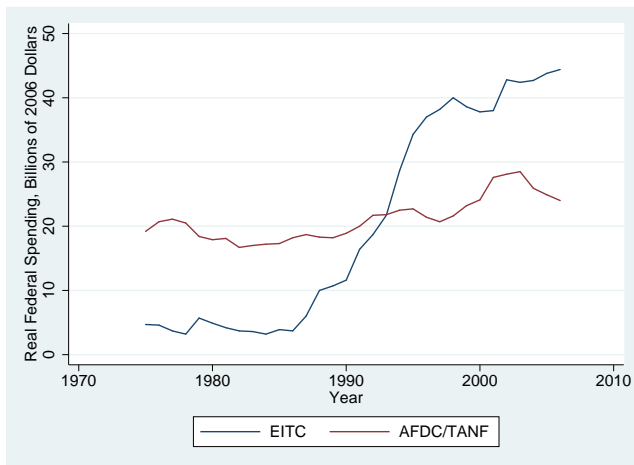


The EITC, Tax Refunds, and Unemployment Spells

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Growing Importance of Tax System in Safety Net



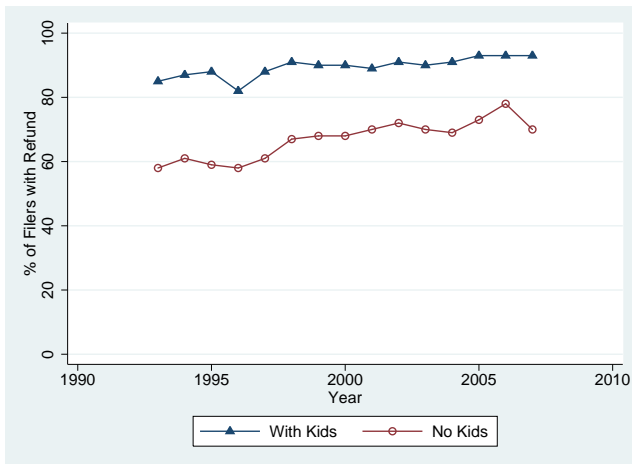
Motivation and Research Question

- ▶ Tax refund often largest payment of the year for low-income families
- ▶ Previous research shows higher levels of cash-on-hand lengthen unemployment
 - ▶ Card, Chetty, and Weber (2007): Job losers just eligible for severance pay have 8-12% lower job finding rate
 - ▶ Chetty (2008): More generous UI benefits increase duration most for liquidity-constrained households
- ▶ Question: Among low-income parents, are unemployment spells beginning just after tax refund receipt longer than unemployment spells beginning at other times?
 - ▶ Women: Spells beginning in February have ~25% lower re-employment hazard rate
 - ▶ Men: No effect

Tax Refunds of EITC Recipients

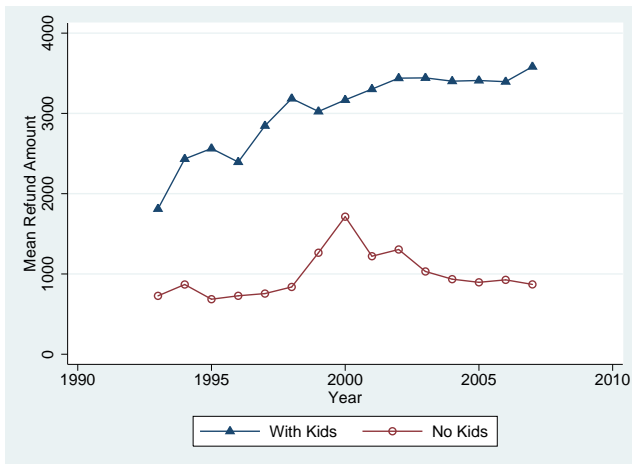
1. Refunds are large
2. Most refunds are distributed in February
3. Refunds are spent quickly

Share of Low-Income Returns Generating Refunds



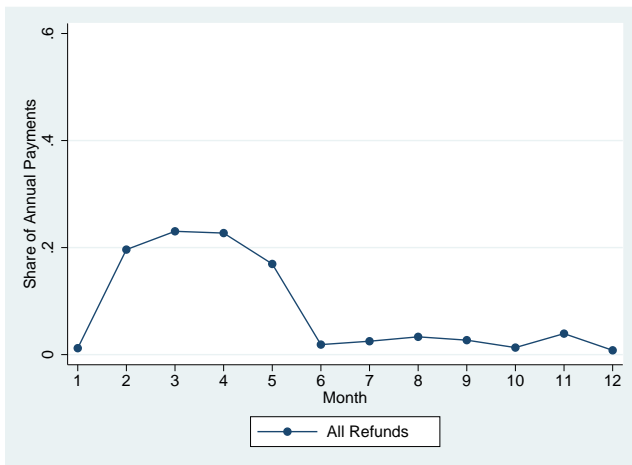
Tax returns with $0 < AGI < \$33000$, real 2007 dollars

Mean Refund, Low-Income Returns



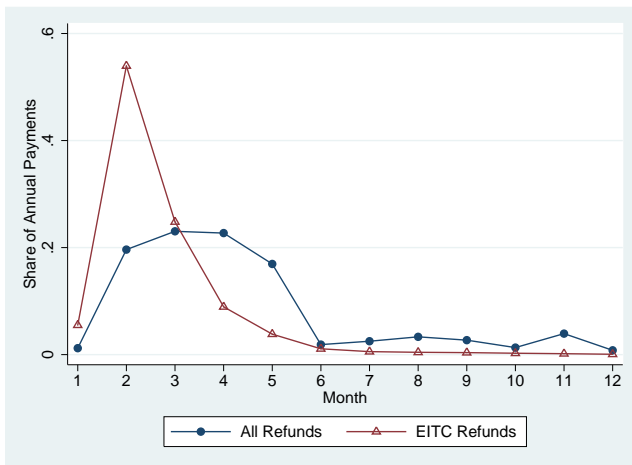
Tax returns with $0 < AGI < \$33000$, real 2007 dollars

Timing of Refund Distribution



Data are from *Monthly Treasury Statements*, 1998 through 2007.

Timing of Refund Distribution



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Refunds Are Spent Down Quickly

- ▶ Evidence for full population:
 - ▶ Souleles (1999): MPC out of tax refunds is ~ 34 to 64 cents
 - ▶ Johnson et al. (2006), Parker et al. (2011): Similar analysis of 2001, 2008 tax rebate payments
- ▶ Evidence for EITC recipients:
 - ▶ Smeeding, Ross, and O'Connor (2000): 33% plan to save part of refund
 - ▶ Beverly, Schneider, Tufano (2006): 15% divert part of refund into savings account
 - ▶ Bronchetti et al. (2011): 9% buy U.S. savings bond
 - ▶ Barrow and McGranahan (2000): In February, EITC-eligible spend 3% more, 9% more on durables
 - ▶ Adams, Einav, and Levin (2009): Among low-income parents, vehicle loan applications twice as high in February

How Cash on Hand Affects Job Search

Use job search model of Lentz and Tranæs (2005)

- ▶ Consumption can be financed by wage income (if employed), UI benefit (if unemployed), or liquid assets
- ▶ The unemployed choose search effort, costly in utility terms
- ▶ Prediction: An increase in liquid assets lowers optimal search effort

Claim: For EITC recipients, the concentrated payment of tax refunds generates large, predictable seasonal variation in liquid assets

Estimation Strategy

- ▶ Restrict to sample of likely EITC recipients: Low-income, low-education parents
- ▶ Compare unemployment spells beginning in February to spells beginning in other months
- ▶ Strategy does not rely on knowing size or exact timing of any individual's refund

Estimation Strategy, Cont.

- ▶ Estimate Cox proportional hazard models

$$\log(h_{it}) = \beta_1 \text{Feb Start}_i + \beta_2 \text{WBA}_i + \gamma \mathbf{X}_{it} + \epsilon_{it}$$

- ▶ If cash-on-hand lengthens unemployment, $\beta_1 < 0$
- ▶ WBA = estimated weekly UI benefit amount
- ▶ \mathbf{X} includes demographics, net liquid wealth, measures of previous work experience
- ▶ Include year, month, state, industry fixed effects
- ▶ Cluster standard errors at individual level

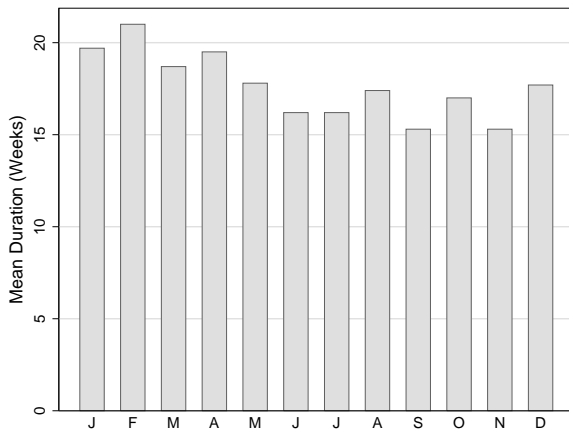
Data: SIPP

- ▶ 1993, 1996, 2001, and 2004 panels
- ▶ Spell begins with transition from job (working or absent without pay) to no job
- ▶ Spell ends with first of at least 4 consecutive weeks of working
- ▶ Restrictions on spells: Active search, not a temporary layoff, duration < 53 weeks
- ▶ Restrictions on individuals: Parents, HS degree or less, age 20 to 64, 12 weeks of work prior to first spell, own + spouse 3-month earnings \leq \$8250
- ▶ Sample: 4181 spells, 1717 for men and 2464 for women

Descriptive Statistics

	Women		Men	
	Feb	Other	Feb	Other
Characteristics of Individuals				
Age	32.6	32.1	34.8	33.6
% White	71.1	65.5	78.5	83.5
% Married	30.1	28.6	78.6	76.0
Number of Kids	1.9	1.9	2.2	2.0**
Earnings, prev 3 months	3040	3064	4306	4016
Pre-Unemp Job Tenure	38.7	39.4	49.4	43.0*
Potential Weekly UI Benefit	122	129	172	162
Mean Net Liquid Wealth	1047	3725	747	3088
Characteristics of Spells				
Included UI Receipt	19.1	19.9	24.4	24.8
Mean Duration (Weeks)	21.0	17.2***	15.0	14.6
N	174	2290	131	1586

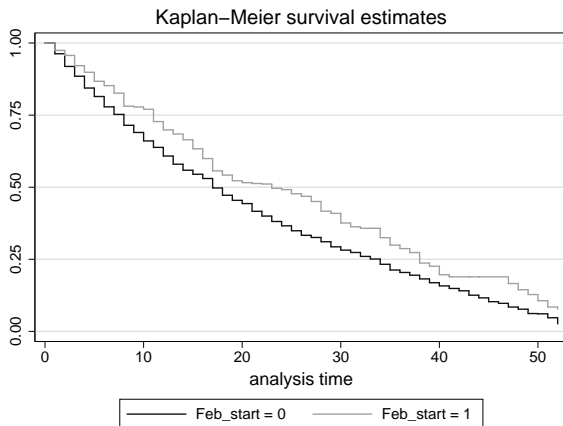
Mean Duration by Month of Entry, Women



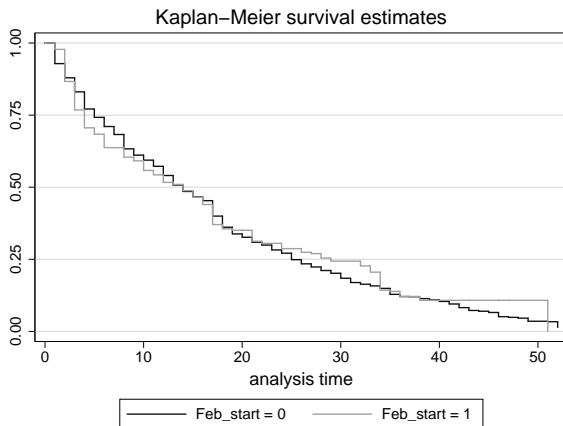
Pre-Unemployment Industry

	Women		Men	
	Feb	Other	Feb	Other
Construction	1.0	0.9	25.6	22.4
Manufacturing	12.8	13.3	14.6	16.2
Wholesale Trade	4.4	3.0	8.1	3.4
Retail Trade	14.9	16.9	14.4	10.7
Transportation	1.7	1.8	2.3	4.4
Administration	3.6	7.5***	4.1	7.4*
Education Services	1.6	2.0	0.4	1.0
Health Services	14.7	13.0	1.0	1.8
Accommodation, Food Services	24.7	19.0	7.6	6.9
Other Services	3.0	4.3	5.6	5.5
Other Industry	17.5	18.4	16.4	20.2

Survival Function, Women



Survival Function, Men



Hazard Model Estimates, Women

Feb Start	-0.267*** (0.092)	-0.279*** (0.096)	-0.306*** (0.099)
On Seam	1.792*** (0.057)	1.775*** (0.059)	1.720*** (0.059)
Age		0.039* (0.023)	0.041* (0.024)
Age Squared		-0.0006* (0.0003)	-0.0006* (0.0004)
White		0.222*** (0.060)	0.216*** (0.065)
Married		-0.076 (0.060)	-0.104* (0.060)
Number of Kids		-0.018 (0.027)	-0.007 (0.026)
Net Liquid Wealth		$-2.23 \cdot 10^{-7}$ $(4.54 \cdot 10^{-7})$	$-4.06 \cdot 10^{-7}$ $(4.96 \cdot 10^{-7})$
Unemp Rate		-0.065*** (0.022)	-0.034 (0.039)
Fixed Effects (Year, Month, State, Industry)			Yes
Number of Spells	2464	2288	2288

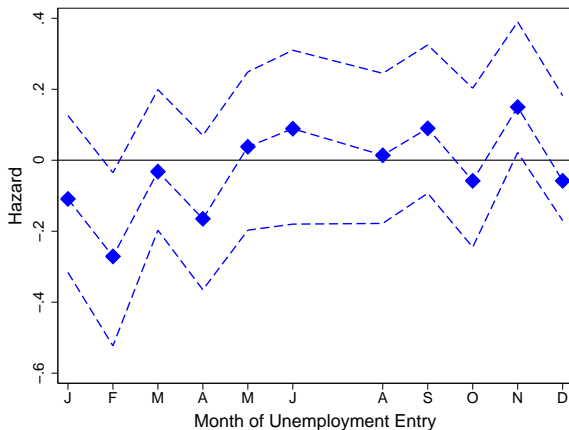
Hazard Model Estimates, Men

Feb Start	-0.067 (0.119)	-0.030 (0.120)	0.044 (0.114)
On Seam	1.952*** (0.061)	1.876*** (0.064)	1.854*** (0.064)
Age		-0.054** (0.021)	-0.043** (0.022)
Age Squared		0.0006** (0.0003)	0.0005* (0.0003)
White		0.322*** (0.092)	0.386*** (0.099)
Married		0.001 (0.074)	-0.010 (0.076)
Number of Kids		0.038 (0.027)	0.003 (0.029)
Net Liquid Wealth		$-1.47 \cdot 10^{-6}$ $(1.32 \cdot 10^{-6})$	$-8.51 \cdot 10^{-7}$ $(1.45 \cdot 10^{-6})$
Unemp Rate		-0.065** (0.027)	-0.049 (0.047)
Fixed Effects (Year, State, Industry)			Yes
Number of Spells	1717	1575	1575

Including Full Set of Starting Month Controls

$$\log(h_{it}) = \sum_{j=1}^{11} \beta_j \text{Starting Month } j_i + \delta WBA_i + \gamma X_{it} + \epsilon_{it}$$

Full Set of Starting Month Coefficients, Women



Alternative Treatment of Months

	Women	Men
Baseline	-0.306*** (0.099)	0.044 (0.114)
Comparing Feb and March to all others	-0.129* (0.071)	0.041 (0.085)
Dropping Jan, March, April starts	-0.361*** (0.106)	-0.034 (0.119)

Cash-on-Hand Effect or February Effect?

- ▶ Allow February effect to vary with predicted EITC amount

Feb Start	-0.080 (0.091)
Feb Start · EITC Value (1000s)	-0.084* (0.046)
Number of Spells	4304

- ▶ Consider groups with smaller average refunds
 - ▶ Individuals with no kids, 1993-2007
 - ▶ Parents with own + spouse earnings of \$33K to \$66K, 1993-2007
 - ▶ Low income parents, 1984-1987

Falsification Tests

	No Kids (1)	Higher Income (2)	Earlier Years (3)
Women			
Feb Start	-0.093 (0.105)	-0.058 (0.145)	0.016 (0.220)
Number of Spells	1852	884	761
Men			
Feb Start	0.036 (0.083)	0.114 (0.132)	-0.140 (0.184)
Number of Spells	3617	1059	667

Do Longer Spells Produce Better Matches?

Previous evidence is mixed:

- ▶ Addison and Blackburn (2000): More generous UI benefits not associated with greater wage gains
- ▶ Centeno (2004): More generous UI benefits associated with longer post-unemployment job tenure
- ▶ Card, Chetty, Weber (2007): Eligibility for severance pay or extended benefits not associated with gains in wage or job tenure

Effects on Job Quality, Women

	Dependent Variable		
	Wage Growth (1)	Paid Hourly (2)	Full Time (3)
Feb Start	-0.068 (0.104)	-0.016 (0.033)	0.018 (0.061)
Pre-Unemployment Controls			
Paid Hourly		0.252*** (0.035)	
Full Time			0.311*** (0.028)
N	1596	1823	1747

Conclusions

- ▶ Recent refund receipt appears to lengthen unemployment spells of EITC-eligible mothers
- ▶ Operating through liquidity channel rather than moral hazard channel
- ▶ No measurable improvement in subsequent job quality
- ▶ Other possible benefits of longer spells
 - ▶ Greater consumption smoothing?
 - ▶ Less disruptive to children's schooling?