

Online Appendix for:
**Consumption Responses to In-Kind Transfers:
Evidence from the Introduction of the Food Stamp Program**

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On-line Appendix

In our paper, we examine the impact of the food stamp program on food expenditures. In this Appendix, we provide supplemental estimates to those provided in the published paper.

Appendix Table 1 provides descriptive statistics for the three samples used in the paper: (1) all nonelderly families, (2) nonelderly families where the head has less than or equal to 12 years of education, and (3) families with children headed by a single woman (female heads of household).

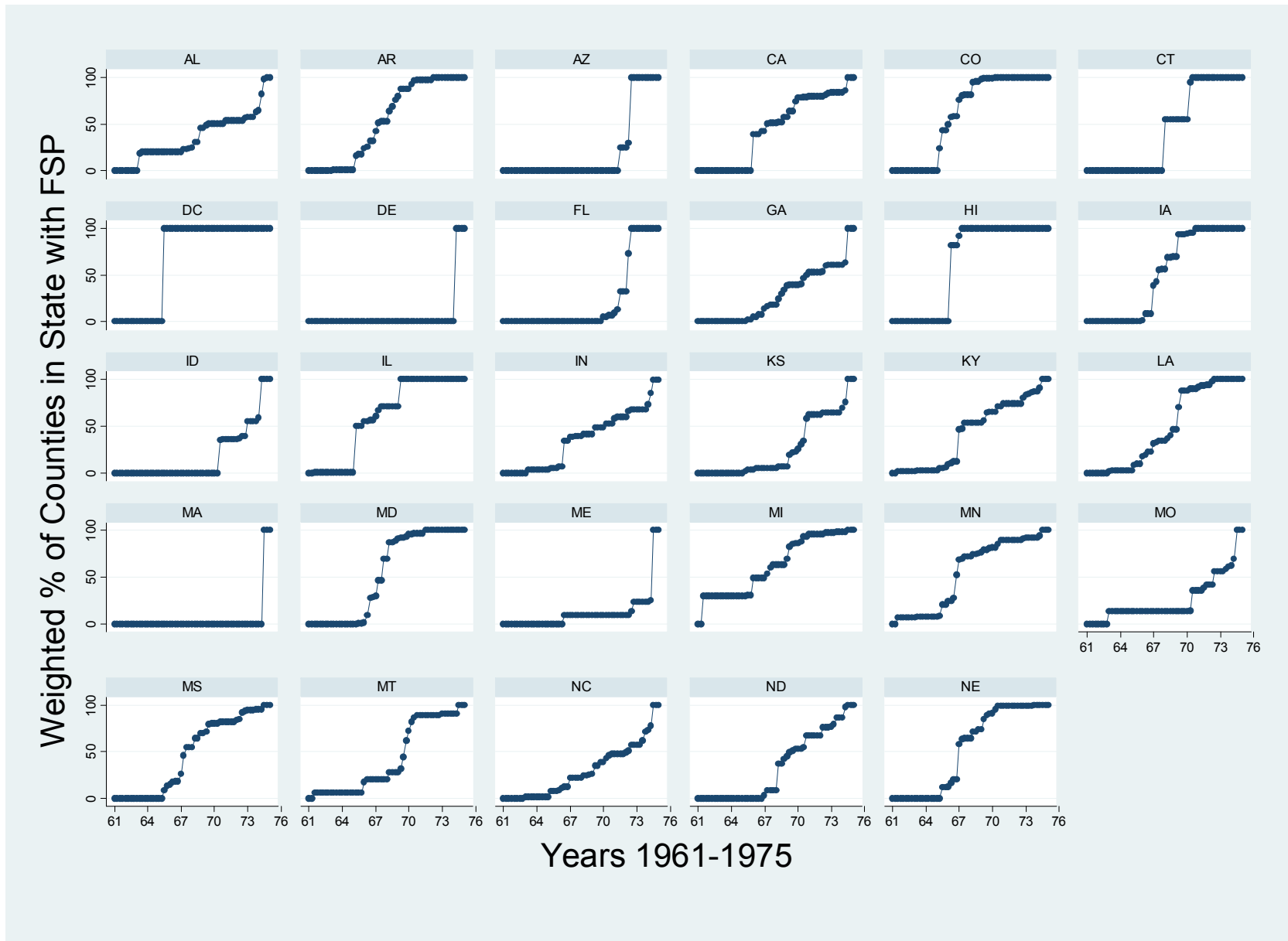
In the main paper (Figure 4) we present trends in the weighted percent of counties that have food stamp programs in place for four illustrative states: California, Florida, Massachusetts, and North Carolina. Appendix Figure 1a/1b presents the same figures for all 50 states.

In the main paper, we present county regressions of FSP implementation dates on county pre-treatment characteristics (Table 1). Appendix Figure 2 provides scatter plots of each of six county characteristics (x-axis) against the county FSP implementation date (y-axis). For guidance, we also provided the univariate linear regression line (weighted by the county population) for each panel. These figures show that the magnitude of the association between the county characteristics and the food stamp start date is weak and there is an enormous amount of variation that is not explained by the characteristics.

The expansion of the food stamp program took place during a time of great change in the U.S. system of government support. In the main paper, we address this by controlling for the county level transfer variables. Another, more direct approach, is to examine the impact of the FSP on family government transfer income. In particular, with the PSID we can measure income of the head and wife from AFDC, other welfare income (SSI, General Assistance), and social security. We present estimates for the nonelderly low education sample using the specification in Table 5, column 1. The results of that exercise, presented in Appendix Table 2, show no significant impact of the FSP on other sources of income support.

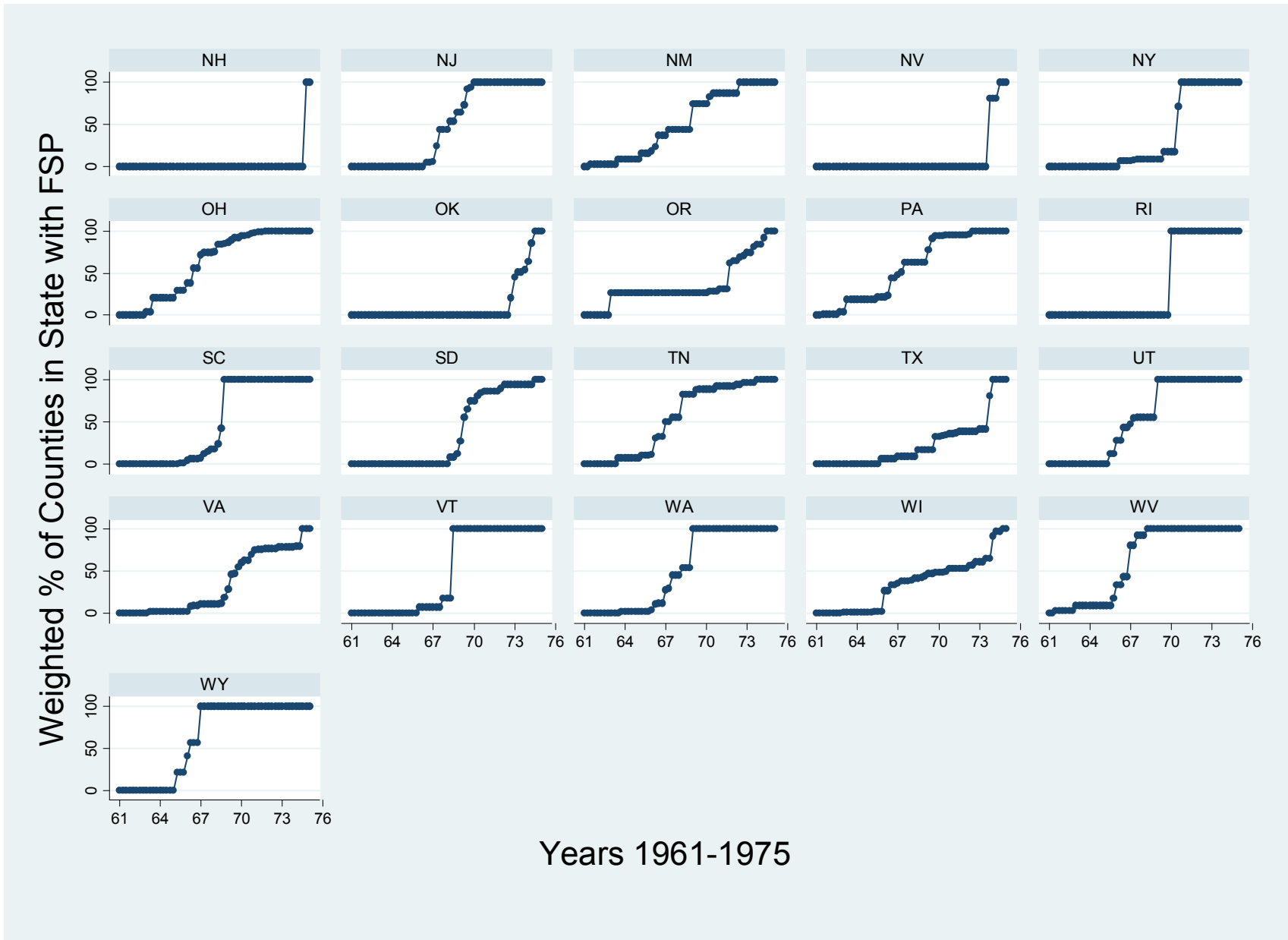
Appendix Table 3 provides robustness results for our main model. The main triple difference estimates for the sample of lower education nonelderly families (≤ 12 years of education) are given in Table 5, column (1). In this table we re-estimate this model for two alternative samples. First, we drop the observations with allocated (imputed) dependent variables. Second, we add back in the observations we “trimmed” from the sample. In our main estimates, we trim observations with unusual values for food expenditures. In particular, we drop observations where the ratio of food spending to income exceeds 0.85, where total annual food expenditures were less than \$100 (in 2005 dollars) or where annual family income was less than \$500 (in 2005 dollars).

Appendix Figure 1a: Percent of Counties with Food Stamp Program 1961-1975, By State



Source: Authors' tabulations of food stamp administrative data (U.S. Department of Agriculture, various years). Counties weighted by 1960 population.

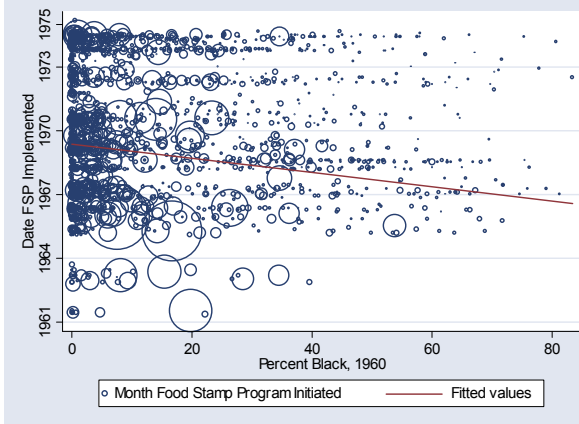
Appendix Figure 1b: Percent of Counties with Food Stamp Program 1961-1975, By State



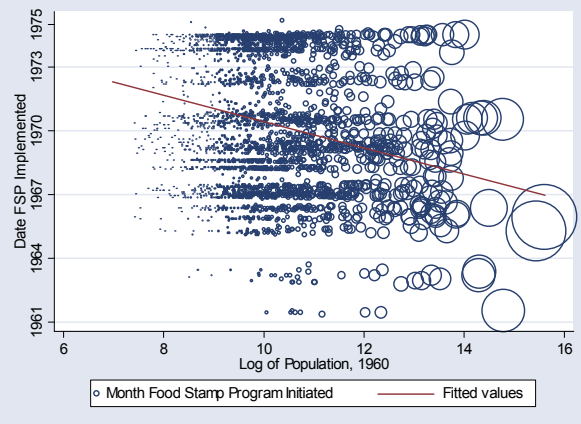
Source: Authors' tabulations of food stamp administrative data (U.S. Department of Agriculture, various years). Counties weighted by 1960 population.

Appendix Figure 2: 1960 County Characteristics and County Food Stamp Start Date

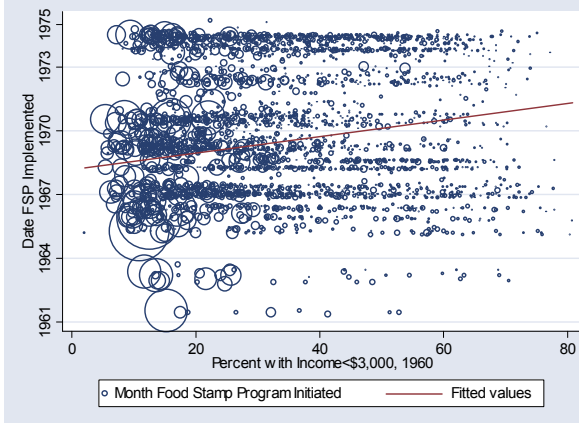
(a) Percent Black



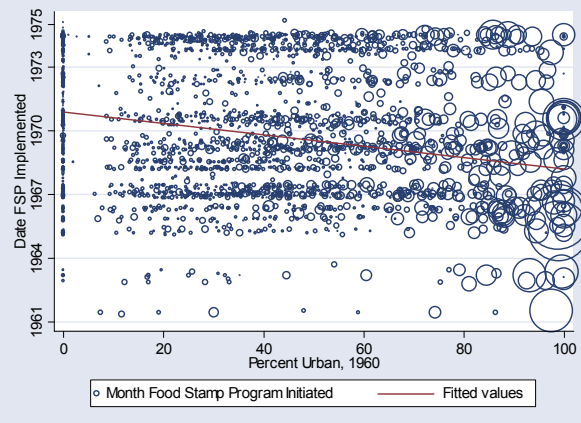
(b) Log of Population



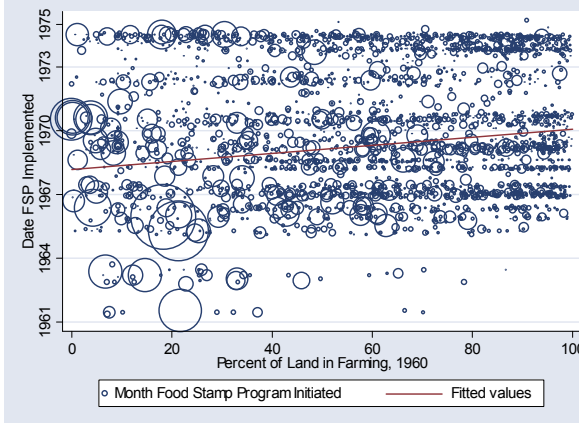
(c) Percent with Income <\$3,000



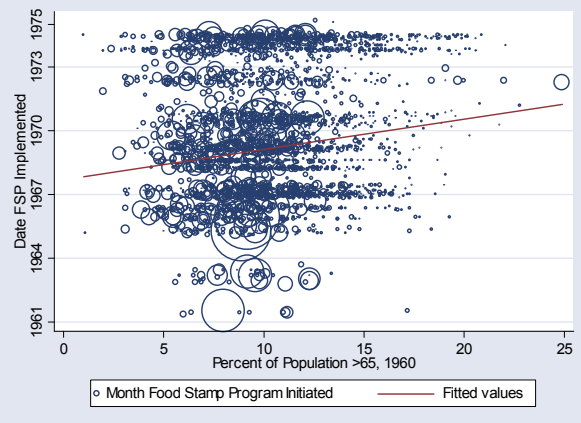
(d) Percent Urban



(e) Percent of Land in Farming



(f) Percent Age >65



Note: Each graph provides a scatterplot of a 1960 county characteristic (x-axis) against the food stamp start date (y-axis) where the points are weighted by the 1960 county population. The graphs also contain the linear fit where the regression is weighted by 1960 county population. 1960 County characteristics are from the 1960 City and County Databook and the FSP implementation dates are from U.S. Department of Agriculture (various years).

Appendix Table 1: Descriptive Statistics for Estimation Sample

	<u>All Nonelderly Singles and Families</u>				<u>Nonelderly, Head <=12</u>				<u>Female Headed Households</u>			
	# nonmissing obs.	Mean	Min	Max	# nonmissing obs.	Mean	Min	Max	# nonmissing obs.	Mean	Min	Max
FSP participation	39,623	0.066	0	1	30,905	0.087	0	1	6,002	0.297	0	1
Real food at home	39,623	6737	0	35347	30,905	6657	0	35347	6,002	5902	0	24131
log(real food at home)	39,243	8.64	2.63	10.47	30,541	8.64	2.63	10.47	5,788	8.52	3.87	10.09
Any meals out	39,623	0.766	0	1	30,905	0.704	0	1	6,002	0.560	0	1
Real all food	39,623	8179	122.8	40200	30,905	7914	123	40063	6,002	7197	175	35378
log(real all food)	39,623	8.86	4.8	10.6	30,905	8.84	4.81	10.60	6,002	8.75	5.2	10.5
Food at home / Income	39,623	0.171	0	0.849	30,905	0.189	0	0.849	6,002	0.259	0	0.849
All food / Income	39,623	0.179	0.003	3.620	30,905	0.196	0.003	3.620	6,002	0.287	0.009	2.140
Real family income	39,623	59643	769	503346	30,905	51956	769	439860	6,002	32625	824	308554
Log(real family income)	39,623	10.77	6.64	13.13	30,905	10.65	6.64	12.99	6,002	10.19	6.71	12.64
County FSP implemented	39,623	0.864	0	1	30,905	0.864	0	1	6,002	0.884	0	1
Urban county	39,623	0.605	0	1	30,905	0.580	0	1	6,002	0.650	0	1
Female headed household	39,623	0.215	0	1	30,905	0.236	0	1	6,002	1	1	1
Education<12 years	39,623	0.327	0	1	30,905	0.475	0	1	6,002	0.481	0	1
Education=12years	39,623	0.361	0	1	30,905	0.525	0	1	6,002	0.380	0	1
Education>12 years	39,623	0.312	0	1	30,905	0.000	0	0	6,002	0.140	0	1
White	39,623	0.856	0	1	30,905	0.822	0	1	6,002	0.635	0	1
Number of children	39,623	1.27	0	13	30,905	1.30	0	5	6,002	2.12	1	11
Number of adults	39,623	1.97	1	14	30,905	1.99	1	4	6,002	1.47	1	8
State unemployment rate	39,623	6.19	2	12.5	30,905	6.11	2	12.5	6,002	6.33	2	12.5
County % black, 1960	39,623	9.62	0	81.3	30,905	9.83	0	81.3	6,002	12.30	0	62.1
County % urban, 1960	39,623	70.03	0	100	30,905	66.90	0	100	6,002	74.59	0	100
County % farmland, 1960	39,623	44.89	0	239.8	30,905	45.71	0	239.8	6,002	41.78	0	126.6
County % ≤\$3,000, 1960	39,623	20.92	5.5	74.4	30,905	22.08	5.5	74.4	6,002	20.51	5.5	68
County % <5 years, 1960	39,623	11.26	5.6	18.2	30,905	11.20	5.6	18.2	6,002	11.22	6.7	18.2
County %>65 years, 1960	39,623	9.27	1	24.9	30,905	9.38	1	24.9	6,002	9.22	2.8	24.9
log(1960 county population)	39,623	12.28	7.72	15.61	30,905	12.14	7.72	15.61	6,002	12.62	7.72	15.61
County per cap ret. and dis. payments	39,623	994.2	112.4	2969.3	30,905	1004.2	112.4	2969.3	6,002	1013.9	172.8	2609.4
County per cap medical payments	39,623	226.6	35.0	690.8	30,905	224.5	35.0	690.8	6,002	237.3	37.0	686.7
County per cap cash PA payments	39,623	226.7	0.0	1086.8	30,905	226.4	0	1086.8	6,002	272.2	15.6	1086.8

Note: PSID interview years 1969-1972 and 1974-1978. No food data is available in 1973 and 1968 is dropped due to inconsistencies in variable definitions. Observations from Alaska are dropped because of missing data on food stamp program start date and observations with unusual expenditure values are dropped (annual food expenditures less than \$100, annual family income less than \$500, or income share on food greater than 0.85). All outcome variables correspond to annual measures taken as of the interview (in spring of the interview year). For details on sample selection see text and notes to Table 3.

Appendix Table 2:
Impact of Food Stamp Introduction on Family Transfer Income (2005 dollars)
Nonelderly low education singles and families

	(1)	(2)
<u>AFDC income (2005\$)</u>		
County FSP Implemented X	69	511
Group participation rate	(1107)	(1057)
Number of Observations	34295	34295
R Squared	0.27	0.29
<u>Other cash welfare (2005\$)</u>		
County FSP Implemented X	723	656
Group participation rate	(677)	(635)
Number of Observations	31319	31319
R Squared	0.13	0.14
<u>Social Security Income (2005\$)</u>		
County FSP Implemented X	-4553	-4740
Group participation rate	(2,429)*	(2,362)**
Number of Observations	31319	31319
R Squared	0.15	0.15
Demographics, group fixed effects	X	X
1960 Cty Vars * Linear Time	X	X
Per Capita Cty Transfers		X
Year Fixed Effects (main and x Pg)	X	X
County Fixed Effects	X	X
State x Linear Time	X	X
Pg x Other Covariates (except Area Fixed Effects)	X	X

Notes: Each parameter is from a separate regression of the outcome variable on a dummy variable equal to 1 if the county-year observation had a food stamp program in place by January of the year prior to the interview year interacted with a group specific food stamp participation rate. The sample includes nonelderly low educated households. See notes to Tables 3 & 5 for more details on sample. All control variables are defined as in Table 5, column 1. See the notes to that table for more details. All outcome variables correspond to annual measures for the year prior to the interview and are expressed in real 2005 dollars. Estimates are weighted using the PSID weight and clustered on county. Standard errors are in parentheses and ***, **, and * indicate that the estimates are significant at the 1%, 5% and 10% levels.

Appendix Table 3:
Impact of Food Stamp Introduction on Total Food Expenditures, Nonelderly Low Educated Sample
Robustness Checks

	Log of Cash Food Expenditures at Home (non-food stamps)	Any Meals Out (0/1)	Log of Total Food Expenditures (including food stamps)
<u>A. Main estimates</u>			
County FSP Implemented x Pg	-0.043 (0.105)	0.101 (0.101)	0.208 (0.096)**
County FSP Implemented	0.000 (0.022)	-0.014 (0.022)	-0.005 (0.020)
Number of Observations	30,541	30,905	30,905
R Squared	0.54	0.26	0.52
<u>B. Drop allocated observations</u>			
County FSP Implemented x Pg	-0.055 (0.110)	0.083 (0.100)	0.173 (0.103)*
County FSP Implemented	0.004 (0.022)	-0.014 (0.021)	-0.001 (0.022)
Number of Observations	28,849	30,578	28,830
R Squared	0.54	0.26	0.51
<u>C. Add in trimmed observations</u>			
County FSP Implemented x Pg	-0.037 (0.102)	0.093 (0.099)	0.218 (0.095)**
County FSP Implemented	0.000 (0.022)	-0.013 (0.022)	0.001 (0.020)
Number of Observations	31,253	32,164	31,931
R Squared	0.53	0.25	0.51

Notes: Each parameter is from a separate regression of the outcome variable on a dummy variable equal to 1 if the county-year observation had a food stamp program in place by January of the year prior to the interview year interacted with a group specific food stamp participation rate. The sample includes nonelderly low educated households. See notes to Tables 3 & 5 for more details on sample. All control variables are defined as in Table 5, column 1. See the notes to that table for more details. Panel A repeats the estimates for Table 5, column 1. Panel B re-estimates this model dropping all observations where the dependent variable is allocated (imputed). Panel C re-estimates the models after adding back in the trimmed observations. (In the main sample, we drop observations with annual food expenditures less than \$100 in 2005 \$, annual family income less than \$500 in 2005 \$, or income share on food greater than 0.85). Estimates are weighted using the PSID weight and clustered on county. Standard errors are in parentheses and ***, **, and * indicate that the estimates are significant at the 1%, 5% and 10% levels.