

Family Labor Supply and the Timing of Cash Transfers: Evidence from the Earned Income Tax Credit

Online Appendix

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Additional Information about SIPP data

As mentioned in main text, SIPP is a longitudinal survey that follows the initially selected sample for at least three years. Our main analysis use 1996, 2001, 2004, and 2008 panels of SIPP, which follows their sample for four, three, three and four years, respectively. In earlier years (i.e. placebo test), the SIPP also had a short panel that followed selected household members for less than two years (for example, the 1989 panel).

For household wealth and asset information, the SIPP usually surveys these questions once per year in its Assets, Liabilities, and Eligibility topical module. The waves of topical modules used in this paper are waves 3, 6 and 9 from the 1996 panel, waves 3 and 6 from 2001 and 2004 panels, and waves 4, 7 and 10 from 2008 panel.

Since the SIPP does not provide valid information about the amount of EITC and AGI,¹ I use the income information in SIPP to construct a variable for AGI and then calculate the predicted EITC amount. The SIPP classifies family income sources into four categories: (1) earned income, (2) property income, (3) means-tested cash transfers, and (4) other income. The last three are unearned income, but means-tested cash transfers are generally non-taxable income. Therefore, I define family income as the sum of earned income and unearned income, excluding means-tested

cash transfers, and use that to approximate AGI.

Construction of the estimated sample

Table A1 displays the summary statistics of selected variables after each sample selection criterion has been applied. First, I require a respondent to have been followed in SIPP for at least two years. This criterion allows me to use the previous year's information on family income and number of qualifying children to assign treatment status to an individual and infer the EITC amount that her family is likely to receive in the current year. For example, I use a respondent's 1996 information on family income and number of qualifying children to calculate the size of payment her family would have been likely to receive in 1997, and examine the impact of receiving the EITC payment on her intra-year labor supply pattern in 1997. Since I focus on low-income families, the estimated sample is restricted to those with positive earned income and family incomes below \$40,000 in the previous year, which serves as the income cutoff for the comparison group (Column 1). Following the previous EITC literature (Eissa and Hoynes, 2004; Eissa and Liebman, 1996), I conduct estimations separately for three subgroups that have been the populations of interest in previous studies: married women, married men, and single women (Column 2). Therefore, I only include those who are the reference person of their household or the spouse of the reference person. Note that a married couple filing their taxes together are from the same family and thus have the same predicted EITC amounts.

The basic unit interviewed in the SIPP is the household, and each household might have several families residing in it. In order to avoid the impact of the EITCs of other subfamilies within the same household, any individual living in a household with more than one family is dropped from the sample (Column 3). Furthermore, I restrict the sample to those aged from 20 to 55 so as to

reduce the impact of retirement on my estimated labor supply responses (Column 4).²

Since my main focus is the intra-year change in labor supply, I require the sample to be observed for all 12 months in the years that I use for labor supply estimation (i.e. except in the first year of each panel) so as to mitigate concern about the impact of a change in sample composition on my estimates. This selection criterion ensures that my estimates identify changes in individuals' behavior instead of shifts in the composition of the sample (Column 5). Finally, for the first year of each panel, which is used only for determining the EITC amount and the treatment status in the following year, the sample can be observed for less than 12 months because a new SIPP panel might start after January. To obtain precise estimates of the EITC payments, I restrict the sample in these years to those with at least six months of observations (Column 6).³ The age restriction (Column 4) causes the biggest changes in the sample characteristics, causing the sample to have higher average earned income, a higher average number of children, a higher predicted EITC amount, a higher portion of EITC recipients, lower average wealth, and lower average liquid assets.

Triple Differences Estimation

In this section, I briefly discuss triple differences estimation, which focuses on EITC effect on labor supply in February (relative to other months). This empirical strategy is commonly used in previous literature (McGranahan and Schanzenbach, 2014; Niedzwiecki, 2013; LaLumia, 2013; Barrow and McGranahan, 2001) and is useful for summarizing the content of event-study analysis. I estimate the following regression:

$$\begin{aligned}
 \text{(A1) } L_{imt} = & \alpha + \beta_l \text{LowInc}_{it-1} + \beta_c \text{Child}_{it-1} + \beta_e \text{EITC}_{it} + \beta^{DDD} \text{EITC}_{it} \times M_2 \\
 & + \sum_m \beta_{lm} \text{LowInc}_{it-1} \times M_m + \sum_m \beta_{cm} \text{Child}_{it-1} \times M_m + \sum_m \beta_m M_m + \delta_t + \nu_t \\
 & + \mathbf{S}_{mt} \boldsymbol{\Omega} + \mathbf{X}_{imt} \boldsymbol{\psi} + \varepsilon_{imt}
 \end{aligned}$$

The only difference between specification (A1) and specification (1) is that I replace $EITC_{it} \times M_m$ with a single variable $EITC_{it} \times M_2$. The variable M_2 is a dummy for the month of February, when most EITC recipients receive their tax refunds. The key variable used for identification is $EITC_{it} \times M_2$, which indicates the February observation of individual i who is expected to receive a high EITC payment. Since the timing of the EITC payments is highly concentrated in February, the treatment group will experience a large cash influx in February due to the receipt of the EITC, which is assumed to be the only difference between the treatment and comparison groups during the year. Hence, I can attribute any February effect found in the treatment group to the impact of receiving the EITC. The coefficient of interest β^{DDD} represents the causal effect of the EITC receipt on the labor supply of individuals receiving high EITC payments in February.

In line with event-study analysis, my preferred specification (Column 5 in Panel A of Table A3) indicates that, compared to married women who receive low amounts of credit, those who receive high EITC payments are, significantly, 2.9 percentage points less likely to work in the month of February than in other months. In sharp contrast, married men and single women who receive high EITC payments do not exhibit distinct likelihoods of working in February compared to the other months. The point estimates in Column 5, Panels B and C of Table A3, suggest that the likelihood of working declines, in February (relative to other months), for married men and single women, by only 0.3 percentage points and 0.2 percentage points, respectively. Both estimates lack statistical significance.

Month-to-Month Labor Force Transitions

In this section, I use detailed information about labor force status from the SIPP to investigate how

the receipt of an EITC refund affects the recipient's month-to-month labor force transitions. This analysis will help us understand the main cause of the decreased likelihood of working for married women in February (relative to other months). In general, my results could be driven by the fact that the receipt of the EITC increases the likelihood of working-to-nonworking transitions or decreases the likelihood of nonworking-to-working transitions (for example, those who work in January and then stop working in February or those who do not work in January and then keep not working in February due to the receipt of the EITC).

As mentioned before, SIPP classifies labor force status into five categories: (1) working, (2) temporary leave without pay, (3) temporary layoff without pay, (4) unemployment, and (5) out of the labor force. The last four categories are defined as nonworking. In addition, Figure A1 displays the total amount of income tax refunds paid out in each week from January to April, based on the Daily Treasury Statement, and clearly shows that a large amount of the income tax refund is disbursed in the 6th week and the 7th week, which corresponds to the second and third weeks of February. Since most EITC recipients obtain their refund in February, this weekly refund disbursement pattern is likely to reflect the timing of the receipt of the EITC refund. Therefore, it is quite possible that EITC recipients receive their credit in the third week of February.

Given the above information, I define the two outcome variables as follows and conduct an event-study analysis: The first dependent variable, $P(W_{im} = 0 | W_{im-1} = 1)$, is an indicator of whether individual i works in the third week of month $m - 1$ (i.e. $W_{im-1} = 1$) and stops working in the third week in month m (i.e. $W_{im} = 0$), which measures the working-to-nonworking transition.

Similarly, I measure the nonworking-to-working transition using the dependent variable, $P(W_{im} = 1 | W_{im-1} = 0)$, an indicator of whether individual i does not work in the third

week of month $m - 1$ (i.e. $W_{im-1} = 0$) but does work in the third week of month m (i.e. $W_{im} = 1$).

Given the above information, I define the two outcome variables as follows and estimate specification (1): The first dependent variable, $P(W_{im} = 0|W_{im-1} = 1)$, is an indicator of whether individual i works in the third week of month $m - 1$ (i.e. $W_{im-1} = 1$) and stops working in the third week in month m (i.e. $W_{im} = 0$), which measures the working-to-nonworking transition. Similarly, I measure the nonworking-to-working transition using the dependent variable, $P(W_{im} = 1|W_{im-1} = 0)$, an indicator of whether individual i does not work in the third week of month $m - 1$ (i.e. $W_{im-1} = 0$) but does work in the third week of month m (i.e. $W_{im} = 1$).

The first two columns in Table A4 report the estimated coefficients on $EITC_{it} \times M_2$ for the above two outcome variables. The estimated coefficient implies that the receipt of an EITC refund would increase the likelihood of a working-to-nonworking transition for married women by 1.3 percentage points in February compared to other months. On the other hand, the receipt of an EITC refund decreases the likelihood of a nonworking-to-working transition by 0.5 percentage points in February compared to other months. Most changes in labor force status are concentrated in the working-to-nonworking transitions, which is around twice as large as the nonworking-to-working transitions, although neither estimate is statistically significant. I further decompose the working-to-nonworking transition into more detailed changes in labor force status by estimating specification (A1) with the following outcome variables, respectively: working to unpaid leave, working to temporary layoff, working to unemployment, and working to out of the labor force. When I do this, I find that most increases in working-to-nonworking transitions in February indeed come from working to unpaid leave transitions. The receipt of the EITC significantly increases the likelihood of working to unpaid leave transition for married women by 1.1 percentage points in

February (relative to other months). In contrast, the likelihoods of other labor force transitions do not show significant differences between February and other months.⁴ Figures A2a to A2f, which plot the estimated coefficients on $EITC_{it} \times M_m$ from specification (1) (i.e. event study analysis) for each outcome variable, confirm my regression results. Although the estimates are not precise, my results provide suggestive evidence that married women could temporarily leave their jobs without pay upon receiving the EITC refund in February.

Table

Table A1

Sample Selection: Summary Statistics

	(1)	(2)	(3)	(4)	(5)	(6)
	Below \$40,000	Reference person or spouse	Only one family	Age 20-55	Observed 12 months	First year information
Family income (\$1,000)	24.17 [10.13]	24.53 [10.04]	24.82 [9.99]	24.47 [10.14]	24.90 [10.03]	24.92 [10.04]
Earned income (\$1,000)	19.78 [11.02]	20.09 [11.10]	20.14 [11.17]	22.14 [10.67]	22.49 [10.158]	22.50 [10.59]
# of qualifying children	0.71 [1.15]	0.82 [1.21]	0.85 [1.23]	1.13 [1.31]	1.35 [1.56]	1.41 [1.40]
EITC payment (> 0, \$1,000)	1.74 [1.49]	1.84 [1.50]	1.87 [1.50]	1.98 [1.49]	2.11 [1.49]	2.13 [1.48]
Monthly employment	0.67 [0.46]	0.68 [0.46]	0.67 [0.46]	0.72 [0.44]	0.71 [0.45]	0.71 [0.45]
Wealth (\$1,000)	93.39 [880.46]	93.73 [930.89]	97.47 [934.04]	66.73 [930.89]	71.33 [805.70]	70.84 [819.65]
Age	43.14 [15.37]	45.01 [14.92]	45.76 [14.91]	39.00 [9.97]	39.51 [9.76]	39.50 [9.74]
State Unemployment rate (%)	6.62 [2.39]	6.60 [2.38]	6.59 [2.38]	6.57 [2.38]	6.69 [2.44]	6.60 [2.40]
Female	0.56	0.57	0.58	0.57	0.66	0.66
Married	0.39	0.48	0.53	0.54	0.67	0.67
White	0.77	0.78	0.78	0.77	0.77	0.77
High school dropout	0.21	0.21	0.21	0.20	0.22	0.22
High school degree	0.51	0.50	0.50	0.50	0.49	0.50
College degree or above	0.28	0.29	0.30	0.30	0.29	0.29
Living in metro	0.74	0.74	0.72	0.74	0.74	0.73
Working part time	0.14	0.14	0.14	0.12	0.12	0.12
Agriculture	0.02	0.02	0.02	0.02	0.02	0.02
Manufacturing	0.14	0.14	0.14	0.15	0.14	0.14
Service	0.57	0.57	0.55	0.58	0.57	0.57
Self-employed	0.09	0.09	0.11	0.10	0.10	0.10
Not working	0.18	0.18	0.19	0.15	0.18	0.18
# of EITC recipients	41,697	35,124	31,386	28,972	16,917	16,798
# of individual	90,928	71,875	63,743	49,235	26,002	25,392
# of individual-months	1,658,640	1,327,590	1,145,450	852,922	498,960	480,888

Note: SIPP data for years 1996-1999, 2001-2003, 2004-2006, and 2008-2012. Family income is

the sum of earned income and unearned income, excluding the non-taxable mean-tested cash transfer. Family income, earned income, wealth, liquid asset, amount of mortgage, and EITC payment are in thousands of dollars. Family income, earned income, wealth, liquid asset, amount of mortgage, # of qualifying children, and EITC payment are based on the family level information in the previous year. Monthly employment is defined as number of working weeks in a month divided by total number of weeks in a month. Female, Married, White, High school, College and above, Agriculture, Manufacturing, Self-employed, Not working, Working part time, and Living in metro are dummy variables. State Unemployment rate (%) is monthly unemployment rate in a given state. Column (1) includes observations that have positive earned income and family income during the previous year below \$40,000. In addition, they are followed for at least two years. All dollar amounts are in 2007 USD. Column (2) additionally requires sample to be married women, married men and single women. They are either reference person of the household or spouse of reference person. Column (3) additionally requires each sample to live in a household with only one family. Column (4) additionally imposes age restrictions: individuals with age 20 to 55. For a married couple, the age restriction is based on wife's age. Column (5) additionally requires individuals to be observed for all 12 months in the year that I use for estimating labor supply (i.e. except the first year of each panel). Column (6) additionally restricts the sample to those observed at least six months in the first year of each panel. Standard errors are reported in parentheses.

Table A2

Estimated Results for Event-Study Analysis

	Monthly Employment			
	Married women 1997-2012	Married man 1997-2012	Single women 1997-2012	Married Women 1990-1993
$EITC \times M_1$	-0.028 [0.018]	-0.003 [0.018]	0.008 [0.014]	0.003 [0.038]
$EITC \times M_2$	-0.038*** [0.018]	-0.005 [0.017]	-0.002 [0.014]	-0.0002 [0.037]
$EITC \times M_3$	-0.024 [0.017]	-0.004 [0.016]	0.001 [0.014]	0.003 [0.036]
$EITC \times M_4$	-0.019 [0.016]	0.008 [0.015]	0.001 [0.013]	0.013 [0.036]
$EITC \times M_5$	-0.013 [0.015]	0.005 [0.015]	0.001 [0.013]	-0.001 [0.035]
$EITC \times M_6$	-0.002 [0.016]	0.002 [0.014]	0.001 [0.013]	-0.015 [0.034]
$EITC \times M_7$	-0.0001 [0.016]	-0.006 [0.013]	-0.014 [0.013]	0.010 [0.030]
$EITC \times M_8$	-0.003 [0.013]	-0.004 [0.012]	-0.006 [0.011]	0.023 [0.025]
$EITC \times M_9$	-0.007 [0.009]	0.007 [0.007]	-0.011 [0.007]	0.004 [0.016]
$EITC \times M_{11}$	-0.002 [0.007]	-0.009 [0.008]	0.006 [0.006]	-0.011 [0.018]
$EITC \times M_{12}$	-0.002 [0.011]	-0.017 [0.011]	0.013 [0.008]	-0.018 [0.024]
R^2	0.791	0.709	0.657	0.804
# of individual	8,566	8,566	8,310	3,806
# of individual-months	161,448	161,448	157,992	47,616

Note: This table reports estimated coefficients on $EITC \times M_m$ from event-study analysis (equation (1)). The outcome variable L is monthly employment status defined as number of working weeks in a month divided by total number of weeks in a month. Therefore, $L = 1$ if working for the full month, $L = 0$ if not working for the full month, and $0 < L < 1$ if working for partial month. The assignment of treatment and control groups are based on 1997-2012 EITC schedule (Column 1, 2, 3) or 1990-1993 EITC schedule (Column 4). All regressions control for treatment group dummy,

an indicator for individuals with one or more qualifying children, an indicator for individuals with family income below EITC income limit, month fixed effect for those who have qualifying children, month fixed effect for those who have family income during tax year greater than EITC income limit, month fixed effect, individual fixed effects, year fixed effects, state fixed effects, monthly state unemployment rate, state specific time trend (quadratic), educational attainment, race, age, living in metro area, family wealth, industry fixed effects, a dummy indicating that the individual worked part-time in the previous year, and interactions between individual characteristics and month dummies M_m . All dollar values are measured in 2007 USD. Standard errors are clustered at the person level and reported in parentheses. *** significant at the 1 percent level, ** significant at the 5 percent level, and * significant at the 10 percent level.

Table A3

Triple Differences Estimates

Dependent Variable:	Monthly Employment				
	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Married Women</i>					
$EITC \times M_2$	-0.026**	-0.030***	-0.031***	-0.031***	-0.029**
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
R^2	0.025	0.787	0.790	0.791	0.792
Baseline mean			0.47		
# of individual			8,566		
# of individual-months			161,448		
<i>Panel B: Married Men</i>					
$EITC \times M_2$	-0.005	-0.004	-0.004	-0.004	-0.003
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
R^2	0.017	0.704	0.707	0.708	0.709
Baseline mean			0.83		
# of individual			8,566		
# of individual-months			161,448		
<i>Panel C: Single Women</i>					
$EITC \times M_2$	-0.001	-0.003	-0.003	-0.003	-0.002
	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]
R^2	0.022	0.653	0.656	0.657	0.657
Baseline mean			0.78		
# of individual			8,310		
# of individual-months			157,992		
Basic controls	√	√	√	√	√
Individual fixed effect		√	√	√	√
State & Year fixed effect			√	√	√
Individual characteristics				√	√
Interactions with M_m					√

Note: This table reports estimated coefficients on $EITC \times M_2$ from triple differences regressions (equation (A1)). The outcome variable L is monthly employment status defined as number of working weeks in a month divided by total number of weeks in a month. Therefore, $L = 1$ if working for the full month, $L = 0$ if not working for the full month, and $0 < L < 1$ if working for partial month. The outcome variables regressed on the indicator for treatment group, as interacted with dummy for February. The treatment group consists of those individuals that have one or more qualifying children and family income greater than zero and less than EITC income limit during

the previous year. The comparison group comprise (1) those individuals that have family income greater than zero and less than EITC income limit during the previous year but have no qualifying child. (2) those individuals with one or more qualifying children but whose family income during the previous year is above EITC income limit and below \$40,000. (3) childless individuals that have family income during the previous year is above EITC income limit and below \$40,000. The income limit roughly corresponds to the maximum EITC-eligible income for the families with one child during my sample period. For a married couple, the income limit is \$36,000 and for single women it is \$33,000. Column 1 control for treatment group dummy, an indicator for individuals with one or more qualifying children, an indicator for individuals with family income greater zero and below \$36,000, month fixed effect for those who have qualifying children, month fixed effect for those who have family income during tax year greater than zero and less than \$36,000, and month fixed effect. Column 2 additionally includes individual fixed effects. Column 3 additionally includes year fixed effects, state fixed effects, monthly state unemployment rate, and state specific time trend (quadratic). Column 4 additionally includes individual characteristics: educational attainment, race, age, living in metro area, family wealth, industry fixed effects, and a dummy indicating that the individual worked part-time in the previous year. Column 5 additionally includes interactions between individual characteristics and month dummies M_m . All dollar values are measured in 2007 USD. Standard errors are clustered at the person level and reported in parentheses. *** significant at the 1 percent level, ** significant at the 5 percent level, and * significant at the 10 percent level.

Table A4

Month-to-Month Labor Force Transitions (Married Women)

Dependent Variable	Month-to-Month Labor Force Transitions					
	(1) Working to Nonworking	(2) Nonworking to Working	(3) Working to Unpaid Leave	(4) Working to Temporary Layoff	(5) Working to Unemployed	(6) Working to out of Labor Force
$EITC \times M_2$	0.013 [0.009]	-0.005 [0.008]	0.011* [0.006]	-0.001 [0.002]	0.002 [0.004]	0.000 [0.005]
R^2	0.073	0.070	0.076	0.077	0.067	0.062
Baseline mean	0.016	0.018	0.004	0.002	0.003	0.007
# of individual	8,566	8,566	8,566	8,566	8,566	8,566
# of individual-months	161,448	161,448	161,448	161,448	161,448	161,448

Note: This table reports coefficients from triple differences regressions (equation (A1)). The sample is restricted to married women. The outcome variables across the columns are presented as follows: 1) an indicator for whether an individual work in the third week in the last month and stopped working in the third week in the current month; 2) an indicator for whether an individual did not work in the third week in the last month and started working in the third week in the current month; 3) an indicator for whether an individual worked in the third week in the last month and then took leave without pay in the third week in the current month; 4) an indicator for whether an individual worked in the third week in the last month and then had temporary layoff without pay in the third week in the current month; 5) an indicator for whether an individual worked in the third week in the last month and become unemployed in the third week in the current month; 6) an indicator for whether an individual work in the third week in the last month and moved out of the labor force in the third week in the current month; All regressions control for the same set of covariates shown in Column 5 of Table A3. Standard errors are clustered at the person level and reported in parentheses. *** significant at the 1 percent level, ** significant at the 5 percent level, and * significant at the 10 percent level.

Table A5

EITC Refund and Individual Characteristics (Married Women)

Dependent Variable:	Refund						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Low income	-0.640*** [0.147]	-0.593*** [0.147]	-0.586*** [0.147]	-0.584*** [0.147]	-0.584*** [0.147]	-0.593*** [0.147]	0.598*** [0.147]
Having children		1.905*** [0.366]	1.849*** [0.336]	1.850*** [0.336]	1.850*** [0.336]	1.807*** [0.347]	1.805*** [0.347]
Age			0.088*** [0.034]	0.087*** [0.034]	0.087*** [0.034]	0.086** [0.034]	0.088*** [0.034]
White				-0.925 [0.601]	-0.925 [0.601]	-0.929 [0.607]	-0.928 [0.608]
High school degree				0.541 [0.484]	0.541 [0.484]	0.554 [0.489]	0.569 [0.500]
College degree or above				0.903 [0.891]	0.903 [0.891]	0.908 [0.900]	0.921 [0.906]
Agriculture						0.026 [0.389]	0.022 [0.390]
Manufacturing						-0.323 [0.269]	-0.331 [0.270]
Working part time						0.072 [0.105]	0.072 [0.105]
Wealth (\$1,000)							-0.000 [0.000]
Living in metro							-0.275 [0.395]
R^2	0.834	0.836	0.837	0.837	0.837	0.838	0.838
# of individual	5,893	5,893	5,893	5,893	5,893	5,893	5,893
# of individual-years	9,290	9,290	9,290	9,290	9,290	9,290	9,290
# of individual-months	111,480	111,480	111,480	111,480	111,480	111,480	111,480

Note: This table reports coefficients from ordinary least squares regressions with individual fixed effects. The outcome variable *Refund* is the imputed EITC amounts that an individual will receive in a given year. Since *Refund* only changes annually, I run this regression using individual-years observations and report number of individual-months observations for a reference. Low income, Having children, White, High school, College and above, Agriculture, Manufacturing, Working part time, and Living in metro are dummy variables. “Low income” is equal to one if the family

income is below \$12,000, which corresponds to the first income cut-off of EITC schedule for married couples during my sample period. “Working part time” is equal to one if individuals work less than 20 hours per week in the previous year. The omitted group for education attachment is “high school dropout”. The omitted group for industry to work is “service and others”. Standard errors are clustered at the person level and reported in parentheses. *** significant at the 1 percent level, ** significant at the 5 percent level, and * significant at the 10 percent level.

Table A6

Eligible Rule and Payment amounts for State EITC

State	Year of Implementation	Percentage of Federal Credit	Refundable?	Workers Without Children Eligible?
Delaware	2006	20%	No	Yes
District of Columbia	2000	40%	Yes	Yes
Illinois	2000	5%	Yes	Yes
Indiana	2003	9%	Yes	Yes
Iowa	1990	7%	Yes	Yes
Kansas	1998	18%	Yes	Yes
Louisiana	2008	3.5%	Yes	Yes
Maine	2000	5%	No	Yes
Maryland	1998	25%	Yes	Yes
Massachusetts	1997	15%	Yes	Yes
Michigan	2008	20%	Yes	Yes
Minnesota	1991	Average 33%	Yes	Yes
Nebraska	2003	10%	Yes	Yes
New Jersey	2000	20%	Yes	Yes
New Mexico	2007	10%	Yes	Yes
New York	1994	30%	Yes	Yes
North Carolina	2008	5%	Yes	Yes
Oklahoma	2002	5%	Yes	Yes
Oregon	1997	6%	Yes	Yes
Rhode Island	1986	25%	Partially	Yes
Vermont	1988	32%	Yes	Yes
Virginia	2006	20%	No	Yes
Wisconsin	1989	4% - one child 14% - two children 43% - three children	Yes	No

Note: Data are from Tax Policy Center (2015). This table summarizes the eligible rule and payment amounts for state EITC. Rhode Island made a very small portion of its state EITC refundable effective in 2003.

Table A7

Share of Annual EITC Disbursements by Month

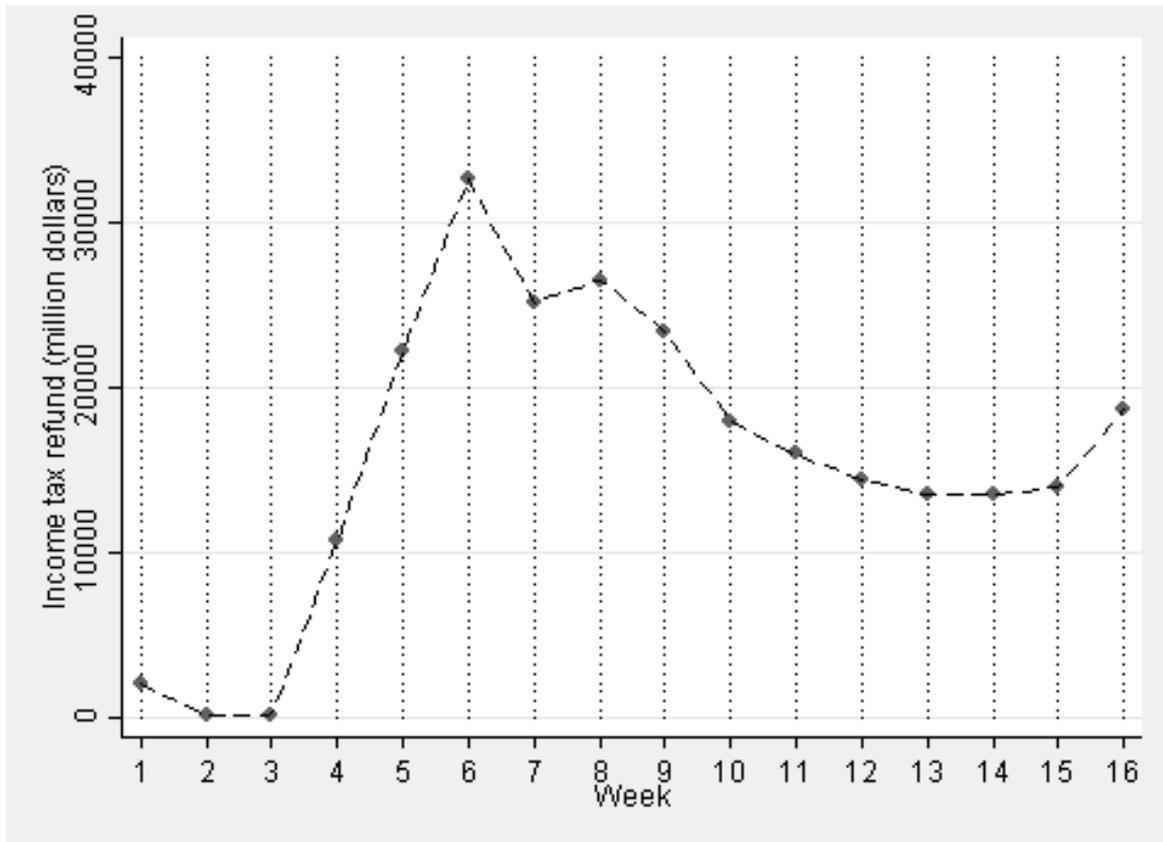
	Percent of annual disbursements
January	7.0
February	55.5
March	22.3
April	8.5
May	4.1
June	1.1
July	0.5
August	0.3
September	0.3
October	0.2
November	0.1
December	0.0

Note: Data are from various issues of *Monthly Treasury Statements*. For each month and year, the fraction of the years disbursements in that year was first calculated. These fractions were then averaged by month across the years: 1997-1999, 2002-2003, 2005-2006, and 2009-2012. Because the IRS did not provide disbursement information in 1997, I used the 1998 distribution of disbursements to impute it.

Figures

Figure A1

Weekly Disbursement Patterns of Income Tax Refunds

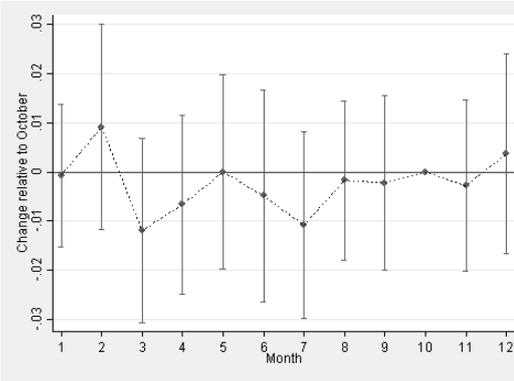


Note: Data are from various issues of *Daily Treasury Statements*. The graph displays the average disbursement of income tax refunds during the first 16 weeks in a year. These amounts were averaged by week across the years: 1997-1998, 2002-2003, 2005-2006, and 2009-2012. Because the IRS did not provide disbursement information in 1997, I used the 1998 distribution of disbursements to impute it.

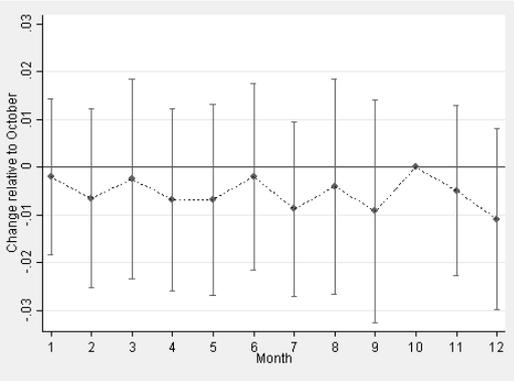
Figure A2

Month-to-Month Labor Force Transitions

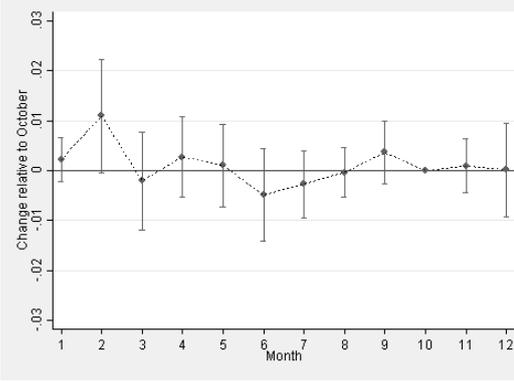
(a) Working to Nonworking



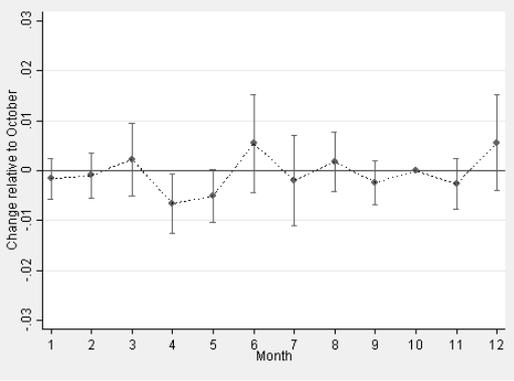
(b) Nonworking to Working



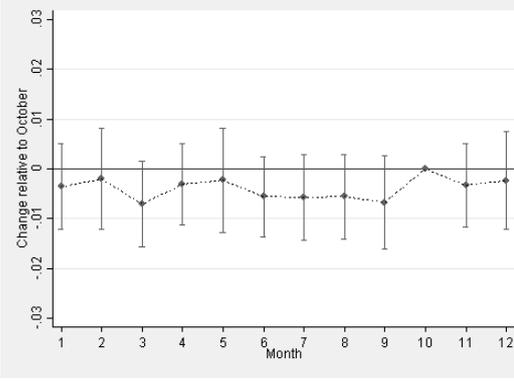
(c) Working to Unpaid Leave



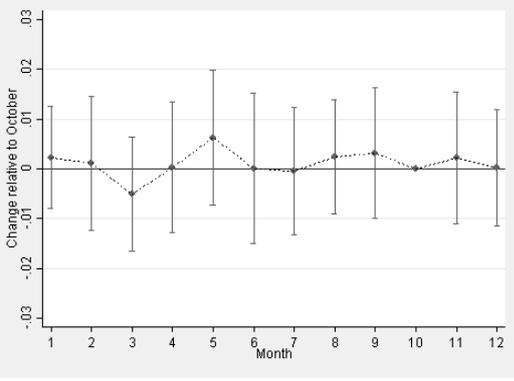
(d) Working to Temporary Layoff



(e) Working to Unemployment



(f) Working to Out of Labor Force



Note: This figure shows coefficients on $EITC_{it} \times M_m$ and associated 95% confidence interval from specification (1) where the dependent variables are working to nonworking, nonworking to working, working to unpaid leave, working to temporary layoff, working to unemployment, and working to out of the labor force. The estimated sample is restricted to married women. The dependent variable is regressed on the interaction terms between indicator for treatment group $EITC$ and 11 month dummies (October is the omitted month) M_m . The treatment group consists of those individuals that have one or more qualifying children and family income during tax year greater than zero and less than \$36,000. The comparison groups comprise (1) those individuals that have family income during tax year greater than zero and less than \$36,000 but have no qualifying child. (2) those individuals with one or more qualifying children but whose annual income is just above \$36,000 and below \$40,000. (3) childless individuals that have incomes greater than \$36,000 and below \$40,000. All dollar values are measured in 2007 dollars. The regression controls for treatment group dummy, an indicator for individuals with one or more qualifying children, an indicator for individuals with family income greater zero and below \$33,000, month fixed effect for those who have qualifying children, month fixed effect for those who have family income during tax year less than \$33,000, month fixed effect, individual fixed effect, year fixed effect, state fixed effect, monthly state unemployment rate, state specific time trend (quadratic), an indicator for interviewing month, educational attainment, number of children under 18, age, industry fixed effect, industry specific time trend (quadratic), family wealth, a dummy indicating that the individual worked part-time in the previous year, and month fixed effect specific to part-time workers.

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¹It does ask the question of how much EITC the respondent received in its tax topical module. However, the response rate for this question is fairly low, at only 24%. In addition, some of the answers to the income questions in the tax module are inconsistent with those in the core SIPP files (Sisson and Short, 2001).

²For married couples, this criterion is based on the wife's age. About 93% of the husbands are also within this age range. In Section 4, I report a robustness check using a sample in which both husband and wife are in the required age range (20 to 55).

³For those without twelve months of observations, I scale their incomes up to create an annual income. For example, for those with seven months of income information. I use the seven-month income multiplied by 12/7 to obtain an estimate of the annual income.

⁴I calculate the entry/exit coefficients as a percentage of total flow. I find that the coefficient of $EITC \times M_2$ for "working to unpaid leave" transitions can account for 85% of the changes in total flow (i.e. coefficient of $EITC \times M_2$ for "working to nonworking" transitions). The coefficients for the remaining transitions only account for 15% (15% for "working to unemployed" transitions, - 0.05% for "working to temporary layoff" transitions, and 0.05% for "working to out-of-labor-force"). These coefficients sum to 100%.