Changes in EITC eligibility and participation, 2005-2009

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Introduction

- Earned Income Tax Credit (EITC) eligibility and take-up is of great interest to policy-makers.
  - It is the largest cash-transfer program in U.S.
  - In 2009, EITC provided assistance to >25 million families.
- Estimating year-by-year estimates of take-up vs. eligibility has been focus.
- Year-by-year *changes*, especially in eligibility, receive less attention.

The most recent recession gives us an opportunity to assess program coverage during a downturn.

- Eligibility may increase due to partial employment/loss of spouse earnings; may decrease due to full-year unemployment

Background

- Assessment of eligibility/take-up requires
  - Estimate of number participating (via administrative data)
  - Estimate of those eligible (via survey data)
- Focus on take-up
  - First estimates in 1990 (Scholz) using only Current Population Survey Annual Social and Economic Supplement (CPS ASEC) and SIPP
  - Recent take-up estimates
    - Caputo (2011): between 53% and 64% for 1999-2005 using NLSY
    - Plueger (2009): ≈75% for 2005 using CPS ASEC linked to IRS data

Data

- Census data, 2006-2010
  - CPS ASEC
  - Modeling files: CPS data modified to model eligibility by household
- IRS data, 2005-2009
  - 1040s
  - EITC recipient file
  - 1040 filers receiving a notice of eligibility for EITC
  - W2s
- Files merged using a Protected Information Key assigned in CARRA

Data

Sample construction

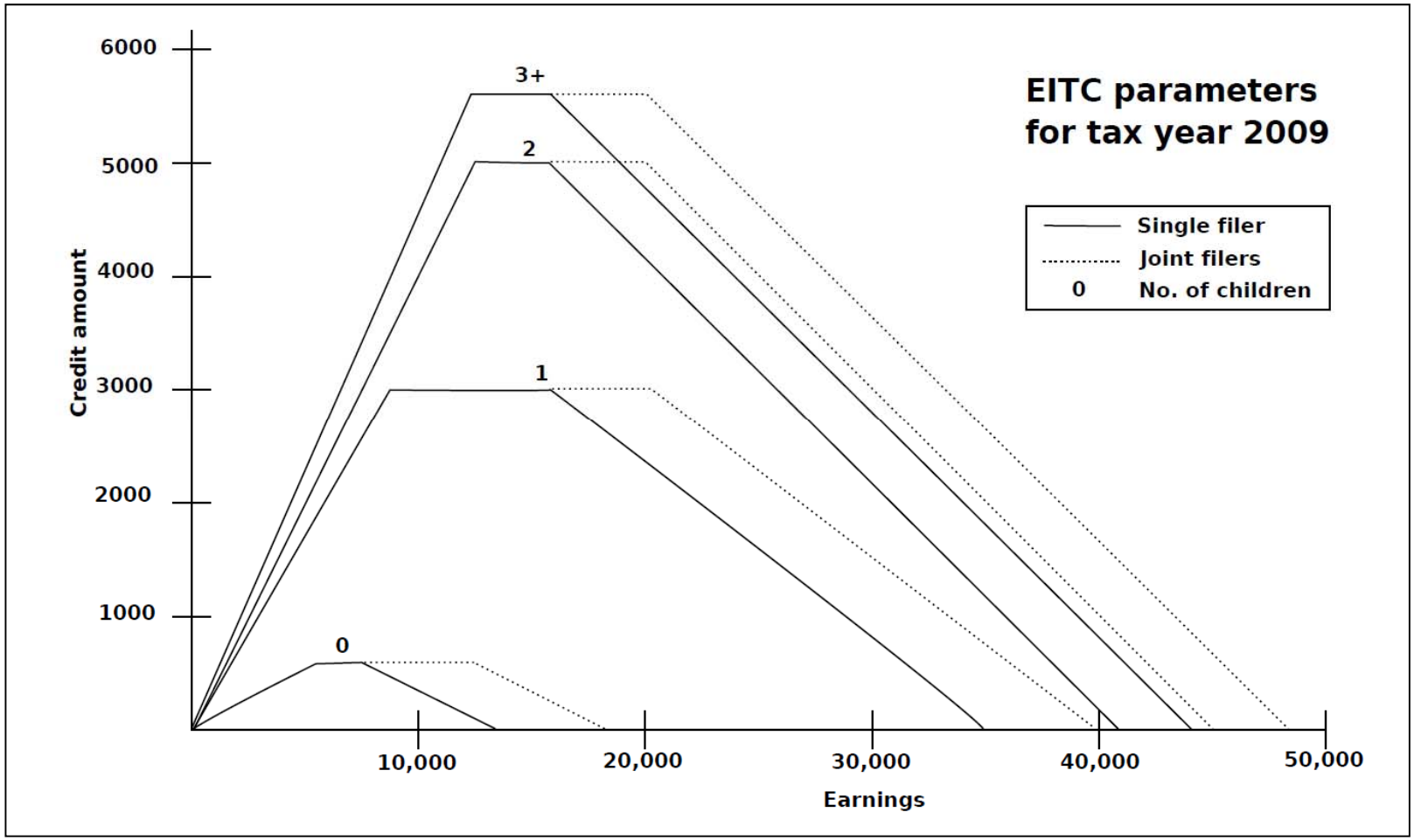
	2005		2006		2007		2008		2009	
Total CPS sample	208,562	100%	206,639	100%	206,404	100%	207,921	100%	209,802	100%
Imputed earnings	19,450	9%	20,204	10%	18,243	9%	18,926	9%	20,458	10%
Edited earnings	19,587	9%	20,490	10%	20,831	10%	19,698	9%	20,154	10%
Not PIKed	16,131	8%	15,150	7%	18,473	9%	18,547	9%	16,801	8%
In analysis sample	153,394	74%	150,795	73%	148,857	72%	150,750	73%	152,389	73%
Earners	72,447	35%	71,044	34%	71,629	35%	72,318	35%	72,603	35%
Earners with modeled data	67,289	32%	65,919	32%	66,116	32%	72,318	35%	72,603	35%
Final count, all years	344,245									

Expansions in program

- Discussion of eligibility increases must take program expansion into account.
  - Married filers received increases between 2005 and 2009.
  - Those with 3+ children received higher credits beginning in 2009.

Year	Expansion category	Amount
2005	Married filing jointly	$2,000
2006	Married filing jointly	$2,000
2007	Married filing jointly	$2,000
2008	Married filing jointly	$3,000
2009	Married filing jointly	$5,000
2009	Three child expansion	45% phase-in rate; $5657 max

EITC in 2009


EITC parameters
for tax year 2009
Single filer
Joint filers
0 No. of children
Credit amount
6000
5000
4000
3000
2000
1000
3+
2
1
0
10,000
20,000
30,000
40,000
50,000
Earnings

Summary results

Changes in 1040 and EITC eligiblity and take-up, 2005-2009

	1040			EITC		
	Participants	Eligibles	Rate/SE	Participants	Eligibles	Rate/SE
2005	114,787	145,685	78.79	15,547	20,185	77.03
			(0.18)			(0.51)
2006	117,960	146,849	80.33	15,642	20,062	77.97
			(0.19)			(0.51)
2007	131,299	149,002	88.12	15,967	19,827	80.53
			(0.17)			(0.52)
2008	121,776	150,486	80.92	16,678	20,992	79.45
			(2.03)			(0.49)
2009	121,157	152,947	79.21	17,913	22,742	78.77
			(1.79)			(0.47)
% change, 05-09	5.40	4.86		14.14	11.91	

Columns 2,3,5, and 6 in1000s; columns 4 and 7 in percents.

Changes, eligibility

	All			Expansion				
Individual characteristics	2005 Total	2009 Total	change 05-09	2005 Total	2009 Total	change 05-09	% change, expansion	% change, other
Female	20.16	19.72	-0.44	0.13	0.39	0.26	1.32	-3.51
	(0.30)	(0.29)		(0.02)	(0.04)			
Male	9.87	11.78	1.92	0.37	1.03	0.66	6.09	11.62
	(0.17)	(0.18)		(0.03)	(0.06)			
White alone	12.14	13.47	1.33	0.27	0.78	0.51	3.99	6.42
	(0.16)	(0.16)		(0.03)	(0.04)			
Black alone	23.65	23.05	-0.60	0.31	0.74	0.43	1.86	-4.42
	(0.58)	(0.52)		(0.07)	(0.10)			
Other race	13.29	13.85	0.56	0.30	0.98	0.68	5.01	-0.87
	(0.63)	(0.62)		(0.10)	(0.20)			
Non-Hispanic	12.15	12.81	0.66	0.22	0.66	0.44	3.50	1.79
	(0.16)	(0.16)		(0.02)	(0.04)			
Hispanic	25.15	27.19	2.04	0.63	1.51	0.88	3.35	4.46
	(0.60)	(0.49)		(0.10)	(0.12)			
Less than HS	20.03	22.22	2.19	0.31	1.12	0.81	3.84	6.54
	(0.50)	(0.49)		(0.06)	(0.12)			
H.S. graduate	16.98	17.97	0.99	0.34	0.89	0.55	3.16	2.50
	(0.32)	(0.30)		(0.04)	(0.06)			
Some college	15.11	16.17	1.07	0.34	0.82	0.48	3.05	3.78
	(0.30)	(0.30)		(0.05)	(0.07)			
BA/BS or more	5.38	6.55	1.18	0.13	0.47	0.34	5.68	14.04
	(0.21)	(0.20)		(0.03)	(0.05)			

Changes, eligibility

	All			Expansion				
Family characteristics	2005 Total	2009 Total	change 05-09	2005 Total	2009 Total	change 05-09	% change, expansion	% change, other
No children	5.70	5.95	0.25	0.09	0.23	0.14	2.42	1.89
	(0.14)	(0.13)		(0.02)	(0.03)			
One child	32.67	36.23	3.56	0.55	1.38	0.84	2.43	7.91
	(0.54)	(0.60)		(0.07)	(0.12)			
More than one child	30.33	35.59	5.26	0.79	2.69	1.90	5.75	10.20
	(0.48)	(0.46)		(0.09)	(0.17)			
Single filer	16.31	15.98	-0.33	(NA)	0.03	0.03	(NA)	-2.27
	(0.23)	(0.22)			(0.01)			
Joint filer	10.38	13.19	2.80	0.67	1.93	1.25	10.69	13.12
	(0.22)	(0.21)		(0.22)	(0.09)			

Changes, take-up

Individual characteristics	2005 Total	2009 Total	change 05-09	% change
Female	80.81	81.75	0.94	1.16
	(0.64)	(0.60)		
Male	72.13	75.59	3.46	4.69
	(0.83)	(0.69)		
White alone	76.85	77.76	0.91	1.17
	(0.63)	(0.57)		
Black alone	78.29	81.91	3.63	4.53
	(1.15)	(0.98)		
Other race	74.17	81.58	7.42	9.52
	(2.39)	(1.69)		
Non-Hispanic	75.63	81.09	5.46	6.97
	(0.60)	(0.48)		
Hispanic	81.51	72.21	-9.30	-12.10
	(0.93)	(1.05)		
Less than HS	79.51	72.16	-7.35	-9.69
	(1.11)	(1.14)		
H.S. graduate	78.57	81.44	2.87	3.59
	(0.80)	(0.74)		
Some college	77.52	82.11	4.59	5.75
	(0.92)	(0.76)		
BA/BS or more	64.60	73.47	8.87	12.85
	(1.99)	(1.52)		

Changes, take-up

Family characteristics	2005 Total	2009 Total	change 05-09	% change
No children	56.10	65.23	9.13	15.05
	(1.21)	(1.15)		
One child	86.15	85.33	-0.82	-0.96
	(0.70)	(0.67)		
More than one child	84.33	82.94	-1.39	-1.66
	(0.71)	(0.66)		
Single filer	75.45	78.39	2.93	3.81
	(0.69)	(0.56)		
Joint filer	80.52	79.47	-1.04	-1.30
	(0.79)	(0.75)		
Phase-in	64.15	68.23	4.08	6.16
	(1.06)	(0.95)		
Plateau	83.11	81.31	-1.80	-2.19
	(1.40)	(1.11)		
Phase-out	83.13	84.39	1.26	1.50
	(0.64)	(0.53)		

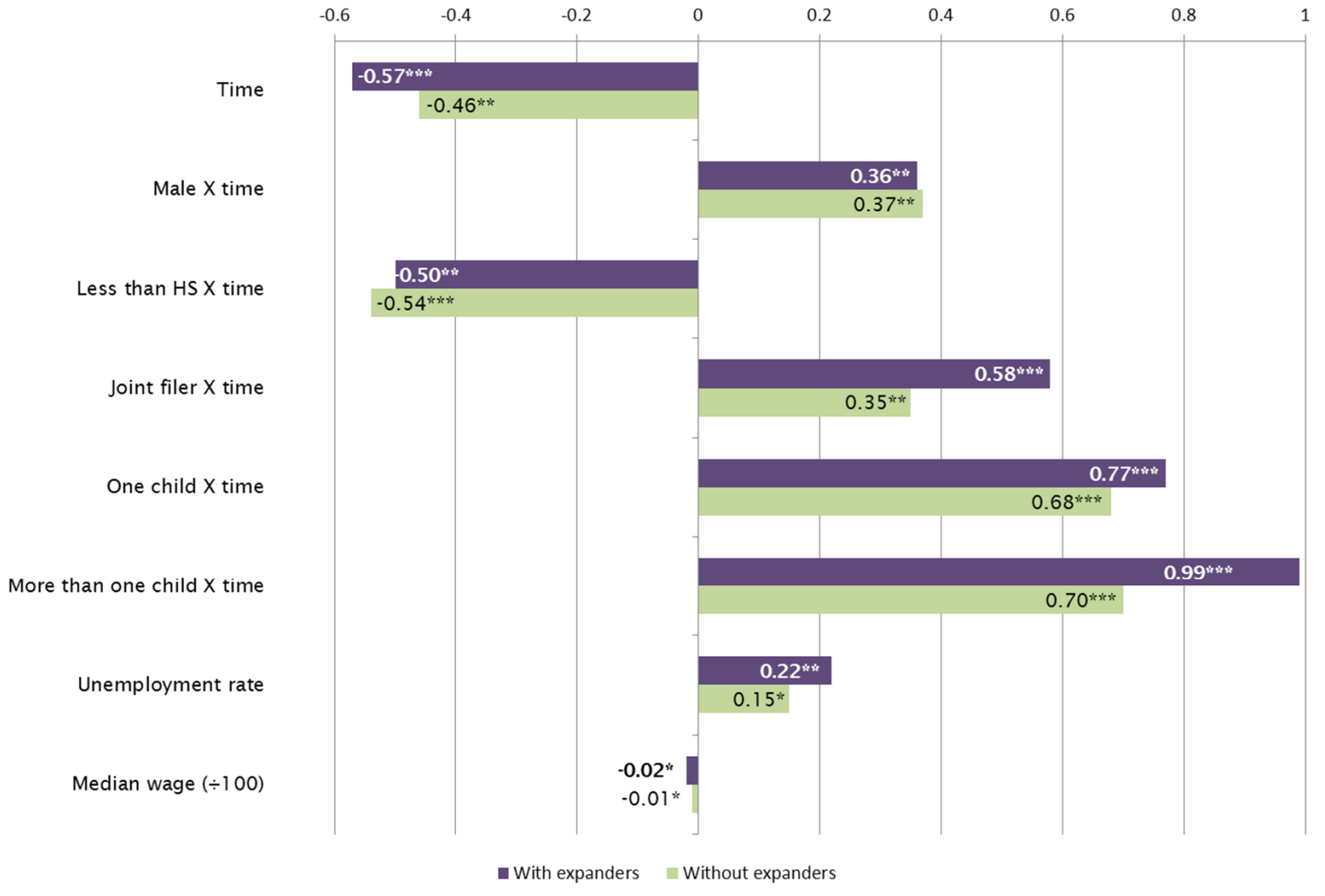
Fixed effects models

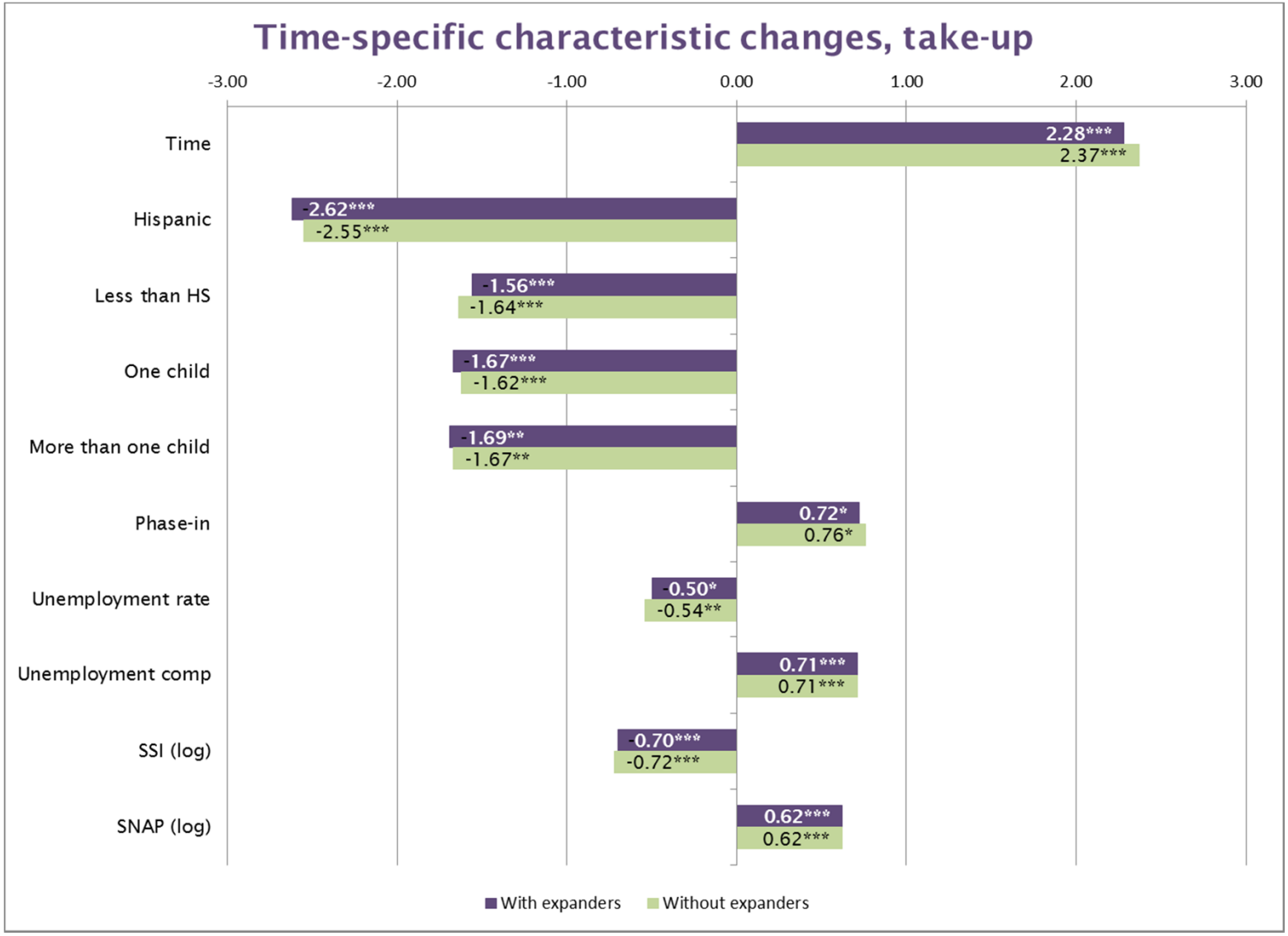
- Question: What was the eligibility/take-up experience for groups over time?
  - Fixed-effects models with time-specific characteristic indicators
  - Includes controls for local labor market

$$Y_{ist} = \alpha + \beta Z_{st} + \gamma X_{ist} + T_{\tau} + (X_{ist} \times T_{\mu}) + \sigma_s + \varepsilon_{ist}$$

Y_{ist} is either eligibility or take-up; Z_{st} are labor market variables by state and time; X_{ist} are demographic characteristics; T are time fixed effects; σ_s are state fixed effects; and the $X \times T$ terms are interactions between characteristics and time.

Time-specific characteristic changes, eligibility




Time-specific characteristic changes, take-up
-3.00
-2.00
-1.00
0.00
1.00
2.00
3.00
Time
2.28***
2.37***
Hispanic
-2.62***
-2.55***
Less than HS
-1.56***
-1.64***
One child
-1.67***
-1.62***
More than one child
-1.69**
-1.67**
Phase-in
0.72*
0.76*
Unemployment rate
-0.50*
-0.54**
Unemployment comp
0.71***
0.71***
SSI (log)
-0.70***
-0.72***
SNAP (log)
0.62***
0.62***
With expanders
Without expanders

Conclusion

- Overall eligibility increased over the recession.
  - Local economic conditions influenced eligibility.
  - Certain groups experienced eligibility changes that may have been co-determined by their labor-market experience.
- Overall take-up, contingent on eligibility, remained flat (between 77% and 78%).
  - Groups that experienced eligibility increases did not necessarily participate at higher rates.
  - Participation in other programs targeted to workers increased take-up.