

The State Earned Income Tax Credit and Savings Behavior

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August 19, 2013

Outline

- Background and motivation
- The current study
- Data
- Model and empirical approach
- Results
- Conclusion
- Limitations and plans for future research

Benefit Delivery

- The EITC expansion fundamentally changed how low-income families receive cash benefits
 - Effects on employment, poverty, and family structure have been studied.
 - There might be reason to believe the form of the benefits has other effects

The Importance of Assets

- Assets are important for the short- and long-term welfare of low-income families
 - “Asset poor” families experience more hardship in the face of negative events¹
 - Holding assets associated with positive outcomes²
 - Saving is difficult for low-income families
 - Tax time might be a salient financial moment for families to save

The Earned Income Tax Credit

- Relatively large, refundable credit that goes to low-income working families.
- Delivered as a lump sum at tax time
- Federal program with optional state supplements, usually as a percentage of the federal benefit

States with EITCs in 2000

State	Percentage of Federal Credit
Colorado	10%
DC	10%
Illinois	5%
Iowa	6.5%
Kansas	10%
Maine	5%
Maryland	15%
Massachusetts	10%
Minnesota	Varies with earnings; average 33%
New Jersey	10%
New York	22.5%
Oregon	5%
Rhode Island	26%
Vermont	32%
Wisconsin	4% - one child
	14% - two children
	43% - three children

A Unique Opportunity to Save

- Thaler and Shefrin's (1981) behavioral life cycle model suggests that people treat lump sums differently than additions to monthly income
 - Specifically, the marginal propensity to save a lump sum payment is higher
- Some evidence to support this with the EITC
 - Intended use: first priority for most is paying bills or debt, but savings is a secondary priority for a substantial minority of families.¹
 - Actual use: less is known. One follow up interview found that about 26% of families actually saved²

¹ e.g. Simpson, Tiefenthaler & Hyde 2009; Linnenbrink 2008; Mammen & Lawrence 2006; Smeeding 2000; Romich & Weisner 2000. ² Spader, Ratcliffe, and Stegman 2005

The Current Study

- Does a more generous EITC increase the amount low-income families are able to save?
 - I hypothesize that families in states and years with more generous credits will be more likely to save and will exhibit increased liquid asset holdings.

Data

- State EITC policies from the Tax Policy Center and the Center on Budget and Policy Priorities
- 2001 and 2004 Surveys of Income and Program Participation (SIPP)
 - Unit of analysis is the family
 - Sample is low-education single mothers

Model

$$\ln(Y_{ist}) = \beta_0 + \beta_1 \text{EITC}_{st} + \beta_2 X_{ist} + \beta_3 S_{ist} + \delta_t + \varepsilon_{ist}$$

- Dependent variable: natural log of sum of liquid assets
- EITC: existence of state EITC, then value
- X: unsecured debt, income, under FPL, under 200% of FPL, age, age2, race, family composition, education, receives food stamps, region
- S: lagged state unemployment and per capita income
- δ : dummy indicating year

Empirical Approach

- A substantial portion of families in the sample (55%) have zero liquid assets.
- The decision to save at all may be separate from (but correlated with) the amount to save, once the decision is made
 - Those who save are a non-random sample
- Heckman two-step

Descriptives, by state EITC

	Entire Sample	No State EITC	State EITC
Total family liquid assets	\$2,722.90	\$2,890.17	\$2,215.22
State EITC as percentage of Federal EITC	4.99%	0.00%	20.14%***
Total family unsecured debt	\$2,911.25	\$2,624.35	\$3,782.02***
Total family monthly income	\$1,744.67	\$1,699.96	\$1,880.35***
Income less than Federal Poverty Level (FPL)	47.29%	47.94%	45.31%*
Income between 100 and 200 percent of FPL	28.84%	29.53%	26.77%**
Age	33.99	33.92	34.17
White	47.23%	46.35%	49.90%**
Black	30.43%	30.53%	30.14%
Hispanic	17.28%	18.28%	14.23%***
Other race, non-white, non-hispanic	5.06%	4.84%	5.73%
Number of children in family	1.75	1.75	1.72
Number of adults in family	1.20	1.20	1.20
Own a car	73.73%	75.18%	69.32%***
Less than high school	20.27%	20.82%	18.61%*
High school degree, no college	34.51%	34.68%	33.99%
Some college	45.22%	44.50%	47.40%*
Received food stamps	34.54%	34.84%	33.65%
Observations	5,984	4,501	1,483

Descriptives, by liquid asset holdings

	Liquid assets=0	Liquid assets>0
Total family liquid assets***	0	\$6,114.00
State has EITC***	22.87%	27.17%
State EITC as percentage of Federal EITC***	4.46	5.66
Total family unsecured debt ***	\$1,591.30	\$4,555.13
Total family monthly income***	\$1,203.99	\$2,418.03
Income less than Federal Poverty Level (FPL)***	63.09%	27.62%
Income between 100 and 200 percent of FPL***	25.94%	32.46%
Age (years)***	32.31	36.07
White***	37.12%	59.81%
Black***	37.30%	21.88%
Hispanic***	20.49%	13.28%
Other race, non-white, non-hispanic	5.09%	5.03%
Number of children in family***	1.85	1.62
Number of adults in family***	1.17	1.25
Own a car***	64.21%	85.59%
Less than high school***	28.53%	9.98%
High school degree, no college***	36.82%	31.63%
Some college***	34.65%	58.39%
Received food stamps***	46.37%	19.81%
Observations	3,319	2,665

Results, state has EITC

	Heckman First Stage Probit	Heckman second stage OLS	OLS
	Dependent variable=1 if family liquid assets>0	Dependent variable= ln(total family liquid assets (\$))	
State has EITC	0.005	0.124	0.126
	(0.016)	(0.119)	(0.119)
lambda		-0.266	
		(0.624)	
Observations	5,984	5,984	2,665
R-squared			0.178

Results, value of EITC

	Heckman First Stage Probit	Heckman second stage OLS	OLS
	Dependent variable=1 if family liquid assets>0	Dependent variable= ln(total family liquid assets (\$))	
State EITC as percentage of Federal EITC	0.001	0.003	0.003
	(0.001)**	(0.005)	(0.004)
lambda		-0.320	
		(0.616)	
Observations	5,984	5,984	2,665
R-squared			0.177

Discussion

- No real evidence that families in states and years with more generous EITC programs save more.
- Maybe not surprising
 - Other work shows that a minority of families save—most focus on paying down unsecured debt or bills
- Savings incentive programs may be necessary for this population
 - Initial evaluations of such programs are promising

Limitations

- Not generalizable beyond low-education single mothers – problem with sample definition
- Timing of variables is not ideal

Future Work

- Different and/or more data
 - Panel data and FE or differencing
 - More precise sample of recipients
 - All single women, instead of just heads of household
- Dependent variables: net worth, unsecured debt, durable goods purchases

Thank you!

BONUS SLIDES

EITC Benefit Structure

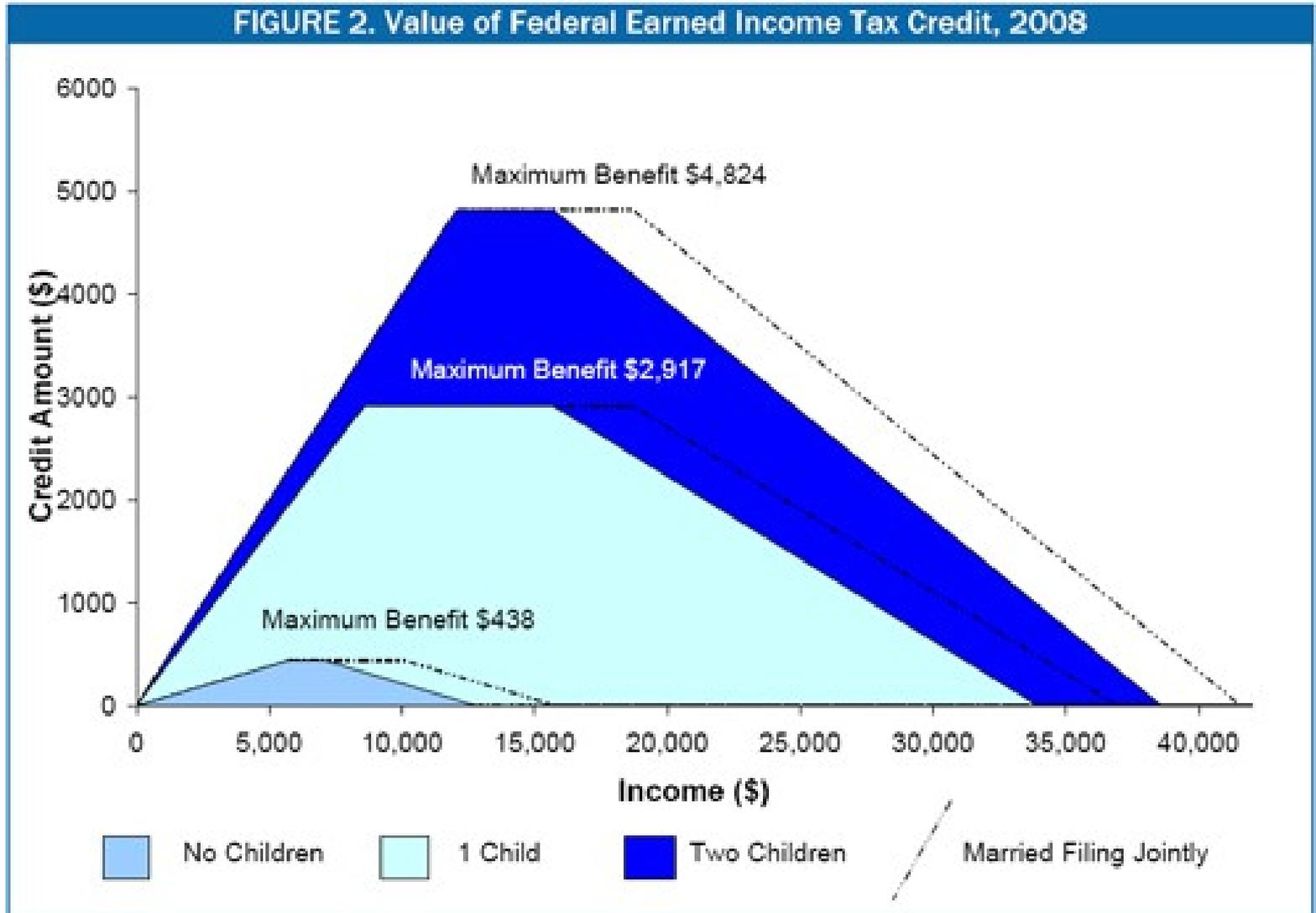


Chart taken from the Center on Budget and Policy Priorities

Table 3, part 1	Heckman First Stage Probit	Heckman second stage OLS	OLS
	Dependent variable=1 if family liquid assets>0	Dependent variable=Ln(Total family liquid assets (\$))	
Depository offices per capita	295.475 (103.194) ^{***}		
State has EITC	0.005 (0.016)	0.124 (0.119)	0.126 (0.119)
Total family unsecured debt (\$)	0.000 (0.000) ^{***}	-0.000 (0.000)	-0.000 (0.000)
Total family monthly income (\$)	0.000 (0.000) ^{***}	0.000 (0.000) ^{***}	0.000 (0.000) ^{***}
Income less than Federal Poverty Level (FPL)	-0.118 (0.028) ^{***}	-0.528 (0.269) ^{**}	-0.619 (0.164) ^{***}
Income between 100 and 200 percent of FPL	-0.051 (0.021) ^{**}	-0.505 (0.150) ^{***}	-0.540 (0.126) ^{***}
<i>Income above 200 percent of FPL (omitted)</i>			
Age (years)	0.012 (0.004) ^{***}	-0.092 (0.038) ^{**}	-0.085 (0.034) ^{**}
Age Squared (years)	-0.000 (0.000) [*]	0.002 (0.000) ^{***}	0.001 (0.000) ^{***}
Black, non-hispanic	-0.132 (0.014) ^{***}	-0.352 (0.194) [*]	-0.420 (0.111) ^{***}
Hispanic	-0.078 (0.017) ^{***}	-0.232 (0.169)	-0.274 (0.136) ^{**}
Other race, non-white, non-hispanic	-0.052 (0.026) ^{**}	0.031 (0.207)	0.004 (0.197)
<i>White (omitted)</i>			

Number of children in family	-0.015	0.077	0.071
	(0.007)**	(0.058)	(0.056)
Number of adults in family	-0.009	0.070	0.069
	(0.012)	(0.079)	(0.079)
Own a car	0.104	0.081	0.141
	(0.014)***	(0.187)	(0.124)
Less than high school	-0.150	-0.471	-0.558
	(0.016)***	(0.255)*	(0.151)***
High school degree, no college	-0.079	-0.158	-0.196
	(0.012)***	(0.130)	(0.094)**
<i>Some college (omitted)</i>			
Received food stamps	-0.087	-0.618	-0.667
	(0.013)***	(0.164)***	(0.117)***
State unemployment, lagged	-0.023	0.045	0.031
	(0.007)***	(0.062)	(0.053)
State per capita income, lagged	0.000	0.000	0.000
	(0.000)***	(0.000)	(0.000)
Year = 2004	0.063	-0.388	-0.352
	(0.017)***	(0.154)**	(0.128)***
<i>Year = 2001 (omitted)</i>			

Table 3, part 3			
Lives in Northeast	-0.076	0.029	0.002
	(0.024) ^{***}	(0.169)	(0.157)
Lives in Midwest	-0.047	-0.180	-0.187
	(0.023) ^{**}	(0.148)	(0.148)
Lives in South	-0.045	-0.001	-0.018
	(0.019) ^{**}	(0.142)	(0.137)
<i>Lives in West (omitted)</i>			
lambda		-0.266	
		(0.624)	
Constant		6.901	6.542
		(1.186) ^{***}	(0.836) ^{***}
Observations	5,984	5,984	2,665
R-squared			0.178