The Effect of Safety Net Programs on Food Insecurity[⊗]

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Abstract: Does the safety net reduce food insecurity in families? In this paper we investigate how the structure of benefits for five major safety net programs – TANF, SSI, EITC, SNAP, and Medicaid – affects low food security in families and very low food security among children. We build a calculator for the years 2001-2009 to impute eligibility and benefits for these programs in each state, taking into account cross-program eligibility rules. To identify a causal effect of the safety net, we instrument for imputed eligibility and benefits using simulated eligibility and benefits for a nationally representative sample. Focusing on non-immigrant, single-parent families with incomes below 300 percent of the poverty line, the results suggest that the median annual cash and food package of roughly $3400 reduces low food security by 5.1 percentage points on a base incidence of 33 percent, a 16 percent reduction. The same package reduces the more extreme outcome of childhood very low food security by an imprecisely estimated 36 percent. Controlling for receipt of other program benefits, the SNAP food assistance program improves food security: each $1000 in annual SNAP eligibility reduces low food security by 1.8 percentage points. We are unable to reject equivalent impacts of cash and food assistance.

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Executive Summary

Safety net programs may allow at-risk families to avoid or reduce food insecurity. However, program effects potentially depend on the mix of cash- and non-cash benefits and the degree to which they "crowd out" food-specific transfers. For example, cash assistance is a factor in the determination of Supplemental Nutrition Assistance Program (SNAP) benefits, so residents of states with generous cash programs may receive less food assistance. In this paper we investigate how the level of overall safety net benefits and their distribution between cash, food, and health insurance affect very low food security among children and low food security in families.

We develop eligibility and benefit calculators for five major safety net programs – TANF, SSI, EITC, SNAP/Food Stamp Program, and Medicaid/CHIP – with each calculator taking into account eligibility and benefit levels for the other programs. We use these calculators to impute eligibility and total benefit packages for participants in the December Current Population Survey for years 2001-2009. Because program eligibility and food insecurity are both related to personal economic conditions, we cannot use these variables directly to identify the causal impact of the safety net on food insecurity. Instead, we instrument for each family's eligibility and benefits using the average simulated eligibility and benefits of a national sample of families with similar demographic characteristics. The main analysis sample includes non-immigrant, single-parent families with incomes below 300 percent of the poverty line.

The results suggest that the safety net does impact food insecurity. The median eligibility package of roughly $3400 food and cash combined reduces low food security by 5.1 percentage points on a base incidence of 33 percent, a 16 percent reduction. The same package reduces the more extreme outcome of childhood very low food security by an imprecisely estimated 36 percent. The safety net significantly reduces the probability of a family reporting that over the last twelve months they needed more money to meet food needs, that they have run short of money for food, that they have eaten less than they should have, that they sometimes did not

have enough to eat, that they sometimes could not afford balanced meals, or that they have been hungry and not eaten. Interestingly, however, the safety net has no detectible impact on usual weekly food expenditures. Combined, these results suggest that the safety net may help families manage occasional shocks that would otherwise lead to reduced food consumption, but does not necessarily affect the overall average level of food consumption.

We lack the power to measure precise effects for most of the individual programs that are part of the safety net package. However, the program specifically targeted to address food insecurity – the SNAP/Food Stamp Program – does appear to be effective. Controlling for eligibility for other program benefits, the SNAP food assistance program improves food security: each $1000 in annual SNAP eligibility reduces low food security by 1.8 percentage points among single-parent families under 300 percent of poverty. The estimated benefit is larger – 3.2 percentage points - if we consider a poorer group of families.

We find no evidence that the distribution of safety net benefits across food and cash matters for food insecurity. The estimated effects of cash programs and SNAP/food stamps are of similar magnitude. Furthermore, there are important cross-program participation effects, suggesting that eligibility for one program may indirectly affect food insecurity by fostering or inhibiting participation in another program. Nevertheless, it is clear that a strong safety net *overall* reduces food insecurity in families with children.

I. Introduction

Substantial research has investigated the effect of nutrition programs on food insecurity among families and children. However, less is known about how *non-food* safety net programs affect food insecurity. Safety net programs may allow at-risk families to avoid or reduce food insecurity, but program effects may depend on their mix of cash- and non-cash benefits and the degree to which they "crowd out" food-specific transfers. For example, Federal food assistance tends to dampen total differences in benefits levels by considering cash assistance in the determination of Supplemental Nutrition Assistance Program benefits. In this paper we investigate how the level of benefits and their distribution between cash, food, and health insurance affect low food security in families and very low food security among children.

We quantify state differences in total benefits and categories of benefits by examining eligibility and benefit levels for Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), federal and state Earned Income Tax Credits (EITC), food assistance through the Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps), and Medicaid and the Children's Health Insurance Program (CHIP). Our benefits calculator reveals substantial variation across states and over time in the level and composition of benefits. Thus, two states might have similar levels of total benefits for a given family income and disability status, but low-income residents of one state might be provided more cash while residents of another might enjoy more generous in-kind benefits. There is also variation across states and within states over time in the aggregate generosity of the safety net. We exploit within-state changes over time in eligibility rules to identify the casual impact of program generosity.

We use 2001-2009 Current Population Survey data to investigate whether the generosity of the aggregate safety net at the state level affects food insecurity among families and children,

and to understand the mechanisms underlying these relationships. We also examine whether these effects vary by program. We focus on families most likely to experience food insecurity: single parent families under 300 percent of the poverty line.

The results suggest that the safety net does impact food insecurity. The median eligibility package of roughly $3400 food and cash combined reduces low food security by 5.1 percentage points on a base incidence of 33 percent, a 16 percent reduction. The same package reduces the more extreme outcome of childhood very low food security by an imprecisely estimated 36 percent. The safety net also reduces other food hardships but has no detectible impact on usual weekly food expenditures. The safety net may help families manage occasional shocks that would otherwise lead to short-term reduced food consumption, but does not affect the typical level of food consumption. Eligibility for the SNAP/Food Stamp Program reduces food insecurity to a degree that is economically and statistically meaningful, but we find no evidence of differential effects for cash and food benefits.

II. Background and Motivation

In 2001-2009, 0.7 percent of non-immigrant families with children experienced very low food security among children (child VLFS) and 17 percent experienced low food security (LFS).[1] For single parent families under 300% of the poverty line, these numbers are 1.5 percent and 33 percent, respectively. Food insecurity emerges when households lack the resources to access enough food for an active, healthy lifestyle for all household members. Very low food security (VLFS) is an extreme form of this condition that is characterized by reduced food intake and disrupted eating patterns (Nord, Andrews, and Carlson, 2009). Although

[1] Authors' calculation based on Current Population Survey December 2001-2009 Food Security Supplement. We exclude immigrant families to simplify eligibility imputation, as explained below.

children in food insecure households are often protected, in about 4 percent of low food security families, children experienced substantially reduced food intake.[2] Household food insecurity is correlated with a large number of health and developmental problems for children, including (but not limited to) asthma (Kirkpatrick et al., 2010), anemia (Eicher-Miller et al., 2009; Skaliky et al., 2006), cognitive problems (Howard, 2011), behavioral problems ((Huang et al., 2010), and worse general health (Cook et al., 2006).[3] In work that deals with the selection issue that faces much of the previous research, Gundersen and Kreider (2009) find that childhood food insecurity is associated with a 1.4 – 3.5 percentage point reduction in the probability that children are in good or very good health.

Figure 1 shows recent trends in food insecurity for non-immigrant families with children. For both low-income single parent families and all families, the rate of food insecurity was fairly stable from 2001 until the recession starting in 2007. It is also notable that food insecurity is substantially higher in every year for single parent, low-income families.

A large literature examines the impact of nutrition programs on food insecurity.[5][6] Presumably due to selection into the program, SNAP recipients have rates of food insecurity that are twice as large as those for eligible non-recipients (Gundersen et al., 2011). However, a

[2] Very low food security among children is evident when households report affirmatively to five of eight questions about disruptions to child food intake.

[3] See Gundersen et al. (2011) for a detailed summary of the overall literature on food insecurity and health outcomes.

[5] The major food programs are the Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps), Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC), and the National School Lunch Program. Our analysis focuses on SNAP/Food Stamps.

[6] A related literature examines the effects of food programs on food consumption. Theory predicts that food programs raise the quality and quantity of food consumed in a household in two ways: by increasing the total resources available to the household and by shifting the allocation of household resources towards food. Gundersen and Ziliak (2003) find that due to SNAP, food consumption is significantly less volatile than income. A number of papers have found that the marginal propensity to consume food out of a dollar of food stamps is higher than that out of a dollar of cash income (e.g. Fraker, 1990; Breunig and Dasgupta, 2002; Fraker et al., 1995a and 1995b). Using the diffused introduction of the Food Stamp Program across counties, Hoynes and Schanzenbach (2009) estimate that the marginal propensity to consume food out of a dollar of food stamps is comparable to that out of a dollar of income.

number of papers that have tried to account for self-selection of the most food insecure into SNAP/food stamp participation find beneficial effects of SNAP/food stamps in reducing food insecurity. Gundersen and Oliveira (2001) use an instrumental variables technique and find that SNAP participants do not face higher rates of food insecurity after controlling for selection. Nord and Golla (2009) use the Current Population Survey Food Security Supplement linked across years to trace out dynamic patterns of very low food security relative to SNAP entry. They find that food security appears to deteriorate in the 6-8 months prior to entering SNAP, but that after SNAP receipt begins, the likelihood of VLFS declines by about one third within a month or so. Ratcliffe and McKiernan (2010) use recent state-level changes in SNAP rules to instrument for SNAP participation, and also find that SNAP reduces LFS and VLFS. Mykerezi and Mills (2010) use state administrative error rates and self-reported loss of benefits while still eligible in an instrumental variables framework and find that participation in SNAP lowers rates of food insecurity. Nord and Prell (2011) examine the temporary increase in SNAP benefits in the economic stimulus package of 2009 reduced food insecurity among SNAP-eligible families relative to non-eligible families.

Comparatively little research, however, has addressed the effect of *non-food* safety net programs on food security. Such programs are similar to nutrition programs in that they expand the total resources available to the household and provide a buffer against income shocks. To the extent that these additional resources are used for food, they may reduce food insecurity. Borjas (2004) reports that welfare generosity decreases food insecurity among immigrants, for instance. Even non-cash programs such as public health insurance may increase the funds available for food. Understanding how household food consumption is affected by the type of safety net support (i.e. cash, food, or health insurance) is critical for effective design of poverty policy.

Furthermore, the effect of non-food programs may depend on how they interact with nutrition programs. For example, enrollment in TANF or SSI may facilitate access to nutrition assistance programs (see Brauner and Zedlewski, 1999). On the other hand, by increasing family income, state non-food program generosity may reduce eligibility and benefit levels for SNAP.[7] In theory, generous welfare programs could "crowd out" food assistance and shift household consumption toward other items, thereby increasing food insecurity. For example, Duggan and Kearney (2007) report that households receive fewer food stamps and WIC benefits following enrollment in the Supplemental Security Income program. Furthermore, because SNAP generosity is conditioned on income from other safety net programs, analyses of the SNAP program that fail to account for the generosity of other safety net programs may yield biased estimates of the marginal impact of SNAP.

Theoretically, the net result of the "income effect" associated with non-food program participation (resulting from expanded resources) and the "substitution effect" (stemming from fewer requirements to allocate household resources to food) is ambiguous and requires empirical investigation. The response to programs may depend on particular program features, so it is advantageous to consider cash and non-cash programs. As detailed below, our research focuses on four major safety net programs in addition to SNAP/food stamps: Temporary Assistance to Needy Families (TANF), Supplemental Security Income (SSI), the federal and state Earned Income Tax Credits (EITC), and Medicaid/CHIP (public health insurance).

TANF. The Temporary Assistance to Needy Families (TANF) program (formerly Aid to Families with Dependent Children, AFDC) provides cash assistance to very low-income families with children who either have a single parent or (more rarely) an unemployed parent. The cash assistance program provides a state-set level of benefits, which is reduced as the parent earns

[7] See Ziliak, Gundersen, and Figlio (2003) for a discussion.

other income. This basic structure began to be modified by states under waivers of the federal rules in the mid-1990s in order to encourage greater connection to the labor force among recipient parents. The waiver period was followed by the enactment of welfare reform in 1996, which established TANF in place of the entitlement program AFDC, giving states considerably more freedom in designing and implementing their programs. Importantly for this project, eligibility for TANF confers automatic eligibility for SNAP, and the design of SNAP offsets to some extent the variation in state maximum benefits. Thus there is less variation in the combined maximum TANF/SNAP benefit across states than there is in the maximum TANF benefit alone, although SNAP benefits do not entirely eliminate differences (Currie, 2003).

Although there is an extensive literature on the effect of food programs on food sufficiency (see Gundersen et al., 2011, for a review), there are surprisingly few papers focusing on the marginal impact of cash welfare on food security. Borjas (2004) finds evidence of such a relationship using variation induced by state responses to welfare reform to identify the effect. Similarly, studies of "welfare leavers" following the implementation of TANF show some evidence that families leaving welfare experienced food hardships after exiting (see Acs, Loprest, and Roberts, 2001, for a summary). Winship and Jencks (2004) find no evidence that welfare reform aggravated food-related problems among single mothers or their children between 1995 and 2002. By focusing on general trends, however, they are largely picking up effects of economic growth and stagnation, rather than on effects of cash assistance *per se*.

Papers examining the effect of cash assistance on consumption are also informative for our analysis. Meyer and Sullivan (2004) find improvements in consumption of single mother families relative to comparison families following welfare reform. Gruber (2000) examines how the maximum cash assistance benefit level in a state affects consumption of families where a

woman becomes a single mother through divorce. He finds that raising the state maximum benefit level by one dollar raises the level of food and housing consumption by 28 cents.

SSI. The Supplemental Security Income Program (SSI) is a federally funded program that provides income support to disabled individuals with limited financial resources.[8] The SSI-disabled program has been expanding dramatically over time, with the number of adult recipients growing 89% between 1990 and 2010, and the number of child recipients quadrupling over this same time period. Some of this increase is likely due to movements of individuals from AFDC/TANF to SSI in the aftermath of welfare reform (General Accounting Office, 1997; Wamhoff and Wiseman, 2007). Individuals cannot enroll in both TANF and SSI, though many families have members participating in both programs.

There has been very little research examining the effects of SSI on either general well-being or food security, despite evidence that suggests that the disabled have high levels of overall material hardship and food insecurity (She and Livermore, 2007; Parish et al., 2009; Huang et al., 2010).[9] Duggan and Kearney (2007) find that enrollment of a child on the SSI program increases family income and reduces the likelihood of poverty. Coleman-Jensen and Nord (2010) find that disability income recipients are more likely to be food insecure than other disabled individuals, but note that this likely reflects differences in the severity of their disabilities. However, Schmidt and Danziger (2012) analyze a sample of former welfare recipients and also find that disability benefit recipients are significantly more likely than unsuccessful applicants to report food insufficiency, even after controlling for detailed health conditions, activity limitations, and individual fixed effects. Though SSI benefits are set at the

[8] The SSI program also provides means-tested income support to the elderly, but that is beyond the focus of this paper.

[9] For example, She and Livermore (2007) find that of the poor and near-poor individuals in the SIPP who experienced hunger, 62% reported a disability.

federal level, a number of states provide additional optional supplements. In 2010, 21 states provided SSI supplements that ranged in maximum dollar amounts from $1 to $362. These supplement amounts also vary over time, both in nominal and in real terms. Higher state supplements have been shown to be associated with the share of children on SSI (e.g., Garrett and Glied, 2000).[10]

EITC. The federal Earned Income Tax Credit (EITC) is a refundable credit administered through the tax system for low-income families with earned income. It has grown rapidly since its creation, from $5.0 billion (2009$) in 1975 to $60.4 billion in 2009 (Tax Policy Center, 2012), in part due to a series of expansions to the credit in the 1980s and 1990s (Hotz and Scholz, 2003). The EITC differs in several important ways from the other programs considered in this project. First, it is targeted at families with workers. Second, because it is administered through the tax system, most EITC recipients receive their credit in a lump sum in February or March, rather than spread throughout the year. Research that examines how recipients spend their credit focuses on the one-time nature of the cash transfer. Using the Consumer Expenditure Survey, Barrow and McGranahan (2000) find that EITC-eligible households spend 9% more on durable goods in February than do similar households that are not eligible for the credit. Smeeding, Ross, and O'Connor (2000) surveyed low-income households in Chicago that filed tax returns about their plans for using their EITC. While 75% of those receiving credits reported plans to use at least part of their credit for "social mobility" uses, 69% reported that they would use part of their EITC to make ends meet. 23% of those receiving credits said they would use part of it on food.

[10] Variation in SSI supplements across states and over time has been used extensively in the previous literature on individuals nearing the age of 65 to examine the effects of SSI on labor supply, saving, and migration (Neumark and Powers, 1998, 2000, 2005, 2006).

EITC benefits are set at the federal level, but a number of states (24 plus the District of Columbia in 2001) have their own EITCs (Williams, Johnson, and Shure, 2010). The state-level EITCs tend to be a percentage of the federal credit ranging from 3.5% to 50% in 2010. Five states have enacted new EITCs since 2006, and a number of states have recently increased their EITC subsidies. Neumark and Wascher (2001) find large effects of the state EITCs on income and income-to-needs ratios.

Medicaid/CHIP. These programs provide health insurance for children and some parents in low-income families. Although originally linked tightly to eligibility for AFDC or SSI, eligibility limits have steadily risen since the mid-1980s, allowing children in families with incomes as high as 200 percent of the federal poverty line or higher to be eligible for public insurance. This expansion of eligibility means that roughly a third of all children are income-eligible for Medicaid and about half of all children are income-eligible for Medicaid or CHIP (Dubay, Haley, and Kennedy, 2002). The income limits for eligibility vary substantially across states and, following seminal work by Currie and Gruber (1996), exogenous state variation in eligibility is typically captured by a variable measuring the fraction of a national sample that would be eligible under the rules in effect in each state.

Access to public health insurance may affect the likelihood of a child experiencing food insecurity in two ways: first, families who receive public insurance for their children do not have to pay the premium cost to cover their children, and second, Medicaid and CHIP have little to no cost-sharing. For both reasons, eligibility for public health insurance frees up resources for the family to use for other expenditures, including food. While there has been no research specifically investigating the effect of Medicaid/CHIP on food insecurity, there have been several papers studying consumption impacts of public health insurance. Gruber and Yelowitz

(1999) report an approximately $538 increase in annual consumption associated with Medicaid participation. More recently, Leininger, Levy, and Schanzenbach (2010) find that eligibility for Medicaid/CHIP is associated with an increase in consumption, although their results suggest that most of the increase is allocated to consumption of transportation or saving for retirement. Other work supporting a relationship between public insurance eligibility and consumption potential includes Shaefer, Grogan and Pollack (forthcoming) and Banthin and Selden (2003). Thus, there is scope for even a non-cash program like Medicaid to affect food consumption and food insecurity.

III. Methodology and Data

As our goal in this project is to examine how the generosity of the state safety net affects food insecurity, our general empirical approach is to regress food security outcomes of interest on measures of family benefit levels and eligibility. Our data come from the 2001-2009 Current Population Survey Food Security Supplement (CPS FSS), which is conducted in December of each year. The FSS is the source for the official food security statistics in the United States. Respondents are asked about how much their household spent on food, their use of food assistance programs, and whether they were able to afford enough food. Based on their answers to a subset of these questions, households are classified into one of three categories: food secure, having low food security, and having very low food security. In addition, the food security of children in the household is calculated from responses to questions that ask specifically about food conditions among the children. Very low food security among children is reported for households with children starting in the year 2000. The CPS FSS is thus a good source of information on the outcomes of interest.

However, the FSS does not include detailed data on income. It contains a variable that gives total income in 16 categories, but this variable does not make a distinction between earned and unearned income, which is critical for determining eligibility and benefit levels for programs. Furthermore, this measure of total income already includes benefit income from various programs, making it a poor input to an eligibility determination procedure.

To remedy this, we use the data on *earnings* that are collected when a household is in the outgoing rotation group of the CPS (the households in month 4 or 8 of the data collection). To obtain the earnings data, we match each member of a December CPS FSS family over the age of 15 to earnings data from the appropriate month. For a quarter of the sample, the outgoing rotation group questions are asked in December, while the other three quarters of the sample are matched to data from January, February, or March. We do the matching on the basis of identifiers available in the CPS data, and we check the quality of matches using reported information in both months on sex, age, and race.[11]

Once the FSS is matched to the outgoing rotation group earnings data, we use these data to determine predicted eligibility and benefit amounts for the safety net programs of interest for each family. Using program eligibility and benefit rules and parameters, we developed calculators that predict eligibility and benefit levels for TANF, SSI, Medicaid/CHIP, and SNAP. We use the National Bureau of Economic Research's TAXSIM program to predict eligibility and benefit levels for federal and state EITCs. Inputs to the calculators include family type (married versus single parents), number of children, ages of children, earnings of respondent and spouse, disability status of respondent and spouse, and state and year of residence. Family groups vary depending upon the family composition rules for each specific safety net program. We assume

[11] We are able to match about 85% of families for both the reference person and spouse (if any). Unmatched families are excluded from the sample.

no unearned income other than that generated by our calculators for the programs mentioned above. In order to model the interactions between programs correctly, we use a linear process: the merged FSS data are run through the TAXSIM program to calculate federal EITCs, which are assumed to be unaffected by other benefits;[12] the output is run through the SSI calculator, which adds SSI benefits; then through the TANF calculator (since TANF eligibility and benefits are affected by SSI receipt); then through the Medicaid/CHIP calculator (since eligibility is affected by SSI receipt); then through the SNAP calculator (since eligibility and benefits are affected by both SSI and TANF). Details about the assumptions underlying the programming of the calculators are provided in the data appendix to this paper.

Table 1 presents imputed eligibility rates and average benefit levels for our main sample: single parent families under 300 percent of poverty. These are generated by running the CPS data through our calculators for each year. The increases in eligibility towards the end of the sample partly reflect the weakened economy. For comparison, we analyze the March CPS for the subsequent year to show actual participation rates and benefit levels for TANF, SSI, and Medicaid. In general, reported rates and amounts are lower than imputed amounts due to incomplete take-up and to measurement error in the imputation.[13]

Using the results of these calculators, we are interested in estimating linear probability models of the form:

$$(1) \qquad vlfsc_{icst} = \beta_0 + \beta_1 benefit_{icst} + X_{icst}\alpha + \theta_s + \lambda_t + u_{icst}$$

where *vlfsc* is an indicator for very low food security among children in family *i* in demographic cell *c* in state *s* in year *t*. *Benefit* is the level of benefits for the various safety net

[12] We assume that EITC benefits are not counted as income towards eligibility or benefits of other programs (see Appendix).

[13] We do not have information on assets or non-safety-net sources of unearned income, so we are likely to overstate program eligibility.

programs the family is imputed to receive based on the results of the calculators (included either as total benefits or separately by program type). In the calculation of benefit and/or eligibility amounts we assume full take-up of programs for which individuals are eligible given their earnings and family characteristics. X represents a vector of state and individual level controls, θ represents state fixed effects, and λ represents year fixed effects. Time-varying state controls include non-pecuniary program parameters, information about unemployment insurance and child support enforcement, and the state unemployment rate.[15] Demographic controls include controls for disability, age, and education of reference person and spouse if applicable, race/ethnicity, age of youngest child, gender of parent if single-parent family, and indicators for whether the family is under 100 or 200 percent of the poverty line.

Thus, the model controls for observable characteristics of families living in states in a given year, all characteristics of states that are fixed over the study period, time-varying state policy and economic conditions, and year-to-year national variation in very low food security among children. The key coefficient β_1 represents the effect of benefit generosity on the prevalence of very low food security among children. We estimate similar models for low food security for families with children, a less rare but still important outcome, as well as additional food-related measures.

An important problem with estimating equation (1) is endogeneity of benefits. In particular, families with higher benefits are also more likely to be food insecure, for reasons that may be unobservable. We thus use the average program generosity by state, year, and

[15] We cannot impute unemployment insurance (UI) eligibility given the data limitations in the December CPS. However, we incorporate the state maximum duration of UI in weeks and maximum dependent allowance as controls. We also include the following policy parameters: TANF asset limit generosity, TANF family caps, TANF strict time limit, SNAP standard utility allowance, and child support enforcement expenditures per capita. Details on these variables can be found in appendix. We tested additional policy parameters but they did not systematically predict program participation.

demographic cell simulated for a national sample of families as an instrument for imputed eligibility. This approach is in the spirit of that used by Currie and Gruber (1996) in the context of Medicaid. Simulated generosity is correlated with benefit levels but should not be correlated with individual family shocks conditional on the other variables. To obtain this exogenous measure of program generosity, we take the national CPS sample for 2001, strip state and year identifiers from the data, and replicate it for each state and the District of Columbia for years 2001-2009. Running these data through our series of benefit calculators allows us to examine the effects of state-level differences in program generosity while abstracting from state-level differences in population characteristics and economic environment. States vary in the degree to which overall generosity changed over time as well as whether expansions occurred in cash, food, or health insurance.

After running these simulated data through the benefit calculator, we average the predicted benefit amounts for the simulated data over a set of arguably exogenous characteristics to create the benefit level instruments. These instruments are cell means, where the cells are defined by state, year, any disabled person in family, married parents, any child<6, number of children (1, or 2 or more), highest education of parents (less than high school, high school, more than high school), and race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, and other). The simulated cell average benefit eligibility levels are then matched back to the CPS FSS and used as instruments for benefit eligibility among families in a given cell. We do not use earned income to define cells because it may respond to safety net parameters. Simulated and imputed average benefit levels are shown in Table 1.[16]

[16] The year-to-year changes in average simulated benefits shown in Table 1 reflect both programmatic changes and changes in the composition of demographic cells over time because the simulated benefits are matched to each family in the CPS based on demographic characteristics. The regressions account for changing demographic characteristics of families.

The instrumental variables strategy ensures that predicted eligibility and benefit levels vary only because of variation in state and federal policy parameters and not due to economic conditions or population characteristics in a state. For example, a rich state with generous policy parameters might have a low *imputed* eligibility rate for a program because few of its residents are poor enough to qualify for a program, but it would have a high *simulated* eligibility rate because a large portion of a national sample would qualify. After discussing the main results below, we use data from the March CPS Annual Social and Economic Supplement to demonstrate that the simulated eligibility instruments do in fact predict both imputed eligibility and actual program participation.

The unit of observation for the analysis is the family. Families are included in the sample if they include at least one child under 18 and the reference person and spouse (if any) are between ages 18 and 64. Families are excluded if earnings information is incomplete, if they did not complete the food security supplement, or if any member of the family is an immigrant. We exclude immigrant families throughout the analysis because program eligibility rules are different for this group and are hard to characterize without information on legal status. We separate the analysis based on marital status because programs affect married and unmarried families differently and because food insecurity is more common among single parent families. We focus our attention on single-parent families under 300 percent of the poverty level because this range captures most variation in safety net eligibility above this level of income.[17] We also present regression results for a more disadvantaged sample under 200% of poverty where food and cash assistance are concentrated.

[17] Among single-parent families in the 200-300% of poverty range, approximately 44 percent are imputed to be EITC eligible and the average fraction of kids eligible for Medicaid/CHIP is 17 percent. Eligibility for SNAP, SSI and TANF is almost non-existent in this income range.

Table 2 describes the summary statistics for the primary sample of interest: single parent families under 300 percent of the poverty line. This sample is more economically disadvantaged and more food insecure than the general population. Among this population, 33 percent report low food security and 1.5 percent report very low food security among children. Half of the sample is below the poverty line, 85 percent of sample heads are female, nearly half are Black or Hispanic, and fewer than half have any post-secondary education.

IV. Results and Discussion

A. Main Results

For completeness, we start by estimating ordinary least squares models, but it is important to keep in mind that a causal interpretation of these models is inappropriate. Results are presented in Appendix Table 1. These results demonstrate that eligibility for safety net programs is *positively* related to very low food security among children and low food security for low-income single parent families. This result is unsurprising, since more economically disadvantaged families within this population are both more likely to qualify for social safety net programs and less likely to be food secure. The evidence of a similar effect on childhood VLFS for married families is weaker, probably because childhood very low food security is extremely rare in such families. The positive association between safety net eligibility and food insecurity illustrates why an instrumental variables strategy is important in this context.

We turn to the instrumental variables strategy described above to isolate the causal impact of program generosity on food insecurity. This strategy purges the estimates of bias stemming from the fact that a family's economic circumstances are correlated both with program eligibility and food insecurity. Table 3 presents the results of the instrumental variables analysis

for the outcome of low food security on our primary sample of interest—unmarried families under 300 percent of the poverty line. An extensive set of controls is included, as detailed in the previous section. The key finding, shown in column I, is that the safety net does matter. Raising a family's combined annual cash and food package by $1000 reduces low food security by 1.5 percentage points on a base of 33 percent. This suggests that the median package of roughly $3400 food and cash for the analysis sample reduces low food security by 5.1 percentage points, or 16 percent. There is no statistically detectible effect of the Medicaid program and the coefficients are positive, but the standard errors are large so it is difficult to learn anything from the estimates.

Column II investigates the marginal effect of individual programs. Point estimates on each of the cash and food programs are negative. The only statistically significant individual program estimate is that on the SNAP program: each $1000 in food stamp eligibility reduces low food security by 1.8 percent. EITC and SSI have slightly larger point estimates but they are not statistically significant. Given the fairly similar magnitudes of coefficients and the lack of statistical difference between them, it is not possible to reject the hypothesis that cash and food have equivalent impacts.

This point is echoed in the subsequent columns, which include combined cash and food benefits as well as each program one at a time. The coefficients on individual programs in columns III through VII represent the extra effect of benefits from one program over and above their contribution to the total benefit package. The coefficients are indistinguishable from zero after controlling for the total benefit level. Though there may be small differences in program efficacy that we cannot detect, we can reject large differential program effects.

In short, the aggregate safety net matters, but the exact form of benefits appears to be less important. Similar results (not shown) are in evidence if one omits the unusual states of Alaska, Hawaii, and the District of Columbia, or if one includes more detailed income controls.

Table 4 repeats the exercise for a more severe outcome: very low food security among children. Statistical power is hindered by the fact the childhood VLFS is a rare event, occurring in only 1.5 percent of families in the unmarried, low-income sample. Despite their lack of statistical significance, the point estimates presented in this table point to a negative relationship between safety net generosity and childhood very low food security. The point estimates suggest that the median cash and food package of roughly $3400 reduces childhood very low food security by an imprecisely estimated 0.16 percentage points, or 36 percent. The point estimates also suggest that Medicaid/CHIP generosity improves childhood food security, but again the statistical power to have confidence in this effect is lacking.

Appendix Table 2 shows the main analysis repeated for single-parent families under 200% of poverty.[18] This group is more likely to be eligible for SNAP and cash assistance than the primary sample. The impact of the combined cash and food package is slightly larger: each $1000 in eligibility reduces food insecurity by 1.9 percentage points on a base of 36 percent. The impact of the SNAP program after holding other program effects constant is also notable. An additional $1000 in SNAP eligibility reduces the probability of low food security by a statistically and economically significant 3.2 percentage points. Again, we lack the statistical power to reject equivalence of cash and food benefit impacts.

As with the primary sample, we do not have the statistical power to identify aggregate safety net impacts on childhood very low food security. However, there is some suggestive

[18] Here the simulated sample used to construct the instruments is restricted to under 200% of poverty.

evidence of beneficial effects of the SNAP program, the EITC, and Medicaid eligibility on this outcome.

Appendix Table 3 presents a limited set of results for all families, all families under 300% of poverty and split by marital status, and all families under 200% of poverty and split by marital status. The beneficial effect of the combined cash and food package on LFS is evident for all sub-samples except the full sample. Again, we lack enough statistical precision to measure the impact of this variable on childhood VLFS, but we do see some suggestive evidence of an impact of Medicaid.

B. Additional Results

We explore fourteen individual markers of food insecurity over the twelve months prior to the survey, and find that all fourteen of them are negatively related to the generosity of the safety net, with seven statistically significantly so.[20] Results for these seven are shown in Table 5. For example, a robust safety net reduces the probability a family reports they that they need more money to meet their food needs; that they have run short of money for food; that they have sometimes/often do not have enough to eat; that sometimes/often their food did not last; that they sometimes/often couldn't afford to eat balanced meals; that they ever ate less; or that they have been hungry and not eaten. The effects on food consumption of children were negative but statistically insignificant. Interestingly, however, the safety net has no detectible impact on usual food expenditures (see column I). One possible explanation for this pattern of results is that safety net benefits help families manage occasional shocks that would otherwise lead to reduced food consumption.

[20] However, a number of issues have been noted with the individual food insecurity questions in the FSS, so these results should be interpreted with caution (National Research Council, 2006).

In sum, the results suggest that the safety net does matter. We find strong evidence that a generous cash and food benefit package reduces low food security in families with children. Similarly, although statistical power is limited, we find a suggestion that the safety net also reduces the extreme outcome of very low food security among children. We find no evidence that food benefits do more to reduce food insecurity than cash benefits, a notion consistent with previous literature suggesting that food benefits are inframarginal and are treated as cash by recipient families (e.g. Hoynes and Schanzenbach 2009). Nevertheless, the beneficial impacts of the SNAP program are statistically robust.

C. Discussion of the Instruments

As noted above, we simulate program eligibility for a national sample within each demographic cell, and use the average simulated benefits in a state-year-cell as an instrument to predict the imputed eligibility of a given family. Because we control for state fixed effects and year fixed effects, we rely heavily within-state changes over time in policy parameters.[21]

To examine state policy variation over time, we use our simulated sample – a nationally representative group under 300% of poverty from the 2001 Current Population Survey – and impute program eligibility and benefit amounts for each member of the sample under the rules for each state-year. This approach abstracts from state and time differences in demographics and economic conditions. Figure 2 presents the average simulated benefit package for 2001 and 2009 in each state. Alaska, Hawaii, and Wisconsin were among the most generous in both periods, and Alabama, Mississippi, and Arizona were among the least. Most states became more

[21] Some variation may also come from differential impact of demographic cell membership across states. For example, the benefit generosity for disabled versus non-disabled residents may be larger in some states.

generous in real terms over the time period, as reflected in the fact that most states are above the 45 degree line.

Importantly for our identification strategy, there are also different state trajectories over the sample period. This is highlighted in Figure 3, where the twelve largest states are included and the safety net package is normalized to a state's own 2001 level. Figures 4 through 8 show state variation in the five safety net programs. There appear to be common national trends (which are controlled in the regression analyses, but the figure also shows within-state variation that differs from the national trend.

After controlling for state fixed effects, year fixed effects, and other factors, it is important that the simulated benefit packages for each state-year-demographic cell are predictive of (imputed) eligibility of individuals actually living in the states. Table 6 shows that the first stage prediction is indeed sufficiently strong to apply an instrumental variables strategy. In all cases, simulated benefit levels for a particular program are strongly and positively related to imputed benefit levels. Furthermore, in all cases the instruments are highly jointly significant with F-statistics above 35.

Second, it is important to establish that eligibility is in fact predictive of program participation. Take-up rates for safety net programs tend to be low and tend to be influenced by unobservable factors. Unfortunately, the December CPS has limited information about program participation, so we cannot directly link program participation to food insecurity. Instead, we turn to the March CPS Annual Social and Economic (ASEC) Supplement, which does contain information on participation in TANF, SSI, SNAP, and Medicaid. We show in Table 7 that instrumented imputed eligibility (where the instrument is simulated eligibility based on a national sample) does indeed predict program participation in the March CPS. For each of the

four programs we can investigate, instrumented eligibility is a strong predictor of program participation.[22]

It is important to note, however, that there are a number of cross-program effects. That is, exogenously determined eligibility for one safety net program may positively or negatively influence the probability of participating in another, even after taking into account the cross-program effect on eligibility for the other program. For example, participation in the SNAP/Food Stamp Program is increased by generous SSI benefits and decreased by generous EITC benefits after controlling for instrumented food stamp eligibility.

These findings highlight the importance of *jointly* considering programs when assessing effectiveness of the safety net. They also imply that a significant coefficient on eligibility for a particular program may or may not imply that it is participation in that program *per se* that is affecting food insecurity. Fully understanding the cross-program effects is beyond the scope of this paper, but it is important to emphasize that our results speak to the generosity of the safety net writ large rather than the efficacy of any one program.

VI. Conclusion

Participation in non-food safety net programs is an important means by which low-income families may respond to the risk of food insecurity. The analysis presented here estimates the effect of major cash, food, and medical safety net programs on food insecurity. We find evidence that a generous cash and food safety net does reduce low food security in families with children and may reduce very low food security among children. The median benefit package of roughly $3400 food and cash combined reduces low food security by 5.1 percentage points on

[22] In future work we plan to use a two-sample instrumental variables to strategy to shed light on the impacts of participation rather than the impacts of eligibility.

a base incidence of 33 percent, a 16 percent reduction. The same package reduces the more extreme outcome of childhood very low food security by an imprecisely estimated 36 percent. The safety net also reduces the probability that a family reports other food-related hardships.

We find no evidence of differences in the effectiveness of food versus cash programs – the total generosity of the package appears to be what matters. Nevertheless, the SNAP program does have a measurable impact on food insecurity, with each $1000 in benefit eligibility reducing low food security by 1.8 percentage points in the primary sample and 3.2 percentage points in the more disadvantaged sample.

The safety net has no detectible impact on typical family food expenditures. Rather, it appears to reduce the likelihood of occasionally running short of money for food by providing a buffer against shocks. In sum, providing a safety net so that families have a source of support - either cash or food - during hard times can substantially improve food security.

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Data Appendix

I. Benefits Calculator

Our benefits calculator first reads in the raw December CPS data for 2001-2009. It then reads in the Outgoing Rotation Group (ORG) files for January-March of each year, and matches the December data to the appropriate ORG. We then form appropriate family groups in the December data corresponding to the family composition rules for each safety net program to be modeled. Families are defined as one or two parents or step-parents ages 18-64 and their minor children (where the definition of "minor" varies by program); extended family members and unmarried partners are not included in the family.

The resulting data are then run through the National Bureau of Economic Research's TAXSIM calculator to calculate federal and state Earned Income Tax Credits. Output from TAXSIM is run through the SSI calculator, and output from the SSI calculator is then run through the TANF calculator. The output from the TANF calculator, combined with data on children, is run through the Medicaid/CHIP calculator, and finally, the output from the Medicaid/CHIP calculator is run through the SNAP calculator. We provide details on each of these steps below.

Matching of December CPS to Outgoing Rotation Groups

The December CPS lacks adequate information on earnings for this analysis. The income variable conflates earned and unearned income and, importantly, already includes any safety net benefits. For the program calculators, we need to obtain earned income from the CPS outgoing rotation group (ORG) sample. For participants in the December CPS, the ORG is split between December, January, February, and March CPS surveys. Thus, roughly three-quarters of the sample require using CPS identifiers to match individuals across survey months. Matches are excluded if there are implausible race, age, or gender differences. The match may fail because of identifier error, because a family moves, or because an individual exits the family. Furthermore, a successful match may yield incomplete earnings information, most often because an individual is self-employed. Overall, about 85% of families successfully match with complete earnings information.

TAXSIM

We use the National Bureau of Economic Research's TAXSIM Version 9 program (http://www.nber.org/taxsim) with the Stata ado interface to calculate federal and state Earned Income Tax Credits (variables v29 and v35, respectively). Our sample is defined to include only families with children, so we have no single taxpayers. We assume that all married CPS respondents file as married and that all single parents file as heads of household. The number of dependents for tax purposes includes all children under the age of 19, as well as disabled and full-time students between the ages of 19 and 23. For more information on TAXSIM, see Feenberg and Coutts (1993).

Transfer income (TANF, SNAP, SSI) is not counted as income towards EITC eligibility or benefits. In most states, the EITC is not counted as income for eligibility/benefit calculations of other transfer programs.[23] In a number of states, the EITC is counted as a resource after a period of time if the credit is not spent.[24]

We assume no unemployment compensation, and assume that all types of income used in tax calculations (other than own earnings and spousal earnings) are zero. This includes dividend income, other property income, taxable pensions, and gross social security benefits. We also assume that rent paid and real estate taxes paid are zero, as well as child care expenses and other itemized deductions such as state and local taxes and deductible medical expenses. We assume no capital gains and losses. There is a TAXSIM variable for "Other non-taxable transfer Income such as welfare, and child support that would affect eligibility for state property tax rebates but would not be taxable at the federal level." We enter this as zero since it does not affect EITC calculations.

SSI Calculator

We assume that respondent families are eligible for SSI if the respondent or spouse (or both) reports a work-limiting disability and if their countable income makes them financially eligible for SSI. In this version of the paper, we are ignoring child SSI, which means we are potentially underestimating the effect of SSI on the well-being of families with children (Duggan and Kearney, 2007).

We assume no unearned income in our calculations of SSI eligibility and benefits. As such, we are overstating eligibility benefits for households who are receiving OASDI or Unemployment Insurance income.

Individuals are eligible for SSI if their countable income is less than the federal benefit rate, and the benefit level is the difference between the two. In calculating countable income, there is a $20 general income exclusion. The first $65 of earned income is excluded, then 1/2 of earnings over $65. These exclusion amounts were constant in nominal terms throughout the 2000s. Married couples are subject to the same $20/$65 income exclusions as an individual regardless of whether they both have income.

Federal SSI benefit rates for couples and individuals are collected from the *Social Security Bulletin's Annual Statistical Supplement*, various years. State supplement levels for couples and individuals are collected from the 2004 *Green Book*, and *State Assistance Programs for SSI Recipients*, various years. In states with a SSI supplement, it is the federal benefit rate plus the

[23] Two exceptions exist: In Connecticut (all years 2001-2010), the EITC is counted as earned income for TANF purposes in the month it is received. In Florida (from 2006-2010), the EITC is not counted for TANF eligibility, but it is counted as a lump sum in the month it is received for benefit calculation. We are currently ignoring EITC income in our TANF calculations for these states.

[24] In no state is it counted as an asset in the month it is received. It counted as an asset in the month after receipt in only one state. Most states that do count remaining portions as an asset do so in the 2nd or 3rd month after receipt.

supplement that is used as the point of reference in determining eligibility and payment amounts (Trenkamp and Wiseman, 2007).

For couples where one spouse is eligible and one is ineligible, if the ineligible spouse's income is less than or equal to the difference between the couple federal benefit rate and the individual federal benefit rate, then there is no deeming of spousal income, so we calculate SSI benefits as if the eligible spouse is an individual. If the ineligible spouse's income is greater than the difference between the couple federal benefit rate and the individual federal benefit rate, then deeming of spousal income applies. We then calculate countable income as a couple, and subtract from the couple federal benefit rate (Balkus and Wilschke, 2003).

TANF Calculator

Our measure of net income for TANF eligibility and benefit calculation only includes earned income of family members. SSI recipients are not eligible for TANF, and it is generally more advantageous to enroll in SSI if possible. We exclude SSI income for SSI recipients in family when determining TANF benefits for other members of the family (Golden and Hawkins, 2012). We ignore all other types of income, including Unemployment Insurance.

The size of the TANF unit varies by state. Information obtained on inclusion in the unit is from the Welfare Rules Database at the Urban Institute. For most states, this includes children under age 18, with children 18 years old included if they are full-time students. SSI recipients are not included in the TANF unit.

All TANF eligibility and benefit parameters (gross and net income and earnings thresholds, need standards, maximum payments, and earned income disregards) are collected from the Urban Institute's Welfare Rules Database. Earned income disregards differ in many states for eligibility versus benefits. For eligibility disregards, we use the rules that apply to new applicants, and ignore disregards based on earnings history. For benefit disregards, we use the rules that apply to someone who has been on the program 12 months (+one day), who is continuously employed for 6 months (+ one day), and is working 25 hours/week. We ignore disregards for child care expenses in our calculator. For states with no explicit income thresholds, we assume that the need standard is used as the threshold. We calculate income eligibility for TANF based on whether the family meets any gross or net earned or unearned income thresholds set by the state. We also account for the statutory eligibility of two-parent non-disabled families set by states. For families that we determine to be TANF-eligible, we then use the benefit computation formula with parameters from the WRD to determine benefit levels.

Medicaid/CHIP Calculator

We first impute Medicaid eligibility for adults in the household. Eligibility thresholds as a percent of the poverty line for working and non-working adults vary by state. Unit size for Medicaid includes all children under the age of 19 (except in Minnesota, which includes all

children ages 20 and under). Earnings include those of both spouses and all children considered to be in the Medicaid unit.

Adults are eligible for Medicaid if they are working and family income as a percent of the poverty line is below the working cutoff; or if they are not working and family income as a percent of the poverty line is below the non-working cutoff, or if they are on SSI. We thus impute Medicaid eligibility for adults in the household by comparing earned income as a percent of the federal poverty level to the eligibility threshold. Eligibility thresholds vary by state, by year, and by whether the adult is working or not. The Medicaid family unit that is used to determine whose earnings are included and the appropriate poverty threshold includes all adults and children under the age of 19 (except in Minnesota, which includes all children ages 20 and under) who are not SSI recipients.

Children are eligible for Medicaid (or CHIP) if the income of their Medicaid family unit is below their state-specific, age-specific, year-specific cutoff. Again, SSI recipients are not included in the family unit, nor is their income counted. Information on eligibility thresholds for both children and adults was obtained primarily from the Kaiser Commission on Medicaid and the Uninsured, who conducted a periodic 50-state survey of Medicaid and CHIP eligibility rules over the 2000-2010 period. Additional information on eligibility thresholds was obtained from previous work by Shore-Sheppard (2008) and Hamersma and Kim (2009).

SNAP Calculator

SNAP eligibility is based on a gross income screen (130% of the poverty line) and a net income screen (100% of the poverty line). Gross income includes earned income, imputed SSI benefits, and imputed TANF benefits. Net income is equal to gross income, less 20 percent of earned income, less a standard deduction.

The SNAP unit includes all members of the family, including TANF and SSI recipients, except in California, where SSI recipients and their income are excluded. The SNAP unit includes children 21 years of age and younger regardless of their work/school status, (2004 Green Book; Food and Nutritional Act of 2008), so our earned income measure includes earnings of all children up to and including 21 year olds. Families where all members are either TANF or SSI recipients are categorically eligible.

In California, the SNAP benefit for SSI recipients is "cashed out" in the state supplement. SSI recipients living independently in CA are ineligible for SNAP. Benefits for other households that include SSI recipients are calculated without including the SSI recipient in the budget unit or counting the SSI recipient's income in assessing household resources (Trenkamp and Wiseman, 2007)

All relevant parameters (gross and net income screen values, standard deductions, and maximum benefits) are collected from the Food and Nutrition Service at the United States Department of Agriculture. Most parameters vary by family size. Eligibility and benefit parameters are the same for all states in the continental US but different for Alaska and Hawaii.

The SNAP benefit for families that pass the gross and net income screens are equal to the SNAP maximum benefit less 30% of net income. It is possible for the imputed benefit to be negative, even for eligible families. The minimum benefit level for families of 1 and 2 persons is $10 in early years. The Food, Conservation, and Energy Act of 2008 changes the minimum benefit for 1 & 2 person families to be equal to 8% of the maximum SNAP allotment for a one person household. This means it now differs in Alaska and Hawaii from the continental US, and changes by year. There is no minimum benefit level for families of 3+ persons.

II. Additional Policy and Control Variables

State unemployment rate: Collected from the Bureau of Labor Statistics Local Area Unemployment Statistics.

Unemployment Insurance weeks: The average number of UI weeks available over the 12-month period to which the CPS Food Screener pertains. We received data from Henry Farber and Rob Valletta on the number of extended weeks of UI available, beyond the normal 26. We then calculated the average total number of UI weeks (extended weeks + 26) available by state over the 12 months from December – November before the December Food Security Supplement survey is conducted.

Unemployment Insurance dependent allowances: Maximum dependent allowances in dollars come from the US Department of Labor Employment and Training Administration (http://www.ows.doleta.gov/unemploy/statelaws.asp). Yearly data reflects the status of state law enacted as of January 1 of that year.

TANF generous asset limit: Equals 1 if state had an asset limit greater than $3000 or had no asset limit. TANF asset limits in dollars collected from the Urban Institute's Welfare Rules Database.

TANF family cap: Equals 1 if a state had a family cap in place that denied additional benefits or reduced benefit amounts to a family that had additional children while on public assistance. Data through 2005 obtained from Rebecca Blank and Jordan Matsudaira, updated with information from the Urban Institute Welfare Rules Database.

TANF strict time limit: Equals 1 if a state had a lifetime time limit of less than 60 months. Data through 2007 obtained from Rebecca Blank and Jordan Matsudaira, updated with information from the Urban Institute Welfare Rules Database.

SNAP standard utility allowance for a family of 3: We use the dollar amount of the HCSUA, which is the standard utility allowance including heating and cooling. Data for 2005-2010 collected from SNAP Quality Control data generated by Mathematica, F Tables. Data are for fiscal years. http://hostm142.mathematica-mpr.com/fns/download.htm. Monthly data for 2001-2004 were provided by Katie Fitzpatrick, and were averaged to

generate annual data. We used averages for Alaska and New York, where SUA depends upon location within the state.

Child support enforcement dollars per capita: Total administrative expenditures on child support were collected from HHS Office of Child Support Enforcement Annual Reports to Congress. 2005-2009 values from 2009 Annual Report to Congress, Table 43; 2001-2004 values from 2004 Annual Report to Congress, Table 30.

Figure 1. Trends in Very Low Food Security among Children and Low Food Security



Note: Authors' calculations based on December CPS. Sample excludes immigrant families.

Figure 2. Average Total Food & Cash Benefit Package in Thousands of Real $2005 2001 versus 2009, Simulated Sample

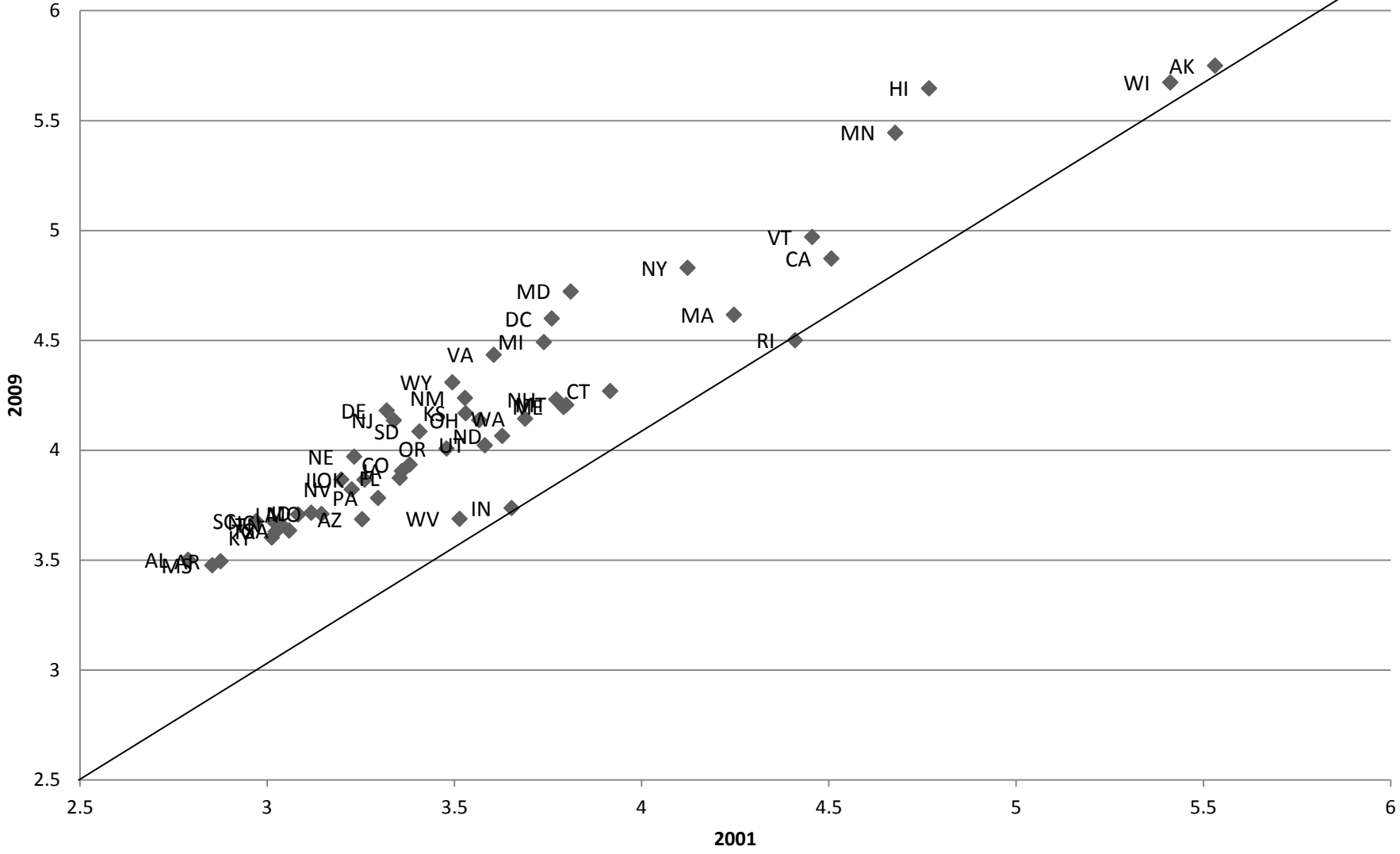
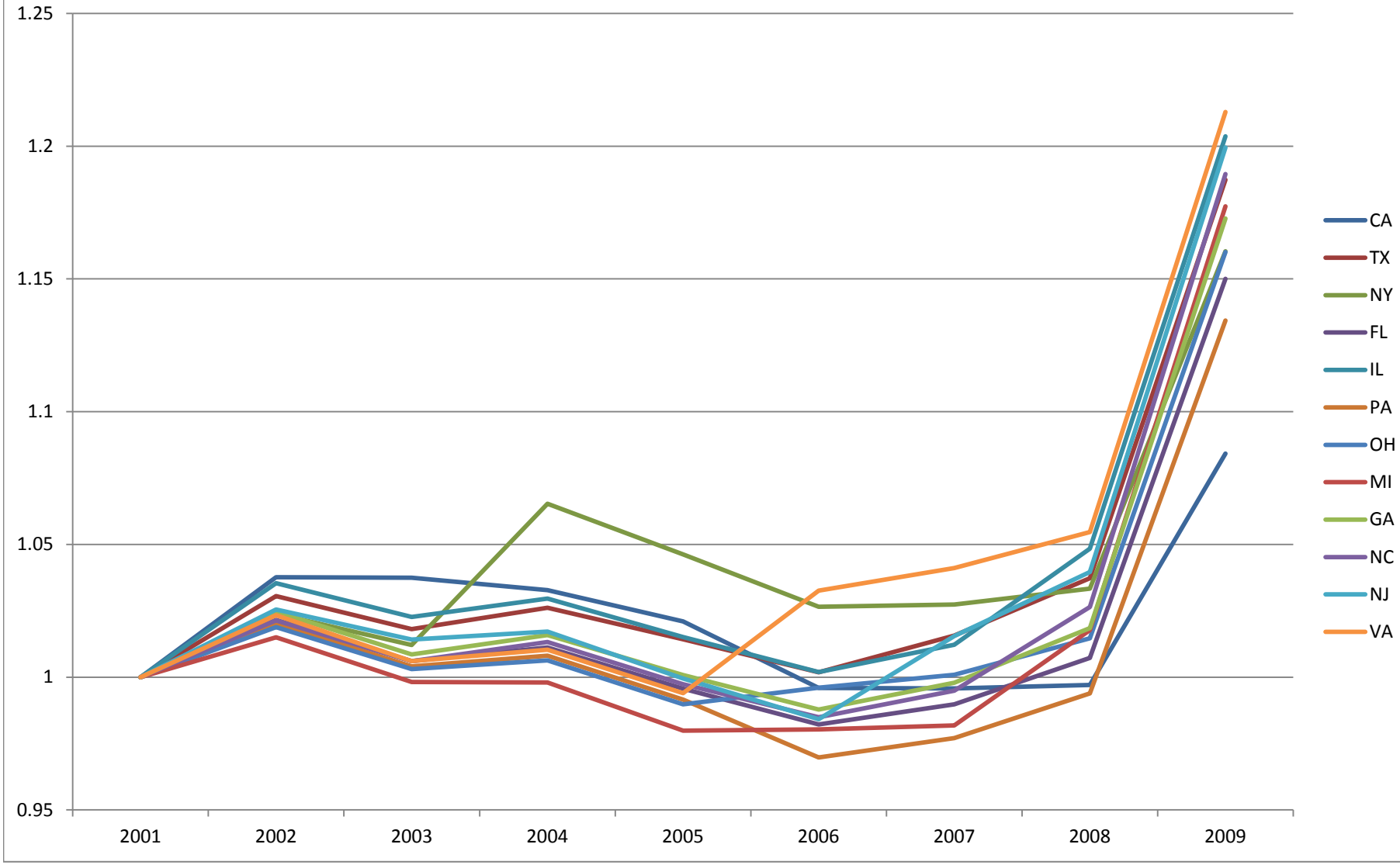


Figure 3. Average Annual Total Food & Cash Benefit Package
Real $2005 Relative to 2001 in State
Simulated Sample <300% Poverty - December CPS



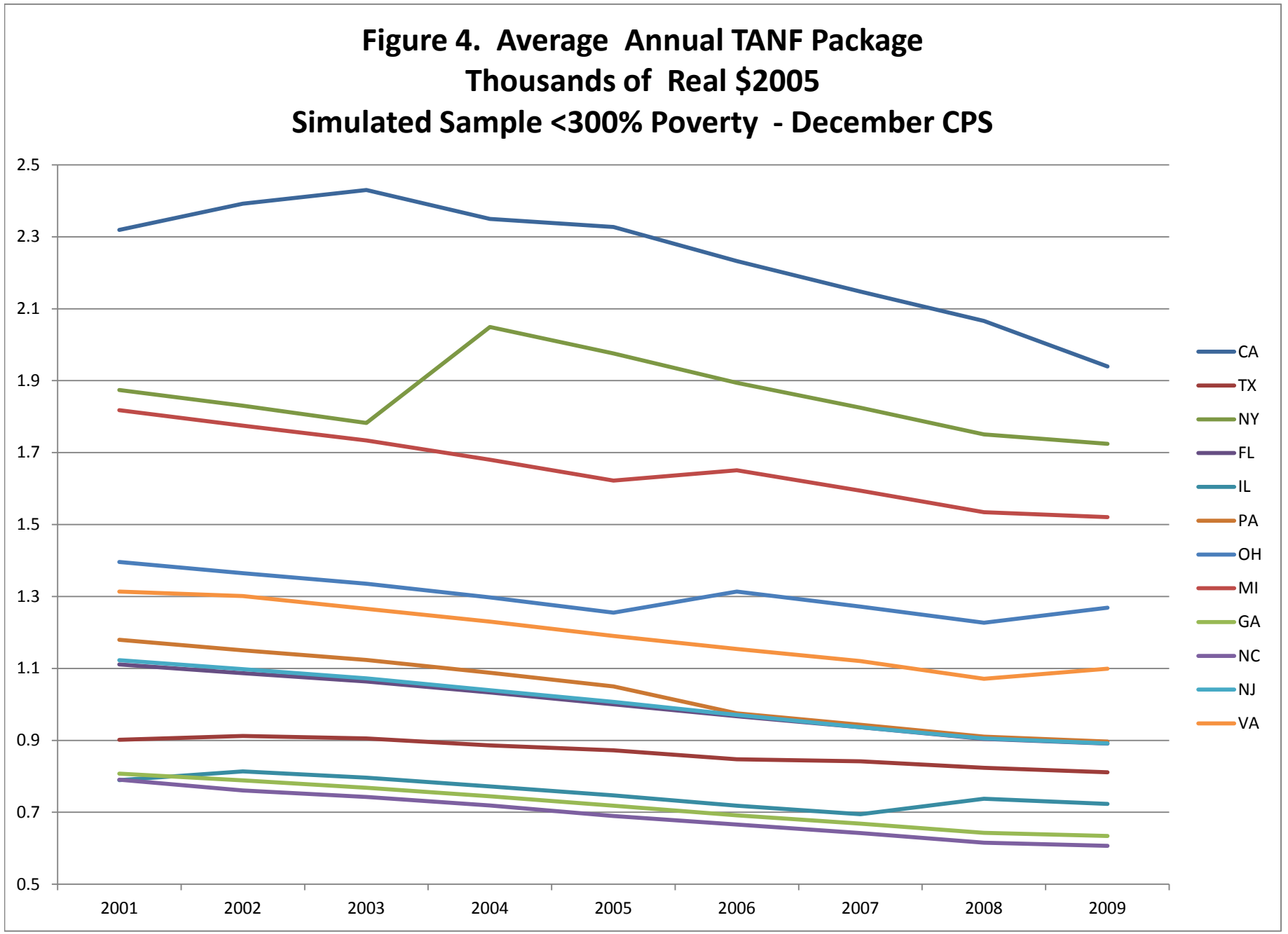

Figure 4. Average Annual TANF Package
Thousands of Real $2005
Simulated Sample <300% Poverty - December CPS
2.5
2.3
2.1
1.9
1.7
1.5
1.3
1.1
0.9
0.7
0.5
2001
2002
2003
2004
2005
2006
2007
2008
2009
CA
TX
NY
FL
IL
PA
OH
MI
GA
NC
NJ
VA

Figure 5. Average Annual EITC Package
Thousands of Real $2005
Simulated Sample <300% Poverty - December CPS

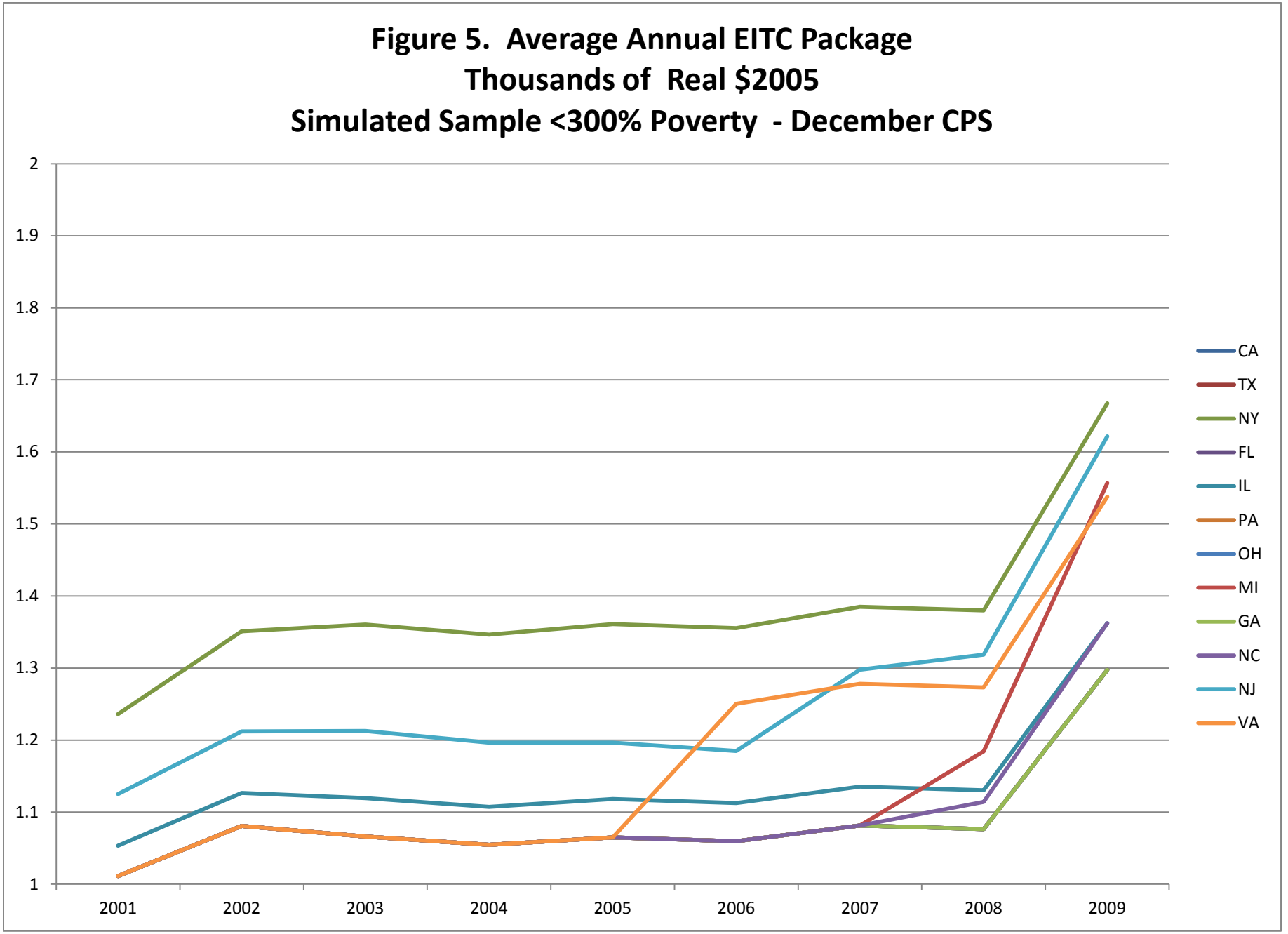


Figure 6. Average Annual Food Stamps/SNAP Package
Thousands of Real $2005
Simulated Sample <300% Poverty - December CPS

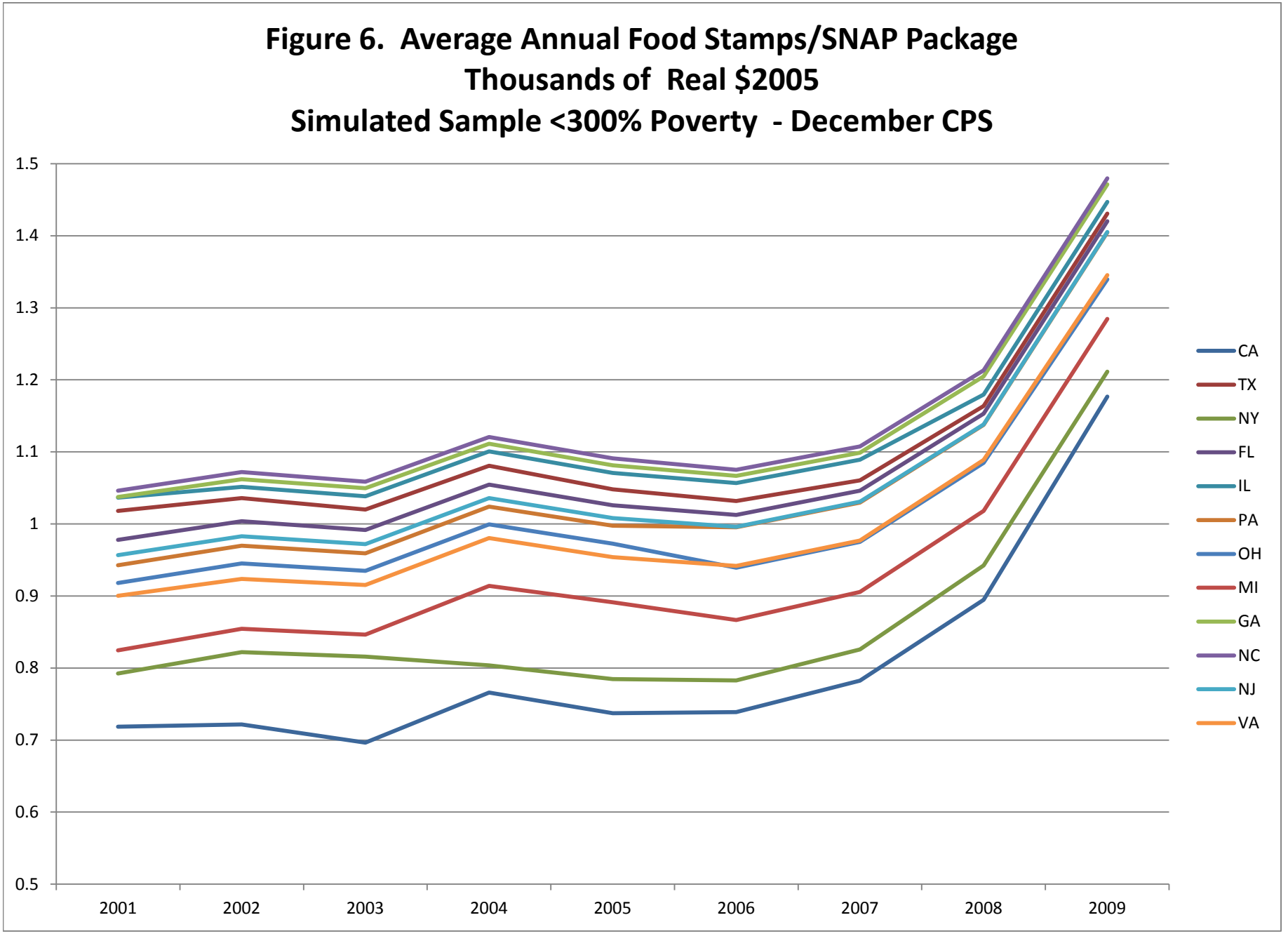


Figure 7. Average Annual SSI Package
Thousands of Real $2005
Simulated Sample <300% Poverty - December CPS

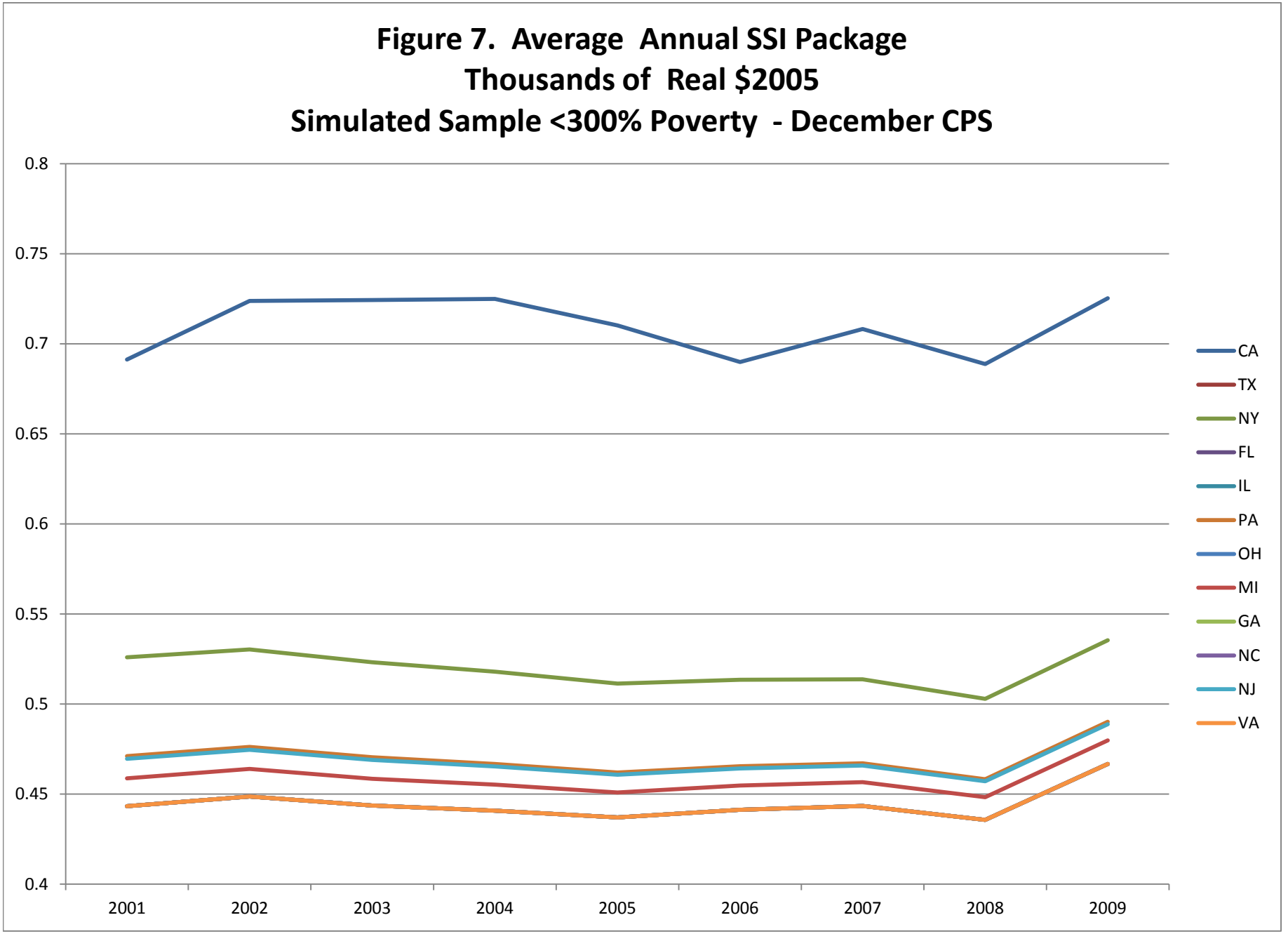


Figure 8. Average Fraction of Family Members Medicaid Eligible
Simulated Sample <300% Poverty - December CPS

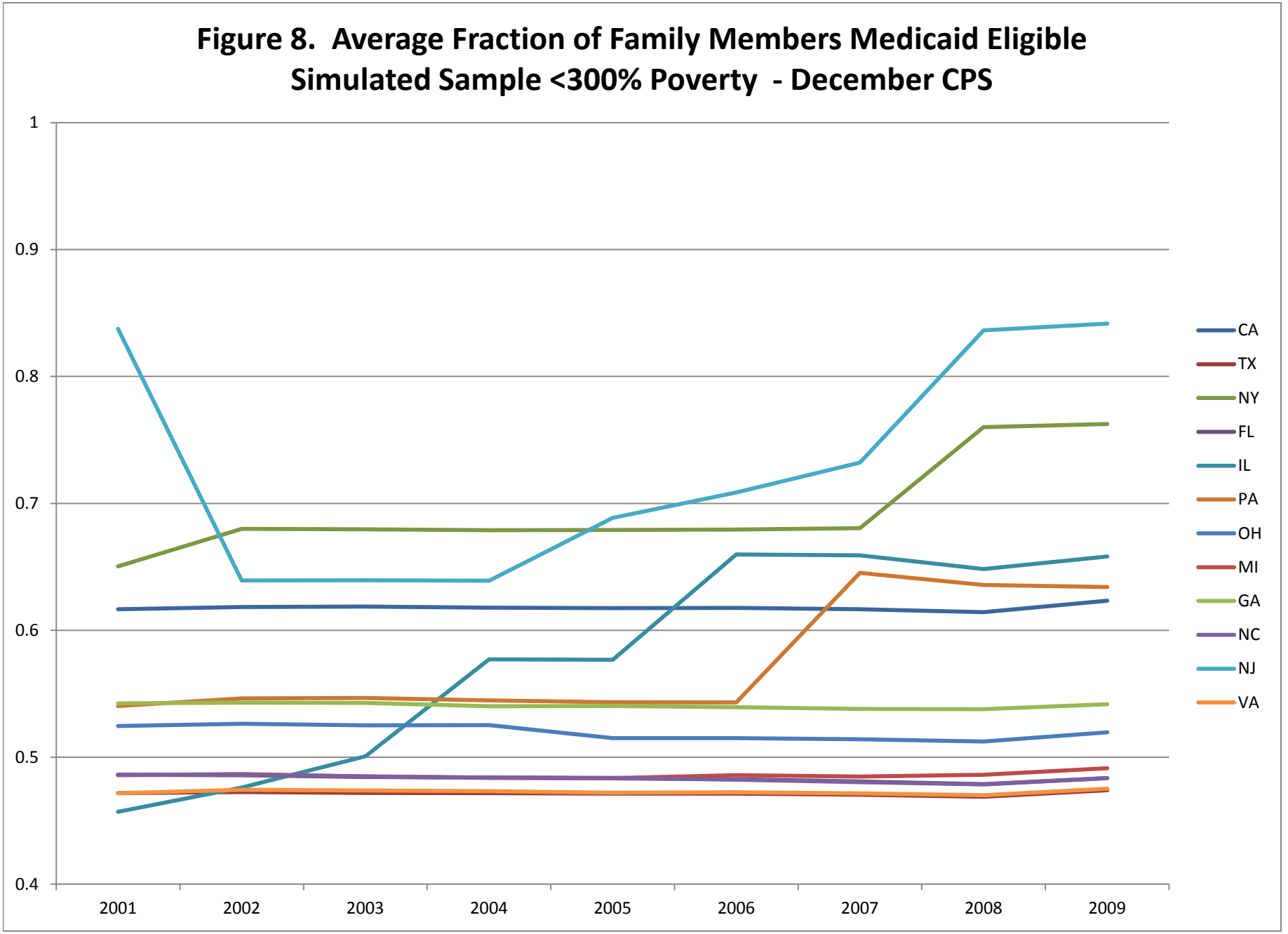


Table 1. Participation Rates, Imputed Eligibility Rates, and Mean Imputed Benefit Amounts, Single Parent Low-Income Sample

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Imputed TANF Eligibility	0.354	0.358	0.378	0.363	0.379	0.364	0.395	0.412	0.448
Reported Family TANF Participation (March CPS sample)	0.105	0.103	0.112	0.102	0.104	0.095	0.081	0.085	0.084
Annual Imputed TANF in $000s (2005 dollars)	1.945	1.981	2.074	1.990	2.058	1.887	1.958	2.020	2.221
Reported Family TANF in $000s (March CPS sample)	0.380	0.382	0.409	0.343	0.355	0.321	0.267	0.245	0.276
Simulated TANF in $000s (2005 dollars)	1.815	1.776	1.711	1.685	1.673	1.600	1.574	1.504	1.518
Imputed SSI Eligibility	0.086	0.072	0.075	0.078	0.083	0.090	0.088	0.085	0.088
Reported Family SSI Participation (March CPS sample)	0.058	0.055	0.056	0.060	0.063	0.064	0.059	0.055	0.055
Annual Imputed SSI in $000s (2005 dollars)	0.643	0.546	0.560	0.576	0.613	0.654	0.643	0.624	0.674
Reported Family SSI in $000s (March CPS sample)	0.383	0.371	0.375	0.406	0.456	0.431	0.396	0.377	0.398
Simulated SSI in $000s (2005 dollars)	0.648	0.557	0.560	0.581	0.628	0.671	0.664	0.604	0.655
Imputed EITC Eligibility	0.565	0.573	0.551	0.565	0.547	0.560	0.538	0.531	0.506
Annual Imputed EITC in $000s	1.320	1.368	1.313	1.344	1.281	1.317	1.324	1.296	1.344
Simulated EITC in $000s	1.347	1.407	1.394	1.392	1.355	1.343	1.355	1.333	1.529
Imputed SNAP Eligibility	0.572	0.584	0.596	0.602	0.605	0.601	0.628	0.660	0.676
Reported Household SNAP Participation (March CPS sample)	0.256	0.268	0.282	0.294	0.297	0.296	0.290	0.327	0.361
Annual Imputed SNAP in $000s (2005 dollars)	0.907	0.980	1.010	1.094	1.081	1.056	1.019	1.322	1.687
Reported Household SNAPin $000s (March CPS sample)	0.620	0.673	0.725	0.809	0.833	0.835	0.817	0.965	1.293
Simulated SNAP in $000s (2005 dollars)	0.940	0.987	0.953	1.042	1.001	0.983	0.986	1.115	1.424
Imputed Fraction of Family Medicaid Eligible	0.677	0.678	0.687	0.692	0.692	0.695	0.715	0.738	0.760
Reported Household Public Health Insurance Participation (March CPS sample)	0.489	0.505	0.535	0.553	0.544	0.554	0.554	0.583	0.605
Simulated Fraction of Family Medicaid Eligible	0.678	0.667	0.667	0.674	0.674	0.680	0.686	0.689	0.701

Note: Sample includes non-immigrant single parent families with at least one child 18 or younger in which the parent is ages 18 to 64. Source is December CPS 2001-2009 except where otherwise noted; March samples are for the March in the subsequent year. SNAP refers to SNAP or Food Stamps and Medicaid refers to Medicaid or SCHIP. Imputed and simulated benefit amounts assume individuals fully participate in all programs for which they are eligible. Reported eligibility and benefits are lower due to incomplete program take-up as well as measurement error in the imputation. Simulation is based on imputed eligibility of on a nationally representative 2001 sample of individuals in a given demographic group defined by disability, marital status, number of children, and education. EITC participation is not reported in the CPS. All benefit amounts adjusted to constant 2005 dollars.

Table 2. Summary Statistics, Single Parent Low-Income Families

	N	Mean	Std. Dev.	Min	Max
Low Food Security	28185	0.33	0.47	0	1
Child Very Low Food Security	27598	0.02	0.12	0	1
Log (Usual Weekly Food Spending) if Spending>=$1	26694	4.51	0.69	0.00	6.91
Need to Spend More to Meet Food Needs	26982	0.28	0.45	0	1
Ever Run Short of Food Money Last 12 Months	28064	0.49	0.50	0	1
Sometimes/Often Not Enough to Eat	28166	0.09	0.29	0	1
Sometmes/Often Food Did Not Last	28138	0.34	0.47	0	1
Sometimes/Often Couldn't Afford to Eat Balanced Meals	27318	0.26	0.44	0	1
Ever Ate Less Because Not Enough Money For Food Last 12 Months	28138	0.18	0.38	0	1
Ever Hungry But Didn't Eat Because Not Enough Money for Food Last 12 Months	28128	0.08	0.28	0	1
Under 100% Poverty	28185	0.51	0.50	0	1
Under 200% Poverty	28185	0.82	0.38	0	1
Disabled Parent	28185	0.08	0.28	0	1
Age of Parent	28185	34.44	9.28	18	64
Parent is Female	28185	0.85	0.35	0	1
Parent Non-Hispanic Black	28185	0.31	0.46	0	1
Parent Hispanic	28185	0.13	0.33	0	1
Parent Other (non-Hispanic, non-White, and non-Black)	28185	0.02	0.14	0	1
Parent Exactly High School	28185	0.39	0.49	0	1
Parent Some College	28185	0.35	0.48	0	1
Parent College Grad or More	28185	0.09	0.28	0	1
Two Kids	28185	0.33	0.47	0	1
Three Kids	28185	0.13	0.34	0	1
Four or More Kids	28185	0.05	0.22	0	1
State Unemployment Rate	28185	5.77	1.69	2.50	13.30
Maximum Weeks of Unemployment Insurance(UI) Benefits	28185	35.08	13.30	26.00	79.58
UI Dependent Allowance ($)	28185	5.15	15.66	0.00	111.00
TANF Generous Asset Limit	28185	0.15	0.36	0	1
TANF Family Cap	28185	0.47	0.50	0	1
TANF Strict Time Limit	28185	0.41	0.49	0	1
SNAP Standard Utlility Allowance	28185	303.44	105.32	117.00	744.00
State Child Support Enforcement $ Per Capita	28185	17.44	7.77	0.57	95.16

Note: Sample includes non-immigrant single parent families with at least one child 18 or younger in which the parent is ages 18 to 64, December CPS 2001-2009. SNAP refers to SNAP or Food Stamps and Medicaid refers to Medicaid or SCHIP. Collection of policy variables described in data appendix. Regressions also control for the age of youngest child for each age 0 to 18 but those statistics omitted here for brevity.

Table 3. Instrumental Variable Regressions Predicting Low Food Security (LFS), Single Parent Low-Income Sample

	I	II	III	IV	V	VI	VII
Sample	Single Under 300% Poverty						
Outcome	LFS	LFS	LFS	LFS	LFS	LFS	LFS
Combined Annual Imputed Cash and Food Benefit in $000	**-0.01507****		**-0.02265****	**-0.01166**	**-0.02098***	**-0.01280***	**-0.01378***
	(0.00508)		(0.00789)	(0.00716)	(0.01018)	(0.00510)	(0.00584)
Annual Imputed TANF in $000s		**-0.00621**	**0.01545**				
		(0.00947)	(0.01275)				
Annual Imputed SSI in $000s		**-0.02435**		**-0.01930**			
		(0.01670)		(0.01711)			
Combined Annual Imputed TANF and SSI in $000					**0.00885**		
					(0.01218)		
Annual Imputed EITC in $000s		**-0.04202**				**-0.03273**	
		(0.04570)				(0.04240)	
Annual Imputed SNAP/Food Stamp in $000s		**-0.01824+**					**-0.00492**
		(0.00997)					(0.01139)
Imputed Fraction of Family Medicaid Eligible	**0.05292**	**0.12018**	**0.09524**	**0.05138**	**0.07788**	**0.10080**	**0.05959**
	(0.10353)	(0.09883)	(0.10306)	(0.10487)	(0.10329)	(0.09540)	(0.10500)
Demographic Controls	yes	yes	yes	yes	yes	yes	yes
State Policy and Economic Condition Controls	yes	yes	yes	yes	yes	yes	yes
State Fixed Effects	yes	yes	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes	yes	yes
Observations	28185	28185	28185	28185	28185	28185	28185

Notes: Standard errors in parentheses are clustered by state. **, *, + refer to statistical significance at the 1, 5 and 10 percent levels respectively. Benefit amounts in 2005 dollars.

Table 4. Instrumental Variable Regressions Predicting Very Low Food Security Among Children (Child VLFS), Single Parent Low-Income Sample

	I	II	III	IV	V	VI	VII
Sample	Single Under 300% Poverty						
Outcome	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS
Combined Annual Imputed Cash and Food Benefit in $000	**-0.00173**		**-0.00341**	**-0.00133**	**-0.00340**	**-0.00045**	**-0.00161**
	(0.00226)		(0.00271)	(0.00250)	(0.00276)	(0.00212)	(0.00267)
Annual Imputed TANF in $000s		**-0.00041**	**0.00343**				
		(0.00313)	(0.00403)				
Annual Imputed SSI in $000s		**0.00191**		**-0.00228**			
		(0.00528)		(0.00695)			
Combined Annual Imputed TANF and SSI in $000					**0.00251**		
					(0.00329)		
Annual Imputed EITC in $000s		**-0.01915**				**-0.01750**	
		(0.01462)				(0.01425)	
Annual Imputed SNAP/Food Stamp in $000s		**-0.00176**					**-0.00045**
		(0.00279)					(0.00323)
Imputed Fraction of Family Medicaid Eligible	**-0.06143**	**-0.03149**	**-0.05213**	**-0.06172**	**-0.05429**	**-0.03548**	**-0.06081**
	(0.04405)	(0.03831)	(0.04174)	(0.04427)	(0.04329)	(0.03864)	(0.04465)
Demographic Controls	yes	yes	yes	yes	yes	yes	yes
State Policy and Economic Condition Controls	yes	yes	yes	yes	yes	yes	yes
State Fixed Effects	yes	yes	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes	yes	yes
Observations	27598	27598	27598	27598	27598	27598	27598

Notes: Standard errors in parentheses are clustered by state. **, *, + refer to statistical significance at the 1, 5 and 10 percent levels respectively. Benefit amounts in 2005 dollars.

Table 5. Effect of Safety Net Generosity on Other Food-Related Outcomes

Sample	I	II	III	IV	V	VI	VII	VIII
	Single Under 300% Poverty							
Outcome	Log (Usual Weekly Food Spending)	Need to Spend More to Meet Food Needs	Ever Run Short of Food Money Last 12 Months	Sometimes/OftenNot Enough To Eat	Sometimes/Often Food Did Not Last	Sometimes/Often Couldn't Afford to Eat Balanced Meals	Ever Ate Less Because Not Enough Money For Food Last 12 Months	Ever Hungry But Didn't Eat Because Not Enough Money For Food Last 12 Months
Combined Annual Imputed Cash and Food Benefit in $000	**-0.00353**	**-0.01510***	**-0.01763****	**-0.01030****	**-0.00978+**	**-0.01032+**	**-0.01461****	**-0.01078****
	(0.01228)	(0.00715)	(0.00581)	(0.00360)	(0.00520)	(0.00583)	(0.00521)	(0.00357)
Imputed Fraction of Family Medicaid Eligible	**-0.22480**	**-0.10718**	**-0.00765**	**0.09038**	**0.07940**	**0.12440**	**-0.03927**	**-0.06634**
	(0.15926)	(0.12309)	(0.11630)	(0.07012)	(0.11355)	(0.09620)	(0.09753)	(0.05928)
Demographic Controls	yes	yes	yes	yes	yes	yes	yes	yes
State Policy and Economic Condition Controls	yes	yes	yes	yes	yes	yes	yes	yes
State Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Observations	26769	27045	28152	28288	28177	27357	28177	28167

Notes: Standard errors in parentheses are clustered by state. **, *, + refer to statistical significance at the 1, 5 and 10 percent levels respectively. Benefit amounts in 2005 dollars.

Table 6. First Stage: The Impact of Simulated Eligibility on Imputed Eligibility, Single Parent Low-Income Sample (OLS)

Sample	I	II	III	IV	V	VI	VII
	Single Under 300% Poverty						
Outcome	Imputed Cash and Food ($000)	Imputed Fraction Medicaid Eligible	Imputed TANF ($000)	Imputed SSI ($000)	Imputed EITC ($000)	Imputed SNAP/Food Stamps ($000)	Imputed Fraction Medicaid Eligible
Mean Combined Annual Simulated Cash and Food Benefit in $000	**0.66042****	-0.01172**					
	(0.02773)	(0.00131)					
Mean Annual Simulated TANF in $000s			**0.66471****	0.02981**	-0.00133	-0.07359**	-0.01270**
			(0.05450)	(0.01033)	(0.02240)	(0.01503)	(0.00215)
Mean Annual Simulated SSI in $000s			-0.13811	**0.67937****	0.13476**	0.09478**	-0.00685
			(0.09533)	(0.08504)	(0.03097)	(0.03284)	(0.00446)
Mean Annual Simulated EITC in $000s			0.16042	-0.10139**	**0.43947****	-0.07194	-0.06531**
			(0.12647)	(0.02605)	(0.06611)	(0.06453)	(0.00800)
Mean Annual Simulated SNAP/Food Stamps in $000s			-0.10615	0.01201+	0.02488	**0.77310****	-0.01032**
			(0.07540)	(0.00702)	(0.02552)	(0.02083)	(0.00310)
Mean Simulated Fraction of Family Medicaid Eligible	-2.34555**	**0.60689****	-1.67770**	-0.40196**	0.18117	-0.28962+	**0.66635****
	(0.38065)	(0.03614)	(0.35415)	(0.14045)	(0.14345)	(0.16901)	(0.03674)
Observations	28307	28307	28307	28307	28307	28307	28307
R-squared	0.819	0.770	0.542	0.974	0.294	0.713	0.771
F-statistic on Instruments	293.89	212.08	77.71	45.41	35.29	293.35	103.97
P-value for F-statistic on Instruments	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Notes: Standard errors in parentheses are clustered by state. **, *, + refer to statistical significance at the 1, 5 and 10 percent levels respectively. Regressions include same controls as prior tables. Benefit amounts in 2005 dollars.

Table 7. Instrumented Eligibility Does Predict Participation (IV), March CPS, Single Parent Low-Income Sample

Sample	I	II	III	IV	V	VI	VII
				Single Under 300% Poverty			
Outcome	Reported TANF in Family	Reported TANF $000s in Family	Reported SSI in Family	Reported SSI $000 in Family	Reported SNAP in Household	Reported SNAP $000s in Household	Reported Public Ins. in Household
Annual Imputed TANF in $000s (Instrumented)	**0.03707****	**0.27168****	-0.00753*	-0.00179	0.01232*	0.05299*	0.01791**
	(0.00478)	**(0.04127)**	(0.00343)	(0.02848)	(0.00536)	(0.02299)	(0.00609)
Annual Imputed SSI in $000s (Instrumented)	0.01906*	0.10598*	**0.03628***	**0.37421****	0.02384**	0.05853+	0.02138**
	(0.00882)	(0.04278)	**(0.01817)**	**(0.09556)**	(0.00732)	(0.03487)	(0.00662)
Annual Imputed EITC in $000s (Instrumented)	-0.02248	0.05852	-0.05867**	-0.44143**	-0.03006+	-0.27854**	-0.01592
	(0.01569)	(0.09658)	(0.01045)	(0.09341)	(0.01590)	(0.06490)	(0.01589)
Annual Imputed SNAP/Food Stamp in $000s (Instrumented)	0.00993*	-0.00187	-0.00521	-0.00994	**0.05022****	**0.41897****	0.02719**
	(0.00427)	(0.02718)	(0.00343)	(0.02779)	**(0.00656)**	**(0.02255)**	(0.00580)
Imputed Fraction of Family Medicaid Eligible (Instrumented)	-0.03660	-0.07141	-0.16239**	-1.12420**	0.03565	-0.69998**	**0.35257****
	(0.04770)	(0.24399)	(0.04509)	(0.35590)	(0.06042)	(0.26905)	**(0.07705)**
Observations	68702	68702	68702	68702	68702	68702	68702

Notes: See previous tables. All financial variables in thousands of 2005 dollars.

Appendix Table 1. OLS Regressions Predicting Low Food Security (LFS) and Childhood Very Low Food Security (Child VLFS)

Sample	Single Under 300% Poverty				Married Under 300% Poverty			
Outcome	LFS	LFS	Child VLFS	Child VLFS	LFS	LFS	Child VLFS	Child VLFS
Combined Annual Imputed Cash and Food Benefit in $000	**0.00404****		**0.00136****		**0.00546****		**0.00012**	
	(0.00149)		(0.00026)		(0.00158)		(0.00034)	
Annual Imputed TANF in $000s		**0.00406****		**0.00148****		**0.00288**		**-0.00009**
		(0.00140)		(0.00042)		(0.00235)		(0.00047)
Annual Imputed SSI in $000s		**-0.01121+**		**0.00335**		**0.00780***		**0.00099**
		(0.00636)		(0.00293)		(0.00310)		(0.00092)
Annual Imputed EITC in $000s		**0.00948***		**0.00297****		**0.01503****		**-0.00011**
		(0.00399)		(0.00105)		(0.00295)		(0.00061)
Annual Imputed SNAP/Food Stamp in $000s		**0.00777***		**0.00117**		**0.00881****		**-0.00010**
		(0.00325)		(0.00088)		(0.00299)		(0.00120)
Imputed Fraction of Family Medicaid Eligible	**0.02556**	**0.03394+**	**-0.00516**	**-0.00219**	**0.00287**	**0.01502**	**0.00019**	**0.00025**
	(0.01985)	(0.01751)	(0.00432)	(0.00443)	(0.01006)	(0.00896)	(0.00321)	(0.00364)
Demographic Controls	yes	yes	yes	yes	yes	yes	yes	yes
State Policy and Economic Condition Controls	yes	yes	yes	yes	yes	yes	yes	yes
State Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Observations	28185	28185	27598	27598	24508	24508	24043	24043
R-squared	0.058	0.059	0.017	0.018	0.093	0.094	0.014	0.014

Notes: Standard errors in parentheses are clustered by state. **, *, + refer to statistical significance at the 1, 5 and 10 percent levels respectively.

Appendix Table 2. Instrumental Variable Regressions Predicting Low Food Security (LFS) and Childhood Very Low Food Security (Child VLFS), Single Under 200% of Poverty Sample

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Sample						Single Under 200% Poverty						
Outcome	LFS	LFS	LFS	LFS	LFS	LFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS
Combined Annual Imputed Cash and Food Benefit in $000	**-0.01853***		**-0.02788****	**-0.01814+**	**-0.01740***	**-0.01438+**	**-0.00313**		**-0.00497**	**-0.00465**	**-0.00220**	**-0.00238**
	(0.00737)		(0.01004)	(0.01070)	(0.00798)	(0.00741)	(0.00287)		(0.00346)	(0.00368)	(0.00290)	(0.00330)
Annual Imputed TANF in $000s		**-0.01155**	**0.02040**					**-0.00492**	**0.00398**			
		(0.01357)	(0.01429)					(0.00494)	(0.00528)			
Annual Imputed SSI in $000s		**-0.01228**		**-0.00166**				**0.00969**		**0.00662**		
		(0.01251)		(0.01910)				(0.00615)		(0.00690)		
Annual Imputed EITC in $000s		**-0.04688**			**-0.02620**			**-0.02842+**			**-0.01986**	
		(0.03726)			(0.03043)			(0.01586)			(0.01328)	
Annual Imputed SNAP/Food Stamp in $000s		**-0.03155***				**-0.01568**		**-0.00676+**				**-0.00284**
		(0.01435)				(0.01341)		(0.00383)				(0.00381)
Imputed Fraction of Family Medicaid Eligible	**0.01256**	**0.09535**	**0.07140**	**0.01222**	**0.04876**	**0.03928**	**-0.07987+**	**-0.03970**	**-0.06842**	**-0.07811+**	**-0.05189**	**-0.07495**
	(0.06836)	(0.08112)	(0.07835)	(0.06858)	(0.07429)	(0.07239)	(0.04542)	(0.04244)	(0.04427)	(0.04556)	(0.04202)	(0.04563)
Demographic Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
State Policy and Economic Condition Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
State Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	22859	22859	22859	22859	22859	22859	22465	22465	22465	22465	22465	22465
	VII	VIII	IX	X	XI	XII						

Appendix Table 3. Instrumental Variable Regressions Predicting Low Food Security (LFS) and Childhood Very Low Food Security (Child VLFS), Additional Samples

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Sample	All	All <300	Single <300	Married <300	All <200	Single <200	Married <200	All	All <300	Single <300	Married <300	All <200	Single <200	Married <200
Outcome	LFS	LFS	LFS	LFS	LFS	LFS	LFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS	Child VLFS
Combined Annual Imputed Cash and Food Benefit in $000	**-0.00245**	**-0.00692***	**-0.01507****	**-0.03380***	**-0.00961***	**-0.01853***	**-0.04620+**	**0.00112**	**0.00005**	**-0.00173**	**-0.00434**	**-0.00059**	**-0.00313**	**-0.00282**
	(0.00223)	(0.00296)	(0.00508)	(0.01548)	(0.00452)	(0.00737)	(0.02689)	(0.00084)	(0.00098)	(0.00226)	(0.00594)	(0.00135)	(0.00287)	(0.00851)
Imputed Fraction of Family Medicaid Eligible	**0.11877+**	**0.01789**	**0.05292**	**-0.03155**	**-0.03495**	**0.01256**	**-0.08129**	**-0.03588**	**-0.04072***	**-0.06143**	**-0.04609***	**-0.04732***	**-0.07987+**	-0.04291+
	(0.06644)	(0.05901)	(0.10353)	(0.09982)	(0.06696)	(0.06836)	(0.12242)	(0.02438)	(0.01667)	(0.04405)	(0.02044)	(0.02049)	(0.04542)	(0.02301)
Demographic Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
State Policy and Economic Condition Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
State Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	94437	52693	28185	24508	36354	22859	13495	91469	51641	27598	24043	35715	22465	13250

Notes: Standard errors in parentheses are clustered by state. **, *, + refer to statistical significance at the 1, 5 and 10 percent levels respectively. Benefit amounts in 2005 dollars.