

**Food Stamps and AFDC:
A Double Life-Line for
Low-Income Working
Single Mothers**

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EXECUTIVE SUMMARY

The Food Stamp Program, administered by the U.S. Department of Agriculture in partnership with state and local governments, is the largest food assistance program in the United States. Congress created the program in 1977 to help poor families purchase nutritious food by offering stamps that can be used to buy groceries. This program has succeeded: research studies show that food stamps increase the nutritional well-being of poor families, more so than comparable cash income, and diet improves as the amount of food stamp benefits rises. The program also strengthens the food industry and the agricultural sector of the economy through the increased purchase of food items.

The percentage of the U.S. population receiving food stamps between 1977 and 1994 ranged from a low of 6.5 percent in 1978 to a high of 10.8 percent in March 1994, when one out of every nine Americans received this benefit. Benefit receipt rates fluctuate with changes in eligibility rules and with economic downturns. Over half of all food stamp participants are children, most of whom live in single-parent homes. Single-parent households are more likely to participate in the program than other households with children because they have lower incomes and because they are more likely to be recipients of Aid to Families with Dependent Children (AFDC), who are automatically eligible for the program.

As of the spring of 1996, policymakers are debating the fate of several of the nation's major social programs, including the Food Stamp Program, AFDC, Medicaid, and Medicare. This report investigates the current relationship between participation in the AFDC program and enrollment in the Food Stamp Program. **It finds that eligible working single mothers who combine or cycle between paid employment and receipt of AFDC are significantly more likely to obtain food stamps if they are also receiving AFDC.**

The 104th Congress proposed that the Food Stamp and AFDC programs be subjected to cutbacks in financing, exclusions of currently eligible participants, curtailments in benefits, and decreases in the federal role in setting minimum standards. The administration concurred with some of these proposals. Policymakers are also considering ending entitlements and distributing lump-sum grants of federal funds to the states. If AFDC becomes a time-limited, transitional work program for mothers, more eligible families will not receive food stamps, and more poor families will likely be more poorly fed.

Methodology

In this study, the Institute for Women's Policy Research (IWPR) examines a national sample of poor single working mothers to explore both the role of food stamps in increasing the living standards of their families and the relationship between AFDC and food stamp participation. The data, from the U.S. Bureau of the Census's Survey of Income and Program Participation, show that these mothers tend either to combine paid employment and AFDC benefits simultaneously or to use these two income sources sequentially. All of the women have months in which they are employed and receive AFDC, months in which they rely only on AFDC, months in which they rely only on earnings, and months in which they receive income from neither source. The study investigates how different combinations of paid employment and AFDC result in variations in food stamp eligibility and food stamp receipt. It also describes the increases in economic well-being when eligible families receive benefits and the losses in purchasing power when they do not. The study focuses on the relationship between AFDC and food stamp participation in the income packages of single mothers for two reasons: previous researchers have found a strong connection between these two programs, and current legislative proposals would curtail both programs.

Findings

Relationship Between Eligibility and Usage

IWPR findings show that:

- Participation in the AFDC program increases the likelihood that those eligible for the Food Stamp Program actually obtain food stamps to feed their families.
- Eligible single working mothers participate much more often in the Food Stamp Program when they receive AFDC than when they do not.
- Food stamp participation rates are lowest in the months when mothers neither receive AFDC nor engage in paid employment. These are also the months in which they are poorest.

Escaping Poverty

IWPR findings show that:

- During months without paid employment and without AFDC receipt, food stamps double the family income, from one-quarter to one-half of the poverty level.
- Incomes of food stamp-eligible families are most likely to rise above the poverty level in months when they package paid employment, AFDC, and food stamps. During these months, their income including the cash value of food stamps averages 115 percent of the poverty level.
- Overall, food stamps increase the level of living for eligible families from 65 percent to 88 percent of the poverty level.

Poor families fail to receive food stamp benefits for many reasons. Some poor mothers do not know about the program or do not realize that they are eligible. Some families must do without food stamps because of the time lag between qualification for and receipt of the food stamps. In other instances, poor mothers cannot spare the time from work to go through the certification procedures. **As a result, the families in the sample lost an average of \$814 (in 1990 dollars) in food stamp benefits over the two-year study period, an amount representing in the aggregate the ability to purchase about \$488 million worth of groceries each year.**

Entry and Exit Patterns

To discern the patterns associated with food stamp participation, we selected a subsample of 30 single mothers to examine the interconnected reasons that eligible recipients start or stop using food stamps. A typical pattern of entry onto the food stamp rolls begins when these single mothers experience declines in their own earnings as a result of job loss or declines in wages or in hours of paid employment. These declines in earnings result in subsequent entries into poverty for their families, followed by simultaneous movement onto the AFDC and food stamp rolls. A second pattern begins with the breakup of families, births of additional children, or loss of earnings by family members other than the mother. These changes result in the need for additional financial resources. The mothers in these families appear to try to compensate for losses and to provide additional resources by entering the AFDC and food stamp rolls. The sequence of events that results in exits from the rolls appears to be the mirror image of the sequence for entries, although there are more unexplained entries than unexplained exits.

Implications for the Future

The main study findings show that the families of single working mothers whose incomes include both paid employment and AFDC are more likely to attain incomes above the poverty level when they participate in the Food Stamp Program. Eligible mothers and their families are more likely to participate in the Food Stamp Program when they are receiving AFDC. Major losses in family purchasing power (almost half a billion dollars per year) occur when these women do not receive food stamp benefits for which they are eligible. Substantially greater losses are found by other researchers who include all single mothers in their analyses.

The results of this study, done on the basis of current eligibility rules and benefit levels, suggest that even further declines in economic well-being and

losses in purchasing power will occur if current proposals to curtail either AFDC or the Food Stamps Program are enacted. Both programs appear vulnerable to cutbacks in funding, tightening of eligibility requirements, and loss of federal control over them if the provisions of the Personal Responsibility Act (H.R. 4), the Family Self-Sufficiency Act of 1995 (Senate Report 10-96), the Food Stamp Simplification and Reform Act of 1995 (H.R. 1214), the Nutrition Assistance Reform Act of 1995 (S. 904), the National Governors' Association's, and the Administration's proposal are enacted as legislation.

The findings from this study suggest that if the AFDC program is transformed into a time-limited employment program and if more recipients lose AFDC benefits, food stamp participation rates among eligible single-mother families will fall. With the ongoing and anticipated restructuring of AFDC, a major gateway to the Food Stamp Program, more eligible families may fail to receive food stamp benefits because of lack of awareness of eligibility. Families' nutritional standards may decrease as a result.

Further, if food stamp eligibility rules are tightened and benefit amounts are reduced, fewer poor single mothers may be eligible for the program and the amounts that they receive will be smaller. Given these potential outcomes, food stamps may have a much smaller impact on reducing poverty and increasing purchasing power in the future than our data for 1984 to 1990 show. The greatest losses in economic well-being may occur among those who are poorest — those who neither receive AFDC nor find employment. These losses in purchasing power can also affect the food industry and the agricultural sector of the economy .

SECTION ONE: INTRODUCTION

The percentage of the U.S. population receiving food stamps between 1977 and 1994 ranged from a low of 6.5 percent in 1978 to a high of 10.8 percent in March 1994, when one out of every nine Americans received this benefit. Benefit receipt rates, which are based on the number of people using food stamps divided by the total population, fluctuate with changes in eligibility rules and with economic downturns. Over half of all food stamp participants are children (Smolkin, 1994), most of whom live in single-parent homes. Currently, the Food Stamp Program (FSP), along with Aid to Families with Dependent Children (AFDC), is vulnerable to cutbacks in financing, exclusions of currently eligible participants, curtailments in benefits, and decreases in the federal role in setting minimum standards. Of particular concern is the double loss of benefits that participants in the AFDC program, mostly single mothers and their children, may face as AFDC becomes a time-limited, transitional work program for mothers and food stamp benefits are likewise curtailed.

This study shows that poor working single mothers who are eligible for food stamps are significantly more likely to obtain food stamps if they are also receiving AFDC as part of their income package. It shows that these women and their families are more likely to escape poverty when they participate in the FSP than when they do not receive benefits for which they are eligible. The results of this study, done on the basis of current eligibility rules and benefit levels, suggest that even greater losses in benefits among single mothers and their children will occur if current proposals are enacted. This study is part of an ongoing investigation by the Institute for Women's Policy Research (IWPR) of how single mothers and other low-income families construct income packages — packages of cash and cash-like resources — that sustain their families and sometimes allow them to escape poverty and near-poverty.

This report begins with background information on the purpose of the FSP, current eligibility requirements and participation patterns, proposals to curtail the FSP and AFDC, and findings of related IWPR studies. Previous IWPR studies examined

the ability of single mothers to escape poverty through constructing an income package that includes paid employment, means-tested welfare benefits, and income from other family members. The purposes of the current study are to explore the factors that increase the likelihood that these single mothers will include food stamps in their income package and the effects of food stamps on their families' living standards and purchasing power. The findings are divided into three sections: (1) the relationship between food stamp eligibility and usage; (2) the income packages that maximize the chances of escaping poverty and the losses in purchasing power that occur when food stamps are not included in these packages; and (3) the interrelated events that result in entry onto or exit from the food stamp rolls. The study ends with conclusions and a discussion of implications for the future.

SECTION TWO: BACKGROUND

Purpose of the Food Stamp Program

The FSP, administered by the Food and Consumer Service of the U.S. Department of Agriculture in partnership with state and local governments, is the largest food assistance program in the country. The FSP provides 100 percent federal funding of benefits (U.S. House of Representatives, Committee on Ways and Means, 1993:1607). Throughout fiscal year 1994, it served approximately 27.5 million persons each month and disbursed about \$23.8 billion in benefits. Although an increasing number of states have implemented Electronic Benefit Transfers (EBT), a system for modernizing the form of food stamp benefits,¹ benefits are still largely provided through coupons that are redeemable for the equivalent dollar value of approved food items.

The primary goal of the program is to “permit low-income households to obtain a more nutritious diet ... by increasing their purchasing power” (the Food Stamp Act of 1977, as amended, P.L. 95-113). Research shows that the program works: food stamps increase the nutritional well-being of poor families, the availability of all nutrients to the household is positively associated with food stamp benefit levels, and the dietary effects of changes in benefits are considerably larger than those due to cash income (Devaney et al., 1989; Devaney and Moffitt, 1990). A secondary goal of the program is to strengthen the food industry and the agricultural sector of the economy through increased purchases of food items (Smolkin, 1995).

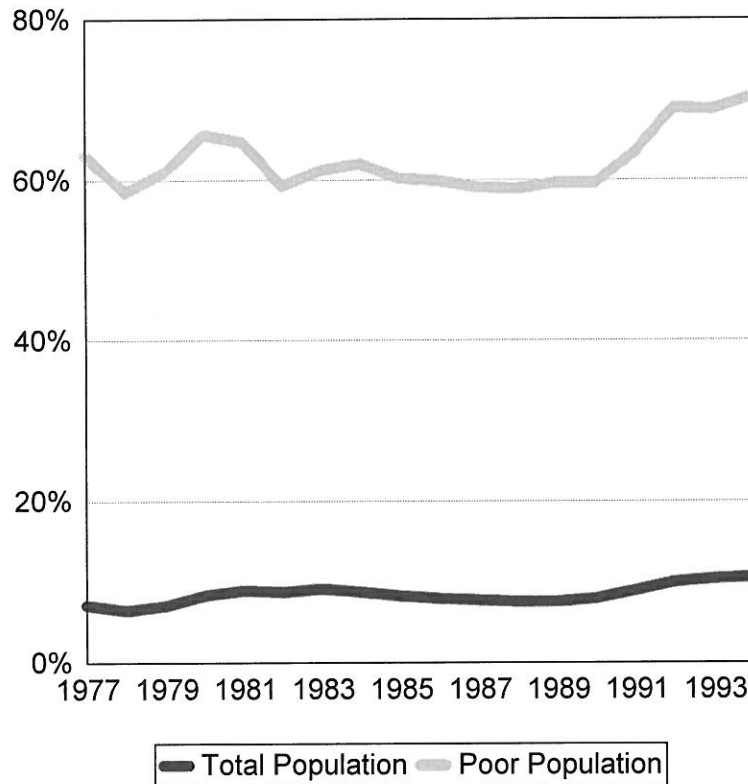
Eligibility and Use

Eligibility rules for the FSP are set primarily by the federal government and are nationally uniform. The current framework for eligibility was set by the Food Stamp Act of 1977.² As of 1977, eligible households must meet specific income, asset, categorical, and employment-related requirements established by federal law and implemented by state welfare agencies (U.S. House of Representatives, Committee on Ways and Means, 1994). The amount of gross and net monthly cash income is

the primary eligibility requirement; the test determines that eligible households have gross and net monthly income and liquid assets below the limits set by the food stamp law. To determine net income, households without elderly or disabled members are allowed an inflation indexed “standard deduction” (\$131 per month in fiscal 1994, regardless of household size); an “earned income deduction” consisting of 20 percent of any earned income, a “dependent care expenses deduction” of up to \$200 per month for children under age two and \$175 per month for children over age two, an “excess shelter expense deduction” for rent and utilities to the extent that they exceed 50 percent of counted income after all other deductions (up to \$231 per month as of July 1994), and, after 1995, a “child support deduction” for any amounts paid toward legally obligated child support (U.S. House of Representatives, Committee on Ways and Means, 1994). Net income is any gross income left after the deductions are taken. Gross income cannot exceed 130 percent of the poverty threshold, while net income cannot exceed 100 percent of the poverty threshold. Eligibility standards are less stringent and deductions are greater for households with elderly or disabled members. Households without elderly members cannot have countable assets valued at more than \$2,000, while households with elderly members are allowed \$3,000. Also, households composed only of AFDC and Supplemental Security Income (SSI) recipients are automatically eligible for the program.³

The eligibility unit for food stamps is a household (referred to as the food stamp unit, or FSU), defined as either a single person living alone or a group of individuals living together who “customarily purchase food and prepare meals in common.” Unrelated co-residents may be treated as a separate household if they purchase food and prepare meals separately (U.S. House of Representatives, Committee on Ways and Means, 1994). Once an FSU is determined to be eligible, the amount of benefits its members receive depends on their countable income and the size of the FSU. Benefit levels range from a maximum of \$112 per month for a single-person household to a maximum of \$676 for an eight-person household (with an additional \$85 for each additional person beyond eight) (U.S. House of Representatives, Committee on Ways and Means, 1994).

Figure 1.
Food Stamp Participation Rates,
1977-1994



Source: U.S. House of Representatives, Committee on Ways and Means (1994:77), unpublished data from the U.S. Department of Agriculture's Food and Consumer Service, and unpublished data from the U.S. Bureau of the Census.

As seen in Figure 1, the percentage of the U.S. population receiving food stamps between 1977 and 1994 ranged from a low of 6.5 percent in 1978 to a high of 10.8 percent in March 1994, when one out of every nine Americans received this benefit. Among the poor, reciprocity rates ranged from a low of 58.8 percent in 1978 to a high of 68.9 percent in 1993. Benefit receipt rates fluctuate with changes in eligibility rules and with economic downturns. These receipt rates among the poor may underestimate usage rates because not all of the poor are eligible to participate in the program. Trippe and Beebout (1988) estimated that participation rates ranged between 74 and 82 percent of the eligible population and found slight declines in participation between 1985 and 1988. A follow-up study found a reversal in this decline after 1988 (Trippe et al., 1992).

Single-parent households are more likely to participate in the program than other households with children because they have lower incomes and because they are more likely to be AFDC recipients, who are automatically eligible for the program (Trippe and Sykes, 1994). As of 1993, 40 percent of food stamp households also received AFDC (Smolkin, 1994). Those eligible households least likely to use food stamps include the elderly, families with employed parents, and households eligible for the lowest benefit amounts (Trippe and Sykes, 1994).

Researchers investigating the dynamics of food stamp use find that recipients move on and off the food stamp rolls (with the average spell lasting about seven months). The amount of earnings is a dominant predictor of participation patterns for all eligible households (Burstein, 1993). For single parents and AFDC households, which have longer periods of receipt than other households (Burstein, 1993), entry onto the AFDC rolls is always a strong predictor of the start of a food stamp spell (Burstein and Visher, 1990; Martini, 1992). Individuals who leave the rolls are less likely to continue to receive food stamps, even if eligible, since they are less likely to realize that they qualify for benefits and are more likely to be told that they do not (Coe, 1985). About six out of ten of those exiting from the FSP remain eligible to participate (Blank and Ruggles, 1992). As a result of lack of participation, families lose purchasing power and have lower standards of living (MacDonald, 1985).

The Current Climate

Concern about the FSP has shifted in the last decade. A 1988 report issued by the Congressional Budget Office addressed the lost purchasing power and lower standards of living experienced by eligible food stamp households that did not collect benefits. The report states that “concerns have been raised that participation in the Food Stamp Program is low” (Ross, 1988). As a result, policymakers encouraged researchers to gain a better understanding of the factors associated with participation and nonparticipation in the FSP so that usage rates could be increased (Allin and Beebout, 1989). The desire to increase food stamp use appears to have waned in light of growing participation rates in the early 1990s. A trend toward fiscal conservatism, which gained momentum in the 1994 congressional elections, resulted

in proposed legislation to decrease the size, scope, and costs of entitlement programs for the poor. Both food stamps and AFDC are currently vulnerable to cutbacks in funding, further restrictions in eligibility requirements, and loss of federal control over the programs if sections of the Personal Responsibility Act (H.R. 4), the Family Self-Sufficiency Act of 1995 (Senate Report 10-96), the Food Stamp Simplification and Reform Act of 1995 (H.R. 1214), the Nutrition Assistance Reform Act of 1995 (S. 904), the National Governors' Association's or the Administration's proposal are enacted as legislation. The following changes are common to many of the pending proposals.

- *Caps on authorization levels for food stamps and limits on program cost increases (if increases are limited to 2 percent annually, regardless of food price inflation)* — The resulting cuts are estimated to range from \$19 billion to \$22 billion over a five-year period, with a loss of benefits for approximately five million individuals, according to U.S. Department of Agriculture estimates. This cap is not present in the National Governors' Association proposal.
- *Reduction of the basic benefit level* — from 103 percent to 100 percent of the Thrifty Food Plan level.
- *Reductions in the standard deduction* — to \$124 per month by fiscal year (FY) 2000.
- *Limits on the extent to which food stamp benefit levels take other household expenditures (especially shelter costs) into account and provisions under which previously uncouned benefits such as energy assistance would be considered as income.*
- *Exclusion of many legal immigrants from the FSP* — about 1.1 million, according to U.S. Department of Agriculture estimates.
- *Limits on participation of "able-bodied" adults without children to four months* — regardless of whether they have found employment.

Some of the proposed legislation would also allow states to:

- *Cash out food stamps, i.e., give cash to employers to subsidize jobs for food stamp recipients or provide cash in lieu of coupons to households receiving AFDC and earning at least \$350 per month for three consecutive months;*

- *Receive a food stamp block grant with its own eligibility and benefit standards after a state has implemented a statewide EBT program or met certain conditions related to quality control; and*
- *Reduce food stamp benefits if AFDC households fail to comply with AFDC rules and disqualify individuals for voluntarily quitting jobs (states are free to disqualify entire families for this reason).*

Proposed cutbacks may not only reduce the living standards of poor Americans but may also reduce food retail sales by an estimated \$4.1 billion to \$9.2 billion over the next five years (U.S. Department of Agriculture, 1995).

AFDC recipients, who have the lowest incomes of families with children and belong to the household type most likely to participate in the FSP, face even more severe curtailments in the AFDC program if current proposals are enacted. These proposals include:

- Elimination of AFDC as an entitlement for eligible recipients;
- Distribution of federal funds in the form of block grants, allowing each state to decide how much of the block grant should go for cash benefits and to determine eligibility standards;
- Caps on aggregate expenditures to 1994 levels regardless of economic circumstances;
- Establishment of stringent time limits for AFDC receipt to 60 months over the course of an adult recipient's lifetime, with time limits confined to only 24 months at state option, regardless of circumstances;
- Blanket cuts for many legal immigrants; and
- State options to cut all AFDC benefits to families in which the mother is under 18 years of age and does not live with her parents and to cut benefits to any child born while the mother is receiving AFDC or whose legal paternity has not been established.

A variety of estimates show the magnitude of losses in purchasing power as a result of these proposals. If the Personal Responsibility Act (H.R. 4) were enacted, there would be cutbacks of \$11.4 billion in the cash assistance part of the AFDC program and of an additional \$13.8 billion due to exclusion of legal immigrants (including restrictions in food stamps) during the first five years, according to

estimates by the U.S. Department of Health and Human Services (1995). An estimated 5.6 million children would lose benefits when additional cutbacks in eligibility for legal immigrants and minor mothers are taken into account (U.S. Department of Health and Human Services, 1995).

Related IWPR Research

As AFDC shifts from an entitlement program for poor mothers and their children to a transitional employment program for mothers, IWPR has continued to examine the income packages that recipients try to put together, often under conditions over which they have no control, in order to increase their families' well-being. *Welfare That Works: The Working Lives of AFDC Recipients* (Spalter-Roth et al., 1995) investigates the well-being of AFDC families as they make transitions into and out of paid employment. IWPR finds that a substantial portion of AFDC recipients are able to increase their families' well-being by packaging income from AFDC, paid employment, and other family members. The more than four out of ten recipients who engage in paid employment, either combining it with AFDC receipt ("combiners") or cycling between these two income sources ("cyclers") over a two-year period, receive considerably fewer dollars in means-tested benefits but have, on average, higher standards of living than those whose packages do not include paid employment.

The most painful months economically for these mothers and their families are the months when they have access to neither earnings from the mother's employment nor AFDC, in which they rely primarily on the earnings of other family members. The families of these mothers are somewhat better off in months when they rely on AFDC, but their incomes are still substantially below the poverty threshold, on average. Combining employment and AFDC tends to work well for these women's families, especially for cycler families, whose incomes are over 120 percent of the poverty line during the months in which they combine paid employment and AFDC. The months with the least family poverty (on average), for both the cyclers and the combiners, are the months in which they are employed but do not receive AFDC. In *Welfare That Works*, the cash value of food stamps was not included in calculating family well-being for this analysis.

Study Questions and Hypotheses

Given the importance of food stamps for the purchasing power and nutritional well-being of poor families (Devaney and Moffitt, 1990), this current study focuses on food stamp eligibility and usage for working single mothers and their families who participate in the AFDC program. The work/welfare packagers are divided into two subgroups, cyclers and simultaneous combiners. Cyclers tend to switch between work and welfare reliance, receiving their income from these sources sequentially rather than simultaneously. This group includes those who cycle only once from welfare to work (or vice versa) as well as those who cycle back and forth between paid employment and welfare receipt. Simultaneous combiners, by contrast, receive both earnings and welfare benefits at the same time. Since some mothers both cycle and combine, the study distinguishes between these two groups by requiring that combiners spend at least four months simultaneously packaging work and welfare and that cyclers spend fewer than four months doing so.⁴

The study investigates how different combinations of paid employment and AFDC receipt affect food stamp eligibility and participation. It investigates the increases and losses in well-being that occur when these women and their families participate or fail to participate in the program. Because previous research has shown that AFDC participation is such an important gateway to food stamp participation, we expect that combiners and cyclers are more likely to participate in months when they receive AFDC than in months when they do not (even if they are eligible). And we expect that food stamps have a visible role in poverty reduction. Finally, we take advantage of the richness of information available on each respondent to develop case studies and diaries of a subsample of combiners and cyclers in order to illustrate the interconnected events that result in movement onto and off of the food stamp rolls.

The study findings shed light on the following specific questions:

- (1) What is the relationship between eligibility and usage among single mothers who either combine paid employment with AFDC receipt or cycle between these two major income sources? What is the food stamp participation rate of combiners compared to cyclers? During which months are eligible persons the most and the least likely to participate in**

the FSP? How significant is AFDC participation in predicting food stamp participation when other factors are held constant? Based on the findings of other researchers, we expect that AFDC has a strong independent effect on the likelihood that families will use food stamps when they are eligible to do so. We therefore expect that combiners will use food stamps in more months than cyclers.

- (2) **When eligible recipients use food stamps, what combinations of paid employment and program receipt maximize their chances of escaping poverty? Which combinations maximize purchasing power? What losses are experienced without food stamps?** Among the two groups of women (combiners and cyclers), in which months do their families have the highest income-to-poverty ratios if food stamps are counted along with cash income? What is the lost of nonparticipation (i.e., loss in purchasing power), and when are these losses the greatest? We expect that working single mothers, although eligible, will be less likely to participate in the FSP during the months when they are employed but do not receive AFDC. Their standard of living (measured in terms of income-to-poverty ratios) will be lower in the months when they do *not* receive AFDC. Their loss of purchasing power will be greatest in the months when they do not receive AFDC.
- (3) **What interconnected series of events are illustrative of entries onto and exits from the food stamp rolls for eligible recipients?** To what extent are events such as increases in work hours, changes in family composition, start or stop of AFDC spells, and start or stop of food stamp spells interconnected? We expect that these events will be different for cyclers and combiners.

In their efforts to create income packages which bring their families out of poverty, the single mothers described here participate or fail to participate in the FSP as a result of eligibility requirements, costs of participation in terms of losses in time and money (such as transportation costs and loss of pay), and gaps in coverage. The need to use food stamps arises for job-related reasons (including job loss or decline in earnings) or family-related reasons (including divorce, separation, or increases in family size). In general, we expect that combiners will be more likely than cyclers to use food stamps when eligible, and that all of the mothers in this sample will be more likely to use food stamps in months when they receive AFDC than in months when they do not. As a result of this differential food stamp usage, we expect poverty rates to be higher and losses of purchasing power greater in months with employment but without AFDC. We expect to find this set of relationships for several reasons. The most obvious reason for

the relationship between AFDC and food stamp use is the automatic qualification of eligible AFDC recipients for food stamp benefits. Intake and case workers likely encourage potential AFDC recipients to complete the food stamp eligibility certification process when applying for AFDC. Knowledge of the FSP and likelihood of using it when eligible may come from prior periods of AFDC receipt. A second reason is participation costs. Other researchers have found that there are time and money costs to remaining eligible for food stamps. These costs are likely greater when recipients are engaged in paid employment and must take time off (and risk job and earnings loss) to maintain eligibility. A third reason for the particular relationship between food stamp use and AFDC use (in this study, the lack of food stamp benefits during the poorest non-AFDC nonemployment months) is the lag between qualification for and receipt of benefits.

To answer the study questions, a data file was created from four panels (1984, 1986, 1987, and 1988) of the U.S. Bureau of the Census's Survey of Income and Program Participation (SIPP).⁵ The methodology for answering the study questions is presented in Appendix A. Merging of the four SIPP panels resulted in a sample population of 502 women who are single mothers for at least 12 out of 24 survey months, receive AFDC benefits for at least two of the 24 months, and work for at least 300 hours. On average, women in the sample are single for 23 months, receive AFDC for 18 months, and work 1,903 hours over the 24-month study period. Single mothers include women who are divorced, widowed, separated from their husbands, or never married and who are the parents or guardians of minor children (under 18 years of age). The sample population represents approximately 1.2 million working single AFDC recipients with an estimated 2.3 million children.

SECTION THREE: FINDINGS

This section begins with a description of the study population (combiners and cyclers). Food stamp participation among this population and the factors that increase participation among eligible AFDC recipients are examined next. An investigation of the impact of food stamp participation on the ability to escape poverty and gain purchasing power follows. Finally, the interconnected reasons for food stamp entries and exits are examined for the combiner and cycler populations.

Who Are the Combiners and Cyclers?

Combiners and cyclers do not fit the stereotype of the AFDC recipient as solely dependent on government assistance. Approximately 43 percent of all single mothers who receive AFDC benefits over a two-year period have both paid employment and AFDC receipt in their income packages; of these 1.2 million single mothers, about half (53 percent) are cyclers and half (47 percent) are combiners (see Table 1). There are similarities and differences between cyclers and combiners. Although the patterns of women who cycle on and off the welfare rolls have been discussed in the literature (Bane and Ellwood, 1994; Pavetti, 1993), the survival strategies of combiners are less well known. The major similarity between these two subgroups is that both engage in substantial hours of paid work and use AFDC and food stamps as additional income sources; the major difference between cyclers and combiners lies in their patterns of welfare use. In contrast to cyclers, combiners are more likely to continue on welfare while also engaging in paid work. Although these differences in income packaging patterns are used to categorize cyclers and combiners, each group has months in which they receive AFDC only, combine AFDC with earnings, rely on earnings, and receive neither AFDC benefits nor earnings. As Table 1 shows, combiners spend an average of 18 months on the welfare rolls, compared to 11 months for cyclers, and combiners are more likely than cyclers to have had previous welfare spells. Both combiners and cyclers engage in substantial work activity. Combiners have more years of work experience than do cyclers (6.0 versus 5.4), and they work more weeks (62 versus 47) and more hours (2,108 versus 1,722). However, combiners, because they receive lower hourly wages (as well as lower

Table 1.
Average Characteristics of Packagers

Characteristic	All Packagers	Cyclers	Combiners
Population	1,198,955	636,626	562,329
Sample	502	275	227
Family			
Age of mother	29	27	31
Number of children	1.9	1.8	2.1
Percent with child under age two or birth during survey	37%	44%	29%
Percent with other earners in family (monthly average)	44%	47%	41%
Human capital			
No high school	9%	9%	9%
Some high school	29%	30%	27%
High school graduate only	41%	40%	45%
Some college	19%	19%	19%
College graduate	1%	2%	0%
Work Behavior			
Work experience (years)	5.7	5.4	6.0
Job tenure (years)	1.8	1.6	2.1
Total hours worked	1,903	1,722	2,108
Weeks employed	54	47	62
Weeks looking for work/on layoff	16	17	14
Hourly wage in primary job (in 1990 \$) (1)	\$4.29	\$4.51	\$4.03
Total earnings in primary job (in 1990 \$(1)	\$7,366	\$7,353	\$7,380
Race/Ethnicity			
White	44%	41%	48%
African-American	42%	44%	41%
Hispanic (2)	11%	11%	10%
Other racial background	3%	4%	1%
AFDC History			
Months on AFDC	14	11	18
Percent ever on AFDC prior to the survey	24%	22%	27%
Average monthly AFDC benefit (in 1990 \$)	\$345	\$326	\$308

(1) Primary job is the job at which the AFDC mother worked the longest hours.

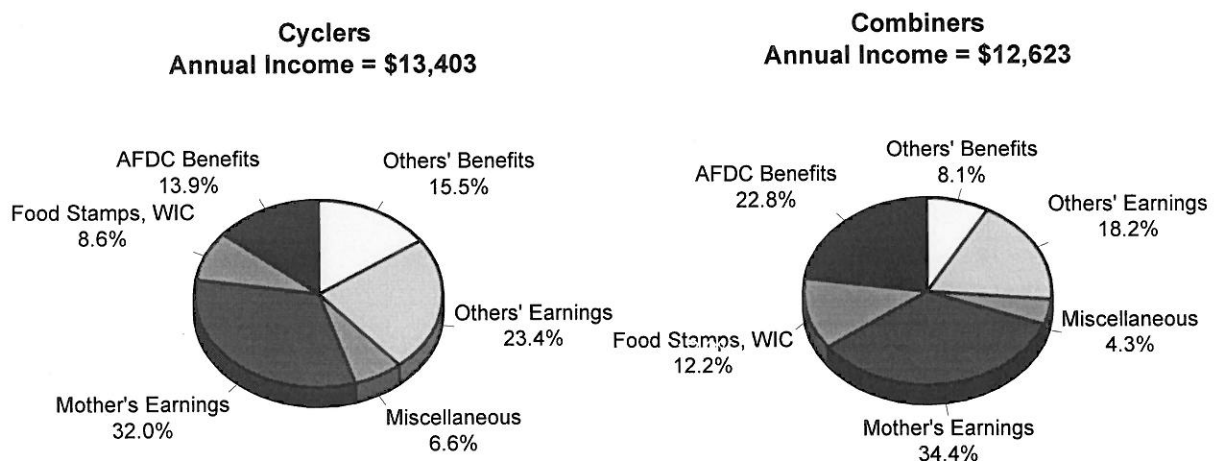
(2) Hispanics may be of any race and are not included here in the white, other, or African-American group.

Source: IWPR calculations based on the U.S. Census Bureau Survey of Income and Program Participation, 1984 and 1986-1988 panels.

AFDC benefits) than do cyclers, spend more time in poverty. Cyclers receive higher wages because they are more likely to work in better-paid positions, specifically in clerical and blue-collar occupations, rather than in low-paid service occupations. Higher wages are another reason that we expect lower food stamp usage rates among cyclers.

There are some differences in age and family composition between cyclers and combiners. The combiners are older than the cyclers, with average ages of 31 and 27, respectively. This age difference likely explains why cyclers, on average, tend to have more toddlers or infants (44 percent, compared to 29 percent of combiners). Combiners tend to have more children on average (2.1 versus 1.8 children) and are also somewhat more likely to be white than are cyclers. Lastly, cyclers are somewhat more likely to live in families with additional earners (47 percent versus 41 percent), which may account for the somewhat higher incomes of cycler families and their lower food stamp usage.

Figure 2.
Annual Incomes of Cyclers and Combiners
(in 1990 dollars, over a 24-month period)



Source: IWPR calculations based on the Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Combiners' use of AFDC as a more continuous safety net results in an average income package that looks somewhat different from that of cyclers. Figure 2 shows that both subgroups include paid employment, means-tested benefits, and income from other family members as major parts of their income packages. For both income packages, about one-third comes from the mothers' paid employment. A higher percent of the combiners' income comes from AFDC and from food stamps (about 12 percent of combiners income is from the cash value of food stamps, compared to about 9 percent for cyclers). Because their earnings and income from other family members are likely to be lower than those of cyclers, combiners are more likely to have lower total family incomes (including the cash value of food stamps and assistance from the Special Supplemental Food Program for Women, Infants and Children (WIC) than are cyclers (\$12,623 in 1990 dollars, compared to \$13,403). Combiners are more likely to spend more months in poverty and are more likely to depend on food stamps as a result. If the cash value of food supplements is not counted, however, both cyclers and combiners generally fail to reach the poverty threshold.

Case Studies

Five case studies of single mothers, presented here, illuminate their income packaging strategies and the patterns of events associated with entries onto and exits from the FSP. The case studies show the increases in living standards when food stamps are included in these individuals' family income packages, the losses in purchasing power when individual families are eligible but do not receive food stamps, and how the addition of these forgone food stamps would have increased the family's economic well-being. They also demonstrate the job gains and losses, the low earnings, the lack of child support, and the fragility of the income packages constructed by these women.

Case Study 1

24-Month Income Packaging Pattern

Months 1 to 8:	Working, receiving child support, and receiving neither food stamps nor AFDC
Month 9 and 10:	Not working, receiving child support, and receiving neither food stamps nor AFDC
Months 11 to 22:	Working for casual earnings, receiving child support, and receiving neither food stamps nor AFDC
Months 23 and 24:	Not working and receiving food stamps, AFDC, and child support

Average Annual Family Income with Food Stamps: \$7,391

This 29-year-old white mother of three is divorced and lives in Wisconsin. She has a tenth-grade education and two years of job experience. This mother works for eight months during the study period as a computer operator in a hospital. She puts together an annual income package of about \$7,400 (including the cash value of food stamps received) through her own employment, government benefits, child support, and other informal income sources. During this time she earns between \$504 and \$1,216 each month, with an average wage of \$6.75 per hour. For the first four months she is employed 35 hours per week. During the last four months, she is employed part-time, for 18 hours each week. The mother loses her job in month 9. The mother receives child support payments averaging \$2,450 annually for the entire 24-month period. These payments are the major income source of the family for the first three months. From months 11 to 22 the mother receives additional income through

casual earnings, such as from occasional babysitting.

The family begins receiving food stamps and AFDC during the last two months of the survey. These payments amount to the \$447 and \$160, respectively, and raise the family's income from \$300 to \$647 for these two months. The family receives food stamps for only two months even though it is eligible to receive them for 22 months. This failure to receive food stamp benefits while eligible represents a monthly average loss of \$197 for the family and a total loss of \$3,940 (over a two-year period) in purchasing power. The addition of the cash value of food stamps actually received increases the family's average annual income only from 59 to 60 percent of the poverty level. If the family had received all food stamps for which it was eligible, its income could have increased significantly, to 76 percent of the poverty level.

Case Study 2

24-Month Income Packaging Pattern

Months 1 to 9:	Working and receiving AFDC but not food stamps
Month 10:	Not working and receiving AFDC but not food stamps
Months 11 and 12:	Not working and receiving food stamps and AFDC
Months 13 to 21:	Working and receiving AFDC but not food stamps
Months 22 and 23:	Not working and receiving food stamps and AFDC
Month 24:	Working and receiving AFDC but not food stamps

Average Annual Family Income with Food Stamps: \$9,187

This 35-year-old African-American woman lives in California and has three children, the youngest of whom is 12. This woman is a high school graduate and works as a teacher's aide over the course of the study period. She constructs an annual income package composed of her own earnings and government benefits. She does not receive child support. The mother has eight years of tenure at her job and eight years of work experience. Her personal earnings average \$5,097 annually, or \$5.29 per hour. She reports no earnings during five months of the study period but does not receive unemployment insurance during this time. She also receives AFDC during the entire survey period. These payments average \$3,660 annually.

entire two-year period. The cash value of food stamps received contributes approximately \$430 to her income each year. The dollar amount of food stamp income not received is more than double this amount (\$880). The family's annual income, excluding the cash value of food stamps, is 78 percent of the poverty level. When the cash value of food stamps is included, the family income is \$9,187, or 82 percent of the poverty threshold. If the mother had received the additional food stamps for which she was eligible, her family income would have increased to 89 percent of the poverty level.

It is only during the period with no earnings from her job that she receives food stamps, although the family is eligible to receive this benefit during the

Case Study 3

24-Month Income Packaging Pattern

Months 1 to 6:	Working and receiving food stamps but not AFDC
Months 7 and 8:	Working and receiving neither food stamps nor AFDC
Months 9 to 12:	Working and receiving food stamps but not AFDC
Months 13 to 24:	Working and receiving neither food stamps nor AFDC

Average Annual Family Income with Food Stamps: \$8,267

This 24-year-old white mother with one child lives in Florida. During the study period, she constructs an income package composed mainly of her own earnings. She is a high school graduate and works as a sales clerk in a grocery store for all 24 months of the study period. Earnings from her employment range from \$358 to \$900 each month. This mother works an average of 28 hours per week, but there is a great deal of variation in her weekly hours of work. She earns an average of \$4.29 per hour. The family receives AFDC for six months during the study period. AFDC income ranges from \$160 to \$359 in the months received — the months in which she is employed the fewest hours.

The family receives food stamps for only four months although it is eligible for 19 months. Food stamps contribute \$124 to the family's income each year. Without food stamps the family's income is \$8,143, or 106 percent of the poverty

level. Even with the additional cash value of food stamps, the family's average annual income is only \$8,267, or 108 percent of the poverty level. The family lives in poverty eight of the 24 months. The average monthly food stamp income not received is \$35, which amounts to an annual average of \$263, more than double the actual annual average amount of food stamp income received by the family. If the family had received all of the food stamps for which it was eligible, its income would have increased to 111 percent of the poverty level.

Case Study 4

24-Month Income Packaging Pattern

Month 1:	Working and receiving neither food stamps nor AFDC
Month 2:	Not working, receiving unemployment insurance, and receiving neither food stamps nor AFDC
Months 3 and 4:	Working and receiving food stamps but not AFDC
Months 5 to 8:	Working and receiving AFDC but not food stamps
Months 9 to 14:	Working and receiving food stamps but not AFDC
Months 15 and 16:	Not working and receiving food stamps and AFDC
Months 17 to 20:	Working and receiving food stamps and AFDC
Months 21 to 24:	Working and receiving neither food stamps nor AFDC

Average Annual Family Income with Food Stamps: \$8,512

This 22-year-old African-American mother lives in New Jersey. She creates an income package from paid employment, AFDC, and food stamps, sometimes combining these income sources and sometimes cycling among them. At the beginning of the study period, she had one child. She is a high school graduate and has two years of work experience. The first month of the survey, she works for \$4.11 an hour as a child care worker and earns a total of \$325. She is unemployed in month 2 and receives \$52 in unemployment insurance, her family's sole source of reported income in this month. In month 3, the mother begins working as a nursing aide in a hospital, where she earns between \$3.75 and \$4.87 an hour. She holds this job for 14 months. At the same time that she begins work, the family begins to receive food stamps, which they use for 14 months, averaging \$582 annually. They also receive 10 months of AFDC benefits averaging \$140 per month. The mother is out of work for two months (months 15 and

16) but continues to receive the same amount of food stamp benefits and also returns to AFDC. She goes back to work for the last eight months of the survey. Her earnings increase to a range of \$750 to \$950 per month. The family continues to receive both food stamps (\$80 per month) and AFDC (\$140 per month) for four of these eight months. The mother has a second child in month 18.

The family's annual income is \$7,930, or 97 percent of the poverty level, including AFDC but not including the cash value of food stamps. When the cash value of food stamps is added to the package, the family's annual income increases to \$8,512 and its standard of living increases to just above the poverty level (104 percent). If the family had received all of the food stamps for which it was eligible, its standard of living would have increased to 106 percent of the poverty level. For this family, food stamps make the difference between an income which is below and one which is above the poverty level.

Case Study 5

24-Month Income Packaging Pattern

Months 1 to 9:	Working and receiving neither food stamps nor AFDC
Month 10:	Working, receiving WIC, and receiving neither food stamps nor AFDC
Months 11 to 18:	Not working and receiving food stamps, AFDC, and WIC
Months 19 to 22:	Working and receiving food stamps and AFDC
Month 23:	Not working, receiving WIC, and receiving neither food stamps nor AFDC
Month 24:	Working, receiving WIC, and receiving neither food stamps nor AFDC

Average Annual Family Income with Food Stamps: \$10,412

This 29-year-old white Delaware resident has three children at the beginning of the study. She is separated from her husband throughout the study period and receives an average of \$50 per month in child support. Her income package is composed of her own earnings, AFDC, food stamps, and other informal income. She is a high school graduate and has a total of ten years of work experience. Two additional children are born during the survey period, increasing the family size to six. The mother works for the first 11 months of the study period as a production inspector in the metal industry at a wage of \$4.50 per hour. At the end of this job, the mother begins simultaneous receipt of food stamps and AFDC. The family also receives help from the WIC program. The family receives both AFDC and food stamps for a total of 12 months and receives WIC benefits for a total of 11 months. From months 19 to 22, while

receiving food stamps and AFDC, the mother begins a new job as a clerk in a hardware store, earning an average of \$5.00 per hour. She does not work during month 23, when she gives birth, but returns to her job in month 24. During the entire study period the husband pays only \$1,188 in child support (for an annual average of \$594).

Without the cash value of food stamps, the family's annual income is \$9,028, or 73 percent of the poverty level. Including the cash value of food stamps, the annual income increases to \$10,412, or 84 percent of the poverty threshold. This family does not receive food stamps during all months in which it is eligible (representing \$171 in lost purchasing power per month). If the family had collected its full share of food stamp benefits, its standard of living would have increased to 91 percent of the poverty threshold.

Food Stamp Participation Among Income Packagers

In this section, we identify the patterns of food stamp participation of work/welfare packagers and examine how these patterns vary by patterns of employment and AFDC receipt. First we compare the months in which eligible cyclers and combiners receive food stamps and months in which they do not and their monthly participation rates. Next we explore the independent effects of factors that increase the likelihood that eligible income packagers will use food stamps. As noted, other researchers have found that food stamp participation is strongly related to AFDC participation; therefore, we would expect eligible combiners or cyclers to use food stamps during all months in which they receive AFDC but not necessarily all months of the study period.

Months of Receipt and Nonreceipt

Table 2 subdivides participation into two categories: (1) months eligible for and receiving food stamps and (2) months eligible but not receiving food stamps. It shows the average number of months for which eligible single mothers who either cycle between AFDC benefits and paid work or combine these two income sources simultaneously receive food stamps. It also shows the average number of months for which these single mothers are eligible for but do not receive this benefit. (It should be noted that because the table does not show months of noneligibility for food stamps, the months shown do not add to total months.) Table 2 also shows the similarities and differences in food stamp receipt and nonreceipt (during periods of eligibility) between cyclers and combiners.

All Months. Out of the 24-month survey period, these women and their families, or food stamp units (FSUs),⁶ were eligible for food stamps an average of 21 months. Of these eligible months, the mothers participate in the FSP for about 15 months and are eligible but do not participate for almost six months (which totals to 21 months of eligibility out of 24 months). **These working mothers do not receive food stamps in more than one quarter (27 percent of the months in which they are eligible, on average).** As expected, combiners have higher rates of food stamp receipt during the months in which they are eligible than do cyclers (81 percent of eligible months for combiners, compared to 65 percent of eligible months for cyclers).⁷ We suggest that combiners are more likely than cyclers to use food stamps when

Table 2.
Months of Receipt and Nonreceipt of Food Stamps

Pattern of AFDC, Food Stamp, and Earnings Receipt	Average Number of Months (1)		
	All Packagers	Cyclers	Combiners
Population	1,198,955	636,626	562,329
Sample	502	275	227
<u>All months</u>	24.0	24.0	24.0
Total months eligible	20.5	19.9	21.2
Months with food stamps	14.9	13.0	17.2
Months eligible but not receiving food stamps	5.6	6.9	4.0
<u>Months with AFDC, no earnings</u>	9.2	9.8	8.6
Total months eligible	9.2	9.7	8.5
Months receiving food stamps	8.0	8.2	7.7
Months eligible but not receiving food stamps	1.2	1.5	0.8
<u>Months with AFDC and earnings</u>	4.8	1.0	9.0
Total months eligible	4.3	1.0	8.2
Months receiving food stamps	3.8	0.8	7.2
Months eligible but not receiving food stamps	0.5	0.2	1.0
<u>Months with earnings, no AFDC</u>	7.7	9.8	5.3
Total months eligible	5.0	6.1	3.7
Months receiving food stamps	2.4	2.9	1.8
Months eligible but not receiving food stamps	2.6	3.2	1.9
<u>Months with neither AFDC nor earnings</u>	2.3	3.5	1.1
Total months eligible	2.1	3.1	0.9
Months receiving food stamps	0.8	1.1	0.4
Months eligible but not receiving food stamps	1.3	2.0	0.5

(1) Months not eligible are not shown.

Source: IWPR calculations based on the U.S. Census Bureau Survey of Income and Program Participation, 1984 and 1986-1988 panels.

eligible because they have more months in which they receive AFDC, even when they are employed. AFDC and food stamp use are likely to be joint events not only because of linked eligibility but also because of decreased costs of multiple participation, greater awareness, and encouragement by case workers.

AFDC Only. The months in which these women are on the AFDC rolls but do not supplement this benefit with paid employment are virtually coterminous with food stamp usage. Cyclers (with 9.8 months on AFDC rolls with no paid employment) fail to use food stamps in 15 percent of the months in which they are eligible, while combiners (with 8.6 months on the AFDC rolls with no paid employment) fail to use food stamp benefits in 9 percent of eligible months. These months of non-use may represent lags in obtaining food stamp benefits.

Combine Work and AFDC. Combiners, by definition, are more likely than cyclers to combine AFDC and earnings from paid employment. During the nine months in which they do so, they are only slightly less likely, on average, to use food stamps when eligible than they are when they receive AFDC but are not employed. They do not use food stamps in only 12 percent of eligible months.

No AFDC, Work Only. During all months in which recipients rely on their own earnings and do not receive AFDC, they are less likely to be eligible for food stamps (as a result of higher income) but are also substantially less likely to participate in the program when eligible. **When employed, both cyclers and combiners do not use benefits in more than 50 percent of months in which they are eligible to do so.** For these months in which earnings tend to be the highest, it may be that the participation cost of receiving small amounts of food stamps is perceived as too high when recipients are not simultaneously going through the process of maintaining their AFDC eligibility. Because relatively few of these women have income levels above 130 percent of the poverty threshold even in months when they do work, food stamps would likely still have a positive effect on their purchasing power and well-being.

No AFDC, No Work. **In the few months in which these single mothers receive neither AFDC nor earnings from employment, relying instead on income from family members and other sources, they have among the lowest rates of food stamp participation (38 percent).** Cyclers receive food stamps in only 35 percent of eligible months, and combiners do so in only 44 percent of eligible months. As Table 5 will show (p. 33), these are the months of lowest income for these women and their families. They may also represent months of lag between application for and receipt of benefits.

Monthly Participation Rates

Another way to capture the relationship between eligibility and usage is through the average monthly participation rate. This rate is defined as the number of single mothers receiving food stamps divided by the number of single mothers eligible to do so. Table 3 shows that 99 percent (495 out of 502) of the sample is eligible to participate, but not all do. **Although the average participation rate for the total sample is 73 percent, about eight out of ten work/welfare combiners participate in the FSP in months in which they are eligible, compared to about two-thirds of the work/welfare cyclers.** These participation rates are similar to those found by other researchers (e.g., Trippe and Beebout, 1988). Regardless of which of the income packaging strategies (i.e., AFDC alone, paid employment and AFDC receipt, paid employment alone, or neither AFDC nor paid employment) these mothers use, combiners are more likely to use food stamps, if eligible, than cyclers. The food stamp participation rates of these two groups are most alike in those months in which both groups receive AFDC but no earnings from paid employment (84 percent for cyclers and 90 percent for combiners). For both groups, participation rates decline in months when mothers do not receive AFDC but are nevertheless eligible. About half (47 percent of cyclers and 51 percent of combiners) do not participate in months when they have earnings but do not receive AFDC. In months in which they receive income from neither source and are most likely to be poor, participation rates are the lowest (cyclers have only a 34 percent participation rate, while combiners have a 48 percent participation rate). These findings support our expectation that participation in AFDC increases the likelihood that poor families (or FSUs) will use food stamps when eligible, and without such AFDC participation even the poorest families may not receive food stamps.

Factors That Increase the Likelihood of Food Stamp Receipt

We next present the results from a logistic regression analysis (see Appendix A for a discussion of this method). The purpose of this analysis is to further test the hypothesis that participation in the AFDC program increases the likelihood that eligible food stamp recipients receive this benefit even if they are engaged in paid employment. This analysis shows whether participation in AFDC increases the likelihood of food stamp participation, and by how much, when the effect of other factors assumed also to affect participation is held constant. In other words, does AFDC participation, per se, increase the likelihood of food stamp receipt?

Table 3.
Comparison of Food Stamp Participation Rates for
Cyclers and Combiners

Pattern of AFDC, Food Stamp, and Earnings Receipt	Food Stamp Participation Rate (1)		
	All Packagers	Cyclers	Combiners
Population	1,198,955	636,626	562,329
Sample	502	275	227
All months	73%	65%	81%
Months with AFDC, no earnings	87%	84%	90%
Months with AFDC and earnings	87%	80%	88%
Months with earnings, no AFDC	48%	47%	51%
Months with neither AFDC nor earnings	37%	34%	48%

(1) Average of the monthly participation rates over a 24-month period. The monthly participation rate is defined as the number of single mothers receiving food stamps divided by the number of single mothers eligible to receive food stamps.

Source: IWPR calculations based on the U.S. Census Bureau Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Measures Used

Based on our own descriptive findings and the research of others, the following economic, programmatic, and demographic factors are included as independent variables in the model.

Economic Factors.

(1) *Employment*: Employed during month (measured as a dichotomous variable). We expect that job starts decrease the likelihood of food stamp participation, and vice versa, when other factors are held constant.

(2) *Hours Worked*: The number of hours worked (measured as a continuous variable). We expect that the more hours worked, the less likely eligible recipients are to participate in the program, when other factors are held constant.

Government Aid.

(3) *Food Stamp Benefit Level*: The dollar amount of food stamp benefits for which the FSU is eligible (measured as a continuous variable). We expect that the greater the benefit amount, the greater the likelihood of program participation, when other factors are held constant.

(4) *AFDC Receipt*: Whether or not the potential food stamp recipient is on the AFDC rolls (measured as a dichotomous variable). As noted, we expect AFDC participation to increase the likelihood of food stamp participation, when other factors are held constant.

(5) *AFDC Benefit Level*: The dollar amount of AFDC benefits that the FSU obtains (measured as a continuous variable). Because AFDC and food stamp usage appear to be linked, we expect that greater AFDC benefit levels increase the likelihood of food stamp participation, when other factors are held constant.

(6) *Public Housing*: Whether or not the FSU is residing in public housing (measured as a dichotomous variable). We expect that public housing residence increases the likelihood of food stamp participation, when other factors are held constant.

(7) *Housing Vouchers (Low-Rent Housing)*: Whether or not the FSU receives housing vouchers (measured as a dichotomous variable). We expect that those households receiving vouchers (such as those provided under Section 8) are more likely to receive food stamps, when other factors are held constant.

(8) *SSI*: Whether or not the FSU receives SSI (measured as a continuous variable). We expect that greater SSI benefit levels increase the likelihood of food stamp receipt, when other factors are held constant.

(9) *WIC*: Whether or not FSU receives WIC benefits (measured as a continuous variable). We expect that greater WIC benefit levels increase the likelihood of food stamp participation, when other factors are held constant.

Demographic Factors.

(10) *Number of Children* (measured as a continuous variable): We expect that the greater the number of children in the FSU, the greater the likelihood of food stamp participation, when other factors are held constant.

(11) *Education*: Whether or not the single mother is a high school graduate (measured as a dichotomous variable). We expect that high school graduates will be less likely to participate in the FSP than high school dropouts, when other factors are held constant.

(12) *Age*: Single mother's age (measured as a categorical variable). We expect that the older group of single mothers will be more likely to participate in the program, when other factors are held constant.

(13) *Region*: Region of residence (measured as a categorical variable). This variable is included in the model because the level of AFDC payments varies by region, and therefore we wish to prevent the dollar amount of AFDC from having an overly important effect.

(14) *Marital Status* (measured as a dichotomous variable): We expect that never-married single mothers will be more likely to participate in the program than ever-married mothers, when other factors are held constant.

(13) *Race/Ethnicity*: Race or ethnicity of single mother (measured as a categorical variable). We expect that neither race nor ethnicity will be a significant predictor of food stamp participation, when other factors are held constant.

Table 4 presents the results of the analysis for month 11 of the survey. During this month, the sample size was 366. The results for months 5, 19, and 23 are presented in Appendix B.

Summary of the Logistic Regression Results

Economic Factors. The economic factors included in the model do not appear to have a strong independent effect on whether eligible recipients participate in the program, contrary to expectations. Whether or not the single mother was employed during the month, although negatively related to food stamp participation, as expected, is not significant in the month 11 results. It is significant in the month 23 model, but the relationship is in the opposite direction. Number of hours of employment appears to have an independent, significant effect on the likelihood of food stamp participation in month 11. Those employed for more hours are less likely to receive food stamps, as expected. The odds ratio, however, indicates that although this factor decreases the likelihood of food stamp participation, the decrease is only fractional. In addition, this variable is not significant in other months, and consequently it does not appear to be a very robust predictor of food stamp participation.

Government Aid. As expected, participation in the AFDC program has a strong, significant effect on the likelihood of food stamp participation. Like the study by Martini (1992), this study finds that AFDC participation is the strongest predictor of food stamp participation among single mother households with children. In month 11, this factor increases the likelihood of food stamp participation about eightfold. **An AFDC recipient**

Table 4.
Factors That Predict Food Stamp Participation
Dependent Variable: Food stamp participation,
Sample: All eligible women in month 11

Variable	Mean	Logistic Coefficient (1)	Odds Ratio
INTERCEPT		-1.5425**	0.2140
Economic characteristics			
Employment			
Employed in month	0.389	-0.0358	0.9650
Number of hours worked	13.9	-0.0463***	0.9550
Government aid			
AFDC	0.646	2.0920***	8.1010
Amount of AFDC received	\$189.00	0.0025*	1.0020
Public housing	0.161	1.1174	3.0570
Low-rent housing	0.111	0.3937	1.4830
Supplemental Security Income	\$8.10	0.0012	1.0010
Potential Dollar value of food stamps	\$147.00	0.0037	1.004
WIC	\$8.00	0.0105	1.0110
Demographic characteristics			
Number of children	1.9	0.2171	1.2420
Education (2)			
HS graduate	0.683	0.2408	1.2720
Age			
Under 20	0.079	0.0612	1.0630
20-29	0.446	-0.3360	0.7150
30-39	0.337	-0.4336	0.6480
Region (3)			
North	0.121	1.0679*	2.9090
South	0.364	0.8734**	2.3950
West	0.250	0.3563	1.4280
Marital status (4)			
Never married	0.428	0.0005	1.0010
Race (5)			
African-American	0.431	-0.2912	0.7470
Hispanic	0.015	1.1273	3.0870

N = 366.

Global Chi-Square = 92.5.

(1) * Indicates probability based on Chi-Square below 0.10, ** indicates below 0.05, and *** indicates below 0.01 (i.e., * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$).

(2) Variable for education is a dummy variable, with non-high school (HS) graduate equal to zero.

(3) Variables for region are dummy variables, with Midwest as the omitted category.

(4) Variable for marital status is a dummy variable, with never married equal to zero.

(5) Variables for race are dummy variables, with white as the omitted category. Hispanics may be of any race and are not included in the white, other, or African-American group.

Source: IWPR calculations based on the Survey of Income and Program Participation, 1984 and 1986-1988 panels.

is eight times as likely as a nonrecipient to use food stamps, when eligible, when the effect of other factors is removed. This finding is robust across the months; AFDC participation increases the likelihood of food stamp participation by more than eleven-fold in months 19 and 23 and by nine-fold in month 5. Also, the amount of AFDC received is significant in month 11: the more AFDC dollars received, the greater the likelihood of food stamp participation, as expected. Receiving more dollars, however, increases the likelihood of food stamp participation only by a fraction. **If the AFDC program has a strong independent effect on food stamp participation as these results indicate, then dropping families from the welfare rolls will decrease food stamp usage.**

The receipt of other means-tested government benefits does not have a significant effect on the likelihood of food stamp participation in month 11, although both residence in public housing and receipt of housing assistance are significant in month 23, increasing the likelihood of food stamp participation close to three-fold. (Housing transfers are additionally significant in month 19, increasing the likelihood of food stamp participation more than threefold.) As expected, the dollar amount of potential food stamp benefits is positively correlated with food stamp usage: higher benefit amounts increase the likelihood of food stamp usage. However, this factor is not significant in either month 11 or month 19. It is significant in month 5 and month 23, but increases the likelihood of food stamp participation by only a fractional amount.

Demographic Characteristics. Contrary to expectations, the number of children in the FSU is not significant in predicting the likelihood of food stamp usage in any month. This lack of significance may be a result of the lack of variation in the number of children. The average cyclical or combiner family has 1.9 children. As of FY 1992, 73 percent of AFDC families had fewer than three children, and less than 4 percent had five children or more (U.S. Department of Health and Human Services, 1992). Alternatively, the effect of this variable may be confounded by the effect of the dollar value of food stamps, so that neither variable is significant.

Unlike the study by Martini (1992), this study does not find that single mothers with a high school diploma are significantly less likely to receive food stamps than

are high school dropouts, nor does it find that the age of the single mother is significantly related to food stamp participation, although age is positively correlated with food stamp usage, as expected. Martini (1992) found that the households of single mothers between the ages of 30 and 39 were significantly more likely to participate in the FSP than were other age cohorts. This study finds only small age effects, not statistically significant, in the opposite direction.

Residence in the North or the South significantly increases the likelihood of food stamp participation in month 11 as well as in month 5, with the odds of participation increasing more than twofold in the South and almost threefold in the North. The findings for the South can likely be explained by the low dollar amounts received by AFDC participants, making food stamp participation imperative for survival.

Whether these working single mothers were ever married or never married does not appear to be significant in predicting the likelihood of food stamp participation. This result is contrary to expectation that never-married mothers, because they are less likely to receive child support payments, would be more likely to participate in the program. Finally, like the study by Martini (1992), **this study finds that race and ethnicity are not significant predictors of the likelihood of using food stamps among eligible single-mother households.**

The findings in this section show the strong independent effect of AFDC receipt in determining whether individuals in this sample of working single mothers receive the food stamp benefits for which they are eligible. These women and their families are least likely to receive food stamps during months in which they are not on the AFDC rolls, regardless of whether they are working or not and despite being eligible for the FSP. The relative lack of food stamp receipt in non-AFDC months, especially in the months with neither AFDC nor earnings, when families are poorest, suggests that food stamp usage will decline as AFDC moves from an entitlement program to a transitional work program and as time limits end eligibility for AFDC. **Even if food stamp eligibility rules are maintained rather than made more stringent, eligible families will be less likely to make use of this benefit if AFDC participation is reduced.**

Effect of Food Stamps on Economic Well-Being and Purchasing Power

In this section, we examine the effect of food stamp receipt and nonreceipt on economic well-being and purchasing power. Economic well-being is defined in terms of income-to-poverty ratios. Lost purchasing power is defined in terms of dollars lost when eligible families do not receive benefits. Here again, the study examines the variation among single mothers by type of income package.

Economic Well-Being: Income-to-Poverty Ratios

Table 5 presents income-to-poverty ratios. We compare food stamp-eligible combiners and cyclers and their families in months with the different types of income packages and in all months with and without food stamps. **The table shows the high rates of poverty experienced by these women and their families, even when paid employment is a part of the income package. The table also shows how much food stamp receipt improves living standards regardless of the type of income package.**

For this sample, family income is less than two-thirds (65 percent) of the poverty threshold, on average, without the cash value of food stamps. When the cash value of food stamps is added, an increase of 23 percent raises a family's income to almost 90 percent of the poverty level. In general, this study finds that families that use food stamps move closer to the minimum sufficiency threshold (as measured by the poverty line) and sometimes exceed it.

AFDC and Work. **In months when the package includes AFDC, paid employment, and food stamps, these women and families have the highest income-to-poverty ratio; it increases to 115 percent of the poverty threshold, up from an average of 88 percent of the threshold.** This represents an increase of 27 percent from the months when they are eligible but do not receive food stamps. Families of cyclers are better off than families of combiners during these months of packaging AFDC, paid employment, and food stamps. The income-to-poverty ratio for cyclers averages 122 percent, compared to 110 percent for combiners, likely because their earnings tend to be higher. Without food stamps, the living standard of cyclers decreases by an estimated 34 percent, while that of combiners declines by an estimated 22 percent.

Table 5.
Effect of Food Stamps on Reducing Family Poverty

Pattern of AFDC, Food Stamp, and Earnings Receipt	Family (1) Income plus Food Stamp Benefits (if received) as a Percent of the Poverty Line		
	All Packagers	Cyclers	Combiners
Population	1,198,955	636,626	562,329
Sample	502	275	227
<u>All months</u>			
Months receiving food stamps	88%	83%	92%
Months eligible but not receiving food stamps	65%	62%	70%
<u>Months with AFDC, no earnings</u>			
Months receiving food stamps	73%	74%	71%
Months eligible but not receiving food stamps	49%	48%	51%
<u>Months with AFDC and earnings</u>			
Months receiving food stamps	115%	122%	110%
Months eligible but not receiving food stamps	88%	88%	88%
<u>Months with earnings, no AFDC</u>			
Months receiving food stamps	103%	105%	101%
Months eligible but not receiving food stamps	84%	81%	88%
<u>Months with neither AFDC nor earnings</u>			
Months receiving food stamps	49%	47%	53%
Months eligible but not receiving food stamps	24%	24%	25%

(1) Defined as the actual or potential FSU.

Source: IWPR calculations based on the U.S. Census Bureau Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Work, No AFDC. Families of cyclers and combiners raise their income just above the poverty level if they use food stamps during the months in which mothers are employed but do not receive AFDC (to 105 and 101 percent of the poverty threshold, respectively). Without food stamps the standard of living for cycler families decreases by an estimated 24 percent, to 81 percent of the poverty level, while that for combiner families declines by an estimated 13 percent, to 88 percent. **As expected, families of these single mothers have a lower standard of living in the months**

when they work but do not receive AFDC than in the months in which they combine paid employment with AFDC and food stamps.⁸

No Work, No AFDC. During the months in which these women neither receive AFDC nor engage in paid employment, their living standards fall to less than half of the poverty level. Food stamps become a major part of their income packages during these months if they receive this benefit. Without food stamps, cyclers and combiners report incomes at only about one-quarter of the poverty level.

Table 6.
Average Loss in Purchasing Power: Cyclers and Combiners,
While Eligible and Not Collecting Food Stamps
(1990 dollars, over a 24-month period)

Pattern of AFDC, Food Stamp, and Earnings Receipt	Food Stamp Income Forgone (1)		
	All Packagers	Cyclers	Combiners
Population	1,198,955	636,626	562,329
Sample	502	275	227
All mothers	\$814	\$1,039	\$558
Months of AFDC, no earnings	\$189	\$234	\$139
Months of AFDC and earnings	\$58	\$15	\$109
Months with earnings, no AFDC	\$313	\$400	\$216
Months with neither AFDC nor earnings	\$252	\$391	\$95

(1) Average amount of food stamp income lost in all months in which mother (and her FSU) is eligible for food stamps but does not receive them.

Source: IWPR calculations based on the U.S. Census Bureau Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Lost Purchasing Power

How much in FSP benefits do these mothers actually lose during the months in which they are eligible for food stamps but do not receive them? **Over the 24-month study period, the average eligible family (FSU) loses an estimated \$814 (in 1990 dollars) in purchasing power through loss of food stamp benefits.** Cyclers lose almost twice as much as combiners (\$1,039 versus \$558), likely because they think that they are not eligible when they do not qualify for AFDC or because of the participation cost of receiving benefits (see Table 6).

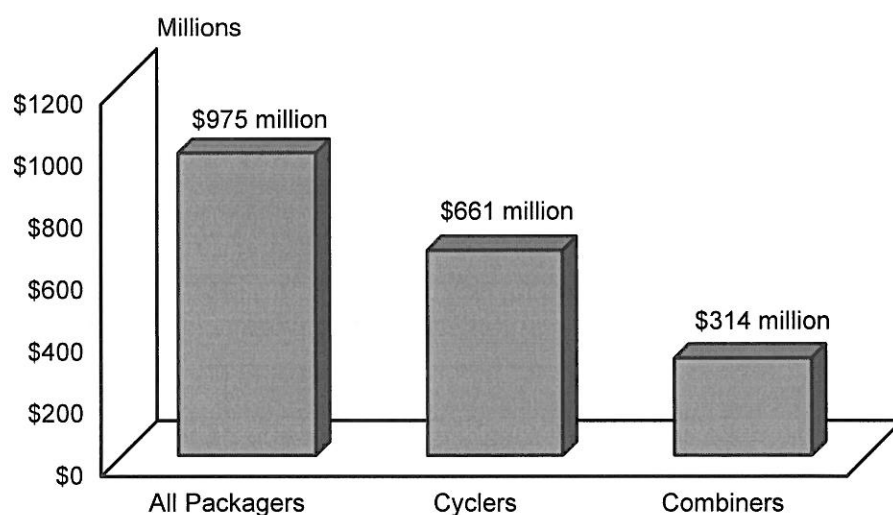
The highest monthly dollar losses for eligible cyclers and combiners occur during those months in which they work but do not receive AFDC. Cyclers forgo \$400 while combiners forgo \$216, on average, over the 24-month study period. These working mothers may be less likely to use food stamps for two reasons. First, food stamps may be less necessary for survival during higher-income months in which they rely on earnings alone. Second, spending the time required to maintain certification may result in potential earnings losses (and hence higher participation costs). Nonetheless, family living standards appear to be lower because of nonreceipt.

For cyclers, the second-highest losses occur during months when the FSUs are poorest. During the months in which mothers neither work nor receive AFDC benefits, they lose a total of \$391 (over the 24-month study period). Most of these losses occur among cyclers, since combiners spend only one month neither working nor receiving AFDC. The smallest losses take place during the months when poverty is less severe (months in which AFDC and employment are combined), when cyclers and combiners lose an average of only \$58.

These 1.8 million single mothers and their families lose an estimated \$975 million (in 1990 dollars) over the 24-month survey period in purchasing power as a result of nonreceipt of food stamps. Cyclers lose an estimated \$661 million and combiners an estimated \$314 million during this period.⁹ These losses amount to almost a half a billion dollars (\$488 million) per year (Figure 3). These losses in purchasing power are modest compared to the \$6 billion that

Blank and Ruggles (1995) estimate that all eligible single mothers lose. Not only do these losses result in lower living standards for this group of women and their families, but the losses in purchasing power also affect food growers, manufacturers, and retailers.

Figure 3.
Estimated Purchasing Power Lost as a
Result of Nonreceipt of Food Stamps
(in 1990 dollars, over a 24-month period)



Source: IWPR calculations based on the U.S. Bureau of the Census Survey of Income and Program Participation, 1984 and 1986-1988.

Events and Patterns Explaining Food Stamp Participation

A subsample of 30 single mothers was selected for detailed analysis of the interconnected reasons that cause eligible recipients to start or stop their use of food stamps. Among this subsample of food stamp-eligible single mothers, more entries onto the rolls than exits from the rolls are observed (six out of ten of all switches found in the subsample are entries onto the food stamp rolls, the remainder are exits).¹⁰

We first examine primary events in the causal sequence associated with starts and stops. One set of events related to moving onto the food stamp rolls is job related. Job-

related reasons include the loss of a job by the mother or reductions in her wages or hours of work. Both combiners and cyclers have job-related sequences leading to food stamp use. For cyclers, family dynamics result in another set of primary events associated with the beginning of a food stamp spell. These dynamics include the decline of income of other family members, the mother's divorce or separation, birth of an additional child, or the split of the household (the FSU leaves the household to become a separate independent unit or is left behind by other household members who move out). For combiners in this subsample, family-related events appear less likely to be the reason for beginning a food stamp cycle, and the major reasons are job related.

Reasons for exits from the food stamp rolls mirror the reasons for beginning a food stamp spell. The primary events associated with the end of a food stamp spell (exits) are job related and are similar for cyclers and combiners. They include mothers beginning employment and increases in the mother's hours or earnings. These job-related reasons represent about half of the events associated with a food stamp exit. For cyclers, the second most important type of primary events are again family related — changes in marital status, moving into their parents' household, and an increase in the number of adult household members receiving income. These primary or "trigger" events tell only part of the story, however.

The data presented in Matrices 1 and 2 show both the primary event associated with entry onto or exit from the food stamps rolls for combiners and cyclers as well as the associated sequence of secondary events. Matrix 1 displays the major patterns associated with entries, and Matrix 2 displays the major patterns associated with exits.

Entries

Matrix 1 shows the sequence of events that results in entries to the food stamp rolls. These single mothers begin a process that results in entry onto the welfare and food stamps rolls when they experience declines in their own earnings as a result of job loss or declines in wages or in hours of paid employment. Declines in earnings result in subsequent drops into poverty followed by simultaneous movement onto both the AFDC and the food stamp rolls. The subsample of combiners is more likely than that of cyclers to experience this entry sequence.

Matrix 1: Multiple Events Related to Entries into the Food Stamp Program

Secondary Events (1)		
Primary Events	Type of Welfare Recipient Mother	
	Cyclers	Combiners
Job-related Loss of job Decrease in wages Decrease in earnings Decrease in number of hours worked Increase in number of hours attending school	N = 9 o Mother starts receiving AFDC [6] o Concurrent and previous decline in mother's earnings [7] o Mother starts receiving other transfers besides AFDC and food stamps (public housing, other welfare) [2] o FSU falls below poverty line [2] o Change in job [1] o Mother stops receiving AFDC [1]	N = 14 o Mother starts receiving AFDC [8] o Concurrent and previous decline in mother's earnings [11] o Mother starts receiving other transfers (unemployment insurance, WIC, low rent, money from charity, child support, other welfare) [4] o FSU moves out of household [2] o FSU falls below poverty line [3] o Mother does not work entire month [1] o Event not clear [1] o Decrease in number of adults receiving income in household [1] o Decline in number of hours worked weekly by mother [1] o Mother changes occupation [1]
Change in mother's transfers Mother stops receiving AFDC Mother stops receiving unemployment insurance Mother starts receiving AFDC		N = 3 o Hourly wage declines [1] o FSU falls below poverty line [1] o Mother starts receiving AFDC [1]
Family-related Decrease in income of other household members FSU moves out of household Mother divorces or separates Increase in family size Mother reunites with children	N = 8 o Mother increases time attending school [1] o Adult earner exits household [1] o Household members stop receiving earnings (job loss) [2] o Mother starts receiving AFDC [4] o Mother starts working [2] o Household below poverty line before FSU exits [1] o FSU falls below poverty line [1] o Mother stops benefiting from public housing [1] o Household splits [2] o FSU income declines [2] o FSU moves to another household [1] o Mother separates from husband [1]	N = 4 o Mother starts receiving AFDC [1] o Husband exits FSU [1] o Decline in family income [1] o Mother starts receiving child support [1] o FSU falls below poverty line [2] o Change in occupation [1] o Grandchild is born [1] o Mother stops working [1]
Not clear		N = 2

(1) N = the total number of switches associated with the main event for the group. Numbers in brackets indicate the number of times the secondary event occurred in association with the main event.

Source: IWPR calculations based on the U.S. Bureau of the Census Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Matrix 2: Multiple Events Related to Exits from the Food Stamp Program

Primary Events	Secondary Events (1)		
	Type of Welfare Recipient Mother		Combiners
	Cyclers		
Job-related Mother starts working Increase in mother's earnings	N = 5 o Increase in mother's earnings [3] o Mother stops receiving AFDC [3] o Mother starts receiving AFDC [1] o Other adults in household start working [1] o Increase in number of hours worked by mother [2] o FSU rises above poverty line [2] o Mother starts second job o Mother changes job	N = 7 o Increase in mother's earnings [2] o FSU rises above poverty line [2] o Mother stops receiving AFDC [2] o Mother stops receiving child support [1] o Mother starts receiving AFDC [1] o Increase in number of hours worked by mother [3] o Increase in wages [1] o Mother receives money from relatives [1]	
Family-related Mother divorces or separates Mother gets married Mother moves out of parents' home Adult earner moves into FSU Increase in household income	N = 4 o Mother moves from household [1] o Mother stops benefiting from living in public housing [1] o Decrease in family size [1] o Mother stops receiving AFDC [2] o Mother starts part-time work [1] o Husband moves back to wife's home [1] o Increase in FSU earnings [1] o Mother stops receiving WIC [1] o Family income increases [2] o Change in type of household [1]	N = 1 o Mother stops receiving AFDC [1] o Other adults receiving income move into mother's household [1]	
Not clear	N = 3	N = 5	

(1) N = the total number of switches associated with the main event for the group. Numbers in brackets indicate the number of times the secondary event occurred in association with the main event.

Source: IWPR calculations based on the U.S. Bureau of the Census Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Another typical entry pattern, more prevalent among cyclers than among combiners, begins with changes in the composition of the family or its loss of resources. The mother's divorce or separation from her husband, the exit of other adult family members from extended family households, the breakup of these households, the birth of an additional child, or the loss of earnings by family members other than the mother reduces the income of remaining family members. Mothers attempt to compensate for income loss either by taking a job and/or by beginning to collect AFDC benefits and food stamps. As noted above, family living standards improve as a result of this effort, although they tend to remain below the poverty threshold unless the mother is successful at packaging paid employment, AFDC, and food stamps.

Exits

Matrix 2 shows the sequence of events that results in exits from the food stamp rolls. These events are the mirror image of entry events. A common exit pattern for both cyclers and combiners begins when the mother's earnings increase. This happens because the mother increases the number of hours worked, changes jobs, or takes on a second job. Concurrently, these mothers tend to lose their AFDC benefits and subsequently their food stamp benefits. Participation rates in the FSP decline, although many families remain eligible for the program. As a result, families experience lower living standards than if they had continued to participate in the FSP.

For cyclers, events related to family dynamics occur during (or close to) the month in which their food stamp spell ends. These events include marriage, return of the husband to the family unit, movement of other adult earners to the household, separation of the unit and its consequent decline in size, or the mother's move to her parents' household. The family event results in an income increase in the household or a decrease in need for resources. The mother also tends to lose other welfare benefits (such as WIC, AFDC, or public housing) as well as food stamps at this time. For combiners, it is rare that contributions from other household (FSU) members are the cause of the end of a food stamp spell. As noted, exit from the food stamp rolls does not mean that the FSU has lost eligibility, but rather exit is likely to be linked to movement off the AFDC rolls.

SECTION FOUR: SUMMARY AND CONCLUSIONS

This study examines the role of food stamps in the income packages of single mothers who tend either to simultaneously combine paid employment and AFDC receipt (combiners) or to obtain these income sources sequentially (cyclers). It focuses on the relationship between AFDC receipt and food stamp participation in the income packages of single mothers because previous researchers have found a strong connection between these two programs and because current legislative proposals, if enacted, would sharply curtail both programs. Both combiners and cyclers have months of combining work and AFDC, months of work alone, months of AFDC alone, and months without either income source. The study shows how these different combinations of paid employment and AFDC receipt affect food stamp eligibility and food stamp receipt. It shows the increases in living standards when eligible families (FSUs) receive benefits and the losses in purchasing power when they do not.

Eligibility and Receipt

- Those eligible for food stamps are significantly more likely to receive this benefit when they receive AFDC simultaneously.
- Eligible combiners and cyclers are at least eight times as likely to participate in the FSP in months in which they receive AFDC as in months in which they do not.
- As expected, food stamp participation rates are higher among eligible combiners than among eligible cyclers; 81 percent of the former group participate in the program, in contrast to 65 percent of the latter. The greater receipt of food stamp benefits among eligible combiners is likely explained by their longer period on the AFDC rolls and by the greater likelihood of experiencing prior AFDC spells. Combiners are more likely to have access to food stamps through the AFDC certification process and may be more aware of who is eligible for the FPS through their prior participation in AFDC.
- Even combiners were nearly half as likely to receive food stamps in those months in which they were employed but did not receive AFDC than in those months in which they packaged these two income sources (51 and 88 percent participation rates, respectively).

- FSP participation rates among both eligible combiners and eligible cyclers were lowest in the months when they neither received AFDC nor engaged in paid employment, the months in which they were poorest. These months may represent transition periods with lags between qualification for and actual receipt of benefits.

Participation, Nonparticipation, and Purchasing Power

Families (FSUs) of combiners and cyclers have average incomes that are below the poverty line for families of their size, despite their efforts to create an income package from a variety of sources. As expected, food stamp receipt improves the living standards for eligible families.

- Overall, food stamp receipt increases the incomes for these families from 65 percent to 88 percent of the poverty level.
- These food stamp-eligible families are most likely to escape poverty in months when they package paid employment, AFDC, and food stamps. During these months, their income (including the cash value of food stamps) averages 115 percent of the poverty level. During months without paid employment and without AFDC, food stamps double the family income, from one-quarter to one-half of the poverty level. Because of factors such as lack of knowledge of the FSP, lack of awareness of eligibility, lags between qualification for and receipt of benefits, or high participation costs of receiving benefits in months when the mother is working, these women and their families lose an average of \$814 (in 1990 dollars) in food stamp benefits over the 24-month study period.
- **When extrapolated to total population losses for combiner and cycler families, these losses amount to \$975 million in lost purchasing power over a 24-month period, or close to half a billion dollars per year. Eligible cyclers lose twice as much as eligible combiners, and both groups lose the most during periods when they do not receive AFDC.**

Entry onto and Exit from the Food Stamp Rolls

A typical pattern of entry onto the food stamp rolls begins when these single mothers experience declines in their own earnings as a result of job loss or declines in wages or in hours of paid employment. These declines in earnings result in subsequent drops into poverty for their families, followed by simultaneous movement onto the AFDC and food stamp rolls. A second pattern begins with breakups of families, births of additional children, or loss of earnings by family members other

than the mother. This pattern is more likely to occur among cyclers. These changes result in the need for additional financial resources, for which the mothers try to compensate by entering the AFDC and food stamp rolls. The sequence of events that result in exits from the rolls appears to be the mirror image of the sequence leading to entries.

Implications for the Future

The findings of losses in purchasing power presented in this study are based on current eligibility standards and benefit amounts. What can we expect in the future? **This study suggests that if the AFDC program is transformed into a time-limited transitional employment program, food stamp participation rates among eligible recipients are likely to fall.** Lack of awareness of eligibility may increase as a major gateway to the FSP closes. Families' nutritional standards may decrease unless programmatic changes that emphasize program outreach are implemented.¹¹ If proposed cutbacks in FSP become law, fewer poor single mothers will likely be eligible for the program, and the amounts that they receive will be smaller. Thus, working single mothers could face income losses from reductions in both AFDC and food stamp benefits.

If these programmatic changes occur, food stamps will likely have a smaller impact on reducing poverty and increasing purchasing power in the future than is currently the case. If proposed cutbacks in both AFDC and food stamp eligibility are implemented, the estimated half a billion dollars in current yearly losses in purchasing power will likely increase. These losses in purchasing power will likely decrease the economic well-being of poor families and result in revenue losses to the food industry.

APPENDIX A: METHODOLOGICAL APPROACH

Description of the Data Set

This study used a data file created from four panels (1984, 1986, 1987, and 1988) of the U.S. Bureau of the Census's SIPP.¹² These four panels were merged to ensure adequate sample sizes of working, single-mother households who received AFDC. The SIPP is a panel survey that interviews participating households every four months. Households are selected for participation in the survey from a universe that includes the civilian noninstitutionalized population of the United States. (For additional details on SIPP sample selection, see Ruggles, 1990.) The SIPP is designed to provide comprehensive, longitudinal information on the changing economic situation of individuals and families and is particularly useful for studying transitions in work, welfare, and economic well-being (Singh et al., 1989). Respondents are asked to recall (on a monthly and sometimes weekly basis) information about household composition, labor force activity, job characteristics, sources of income, and participation in government assistance programs. The monthly reporting system of the SIPP is key to our analysis of single mothers who package paid employment and government transfers, since many respondents cycle in and out of marginal jobs and on and off of welfare and other government programs (David and Fitzgerald, 1988).

Through the use of a common identification number, we merged information on children and other members living in these women's households with our data file of all transfer recipients so that we could proxy the food stamp unit. We also merged information from special modules on family assets, child care expenditures, and housing costs and on the work, education, and welfare history of the study population in order to better determine food stamp eligibility.

Description of the Sample

Merging of the four SIPP panels resulted in a sample population of 502 women who are single mothers for at least 12 out of the 24 survey months, receive AFDC benefits for at least two of the 24 months, and work for at least 300 hours.¹³ On average, women in the sample are single for 23 out of 24 months and receive AFDC for 18 months. Single mothers include women who are divorced, widowed, separated from their husbands, or never married, and whose household include minor children (under 18 years of age). Excluded from the data set are those single welfare mothers who dropped out of the survey before answering the wave 2 topical module questions on welfare and employment history.¹⁴

Mothers receiving AFDC who included earnings from at least 300 hours of paid employment in their income packages are referred to as work/welfare packagers; these women were employed for 1,903 hours on average over the two-year study period. Those mothers without at least 300 hours of paid employment were excluded.

By using only 24 months of data and by excluding those who dropped out of the survey, this sample may include a higher proportion of AFDC recipients with short spells because it includes single mothers with only two months of AFDC receipt out of a possible 24 months. Those AFDC recipients with shorter spells may be less likely to use food stamps because of gaps between food stamp qualification and receipt.

Because we specify that single mothers must be single for at least half of the study months, those who exit from the FSP in this sample may be less likely to do so for reasons of marriage than might be expected from a sample limited only to women who were single at the start of the study period. Likewise, because this sample was limited to women who worked for at least 300 hours, it is more likely to contain recipients who entered onto or exited from the food stamp rolls for job-related reasons than would a sample that included AFDC recipients without hours of paid employment.

Description of the Unit of Analysis

This research places women's income packaging or survival activities at the center of the analysis. As a result of this perspective, the unit of analysis for this study is the single mother and the family (the FSU) with whom she lives rather than the spell of food stamp or AFDC receipt. Other researchers exploring the dynamics of AFDC and food stamp eligibility often use the food stamp or AFDC spell as the unit of analysis (see Blank and Ruggles, 1992, 1993, and Long and Doyle, 1989, for example). Spell analysis tends to detach the duration of program participation from the individual or family by reifying and explaining the spell duration rather than investigating the spell as part of a survival strategy (for a more detailed discussion of spell analysis versus survival strategies, see Spalter-Roth and Hartmann, 1996).

Blank and Ruggles (1992) identify additional problems with using spell analysis with the SIPP. They found that the greatest difficulty with using the SIPP to investigate completed spells of AFDC or food stamp receipt was the relatively short period of each panel of data. They found that 62 percent of AFDC spells and 60 percent of food stamp spells started before the beginning of the study period (i.e., were left censored). In IWPR's current study, fully 22 percent of food stamp spells started before or ended after the study period (were either right or left censored). To look only at completed spells would mean sacrificing valuable information about public assistance reciprocity and the survival strategies of single mothers. The increasing prevalence of research focusing on spells has risen largely from a tendency to equate longer spell lengths with dependency. Spell-oriented analysis often fails to account for multiple spells, or reentry onto the rolls, and other strategic efforts to bring resources into a family's income package (Gottschalk and Moffitt, 1994).

Methodology for Answering the Study Questions

We follow and expand upon the methodology used by other researchers to answer the major study questions.

Question 1: Determining Eligibility and Participation

To answer the questions about food stamp eligibility and participation, we expand on the methodology of Blank and Ruggles (1993) by calculating eligibility from net

income in addition to gross income and by utilizing a definition of the FSU which more closely resembles that used by caseworkers.

In defining the FSU, we further refine the approaches of other SIPP users (Ross, 1988; Doyle and Beebout, 1988). In the study, the simulated food stamp household is the FSU to which food stamp beneficiaries belong. For AFDC participants who do not receive food stamps, the simulated food stamp household is the AFDC unit plus any additional family members living in the household. For any other cases, the food stamp household corresponds to members of the nuclear family — related and unrelated subfamilies living within the census household were treated as separate FSUs. Family members who were 60 years old or older were excluded from the simulated food stamp households, since these individuals could qualify for their own food stamp benefits and were slightly more often excluded than included in the observed FSUs (Ross, 1988). This latter definition of the simulated food stamp household was compared to alternative definitions in the literature and found to most accurately identify observed FSUs.

FSP eligibility is determined according to food stamp rules outlined by the U.S. Department of Agriculture (from 1983 to 1990, the years included in the SIPP data set). Net income is computed by subtracting the standard deduction from gross income as well as variable deductions for earned income, dependent care, and shelter expenses — expenses that are available in topical modules of the SIPP.¹⁵ Assets, imputed from an individual's interest income, were also used in the eligibility determination. In addition, we account for differing eligibility requirements resulting from the presence of disabled family members. After ascertaining eligibility based on gross and net income, assets, household size, and federal poverty level guidelines, we impute food stamp benefit levels for nonparticipating but eligible families. The deductions and benefit levels are adjusted for any changes in eligibility rules which occurred over the course of the survey. As a result of this analysis, we obtain the differential participation rates among eligible combiner and cycler families. Although we have attempted to capture the food stamp-eligible population through a careful proxying of eligibility criteria, it is undoubtedly the case that our estimates do not perfectly reflect the true eligible food stamp-eligible population. For a further discussion of this issue, see Martini (1992).

We estimate a logistic regression model to test the hypothesis that AFDC receipt per se increases the likelihood of food stamp participation. We use multivariate analysis to estimate the independent effects (coefficients) and significance of a number of different factors in determining the probability that the event will occur. We chose this form of regression analysis because the dependent variable (food stamp usage) is a discrete, dichotomous variable that assumes only two values (either using food stamps or not). Logistic models are standard estimating procedures in this type of case (Maddala, 1983).

In estimating the model, we follow a recent multivariate analysis used to predict participation in the FSP among eligible recipients (Martini, 1992) with a dichotomous dependent variable (participated or not). We use a series of economic, program participation, and demographic measures as independent variables. Like Martini, we use a single month of SIPP data from the combined panels to estimate the model. Unlike Martini, however, we checked the robustness of our findings by running the model in three additional months, all randomly selected from the 24 possible months.¹⁶

Question 2: Investigating the Well-Being of Families

In previous research on income packaging (Spalter-Roth et al., 1995), we examined how the economic well-being (defined in terms of income-to-poverty ratios) of the families of different groups of welfare recipients (including combiners and cyclers) varies according to the elements in their income packages. We investigated (1) the months in which they neither received AFDC nor engaged in paid employment; (2) the months in which they received AFDC but did not work; (3) the months in which they combined AFDC receipt with paid employment; and (4) the months in which they engaged in paid employment but did not receive AFDC.

To answer question 2, we re-examine the income to poverty ratios in these different months for combiners and cyclers. In this current study, we include the cash value of food stamps in calculating income-to-poverty ratios. We recalculated the income-to-poverty ratios for cyclers' and combiners' families (FSUs) during months when eligible units received food stamps, and then months in which they

did not, under the four different combinations of work and AFDC receipt. The poverty levels used are those published by the Food and Consumer Service from 1983 to 1990.¹⁷ These data were merged into relevant panels of the SIPP data set.

To further investigate the role of food stamps in improving families' living standards, we calculated the loss in purchasing power or the cash value of the food stamp benefits forgone when eligible FSUs do not collect food stamps. This amount was calculated by summing the monthly potential food stamp benefit not collected across the 24 months of the survey, multiplying that sum by the total number of single-mother families, and then converting the resulting amount into 1990 dollars.

Question 3: Investigating Entries and Exits

We used a case study approach in order to identify the multiple factors that contribute to entry onto and exit from the food stamp rolls. We selected 30 cases from the study data file (15 cyclers and 15 combiners) for the analysis. First, we selected cases that had at least one month of eligibility and one month of food stamp usage, and one month of eligibility and one month of non-food stamp usage (all of these conditions occurred after month 5 so that it was possible to observe the situation of the FSU prior to the start of a food stamp spell). The 30 cases were then randomly selected from the resulting pool.

Month-by-month output on the 30 cases was analyzed. Two coding sheets were created (one for entries and another for exits), each containing groups of potential events (codes) that could be associated with the start or end of a food stamp spell. Each "switch" and the associated events were assigned to the appropriate coding sheet and checked for intercoder reliability.

We then identified and coded other changes that were occurring in the FSU during that month. As much as possible, coders looked for time sequences indicating temporal causality; when such sequences were not clear, the events were considered "associated" (the events occurred simultaneously or close in time). Five of these 30 cases were then selected as examples for the lengthier "diary" analyses, or narratives, presented in the body of the report.

Calculations and Definitions Used for Determining Food Stamp Eligibility

Food Stamp Unit: If the mother was already a member of an FSU, she was defined as her FSU. If the mother was not a member of an FSU but was a member of an AFDC unit, the FSU was defined as members of the AFDC unit plus any spouse or children. Otherwise, the FSU includes the mother and the members of her immediate family. If the mother is a member of a subfamily, only members of the subfamily are included in her FSU. Any member of the mother's family who was older than 60 was excluded from her unit (since that individual could qualify for his or her own food stamp benefits).

Income, Assets, Expenses All income, assets, and expenses were calculated by combining information for all members of the defined FSU. Poverty levels were determined by the number of persons in the defined FSU. These poverty levels were **not** adjusted for inflation each month (as were the SIPP family poverty levels) but were adjusted for approximately each fiscal year.

Child Care Amounts: The amount paid for child care was obtained from the following waves of the SIPP:

1984 - wave 5
1986 - wave 6
1987 - wave 3
1988 - waves 3 and 6

The average hours worked and the average number of children were calculated for the appropriate waves and used to estimate the amount paid for child care per child per hour worked. This estimate was used to estimate the amount paid for child care per month for every member of the mother's household.

Shelter Amounts: The amount paid for shelter was obtained from the following waves of the SIPP:

1984 - wave 4
1986 - wave 6
1987 - wave 3
1988 - wave 4

As a result of changes made from the 1984 to the 1986 panel and changes from the 1987 to the 1988 panel, the calculations for shelter amounts are not identical for all panels (those for 1986 and 1987 are the same). All estimates include mortgage payments, rental payments, and costs for electricity, gas, oil, or other heating sources.

Assets: Since actual asset amounts were not available for every month of the SIPP, but the amount of interest earned from the assets was available, we used yearly interest rates on short-term (one-year) Treasury notes and bonds to estimate asset value. Information on interest rates was obtained from the Federal Reserve Bulletins.

Participation Rates: The food stamp participation rates were calculated in two ways:

(1) The number of months a mother received food stamps was divided by the number of months she was eligible. The average for all mothers was used as the food stamp participation rate.

(2) For each month, the number of mothers in the sample receiving food stamps was divided by the number of mothers eligible for food stamps. The average of the 24 months was used for a food stamp participation rate which would be comparable to definitions used in Trippe and Doyle, 1992.

APPENDIX B: REGRESSION TABLES

Appendix Table 1.
Factors That Predict Food Stamp Participation
Dependent Variable: Food stamp participation
Sample: All eligible women in month 5

Variable	Mean	Logistic Coefficient (1)	Odds Ratio
INTERCEPT		-1.3414	0.3230
Economic characteristics			
Employment			
Employed in month	0.336	0.0545	1.0560
Number of hours worked	11.3	-0.0015	0.9980
Government aid			
AFDC	0.672	2.2000 ***	9.0250
Amount of AFDC received	\$202.00	0.0025 *	1.0030
Public housing	0.149	0.0057	1.0060
Low-rent housing	0.119	0.3100	1.3630
Supplemental Security Income	\$9.58	0.0050	1.0050
Dollar value of food stamps	\$151.00	0.0046 **	1.005
WIC	\$8.47	-0.0013	0.9990
Demographic characteristics			
Number of children	1.9	0.0913	1.0960
Education (2)			
HS graduate	0.692	0.3613	1.4350
Age			
Under 20	0.095	-1.1978	0.3020
20-29	0.458	-0.6608	0.5160
30-39	0.323	-0.6479	0.5230
Region (3)			
North	0.122	0.9059 *	2.4740
South	0.366	0.7932 **	2.2100
West	0.239	0.3140	1.3690
Marital status (4)			
Never married	0.420	-0.1771	0.8380
Race (5)			
African-American	0.440	-0.1903	0.8270
Hispanic	0.015	-0.9198	0.3990

N = 366.

Global Chi-Square = 90.6, degrees of freedom = 20.

(1) * Indicates probability based on Chi-Square below 0.10, ** indicates below 0.05, and *** indicates below 0.01 (i.e., * p < 0.10; ** p < 0.05; *** p < 0.01).

(2) Variable for education is a dummy variable, with non-high school (HS) graduate equal to zero.

(3) Variables for region are dummy variables, with Midwest as the omitted category.

(4) Variable for marital status is a dummy variable, with never married equal to zero.

(5) Variables for race are dummy variables, with white as the omitted category. Hispanics may be of any race and are not included in the white, other, or African-American group.

Source: IWPR calculations based on the Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Appendix Table 2.
Factors That Predict Food Stamp Participation
Dependent Variable: Food stamp participation
Sample: All eligible women in month 19

Variable	Mean	Logistic Coefficient (1)	Odds Ratio
INTERCEPT		-2.0929 ***	0.1230
Economic characteristics			
Employment			
Employed in month	0.444	0.4613	1.5860
Number of hours worked	16.9	0.0010	1.0010
Government aid			
AFDC	0.623	2.4267 ***	11.3220
Amount of AFDC received	\$179.77	0.0003	1.0000
Public housing	0.151	0.6136	1.8470
Low-rent housing	0.126	1.1986 **	3.3160
Supplemental Security Income	\$7.93	-0.0008	0.9990
Dollar value of food stamps	\$142.00	0.0031	1.003
WIC	\$10.66	0.0054	1.0050
Demographic characteristics			
Number of children	1.9	0.1426	1.1530
Education (2)			
HS graduate	0.680	0.2754	1.3170
Age			
Under 20	0.056	-0.3321	0.7170
20-29	0.441	-0.0219	0.9780
30-39	0.369	0.2956	1.3440
Region (3)			
North	0.126	0.9080	2.4790
South	0.367	0.6212	1.8610
West	0.239	-0.0971	0.9070
Marital status (4)			
Never married	0.433	0.0755	1.0780
Race (5)			
African-American	0.428	-0.4383	0.6450
Hispanic	0.021	1.4448	4.2410

N = 360.

Global Chi-Square = 104.5, degrees of freedom = 21.

(1) ** Indicates probability based on Chi-Square below 0.05, and *** indicates below 0.01 (i.e., ** $p < 0.05$; *** $p < 0.01$).

(2) Variable for education is a dummy variable, with non-high school (HS) graduate equal to zero.

(3) Variables for region are dummy variables, with Midwest as the omitted category.

(4) Variable for marital status is a dummy variable, with never married equal to zero.

(5) Variables for race are dummy variables, with white as the omitted category. Hispanics may be of any race and are not included in the white, other, or African-American group.

Source: IWPR calculations based on the Survey of Income and Program Participation, 1984 and 1986-1988 panels.

Appendix Table 3.
Factors That Predict Food Stamp Participation
Dependent Variable: Food stamp participation
Sample: All eligible women in month 23

Variable	Mean	Logistic Coefficient (1)	Odds Ratio
INTERCEPT		-1.9929 **	0.1360
Economic characteristics			
Employment			
Employed in month	0.475	0.9390 **	2.5580
Number of hours worked	17.8	-0.0119	0.9980
Government aid			
AFDC	0.591	2.4747 ***	11.8780
Amount of AFDC received	\$170.00	0.0016	1.0020
Public housing	0.165	1.0880 **	2.9680
Low-rent housing	0.113	0.9971 **	2.7100
Supplemental Security Income	\$10.89	0.0000	1.0000
Dollar value of food stamps	\$142.00	0.0021 **	1.005
WIC	\$9.89	-0.0012	0.9990
Demographic characteristics			
Number of children	1.9	0.1102	1.1160
Education (2)			
HS graduate	0.688	0.1951	1.1250
Age			
Under 20	0.042	0.4826	1.6200
20-29	0.465	-0.2222	0.8010
30-39	0.365	-0.1630	0.8500
Region (3)			
North	0.126	-0.3473	0.7070
South	0.370	-0.3046	0.7370
West	0.242	-0.6072	0.5450
Marital status (4)			
Never married	0.436	0.2338	1.2630
Race (5)			
African-American	0.436	-0.3874	0.6790
Hispanic	0.030	1.7959	6.0250

N = 349.

Global Chi-Square = 106.6, degrees of freedom = 20.

(1) ** Indicates probability based on Chi-Square below 0.05, and *** indicates below 0.01 (i.e., ** p < 0.05; *** p < 0.01).

(2) Variable for education is a dummy variable, with non-high school (HS) graduate equal to zero.

(3) Variables for region are dummy variables, with Midwest as the omitted category.

(4) Variable for marital status is a dummy variable, with never married equal to zero.

(5) Variables for race are dummy variables, with white as the omitted category. Hispanics may be of any race and are not included in the white, other, or African-American group.

Source: IWPR calculations based on the Survey of Income and Program Participation, 1984 and 1986-1988 panels.

ENDNOTES

¹ As of May 1995, ten states, Iowa, Maryland, Minnesota, New Jersey, New Mexico, Ohio, Pennsylvania, South Carolina, Texas, and Wyoming, had initiated EBT systems within a few counties and are expanding their programs. Eleven states, Arkansas, Colorado, Connecticut, Delaware, Louisiana, Maine, Massachusetts, New Hampshire, North Dakota, South Dakota, and Vermont, are currently working to implement and develop EBT systems.

² Prior to 1977, the FSP imposed a net income test and an asset test in determining need and required households to purchase coupons whose face value varied by household size and geographic location (Trippe et al., 1992).

³ See the section on the FSP in U.S. House of Representatives, Committee on Ways and Means, 1994, for additional details on eligibility rules.

⁴ The criterion of a four-month combining period distinguishes between incidental and long-term combiners. The four-month period corresponds to the point at which AFDC rules change. Those who combine for fewer than four months keep one-third of their earnings, whereas those combining for longer periods generally face dollar-for-dollar reductions in their welfare benefits, after allowing for some income disregards. About half of the cyclers spend a few months simultaneously combining work and welfare, but they are defined as cyclers because that is their primary work/welfare strategy. About three-fifths of the combiners also spend some months working without receiving any welfare and might be considered incidental cyclers.

⁵ The 1985 SIPP panel is excluded from the analysis because it does not include a personal history module which contains information on work and welfare history.

⁶ The FSU includes individuals who live in a residential unit and prepare food together.

⁷ Eligible months equal the total of the months eligible and using food stamps and the months eligible but not using food stamps. To determine the percentage of months in which eligible recipients do not use food stamps, months eligible but not using are divided by total months eligible.

⁸ This analysis examines the economic well-being of cyclers and combiners only in the months when they are eligible for food stamps. By definition, they have lower incomes in those months than in those months when they are not eligible for food stamps. During the months of employment and non-AFDC use, the total sample of combiners and cyclers had incomes at 127 percent of the poverty level and those with the highest family incomes were ineligible for food stamps. The ineligible months of these income packagers are not represented in Table 5.

⁹ These figures were arrived at by multiplying the weighted N of the sample population by the percentage eligible to participate in the FSP by the average dollars lost (\$814) per eligible packager, during the months of nonparticipation in the program, over the 24-month period.

¹⁰ This analysis examines only those entries and exits that were observed. For example, if a single mother was already on the food stamp rolls in the first month of the survey, she is not considered as entering a food stamp spell. If, instead, the beginning of a spell of food stamp receipt is observed in month 3, this case is regarded as an entry. The same logic is used for exits.

¹¹ Research studies (Devany et al., 1989; Devaney and Moffitt, 1990) show that food stamp benefits improve nutrition for poor families more than an equivalent amount of cash income. It therefore seems very likely that if access to food stamps benefits is reduced for eligible families who are no longer receiving AFDC, their nutritional standards will fall. A strong outreach program to families leaving the AFDC rolls could help to keep FSP participation up.

¹² The 1985 SIPP panel is excluded from the analysis because it does not include a personal history module which contains information on work and welfare history.

¹³ Although each panel contains 28 to 32 months of data, this study uses only 24 months because this time frame corresponds to two calendar years.

¹⁴ Also excluded were the few mothers living with relatives whose earnings were reported to exceed \$60,000. Although it would be technically possible for a poor mother and her child to receive AFDC even if she lived with her well-off parents, it is very rare. Because we suspected that income may have been misreported in these cases, we excluded them from the analysis.

¹⁵ Identical deduction computation techniques have been used by Doyle and Beebout (1988) and Ross (1988).

¹⁶ This model was tested for multicollinearity and for omitted and irrelevant variables to rid the estimation of potential sources of bias.

¹⁷ See Office of Analysis and Evaluation, Food and Nutrition Service, U.S. Department of Agriculture, various years, Characteristics of Food Stamp Households (several years — summer of 1983 to 1990).

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