Intensity of Food Stamp Use and Transient and Chronic Poverty:

Evidence from the Panel Study of Income Dynamics

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Introduction

The dynamic nature of poverty adds an important dimension to poverty analysis. Some households experience poverty for long periods of time, while others are exposed to poverty only on a temporary basis due to negative short run shocks. Using static poverty measures based on cross-sectional data, the poor can be differentiated on the basis of how far their consumption, expenditure or income lies below the poverty line. However, this approach fails to distinguish between the chronically poor and the temporarily poor. Analysis of changes of a household's welfare over time is therefore required for identifying the transiently and chronically poor. Poverty dynamics also provide useful insights into what determines movements into and out of poverty and why some households remain poor over extended periods of time.

Whether it is transient or chronic in nature, poverty can be traced back to different economic circumstances. Evidence from research on poverty dynamics indicates that the determinants of chronic poverty may differ from the determinants of transient poverty. Information on these processes would be useful in the design of poverty reduction strategies as the social-safety-net needs of transiently and chronically poor households are likely to differ. This implies that alternative policies may be required in targeting these households (Jalan and Ravallion, 2000). An improved understanding or the response of transient and chronic poverty to existing food assistance programs would help design such mechanisms.

In the U.S., one of the largest transfer programs targeting the poor is the Food Stamp Program (FSP). Many dimensions of FSP impacts have been analyzed including impacts on self-reported measures of food insecurity (eg. Gundersen and Oliviera, 2001; Kabbani and Kmeid, 2005), impacts on the income-based official poverty measure for the general population (Bishop, Formby, and Zeager, 1996; Hoynes, Page, and Stevens, 2006), impacts on specific target groups

like children (Jolliffe, Gundersen, Tiehen, and Winicki, 2005), the impact of the FSP on family expenditures, food consumption, intake and diet quality (Wilde, McNamara, and Ranney, 1999), Studies have also highlighted the expenditure smoothing benefits of the program (Breunig et al., 2001; Gundersen and Ziliak, 2003).

Despite evidence that FSP participation has a significant impact on family well-being, the literature exploring the quantitative impacts of FSP participation on family poverty dynamics is limited. To our knowledge, Mykerezi (2007) is the first study to examine the relationship between FSP participation and expenditure-poverty dynamics explicitly. This study used quarterly expenditure data from the Consumer Expenditure Survey (CEX) to generate intra-annual transient and chronic poverty measures and examined the relationship between FSP participation and intra-annual family poverty in a simultaneous equation framework. Transient and chronic poverty measures are generated based on family expenditures as opposed to income as poverty calculations based on income have several limitations. Family incomes vary more in response to shocks than do expenditures, as families use accumulated assets and credit markets to smooth consumption when faced with transitory income changes (Jorgenson, 1998). Expenditures also appear to be less subject to systematic under-reporting than income, especially among low-income families (Meyer and Sullivan, 2003).

The current study generates expenditure-based poverty measures to examine the determinants of transient and chronic poverty, with particular focus on the differential role of food assistance on these dimensions of poverty. We use Panel Study of Income Dynamics (PSID) data from 1995-2003 to generate transient and chronic poverty measures based on annual household expenditures as in Jalan and Ravallion (2000). Under this approach, transient poverty measures the component of poverty that stems from inter-annual variability in family

expenditures across these years, while chronic poverty refers to the component of poverty associated with average expenditures below the poverty line over the same period.

This study augments the literature on the dynamics of poverty and the effectiveness of food assistance in several aspects. First, we use a 6 year panel of expenditure data to examine inter-annual family poverty dynamics. While this approach may not account for seasonal fluctuations in well-being, it sheds light on how households move in and out of poverty in the medium and long-run. Another important difference is that we use proprietary geo-coded panel data to account for local economic conditions, as they play important roles in shaping both family poverty dynamics and FSP participation.

Transient and chronic poverty trends are documented for both the nation and the rural South. The rural South is given special consideration as the region's disproportionate share of persistently poor counties may contribute to chronic poverty in the region (Miller and Weber, 2004).

The rest of the paper is organized a follows. The next section describes the data and the measures of the incidence and severity of transient and chronic poverty used in the study. Section 3 presents the empirical strategy, and section 4 presents the descriptive statistics for poverty measures and covariates of the model. Section 5 presents the results, while section 6 distills policy implications and concludes.

Data and Measures

The primary source of data for the analysis is the Panel Study of Income Dynamics (PSID), a long-term panel that started in 1968 with a sample of roughly 5,000 households (3,000 nationally representative households and an over sampling of 2,000 low-income households). The original families and the families of their offspring were followed. Thus, by 2001 over 7,000

families are included in the sample. However, the panel continued to be nationally representative by applying household weights.

One problem with the PSID is that it contains information on a limited number of consumption items, including food at home and food away from home, and housing expenditures. Several previous studies have used data from the Consumer Expenditure Survey (CEX) to impute total consumption from the limited expenditure categories in the PSID (e.g. Meyer and Sullivan, 2002; Blundell, Pistaferri, and Preston, 2002). The current study takes a different approach and uses the existing expenditure categories in the PSID in constructing poverty measures. In order to establish a "food and housing needs standard", we first use CEX data to determine the share of total consumption that is comprised by expenditures on food and housing for households with overall consumption levels near the official poverty line. Figures 1 and 2 present locally weighted regression estimates of the food share and the housing share as a function of total expenditures normalized by the official poverty line, and indicate that food and housing expenditures comprise about 44% of total expenditures for households near poverty (those with expenditures equal to 120 percent of the poverty line). Then food and housing poverty measures are generated by comparing total food and housing expenditures reported in the PSID to 44% of the official poverty line. Constructing poverty measures using actual food and housing expenditures was preferred over using imputed total consumption because the non-linear poverty indexes in the current application may be highly sensitive to measurement error (Mykerezi, 2007). Such errors will be minimized as actual expenditures likely contain less measurement error than imputed measures.

A unique strength of the PSID data is that information on residence at the county level is available, enabling the estimation of the impacts of some local conditions on economic well-

being and social assistance. We use county-level poverty rates obtained from the U.S. Census Bureau of Small Area Income and Poverty Estimates (SAIPE) to account for the economic conditions in the county in which the household resides. Information on state-level certification periods was obtained from the FSP Quality Control (FSPQC) database which is generated from monthly quality control reviews of FSP cases that are conducted by state FSP agencies.

As mentioned above, in this analysis transient expenditure poverty refers to the component of the severity of poverty that stems from inter-annual variability in expenditures across yearly measures, while chronic poverty refers to the component of poverty associated with average expenditures below the expenditure poverty line across the same periods.

The severity of poverty measure is defined as:

$$P(y_{it}) = (1 - y_{it})^2 \; if \; y_{it} < 1$$
$$= 0 \; if \; y_{it} \geq 1 \tag{1}$$

where y_{it} represents family expenditures normalized to the family-type-specific poverty line. This severity measure has the advantageous property of penalizing inequality among the poor (Sen, 1976). For empirical work, the measure also has the advantageous properties of being convex and approaching zero at the poverty line smoothly from below.

The severity of poverty measure is also additively decomposable into transient and chronic components. Let P_i be a measure of the average severity of poverty for the ith household over T years:

$$P_i = \frac{1}{T} \sum_{t=1}^{T} P(y_{it}) \tag{2}$$

Severity of poverty at mean expenditures is the measure of chronic poverty:

$$C_i = P(\bar{y}_i), \; \bar{y}_i = \frac{1}{T} \sum_{t=1}^{T} y_{it} \tag{3}$$

Following Jalan and Ravallion (2000), the transient component of poverty is then defined as the portion of the severity of poverty measure attributable to variability in expenditures:

$$T_i = P_i - C_i \tag{4}$$

Empirical Model

The transient poverty component depends on family exposure to income related shocks and access to expenditure smoothing mechanisms. These shocks may, in some cases not be easily observable, but are assumed to be related to both family demographic characteristics and local economic conditions. A primary expenditure smoothing mechanism observed in the analysis is FSP participation. Well developed service sectors in the local economy can also improve family's abilities to smooth income shocks through labor markets with lower transaction costs to job search (Mills, 2000). Similarly, the chronic component of poverty depends on average family income, which is a function of family assets and local economic assets. The role of the FSP in ameliorating chronic poverty is in this case that of long-term expenditure support, rather than expenditure smoothing.

We thus express the relationship between transient poverty and the observed covariates as:

$$T^* = X\beta_1 + \gamma FS + \varepsilon_1 \tag{5}$$

where T^* is a latent continuous measure of household transient poverty, X is a vector of observed covariates assumed to influence T^*, FS measures the length of FSP use, β and γ are conformable parameter vectors and ε is a random error.

Two empirical issues associated with the estimation of β_1 and γ need to be addressed: First, we can only observe $T = \max\{T^*, 0\}$, as most families have transient severity of poverty measures of zero. Second, FSP participation is a choice, and there may be unobserved effects that affect both, FS and T^*. If that were the case the ordinary least squares estimate of γ would

7

be biased. To address these concerns the relationship between T and FS is estimated using an instrumental variable (IV) Tobit model, with FS expressed as:

$$FS = X\beta_2 + \delta Z + \varepsilon_2 \qquad (6)$$

where X is as previously defined, Z is a vector of covariates assumed to only affect FS, β_2 and δ are parameter vectors and ε_2 is a random error.[1] The chronic poverty system is also specified in a similar manner.

Three common groups of covariates are included in the specifications of the determinants of transient and chronic poverty and the specification of the determinants of the intensity of FSP use. Family demographic and structure characteristics include family size, number of children and number of children squared, as well as the age, gender, marital status and race of the household head. Family educational assets are measured by discrete indicators of education level of the household head (no high-school degree, high-school degree, some post-secondary education but no college degree, and a college degree). Location attributes are measured by indicators of residence in a rural county, and in the rural South and county level poverty rates.

In addition, the state-level share of active caseloads that had recertification periods of less than 3 months, three to 7 months, and seven to twelve (as opposed to higher then twelve) are included in the FSP equation but not the poverty equations.

Descriptive Statistics

In this section, we present estimates of food and housing expenditure-based measures of total poverty and their transient and chronic components across the period 1995-2003. Note that

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[1] The likelihood function for the instrumental variable Tobit is well-known and it is not replicated here. The models are estimated using STATA's IVTOBIT and CMP routines are estimated using STATA's IVTOBIT and the CMP routine programmed by David Roodman for STATA.

household weights are applied in calculating means and standard deviations in this analysis as PSID over samples low-income families.

The incidence and severity of total poverty and its chronic and transient components are presented in table 1 for the nation and the rural South. For the incidence measure, a family is identified as chronically poor if food and housing expenditures averaged across the time period considered are below the adjusted poverty line. On the other hand, a family is identified as transiently poor if food and housing expenditures are below the poverty line for at least one year, but the family is not chronically poor.

The results indicate that the nation has a significantly higher percentage of its population experiencing transient poverty relative to chronic. This is also the case for the rural South. It is also important to note that the incidence of both transient and chronic poverty is substantially higher in the rural south than in the nation as a whole. For instance, about 14 percent of the population experiences transient poverty and 5 percent experiences chronic poverty in the nation, whereas 24 percent of the rural South's population is transiently poor and 12 percent is chronically poor based on food and housing expenditures.

The severity of poverty measures also indicate that the majority of the total severity of poverty is transient for the nation and the rural south. The severity of both, transient and chronic poverty is, as expected, substantially higher for the rural south.

Descriptive statistics for the other endogenous variable, the total number of months of FSP participation over the entire period, is provided in table 2. Nationally, the rate of participation in the FSP is 16.25, with an average of 32 months of FSP use among participants. In comparison, participation rates and the average number of months of FSP participation are higher in the rural South than the nation: 19.40 percent with an average of 36 months on the FSP.

9

Focusing on poor households, we observe that the participation rate in the FSP is always significantly higher among chronically poor households both in the nation and the rural South. Average number of months of FSP participation is also higher for the chronically poor than the transiently poor both in the nation and the rural South. Comparing the nation and the rural South, we observe a surprising outcome: the percentage of poor households (both chronic and transient) participating in the FSP is smaller in the rural South than the nation as a whole. The difference is larger for transiently poor households, with 26 percent of the transiently poor in the nation participating in the FSP, and only 20 percent of the transiently poor in the rural South participating in the FSP. With higher transient and chronic poverty rates in the rural South, this is a concern as it implies that poor households in the rural South do not take advantage of the FSP.

Descriptive statistics for the other covariates employed in the model are provided in table 3. The average family in the PSID sample has 2.6 members, with 0.7 children below the age of 18 on average. Taking the more educated spouse to be the head of the household for married families and the reported head for families with other marital status, we observe that the head is 47 years old on average. The average household faces a county-level poverty rate of 13 percent. Turning to the discrete indicators, we observe that families with a head with at least a college degree represent 36 percent of the sample, while those with at least a high school degree and those with some college but no degree represent 29 and 25 percent of the sample, respectively. Families with a head with no high school degree represent 10 percent of the sample. A large percentage of the households have white (88 percent) or African American (10 percent) heads, leaving only a very small percentage to Hispanic and other non-white populations. 83 percent of the households are headed by a male. The majority of the households are headed by married couples, whereas households with a single, divorced or separated head constitute only 37 percent

of the sample. 25 percent of the households in the sample reside in a rural area, and 11 percent are in the rural South. Finally, considering the average certification periods in the states in the sample, we observe 13 percent with less than 3 months, 23 percent with 4-6 months, 56 percent with 7-12 months, and 8 percent with more than 12 months.

Results

Transient poverty model estimates are presented in table 4 along with the jointly estimated FSP participation equation parameter estimates. Length of FSP participation reduces transient poverty *(p=0.1)*. Marginal effects computed at the sample mean indicate that a one month increase in FSP participation reduces transient poverty by 14 percent among the poor.[2]

Chronic poverty system estimates are presented in table 5. Again, the parameter estimate associated with months of FSP participation is negative and statistically significant *(p=0.05)*, implying that longer periods of FSP participation decrease chronic poverty. Marginal effects suggest a 15 percent reduction in chronic poverty associated with an additional month of FSP participation for the average chronically poor household.

Marginal effects of exogenous model covariates, computed from the reduced form parameter estimates are presented in table 6, for the transient and chronic poverty equations. Residence in a rural area and in a higher poverty county increase both transient and chronic poverty. Residents of states with shorter average recertification periods also show higher transient and chronic poverty. These variables likely operate through reductions in FSP use. Also worth noting is the fact that residence in the rural south does not have a marginal impact on transient poverty and is actually associated with lower chronic poverty *(p=0.1)*, despite the

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[2] Marginal effects are computed as $\frac{\partial[E(T^*|T>0,X)]}{\partial FS}|_{X=\overline{X}}$.

regions' disproportionate incidence and severity of poverty. This result indicates that rural residence and the family attributes accounted for in this study fully explain the higher poverty in the rural South.

Both dimensions of poverty are also higher for households headed by African Americans and households with more children, and are lower for male-headed households, and those headed by a married or a more educated individual. Age of the household head decreases transient but not chronic poverty.

Parameter estimates associated with the FSP use equation are very similar between the transient and chronic poverty systems (table 4 and table 5). Estimates indicate that FSP use increases at an increasing pace with the number of kids, is higher for households with an African American head and households that reside in counties with higher poverty. FSP use is lower for households with older, more educated and married heads. Lower recertification periods are jointly significant and are shown to reduce FSP use.

As a final note, results reveal the existence of a joint relationship between months of FSP participation and both dimensions of poverty. In fact, the estimated error correlation is positive and statistically significant *(p=0.05)* in both systems. Single equation Tobit estimates of transient poverty and chronic poverty (presented in the appendix table A1 and table A2, respectively) also suggest the the existence of self-selection into the FSP by the poor; the parameter estimate associated with the impact of FSP participation on both components of poverty is positive and significant *(p=0.05)*.

Discussion and Conclusions

Household well-being is generally subject to both intra-annual or seasonal and inter-annual fluctuations. Similar to the finding in Mykerezi (2007), transient poverty accounts for a larger

share of economic hardship than chronic poverty. In fact, results of this study indicate that the transient component of expenditure-poverty accounts for at least sixty percent of total severity of poverty in the nation measured over 1995-2003. Given its high prevalence, mechanisms that specifically address transient poverty are likely to greatly improve household well-being.

Results from the estimation of transient and chronic poverty systems of equations indicate that transient poverty and chronic poverty are both reduced at nearly the same rate by additional months of FSP participation. This implies that poor households use food stamps for both long-term expenditure support and as a smoothing mechanism. In general, the determinants of chronic and transient poverty are not found to differ significantly, at least within the set of variables accounted for in this study. Both aspects of poverty appear to be correlated with age of head, human capital, minority status, rural residence and local economic conditions.

The state-level FSP policy variables, namely shorter recertification periods reduce FSP use, likely because of increased transaction costs, resulting in higher poverty. Overall, we find that continued effort to increase FSP participation via lowered transactions costs or otherwise stands to reduce transient and chronic poverty. Most states are already involved in FSP outreach with the primary goal of increasing participation. Expansion of these programs may be crucial in efforts to reduce household exposure to poverty.

This research is being extended in two important aspects. First, the ability of households to smooth consumption inter-temporally and to insure themselves adequately against fluctuations in living conditions is likely to vary depending on the length of the time period considered. This analysis is being extended to consider time periods of different lengths. In addition, alternative specifications that control for labor force status fluctuations and changes in household size are being considered.

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Figure 1: Locally Weighted Regression Estimates, Food Share and Normalized Expenditures
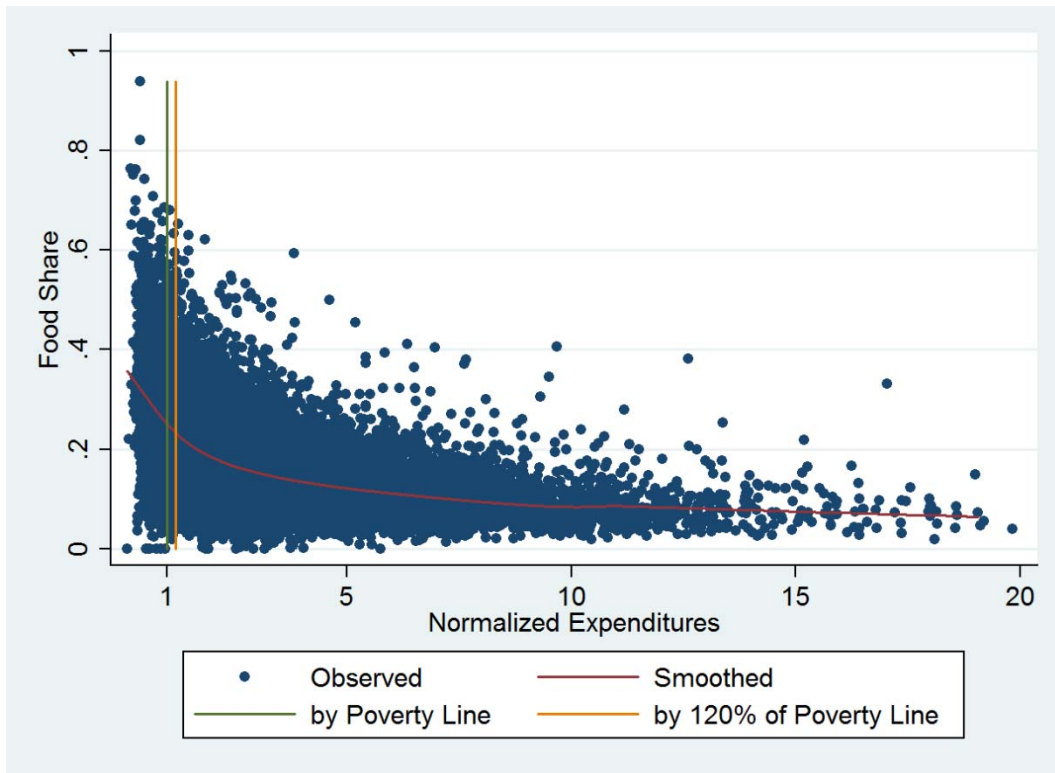

Figure 2: Locally Weighted Regression Estimates, Housing Share and Normalized Expenditures
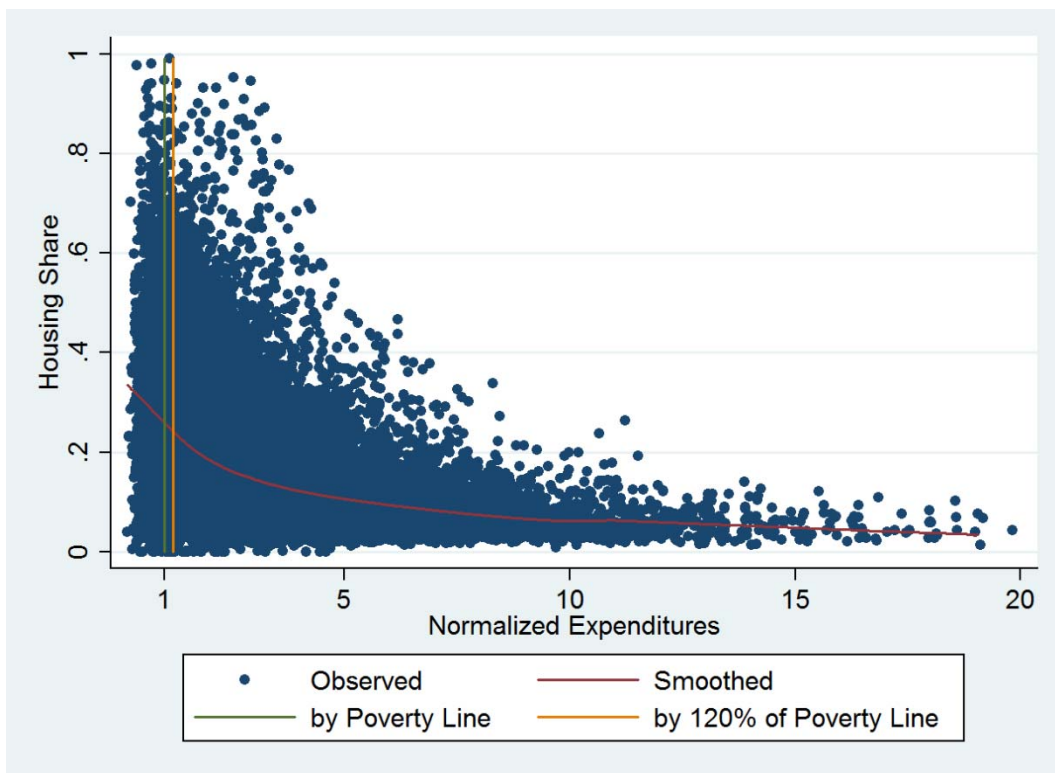
Table 1: Decomposition of Severity of Poverty and Incidence of Transient and Chronic Poverty, Nation and Rural South

	% Population Transiently Poor	% Population Chronically Poor	Total Poverty	Transient Poverty	Chronic Poverty	Sample Size
Nation	13.71	4.65	0.0037	0.0023	0.0015	3268
Rural South	24.24	12.12	0.0079	0.0051	0.0028	363

Table 2: Food Stamp Program Participation among Chronic and Transient Poor, Nation and Rural South

	Nation		Rural South	
	Rate (%)	Months of Participation [a]	Rate (%)	Months of Participation [a]
All	16.25	31.60	19.40	36.14
Chronic	42.67	43.79	40.48	45.87
Transient, not Chronic	25.50	32.00	19.32	29.06

[a] Expressed as the sum of all months in which a household participating in the FSP received food stamps in the period.

Table 3: Descriptive Statistics

Variable [a]	Mean	Standard Deviation
Married	0.63	0.48
Male	0.83	0.38
No High School	0.10	0.30
High School Degree	0.29	0.45
Some College	0.25	0.43
College Degree	0.36	0.48
White	0.88	0.32
African American	0.10	0.30
Other Race	0.02	0.14
Family Size	2.56	1.33
Number of Kids	0.70	1.05
Number of Kids Squared	1.59	3.38
Age (10 years)	4.69	1.44
County poverty rate	0.13	0.06
Rural Residence	0.25	0.43
Rural South Residence	0.11	0.32
Average Certification Period <3 Months	0.13	0.12
Average Certification Period 4-6 Months	0.23	0.16
Average Certification Period 7-12 Months	0.56	0.23

[a] Head is defined to be the more educated spouse.

Table 4: Transient Poverty Model Structural Parameter Estimates

Variable	Months of FSP Participation			Transient Poverty*100		
	Parameter		SE	Parameter		SE
Months of FSP Participation				-0.522	*	0.28
Intercept	12.653	**	1.76	2.211		2.88
Family Size	0.404		0.32	0.408		0.28
Number of Kids	-0.082		0.49	0.536		0.39
Number of Kids Squared	0.456	**	0.10	0.184		0.15
Age of Head (10)	-0.451	**	0.14	-0.402	**	0.17
Head is African American	3.421	**	0.46	3.834	**	1.03
Head is Other Race	0.458		1.29	0.778		1.06
Head Graduated High School	-7.274	**	0.60	-5.404	**	2.13
Head Some College, No Degree	-9.163	**	0.63	-7.208	**	2.66
Head Graduated College	-8.616	**	0.63	-8.378	**	2.51
Head is Married	-4.371	**	0.52	-3.464	**	1.34
Head is Male	0.078		0.45	-0.433		0.37
County Poverty Rate	17.058	**	3.22	17.072	**	5.45
Rural	-0.430		0.51	1.759	**	0.43
Rural South	0.136		0.73	-0.314		0.55
Average Certification Period <3 Months	-6.716	**	2.53			
Average Certification Period 4-6 Months	-0.345		1.31			
Average Certification Period 7-12 Months	-3.784	**	1.52			
Error Variance	9.241	**	0.116	6.276	**	2.209
Error Covariance	0.840	**	0.123			
N	3151					
Log-Likelihood	-13610.23					

Note: ** indicates significance at p=0.05 level, * indicates significance at the p=0.10 level.

Table 5: Chronic Poverty Model Structural Parameter Estimates

Variable	Months of FSP Participation			Chronic Poverty*100		
	Parameter		SE	Parameter		SE
Months of FSP Participation				-0.706	**	0.36
Intercept	13.048	**	1.75	2.244		3.64
Family Size	0.408		0.32	0.475		0.35
Number of Kids	-0.083		0.49	0.438		0.49
Number of Kids Squared	0.455	**	0.10	0.328	*	0.19
Age of Head (10)	-0.450	**	0.14	-0.329		0.21
Head is African American	3.423	**	0.46	4.394	**	1.30
Head is Other Race	0.458		1.29	1.564		1.31
Head Graduated High School	-7.264	**	0.60	-6.453	**	2.69
Head Some College, No Degree	-9.158	**	0.63	-8.923	**	3.35
Head Graduated College	-8.613	**	0.63	-10.251	**	3.17
Head is Married	-4.378	**	0.52	-4.352	**	1.69
Head is Male	0.079		0.45	-0.831	**	0.46
County Poverty Rate	16.868	**	3.22	22.186	*	6.85
Rural	-0.440		0.51	2.175	**	0.54
Rural South	0.118		0.73	-0.673		0.69
Average Certification Period <3 Months	-6.602	**	2.49			
Average Certification Period 4-6 Months	-1.057		1.24			
Average Certification Period 7-12 Months	-4.198	**	1.51			
Error Variance	9.241	**	0.12	7.997	**	2.89
Error Covariance	0.872	**	0.10			
N	3151					
Log-Likelihood	-13619.32					

Note: ** indicates significance at p=0.05 level, * indicates significance at the p=0.10 level.

Table 6: Marginal Effects of Exogenous Variables on Latent Transient and Chronic Poverty

Variable	Transient Poverty*100			Chronic Poverty*100		
	Marginal Effect		SE	Marginal Effect		SE
Family Size	0.023		0.02	0.018		0.02
Number of Kids	0.069	**	0.03	0.048		0.03
Number of Kids Squared	-0.007		0.01	0.001		0.01
Age of Head (10)	-0.020	**	0.01	-0.001		0.01
Head is African American	0.318	**	0.05	0.242	**	0.04
Head is Other Race	0.065		0.11	0.147		0.13
Head Graduated High School	-0.168	**	0.03	-0.117	**	0.03
Head Some College, No Degree	-0.229	**	0.03	-0.192	**	0.03
Head Graduated College	-0.376	**	0.03	-0.330	**	0.03
Head is Married	-0.155	**	0.04	-0.134	**	0.04
Head is Male	-0.061	*	0.04	-0.097	**	0.04
County Poverty Rate	0.958	**	0.22	0.991	**	0.21
Rural	0.306	**	0.06	0.327	**	0.06
Rural South	-0.037		0.04	-0.059	*	0.03
Average Certification Period <3 Months	0.346	**	0.16	0.386	**	0.15
Average Certification Period 4-6 Months	-0.034		0.13	0.071		0.12
Average Certification Period 7-12 Months	0.233	**	0.12	0.313	**	0.12

Note: ** indicates significance at p=0.05 level, * indicates significance at the p=0.10 level.

Appendix

Table A1: Single Equation Tobit Estimates for Transient Poverty*100

Variable	Parameter		SE
Months of FSP Participation	0.046	**	0.01
Intercept	-3.245	**	0.67
Family Size	0.161		0.17
Number of Kids	0.584	**	0.26
Number of Kids Squared	-0.077	**	0.04
Age of Head (10)	-0.147		0.09
Head is African American	1.908	**	0.27
Head is Other Race	0.505		0.71
Head Graduated High School	-1.226	**	0.29
Head Some College, No Degree	-1.979	**	0.32
Head Graduated College	-3.460	**	0.37
Head is Married	-0.915	**	0.28
Head is Male	-0.481	**	0.25
County Poverty Rate	7.329	**	1.69
Rural	1.999	**	0.29
Rural South	-0.238		0.35
Error Variance	3.411	**	0.21
N	3151		
Log-Likelihood	-2137.21		

Note: ** indicates significance at p=0.05 level, * indicates significance at the p=0.10 level.

Table A2: Single Equation Tobit Estimates for Chronic Poverty*100

Variable	Parameter		SE
Months of FSP Participation	0.126	**	0.03
Intercept	-24.786	**	4.22
Family Size	-0.519		0.68
Number of Kids	2.230	**	1.19
Number of Kids Squared	-0.094		0.17
Age of Head (10)	1.093	**	0.43
Head is African American	5.537	**	1.29
Head is Other Race	4.033		4.16
Head Graduated High School	-1.274		1.08
Head Some College, No Degree	-5.191	**	1.61
Head Graduated College	-10.264	**	2.26
Head is Married	-1.077		1.30
Head is Male	-2.732	**	1.29
County Poverty Rate	22.807	**	7.45
Rural	7.268	**	1.68
Rural South	-2.044		1.60
Error Variance	9.730	**	1.12
N	3151		
Log-Likelihood	-811.21		

Note: ** indicates significance at p=0.05 level, * indicates significance at the p=0.10 level.