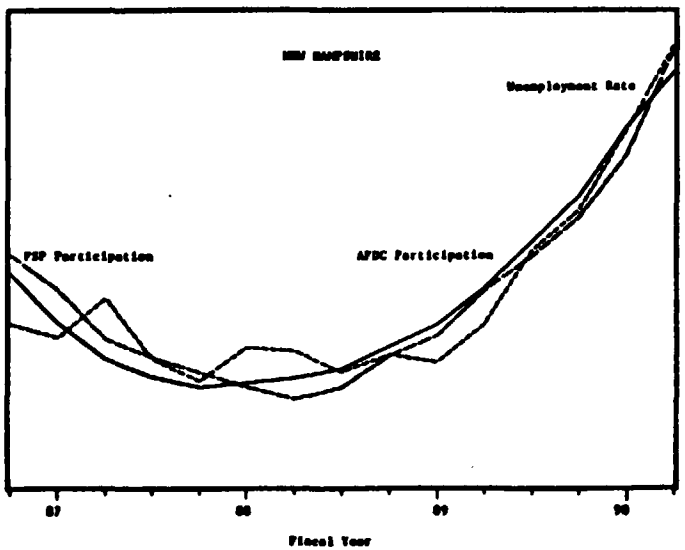
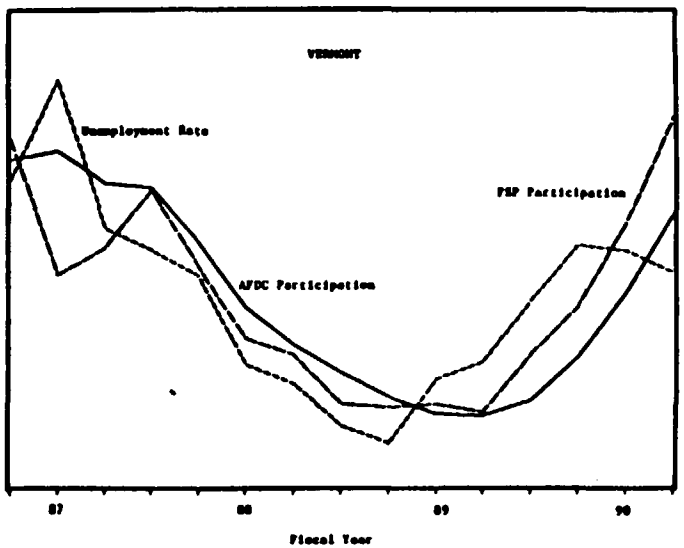
STATES WHICH EXHIBIT AN EARLY TURNING POINT IN PARTICIPATION BETWEEN FY87.4 AND FY88.3

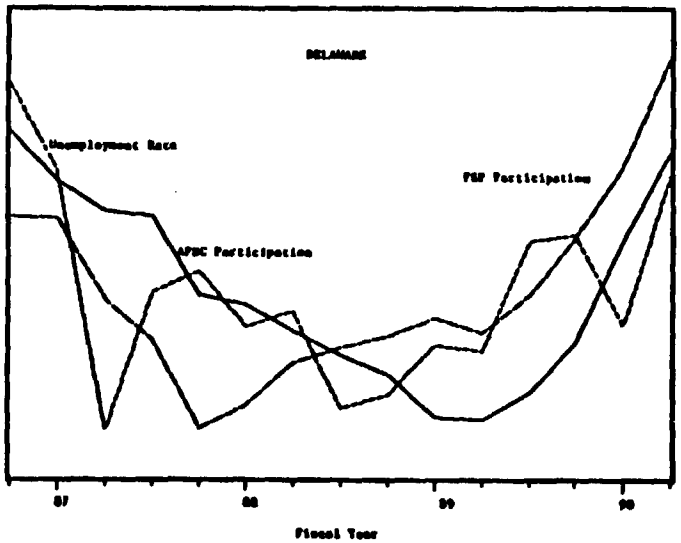


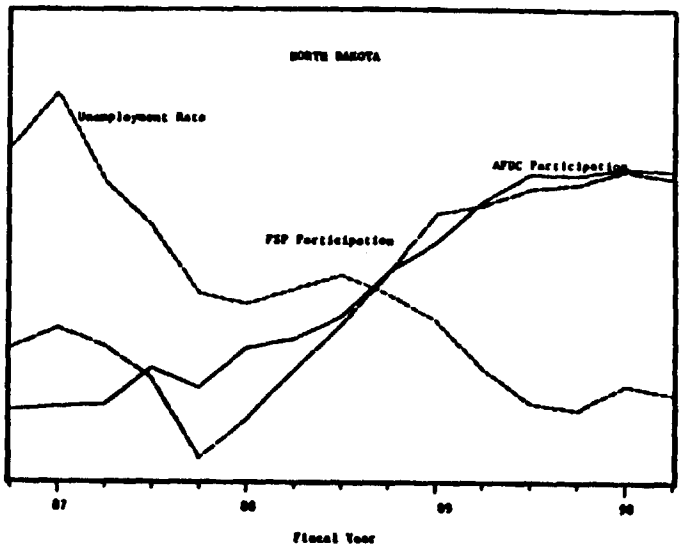


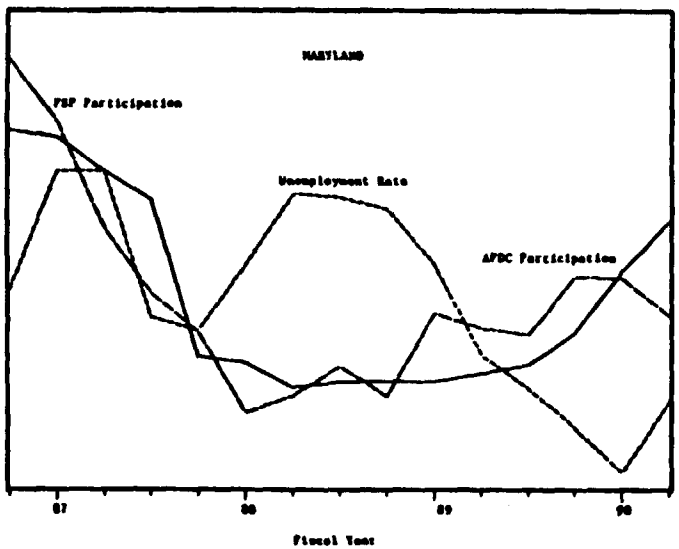


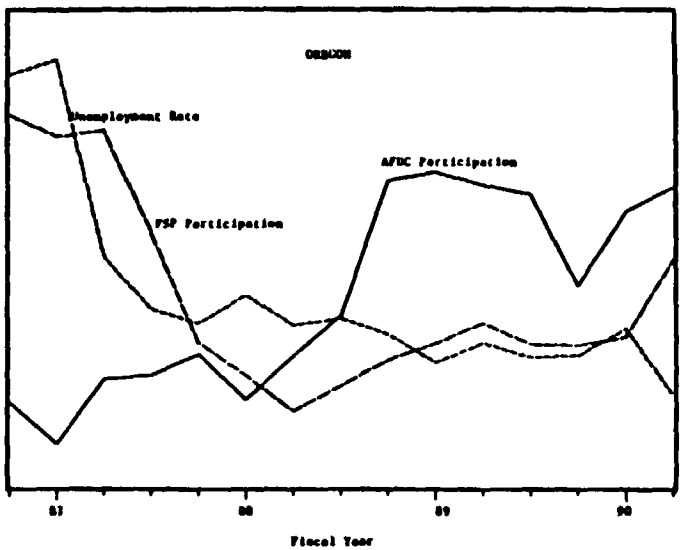


STATES WHICH EXHIBIT AN EARLY TURNING POINT IN PARTICIPATION BETWEEN FY87.4 AND FY88.3

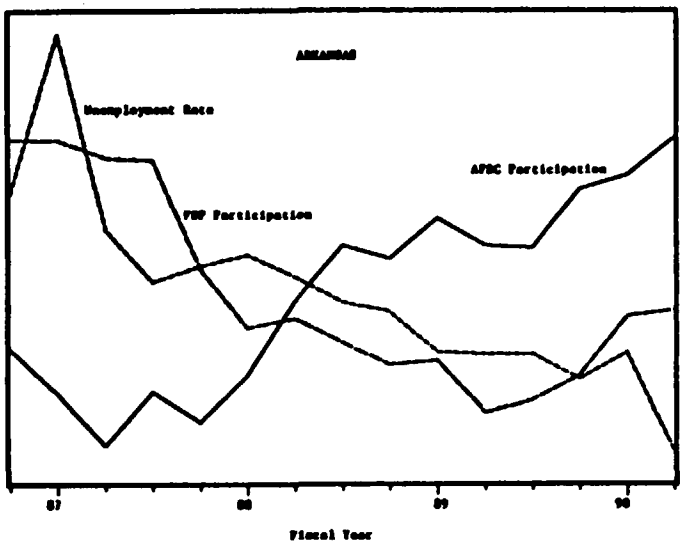


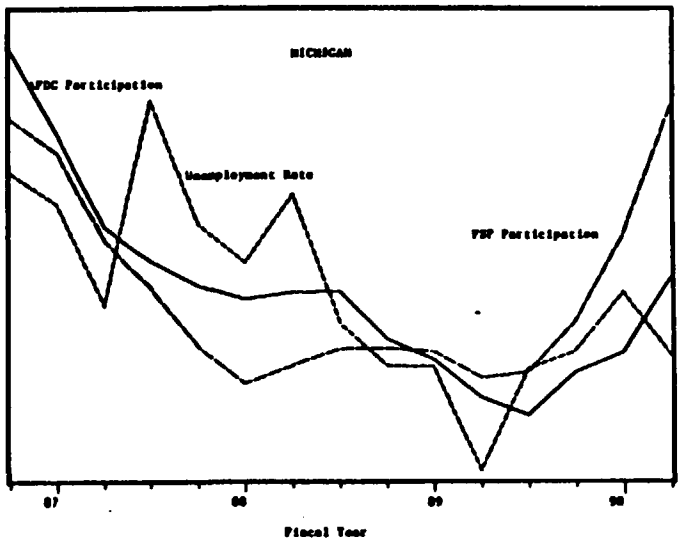


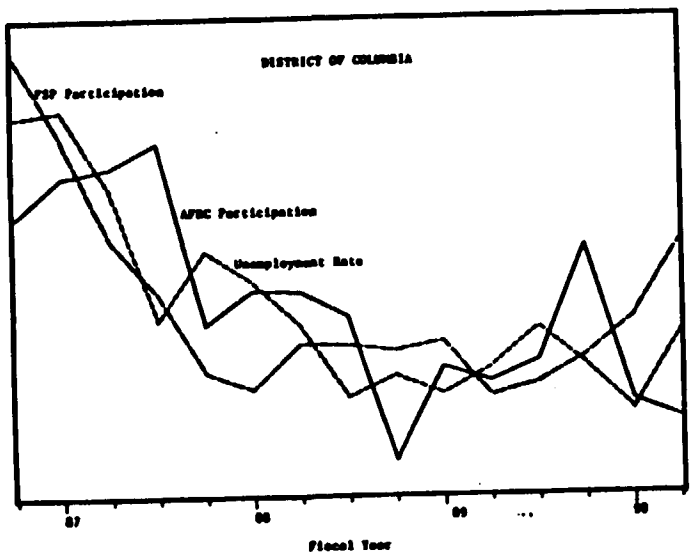


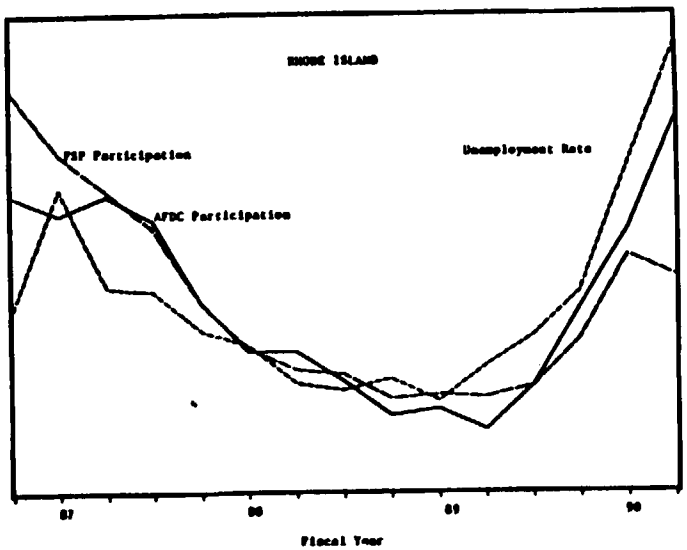


STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1

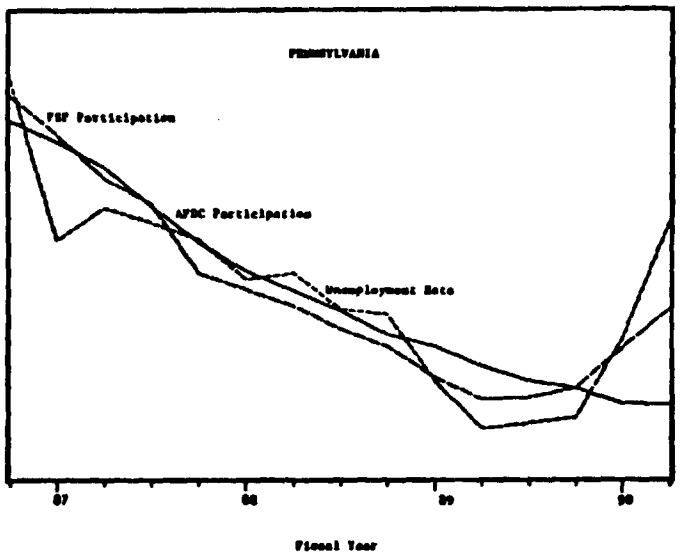


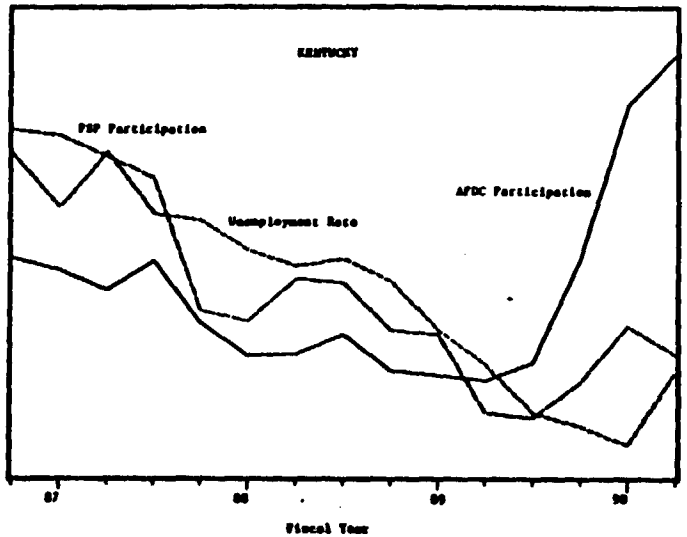


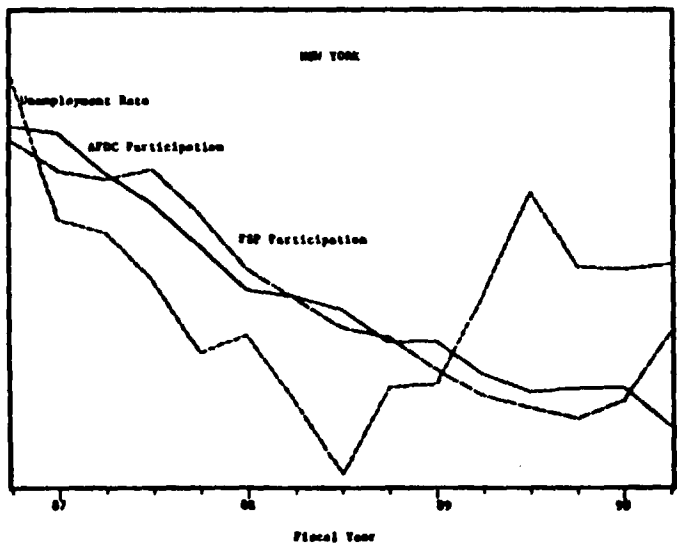


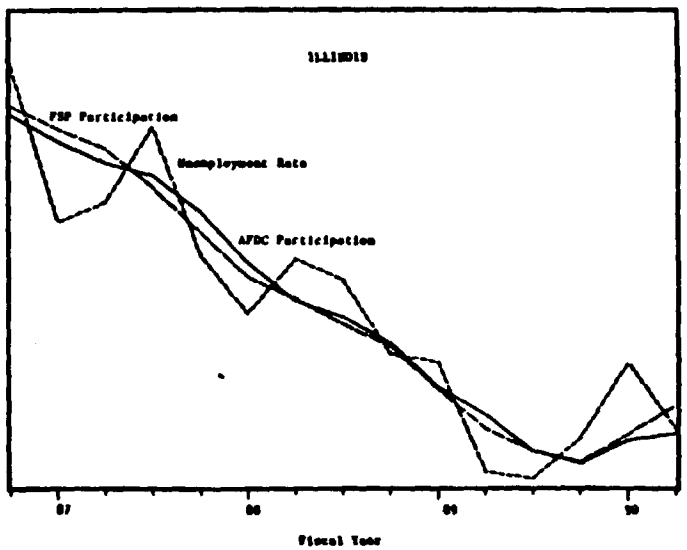


STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1

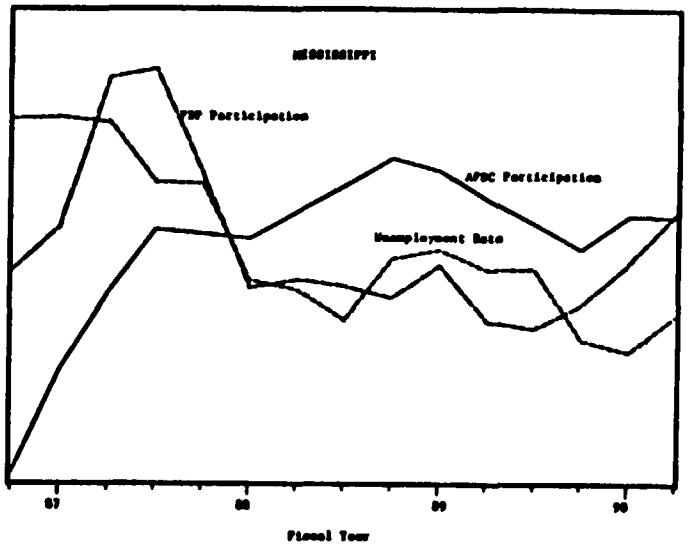


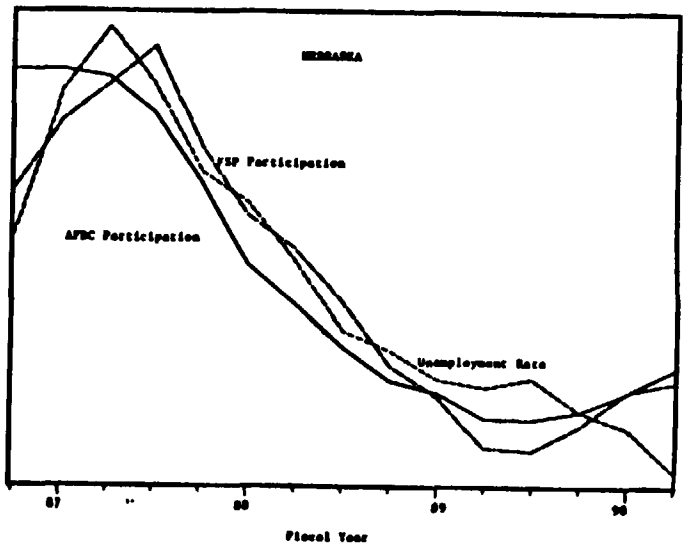


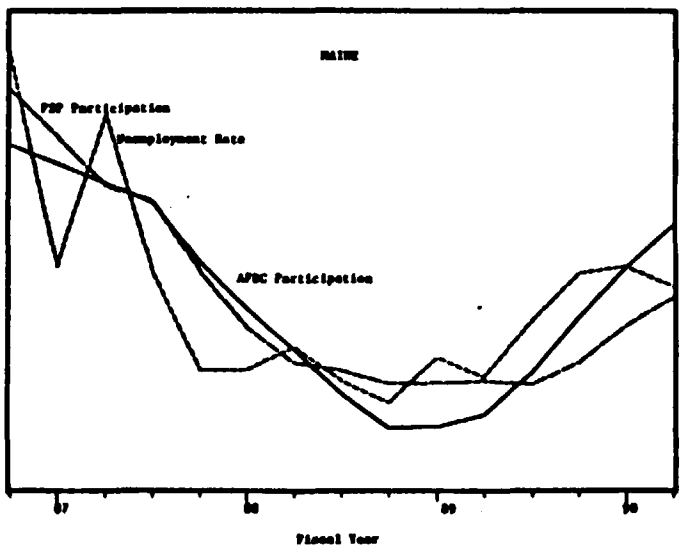


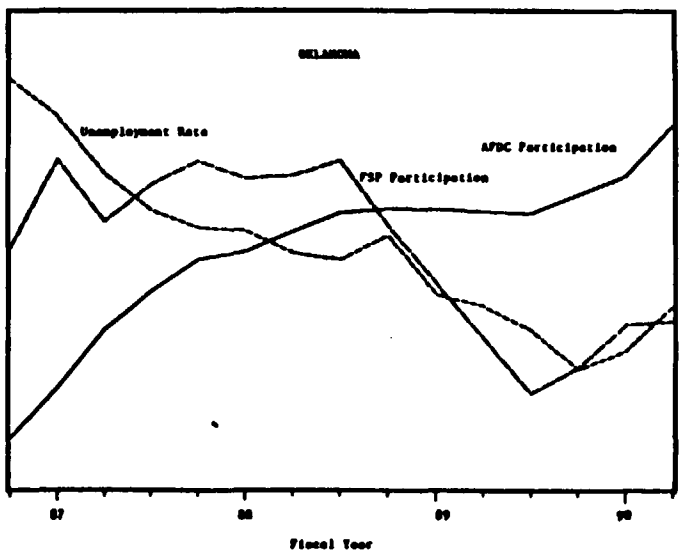


STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1

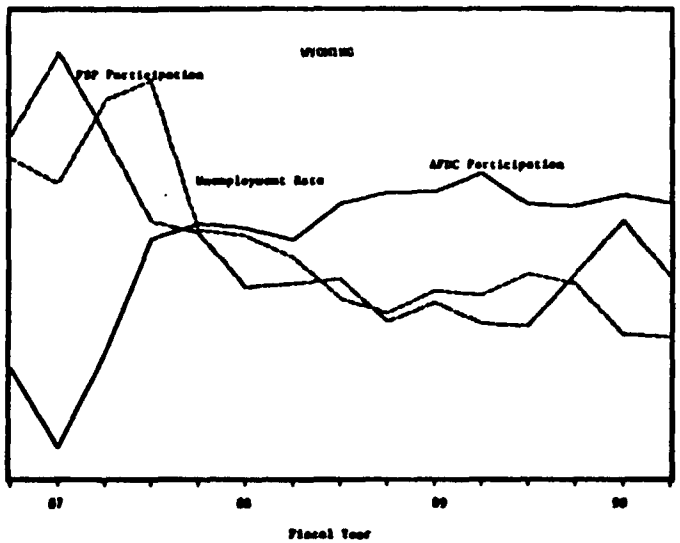


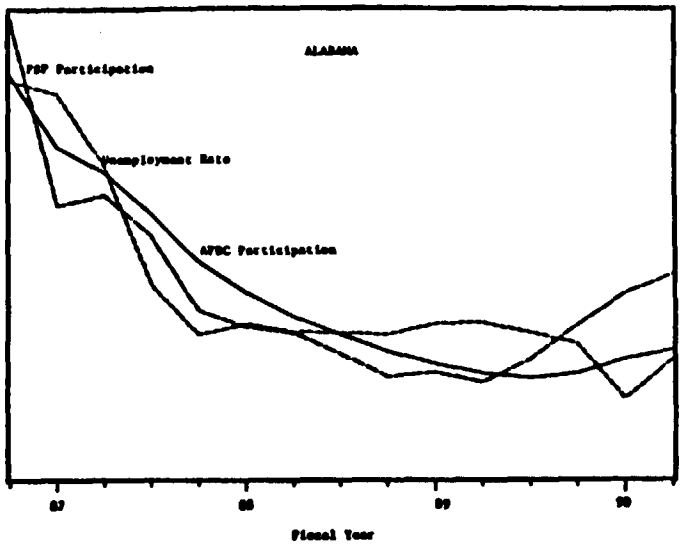


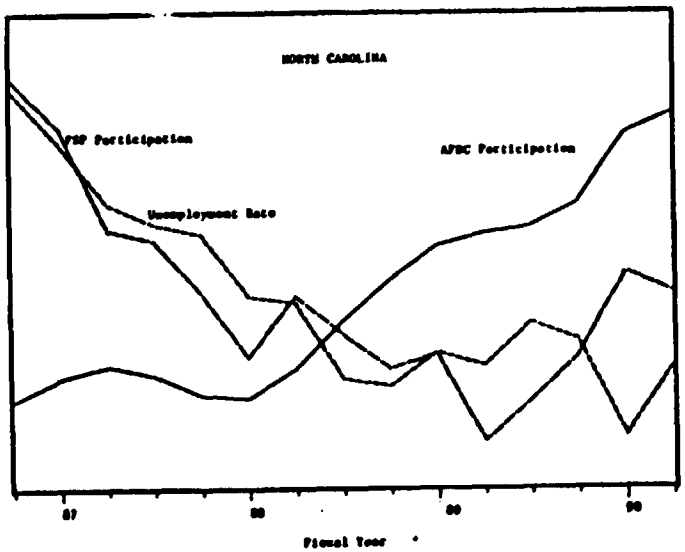


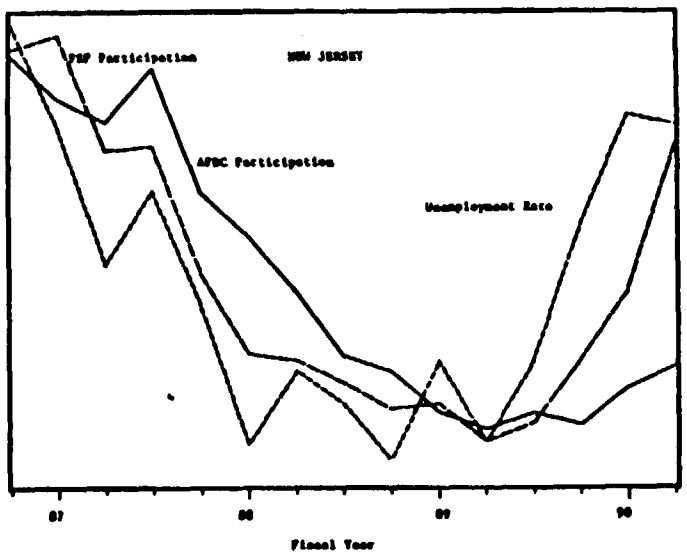


STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1

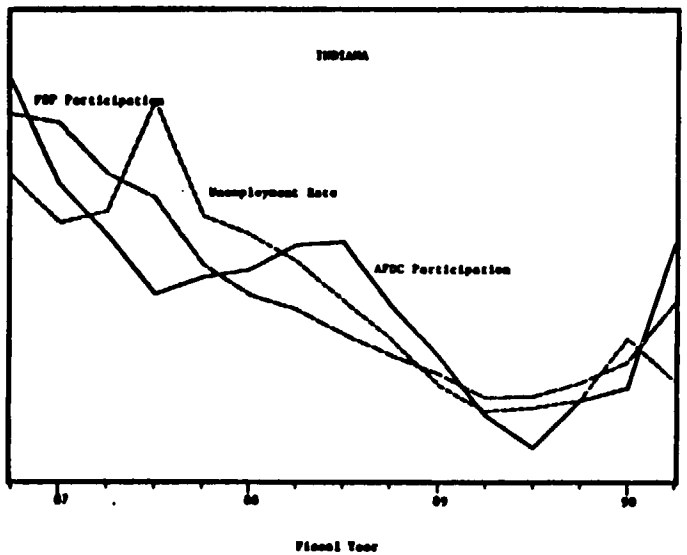








STATES WHICH EXHIBIT A LATE TURNING POINT IN PARTICIPATION BETWEEN FY89.3 AND FY90.1



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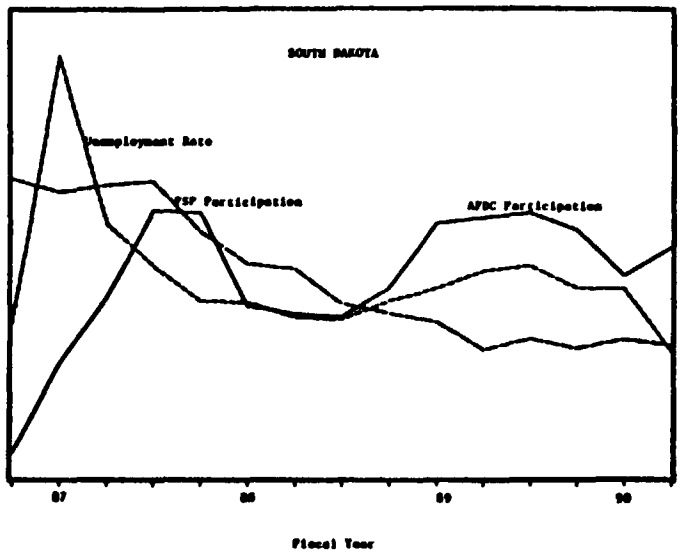

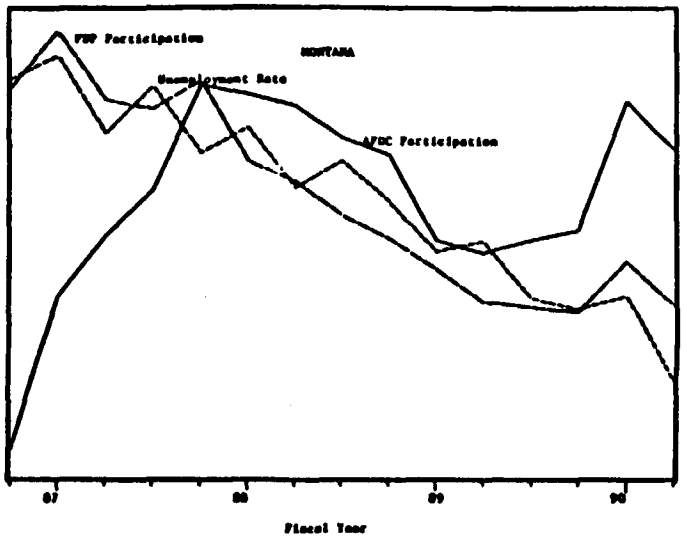

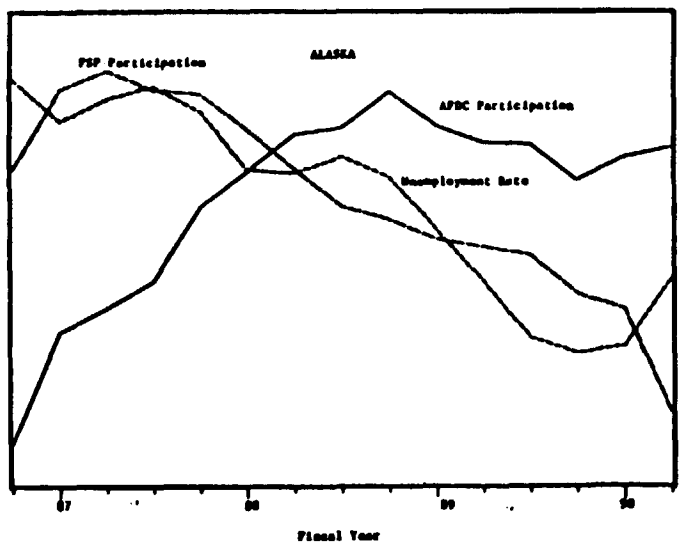

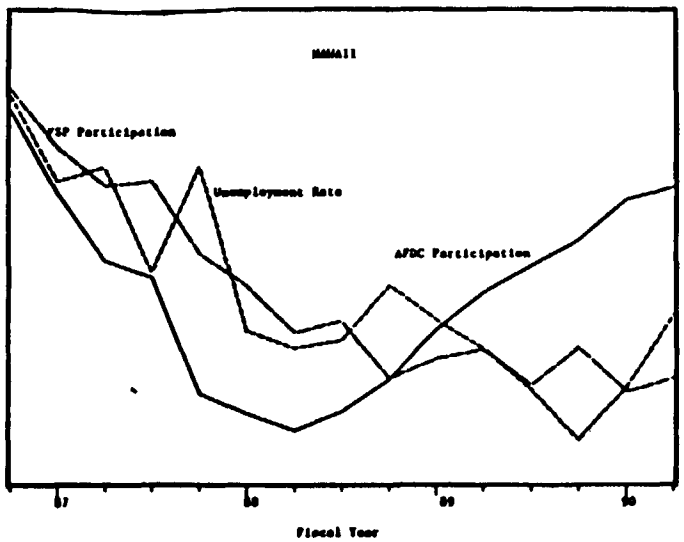

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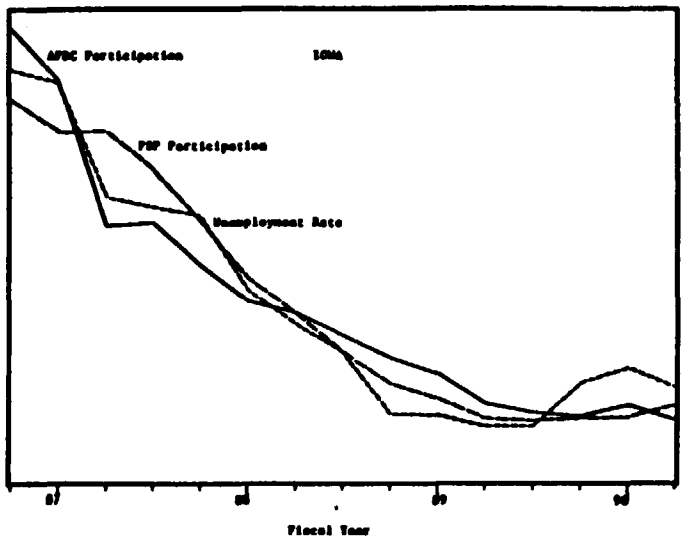

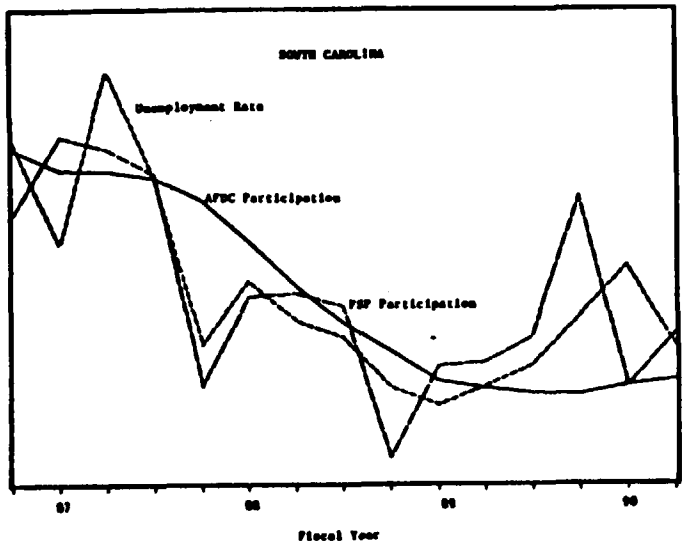

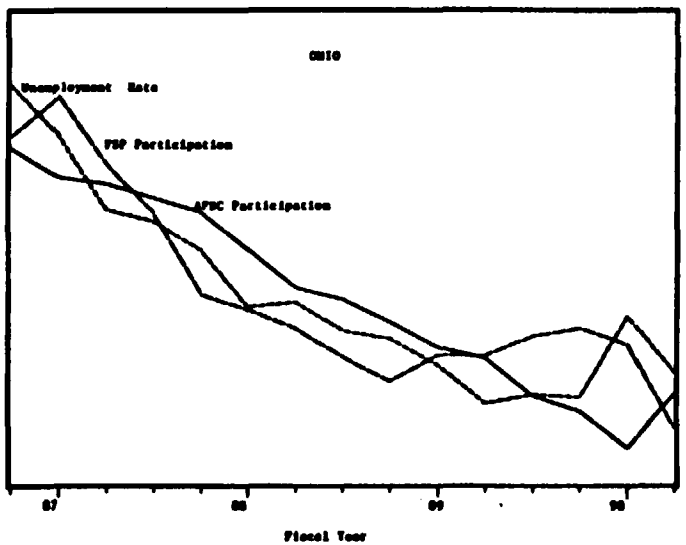

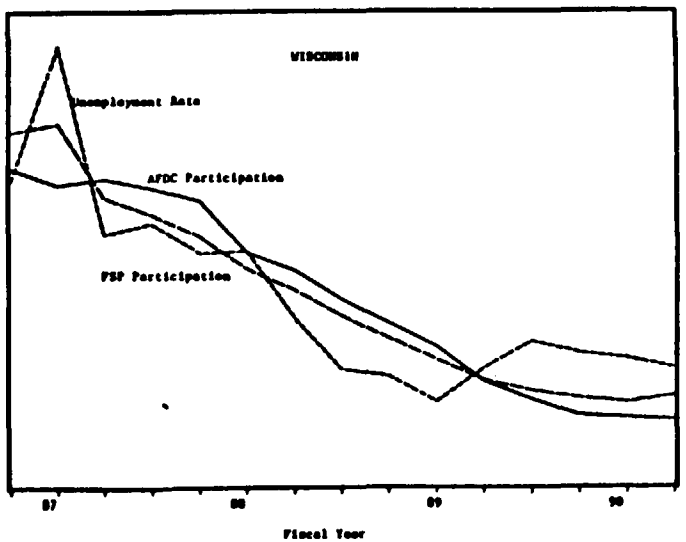

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