

ONLINE APPENDIX A

Table A1: The Distribution of the Marginal Tax Rates for Single Parents with Two Children in 1997

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	10.0	22.9	26.9	27.4	10.1	23.3	27.4	27.9	7.6	19.2	22.7	22.6	13.6	26.9	31.4	31.6
No Programs, EITC and CTC only	-31.0	9.3	48.5	49.0	-30.3	9.1	48.7	49.0	-36.2	5.9	43.7	43.7	-26.4	13.6	53.7	53.8
Medicaid only	-30.6	15.5	54.5	51.6	-30.3	16.0	54.8	49.7	-36.2	7.1	43.7	43.7	-26.4	22.7	66.8	66.0
Housing only	-13.1	30.3	62.4	53.4	-12.5	30.1	64.7	50.7	-18.3	26.9	50.2	43.7	-8.5	34.6	73.5	73.1
SNAP only	-31.0	20.6	94.5	51.1	-30.3	20.6	95.4	49.1	-36.2	17.5	90.6	43.7	-26.4	23.5	100.6	55.7
Medicaid & Housing only	-12.7	36.5	68.5	55.9	-12.5	37.0	67.6	51.5	-18.3	28.1	51.8	45.8	-8.5	43.7	87.8	74.6
Medicaid & SNAP only	-30.6	26.8	100.6	53.7	-30.3	27.6	101.7	49.7	-36.2	18.7	82.6	43.7	-26.4	34.0	113.6	68.0
Medicaid, SNAP & TANF only	21.5	51.1	99.8	54.5	20.0	52.0	101.8	49.7	-14.0	26.8	67.7	43.7	60.3	73.2	117.4	85.5
Medicaid, SNAP, TANF & Housing	32.3	69.2	110.0	58.3	30.9	71.0	110.9	51.5	6.4	51.2	74.9	45.8	63.0	85.0	132.2	85.8

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A2: The Distribution of the Marginal Tax Rates for Single Parents with Two Children in 2007

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	10.1	18.8	24.0	27.2	9.9	19.0	24.6	27.8	7.6	15.4	19.8	22.6	13.6	21.4	27.2	30.1
No Programs, EITC and CTC only	-32.4	-15.0	42.1	49.7	-32.4	-14.9	42.0	49.7	-40.4	-18.1	36.8	43.7	-27.4	-11.5	47.1	56.5
Medicaid only	-31.4	-10.3	44.5	53.1	-31.4	-12.2	42.8	50.7	-40.4	-17.5	36.8	43.7	-23.3	0.1	55.8	67.1
Housing only	-13.9	6.0	57.6	55.5	-13.8	6.1	57.8	51.0	-21.8	2.9	43.1	43.8	-8.8	9.5	68.1	73.7
SNAP only	-32.4	5.5	80.5	50.3	-32.4	5.7	79.9	49.7	-40.4	2.4	74.7	43.7	-27.4	9.2	86.4	57.1
Medicaid & Housing only	-12.8	10.7	60.0	58.9	-12.8	8.8	60.6	57.3	-21.8	3.5	45.1	46.1	-4.7	21.1	76.8	78.1
Medicaid & SNAP only	-31.4	10.2	82.9	53.6	-31.4	7.7	80.7	51.0	-40.4	2.6	74.7	43.7	-23.3	20.8	97.3	72.1
Medicaid, SNAP & TANF only	17.2	25.3	84.0	53.7	17.6	26.1	81.7	51.0	-17.4	6.6	74.7	43.7	47.9	43.4	110.4	74.3
Medicaid, SNAP, TANF & Housing	29.4	44.3	96.0	59.2	28.7	44.6	95.0	58.3	5.8	30.6	80.0	46.1	52.1	58.6	121.9	79.0

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A3: The Distribution of the Marginal Tax Rates for Married Parents with Two Children in 1997

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	10.0	21.3	26.2	26.5	9.9	21.1	26.2	26.6	7.6	18.1	22.7	22.6	13.6	24.8	30.6	31.6
No Programs, EITC and CTC only	-31.0	27.8	47.7	39.4	-30.4	27.4	47.2	39.2	-36.3	24.4	43.7	35.3	-26.4	31.4	53.0	44.6
Medicaid only	-30.0	38.7	51.9	41.4	-30.4	39.6	52.0	40.3	-36.3	24.6	43.7	35.3	-18.8	50.2	63.8	50.5
Housing only	-12.4	48.8	61.1	43.2	-11.8	48.4	63.9	40.6	-17.7	45.4	49.1	35.3	-7.9	52.4	72.8	61.0
SNAP only	-31.0	47.4	87.4	40.1	-30.4	47.3	86.3	39.3	-36.3	44.3	82.8	35.3	-26.4	51.2	92.7	44.9
Medicaid & Housing only	-11.5	59.7	65.3	45.2	-11.8	60.6	65.5	42.2	-17.7	45.6	51.8	35.4	-0.3	71.2	84.8	64.8
Medicaid & SNAP only	-30.0	58.4	91.6	42.1	-30.4	59.4	91.2	40.3	-36.3	44.5	82.8	35.3	-18.8	70.1	103.6	50.5
Medicaid, SNAP & TANF only	23.3	75.3	90.1	42.9	23.0	75.8	91.8	40.3	-4.0	51.7	51.3	35.3	55.1	97.8	103.6	54.2
Medicaid, SNAP, TANF & Housing	34.5	93.6	100.1	46.2	35.3	95.3	101.5	42.2	17.5	73.1	66.6	35.4	58.8	112.4	121.5	65.6

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A4: The Distribution of the Marginal Tax Rates for Married Parents with Two Children in 2007

	Mean				Median				5 th Percentile				95 th Percentile			
	0- 50% FPL	50- 100% FPL	100- 150% FPL	150- 200% FPL	0- 50% FPL	50- 100% FPL	100- 150% FPL	150- 200% FPL	0- 50% FPL	50- 100% FPL	100- 150% FPL	150- 200% FPL	0- 50% FPL	50- 100% FPL	100- 150% FPL	150- 200% FPL
	No Programs, No EITC or CTC	9.9	17.7	21.9	26.2	9.6	17.7	21.8	26.4	7.6	14.7	18.7	22.6	13.0	21.9	24.8
No Programs, EITC and CTC only	-33.4	4.0	44.3	41.7	-33.1	3.9	43.9	41.7	-41.1	0.9	39.8	37.2	-28.1	8.5	50.1	47.1
Medicaid only	-31.0	11.2	47.6	45.8	-32.1	6.8	44.8	43.2	-41.1	1.0	39.8	37.2	-15.4	25.3	67.8	60.6
Housing only	-14.3	25.0	58.3	46.8	-14.0	24.9	59.5	43.4	-22.0	21.9	44.5	37.2	-9.0	29.5	71.1	65.8
SNAP only	-32.5	29.8	77.1	42.1	-32.2	29.8	76.1	41.8	-40.2	26.9	72.0	37.2	-27.2	34.5	84.9	48.2
Medicaid & Housing only	-11.9	32.2	61.6	50.8	-13.0	27.8	60.8	47.8	-22.0	22.0	44.5	37.5	3.7	46.3	88.8	69.4
Medicaid & SNAP only	-30.1	37.1	80.3	46.2	-31.7	32.8	77.0	43.2	-40.2	27.0	72.0	37.2	-14.5	51.3	100.0	68.9
Medicaid, SNAP & TANF only	18.3	46.5	81.1	46.2	18.7	45.3	77.2	43.2	-7.3	28.9	72.0	37.2	42.6	65.1	109.4	68.9
Medicaid, SNAP, TANF & Housing	31.4	65.3	92.0	50.9	31.2	65.7	89.9	47.8	11.4	50.9	73.9	37.5	50.7	82.9	121.8	69.4

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A5: The Distribution of the Marginal Tax Rates for Single Childless Adults in 1997

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	15.4	25.8	26.3	26.7	15.2	25.6	26.6	27.0	13.1	22.7	22.7	22.7	19.1	28.6	28.9	30.3
No Programs, EITC and CTC only	7.5	31.0	28.9	26.7	7.5	30.7	29.4	27.0	5.5	27.7	25.3	22.7	11.4	34.4	32.2	30.3
Medicaid only	7.5	31.0	28.9	26.7	7.5	30.7	29.4	27.0	5.5	27.7	25.3	22.7	11.4	34.4	32.2	30.3
Housing only	28.5	52.0	49.9	41.9	28.5	51.7	50.4	43.7	26.5	48.7	46.3	28.7	32.4	55.4	53.2	51.1
SNAP only	15.9	54.0	32.6	26.8	16.2	53.6	32.3	27.0	10.0	50.6	28.1	22.7	20.1	57.9	37.1	30.3
Medicaid & Housing only	28.5	52.0	49.9	41.9	28.5	51.7	50.4	43.7	26.5	48.7	46.3	28.7	32.4	55.4	53.2	51.1
Medicaid & SNAP only	15.9	54.0	32.6	26.8	16.2	53.6	32.3	27.0	10.0	50.6	28.1	22.7	20.1	57.9	37.1	30.3
Medicaid, SNAP & TANF only	15.9	54.0	32.6	26.8	16.2	53.6	32.3	27.0	10.0	50.6	28.1	22.7	20.1	57.9	37.1	30.3
Medicaid, SNAP, TANF & Housing	37.9	74.1	53.6	42.0	38.2	73.6	53.3	43.7	32.0	70.6	49.1	28.7	42.1	77.9	58.1	51.1

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A6: The Distribution of the Marginal Tax Rates for Single Childless Adults in 2007

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	13.6	20.8	25.6	26.6	13.4	20.7	26.0	26.7	11.3	17.7	22.2	22.7	16.7	25.1	28.3	29.9
No Programs, EITC and CTC only	5.4	26.2	28.3	26.6	5.3	25.8	28.7	26.7	3.7	22.7	24.8	22.7	8.7	30.4	30.8	29.9
Medicaid only	5.4	26.2	28.3	26.6	5.3	25.8	28.7	26.7	3.7	22.7	24.8	22.7	8.7	30.4	30.8	29.9
Housing only	26.4	47.2	49.3	43.7	26.3	46.8	49.7	44.8	24.7	43.7	45.8	30.7	29.7	51.4	51.8	50.6
SNAP only	17.7	46.1	31.1	26.6	17.9	45.7	31.0	26.7	14.7	42.4	27.0	22.7	21.3	52.8	36.0	29.9
Medicaid & Housing only	26.4	47.2	49.3	43.7	26.3	46.8	49.7	44.8	24.7	43.7	45.8	30.7	29.7	51.4	51.8	50.6
Medicaid & SNAP only	17.7	46.1	31.1	26.6	17.9	45.7	31.0	26.7	14.7	42.4	27.0	22.7	21.3	52.8	36.0	29.9
Medicaid, SNAP & TANF only	17.7	46.1	31.1	26.6	17.9	45.7	31.0	26.7	14.7	42.4	27.0	22.7	21.3	52.8	36.0	29.9
Medicaid, SNAP, TANF & Housing	39.7	66.2	52.0	43.7	39.9	65.7	52.0	44.8	36.7	62.4	48.0	30.7	43.3	72.9	55.4	50.6

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A7: The Distribution of the Marginal Tax Rates for Married Childless Adults in 1997

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	10.0	25.3	26.0	26.1	9.9	25.2	25.7	26.1	6.6	22.6	22.7	22.6	13.9	28.6	30.0	30.6
No Programs, EITC and CTC only	3.7	31.6	26.0	26.1	3.7	31.7	25.7	26.1	0.4	28.8	22.7	22.6	7.6	35.1	30.0	30.6
Medicaid only	3.7	31.6	26.0	26.1	3.7	31.7	25.7	26.1	0.4	28.8	22.7	22.6	7.6	35.1	30.0	30.6
Housing only	24.7	52.6	43.6	33.5	24.7	52.7	44.1	30.0	21.4	49.8	34.5	22.7	28.6	56.1	51.0	49.6
SNAP only	16.0	57.6	37.7	26.3	16.2	57.7	36.4	26.2	10.8	54.8	33.2	22.6	20.2	61.1	48.3	30.6
Medicaid & Housing only	24.7	52.6	43.6	33.5	24.7	52.7	44.1	30.0	21.4	49.8	34.5	22.7	28.6	56.1	51.0	49.6
Medicaid & SNAP only	16.0	57.6	37.7	26.3	16.2	57.7	36.4	26.2	10.8	54.8	33.2	22.6	20.2	61.1	48.3	30.6
Medicaid, SNAP & TANF only	16.0	57.6	37.7	26.3	16.2	57.7	36.4	26.2	10.8	54.8	33.2	22.6	20.2	61.1	48.3	30.6
Medicaid, SNAP, TANF & Housing	38.0	78.2	54.8	33.6	38.2	78.2	55.5	30.0	32.8	75.3	44.6	22.7	42.2	81.6	62.0	49.6

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A8: The Distribution of the Marginal Tax Rates for Married Childless Adults in 2007

	Mean				Median				5 th Percentile				95 th Percentile			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
No Programs, No EITC or CTC	10.0	20.0	20.8	24.7	9.9	19.8	20.6	24.9	7.9	17.7	17.7	21.5	13.2	23.6	25.2	27.5
No Programs, EITC and CTC only	3.5	25.7	21.6	24.7	3.4	25.3	21.4	24.9	1.6	23.0	18.4	21.5	6.7	29.1	26.1	27.5
Medicaid only	3.5	25.7	21.6	24.7	3.4	25.3	21.4	24.9	1.6	23.0	18.4	21.5	6.7	29.1	26.1	27.5
Housing only	24.5	46.7	40.5	34.0	24.0	46.3	41.4	33.4	22.6	44.0	31.6	21.5	27.7	50.1	47.1	47.8
SNAP only	18.9	51.2	30.5	24.7	19.0	51.0	29.5	24.9	16.0	48.5	26.5	21.5	22.3	54.6	40.3	27.5
Medicaid & Housing only	24.5	46.7	40.5	34.0	24.0	46.3	41.4	33.4	22.6	44.0	31.6	21.5	27.7	50.1	47.1	47.8
Medicaid & SNAP only	18.9	51.2	30.5	24.7	19.0	51.0	29.5	24.9	16.0	48.5	26.5	21.5	22.3	54.6	40.3	27.5
Medicaid, SNAP & TANF only	18.9	51.2	30.5	24.7	19.0	51.0	29.5	24.9	16.0	48.5	26.5	21.5	22.3	54.6	40.3	27.5
Medicaid, SNAP, TANF & Housing	40.9	71.2	49.4	34.0	41.0	71.0	49.5	33.4	38.0	68.5	39.6	21.5	44.3	74.6	59.1	47.8

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A9: Marginal Tax Rates for Single Parents with Two Kids in Ohio with Different Discount Factors for Medicaid

Discount Factor = 0.2								
	1997				2007			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
Medicaid only	-31.6	13.3	53.4	47.8	-32.4	-15.9	47.5	47.6
Medicaid & Housing only	-13.7	34.3	63.6	47.8	-13.8	5.1	59.2	47.6
Medicaid & SNAP only	-31.6	24.8	100.3	47.8	-32.4	4.8	85.4	47.6
Medicaid, SNAP & TANF only	18.4	61.3	100.3	47.8	21.8	27.6	85.4	47.6
Medicaid, SNAP, TANF & Housing	30.0	77.0	107.2	47.8	34.6	43.6	94.1	47.6
Discount Factor = 0.3								
Medicaid only	-31.6	16.0	56.6	47.8	-32.4	-15.9	51.1	47.6
Medicaid & Housing only	-13.7	37.0	66.9	47.8	-13.8	5.1	62.8	47.6
Medicaid & SNAP only	-31.6	27.6	103.5	47.8	-32.4	4.8	89.0	47.6
Medicaid, SNAP & TANF only	18.4	64.1	103.5	47.8	21.8	27.6	89.0	47.6
Medicaid, SNAP, TANF & Housing	30.0	79.7	110.4	47.8	34.6	43.6	97.7	47.6
Discount Factor = 0.4								
Medicaid only	-31.6	18.8	59.9	47.8	-32.4	-15.9	54.7	47.6
Medicaid & Housing only	-13.7	39.8	70.1	47.8	-13.8	5.1	66.4	47.6
Medicaid & SNAP only	-31.6	30.3	106.8	47.8	-32.4	4.8	92.6	47.6
Medicaid, SNAP & TANF only	18.4	66.8	106.8	47.8	21.8	27.6	92.6	47.6
Medicaid, SNAP, TANF & Housing	30.0	82.5	113.6	47.8	34.6	43.6	101.3	47.6

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Table A10: Marginal Tax Rates for Single Parents with Two Kids in Ohio with Different Discount Factors for Subsidized Housing

Discount Factor = 0.3								
	1997				2007			
	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL	0-50% FPL	50-100% FPL	100-150% FPL	150-200% FPL
Housing only	-23.9	16.8	51.3	47.8	-24.4	-6.9	45.3	47.6
Medicaid & Housing only	-23.9	25.0	61.0	47.8	-24.4	-6.9	56.1	47.6
Medicaid, SNAP, TANF & Housing	24.0	72.1	104.6	47.8	28.6	34.9	91.0	47.6
Discount Factor = 0.5								
Housing only	-18.8	22.8	54.2	47.8	-19.1	-0.9	48.7	47.6
Medicaid & Housing only	-18.8	31.0	63.9	47.8	-19.1	-0.9	59.5	47.6
Medicaid, SNAP, TANF & Housing	27.0	75.9	107.5	47.8	31.6	39.3	94.3	47.6
Discount Factor = 0.7								
Housing only	-13.7	28.8	57.2	47.8	-13.8	5.1	52.0	47.6
Medicaid & Housing only	-13.7	37.0	66.9	47.8	-13.8	5.1	62.8	47.6
Medicaid, SNAP, TANF & Housing	30.0	79.7	110.4	47.8	34.6	43.6	97.7	47.6

Note: The marginal tax rates are reported in percentages. FPL refers to the Federal Poverty Line.

Online Appendix B

This appendix explains the details of the program benefit functions as well as the sources we use for the policy parameters.

1 Taxes

1.1 Federal Income Tax

We assume all married couples file for taxes jointly. If a single filer doesn't have any kids, she is subject to the brackets and the marginal tax rates of the single filing status. However, if a single filer has kids, we assume her filing status is the head of household. We use the lower and upper income thresholds and the marginal tax rates for each bracket and filing status provided by the Tax Foundation at http://taxfoundation.org/sites/default/files/docs/fed_individual_rate_history_nominal.pdf. For personal exemptions of single and married tax filers as well as dependents, we use the data provided by the IRS on <https://www.irs.gov/pub/irs-soi/histab23.xls>. We also assume all household income comes from labor market earnings.

1.2 State Income Tax

We backed out the income brackets and marginal tax rates for single and married households using NBER's tax simulator TAXSIM. Specifically, we simulated the state taxes of married and single households with income levels between \$0 and \$300,000 with \$500 increments in each state. The resulting brackets from this simulation exercise take into account the exemptions and credits in each state. We then cross-checked the marginal tax rates using the data provided by the Tax Policy Center at http://www.taxpolicycenter.org/taxfacts/Content/PDF/state_income_rates.pdf for the years the data is available.

1.3 Payroll Tax

We use information provided by the Tax Foundation at http://taxfoundation.org/sites/taxfoundation.org/files/docs/soc_security_rates_1937-2009-20090504.pdf for the Social Security and Medicare Tax Rates paid by an employee along with the maximum taxable base.

1.4 Federal Earned Income Tax Credit

The amount of federal Earned Income Tax Credit (EITC) a tax filer i with labor market earnings E_{it} receives at time t is determined based on the following formula:

$$\text{FEITC}_{it} = \begin{cases} r_{1it}E_{it} & \text{if } E_{it} \leq b_{1it}, \\ r_{1it}b_{1it} & \text{if } b_{1it} < E_{it} \leq b_{2it}, \\ \max\{r_{1it}b_{1it} - r_{2it}(E_{it} - b_{2it})\} & \text{if } E_{it} > b_{2it}. \end{cases} \quad (1)$$

In this setup the first line of equation (1) defines the subsidy region, the second line defines the flat region, and the third line defines the phase-out region of the credit schedule. The income levels b_{1it} and b_{2it} are the thresholds that define the subsidy and phase-out regions, respectively. The slope of the subsidy and phase-out regions of the credit schedule are determined by r_{1it} and r_{2it} . The earnings thresholds as well as the subsidy and phase-out rates depend on the number of children and the marital status of a tax filer. For all the policy parameters of the federal EITC, we use information provided by the Tax Policy Center at http://www.taxpolicycenter.org/taxfacts/content/pdf/historical_eitc_parameters.pdf. Once again, we assume all household income comes from labor market earnings.

1.5 State Earned Income Tax Credit

If a tax filer receives federal EITC and resides in a state that offers a state EITC program, then she also receives tax credit from the state. The level of the state EITC is determined as a percentage of the federal EITC that the filer receives. In other words,

$$\text{SEITC}_{it} = r_{3it}\text{FEITC}_{it}, \quad (2)$$

where the policy parameter r_{3it} is set by the state and varies with the calendar year and for some states, with the number of children. NBER provides a table on the state EITC rates for the years between 1996 and 2010 at <http://users.nber.org/~taxsim/state-eitc.html>.

The state EITC schedule of Minnesota resembles the shape of federal EITC and the details of the credit schedule for this state can be found at http://users.nber.org/~taxsim/eitc_MN.pdf. We assume the take up rate for the state EITC is 100%.

1.6 Child Tax Credit

For the calculation of the Child Tax Credit (CTC), we assume all married individuals file for taxes jointly. The maximum credit per child, refundability threshold, refundability rate, phase-out thresholds based on filing status, and the phase-out rate determine the child tax credit amount a tax filer receives. We use the information provided by the Congressional Research Service report “The Child Tax Credit: Current Law and Legislative History”¹ for the policy parameters.

2 Transfer Programs

2.1 Medicaid

For the income eligibility thresholds of parents between 2002-2007, we use data provided by the Kaiser Family Foundation at <http://kff.org/medicaid/state-indicator/medicaid-income-eligibility-limits-for-parents/>. For 1997, we use the AFDC eligibility thresholds provided by the Congressional Research Service report on “Medicaid Eligibility for Adults and Children”. We then back out the thresholds for the remaining years using the parents’ eligibility expansion levels and implementation dates from Busch and Duchovny (2005).

We use the same income eligibility thresholds for all children regardless of their age. For all children, we use the income eligibility thresholds for children who are aged between 6 and 18, since those are less than or equal to the thresholds for children of different ages. For the years between 1997 and 2001, we use data provided by the “Maternal and Child Health Update” reports of the National Governors Association². For the years between 2001 and 2007, we use the data provided by the Kaiser Family Foundation at <http://kff.org/medicaid/state-indicator/medicaid-income-eligibility-limits-for-children-ages-6-18/>.

For all the income eligibility thresholds (parents and children), we take the maximum of

¹<https://www.fas.org/sgp/crs/misc/R41873.pdf>

²<http://www.nga.org/cms/home/nga-center-for-best-practices/center-publications/page-health-publications/col2-content/main-content-list/maternal-and-child-health-mch-up.html>

the thresholds for Medicaid and SCHIP. We also include the earnings and children disregards from the KFF policy brief on ‘Determining Income Eligibility in Children’s Health Coverage Programs: How States Use Disregards in Children’s Medicaid and SCHIP’.³

We calculate the Medicaid benefits a household receives by first multiplying the number of adults and the number of children with the per capita state Medicare expenditures on adults and children, respectively and then by adding up those two components. The per capita state expenditures are provided by Kosali Simon. Once we have the total Medicare benefits of a household, we discount this number by 0.3 as discussed in the paper.

2.2 Supplemental Nutritional Assistance Program

We get the gross and net income eligibility rules, net income definition, monthly maximum benefits, and the benefit calculation rules for each year from the report “Trends in Supplemental Nutrition Assistance Program Participation Rates: Fiscal Year 2010 to Fiscal Year 2013” prepared by the Mathematica Policy Research for the U.S. Department of Agriculture’s Food and Nutrition Service, Office of Policy Support⁴. We construct the series for standard and shelter deductions from the legislative timeline provided by the USDA’s Food and Nutrition Service at <http://www.fns.usda.gov/sites/default/files/timeline.pdf>. We ignore the dependent deduction for dependents who are younger than 2 years old in our analysis. For the households that do not participate in subsidized housing, we assume the shelter expense is equal to one-third of the gross household income. If the household participates in subsidized housing, we assume the shelter expense is equal to the *required rent* that is used in calculation of the housing subsidy. The details of the required rent formula is explained below.

2.3 Temporary Assistance for Needy Families

The policy rules, the needs standards, the rules for the gross and net income tests, earnings disregards, and the payment standards define the amount of welfare benefits a TANF participant receives. We use the rules and policy parameters provided by the Welfare Rules Database⁵ of the Urban Institute.

³The policy brief can be downloaded from <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/7776.pdf>.

⁴<http://www.fns.usda.gov/sites/default/files/ops/Trends2010-2013.pdf>

⁵<http://wrds.urban.org/wrd/Query/query.cfm>

2.4 Subsidized Housing

All the policy parameters to calculate the housing subsidy are taken from TRIM3 project website⁶, <http://trim3.urban.org>. In order to assign the number of bedrooms to a household, we assume that there needs to be at least one bedroom for 2 people and if there are odd number of people in the house, we round the required number of bedrooms downwards. The information on the level of fair market rent for each year based on the number of bedrooms is provided by TRIM3. The adjusted income is found by deducting the dependent and elderly allowances from gross income. Note that, gross income for subsidized housing includes TANF benefits received by the household. There are also allowances for child care expenses and medical expenses for households with an elderly or disabled head or spouse that we ignore in our analysis.

We follow the description on TRIM3 project website to calculate the subsidy. The amount of subsidy equals to the fair market rent minus the required rent. The required rent is the larger of 10% of gross income and 30% of adjusted income. If the result is less than \$25, then the required rent is equal to the lesser of \$25 and 60% of gross income. Once we calculate the subsidy, we discount it by 0.7 as discussed in the paper.

References

Busch, S. H. and N. Duchovny (2005). Family coverage expansions: Impact on insurance coverage and health care utilization of parents. *Journal of Health Economics* 24(5), 876–890.

⁶Downloaded on February 4, 2016.