

### ***Specification Checks***

In Table OA1, we present alternative models using March 2021, the month when the policy was introduced (but before CTC payments were distributed), as our treatment timing. Similar to our actual estimates, we find small and insignificant effects that suggest that parents did not respond to the announcement of the policy by reducing their labor supply. In Table OA2, we replicate our primary findings on 2020 CPS data to assess the possibility of seasonality affecting our findings. The results suggest that this is not the case.

### ***Callaway and Sant'Anna Group-Time Treatment***

Recent work has cast doubt on both the validity and robustness of the two-way fixed effect estimator when more than two treatment groups and periods are included in analytical models, treatment timing varies, and treatment effect is heterogeneous (Borusyak, Jaravel & Spiess, 2021; Callaway & Sant'Anna 2021; Goodman-Bacon, 2021; Sun & Abraham, 2021;). While the use of the CTC expansion as a treatment does not fall within these critiques, the two-way fixed effects estimator still reports a weighted average treatment on the treated estimate across treatment groups because treatment size varies across households. Fortunately, however, treatment size varies on observable characteristics—the number and age of children in the household.

A further complication in our analytic design is the continuous nature of CTC payments. The traditional difference-in-differences framework operates on a binary treatment, identifying the treatment and control groups and clean comparisons. When using a continuous treatment, the comparison groups become more difficult to identify (Callaway, Goodman-Bacon, & Sant'Anna, 2021). For continuous treatments, both the level and slopes of the dose-response relationship are required to gain a complete understanding of the treatment effects of a group-varying continuous treatment.

We address these issues by leveraging the Callaway and Sant'Anna (2021) estimator at both the aggregate and group treatment levels. We first treat the introduction of the CTC as a simultaneous binary treatment among all eligible households. We use the binary treatment coding to create an event study design, presented in Figure OA1, exploring how the CTC expansion's effect changed in the months following its adoption. This also allows us to estimate an aggregate effect across all eligible individuals. The binary treatment coding is expanded in three ways. First, we create separate household groups by household composition (i.e., the number of children and their ages). Second, we create \$25 bins of additional monthly CTC payments and present those treatment bins which are represented by at least 1% of the sample. Third, we create 1% bins of the change in the relative wage ranging from no change in the control group to a reduction of 9% or more. Repeating the analysis at the treatment-group level in Tables OA3, OA4, and OA5 allows us to estimate a different  $ATT(d/x)$  for CTC dosage  $d$  in treatment group  $x$ . This estimation does not allow us to make the case that each  $ATT(d/x)$  can be linked as a single dosage response curve, but rather that each is a different point on each group  $x$ 's dosage response curve.

Results from our analysis using the Callaway and Sant'Anna (2021) estimator reveal no evidence of an effect of the CTC expansion on employment or labor force participation. These results are in line with results from our main analytical specification. When exploring the CTC expansion by groups, we find no evidence of significant deviation from the aggregate result. The CTC expansion did not appear to affect parents' employment or labor force participation regardless of household composition.

**Table OA1:** Difference-in-Differences Estimates of the Effect of Expanded CTC on Employment Outcomes with March 2021 as Treatment Start Month (CPS, January 2021 through December 2021)

	<b>Binary Treatment</b>		<b>Continuous Treatment</b> (\$100s of Net Monthly Benefit Value)	
	1: Employed	2: Active in Labor Force	1: Employed	2: Active in Labor Force
Household with Children	0.038*** (0.003)	0.032*** (0.004)	-0.000 (0.001)	-0.001 (0.001)
Household with Children X Post-March 15	0.003 (0.003)	0.004 (0.003)	0.001 (0.001)	0.002 (0.001)
Pre-Treatment Mean among Households with Children	0.714	0.762	0.714	0.762
Observations	636,401	636,401	633,490	633,490

Note: Sample: adults between ages 18–65. All models include state and month fixed effects and control for age, education, and sex of individual. Robust standard errors in parentheses. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table OA2:** Seasonality Test: Difference-in-Differences Estimates of the Effect of July 2020 Treatment on Employment Outcomes (CPS, January 2020 through December 2020)

	<b>Binary Treatment</b>		<b>Continuous Treatment</b> (\$100s of Net Monthly Benefit Value)	
	1: Employed	2: Active in Labor Force	1: Employed	2: Active in Labor Force
Household with Children	0.039*** (0.003)	0.034*** (0.003)	0.001 (0.001)	0.001* (0.001)
Household with Children X Post-July 15	-0.001 (0.003)	-0.004 (0.003)	-0.000 (0.001)	-0.001 (0.001)
Pre-Treatment Mean among Households with Children	0.704	0.767	0.704	0.767
Observations	705,905	705,905	702,853	702,853

Note: Sample: adults between ages 18–65. All models include state and month fixed effects and control for age, education, and sex of individual. Robust standard errors in parentheses. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table OA3:** Difference-in-differences Estimates of the Effect of the CTC Expansion on Employment Outcomes Using the Callaway and Sant’Anna (2020) Methodology and Defining Treatment Group by the Additional Monthly CTC Payment Received (CPS, January 2021 through December 2021)

<b>Treatment-Group:</b> Monthly Additional CTC Payments	<b>Treated Units</b>	<b>Effect Estimate</b>	
		<b>1: Employed</b>	<b>2: Active in Labor Force</b>
All Treated Households	208,572	0.004 (0.004)	0.006 (0.004)
\$100	6,701	-0.009 (0.013)	-0.006 (0.012)
\$125	17,000	-0.011 (0.009)	-0.009 (0.009)
\$150	10,787	0.007 (0.014)	0.009 (0.013)
\$175	39,616	0.0003 (0.007)	0.004 (0.007)
\$200	5,355	0.006 (0.019)	0.011 (0.019)
\$225	7,123	0.022 (0.019)	0.035 (0.017)
\$250	17,930	-0.010 (0.009)	0.0001 (0.009)
\$325	11,419	-0.008 (0.013)	-0.003 (0.011)
\$350	24,882	-0.005 (0.009)	-0.001 (0.008)
\$375	11,787	-0.003 (0.011)	0.001 (0.01)
\$525	17,082	0.007 (0.010)	0.012 (0.010)
\$675	6,182	0.024 (0.016)	0.025 (0.015)

Note: Sample: adults between ages 18–65. All models include controls for age, education, and sex of household head. Each treatment group is defined by the additional monthly CTC payments as a result of the CTC expansion—rounded to the nearest \$25. Presented treatment groups are those with at least 1% of the sample. Robust standard errors in parentheses are clustered at the state level. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table OA4:** Difference-in-differences Estimates of the Effect of the CTC Expansion on Employment Outcomes Using the Callaway and Sant’Anna (2020) Methodology and Defining Treatment Group by The Number and Age of Children (CPS, January 2021 through December 2021)

Treatment-Group: Children ages: $0 \leq x < 6$	Treatment-Group: Children ages: $6 \leq x < 18$	Treated Units	Effect Estimate	
			1: Employed	2: Active in Labor Force
All Treated Households		208,572	0.004 (0.004)	0.006 (0.004)
0	1	46,206	0.002 (0.005)	0.003 (0.005)
0	2	37,703	0.001 (0.006)	0.002 (0.005)
0	3	13,158	-0.0003 (0.006)	0.003 (0.006)
0	4	3,523	-0.0001 (0.007)	0.0001 (0.007)
1	0	31,145	-0.003 (0.006)	0.001 (0.005)
1	1	21,477	0.006 (0.008)	0.006 (0.007)
1	2	11,045	-0.001 (0.006)	0.0001 (0.006)
1	3	3,990	-0.0001 (0.006)	0.002 (0.007)
2	0	15,782	-0.003 (0.007)	-0.0007 (0.006)
2	1	6,402	-0.001 (0.007)	0.0004 (0.007)
2	2	2,649	0.001 (0.007)	0.002 (0.007)

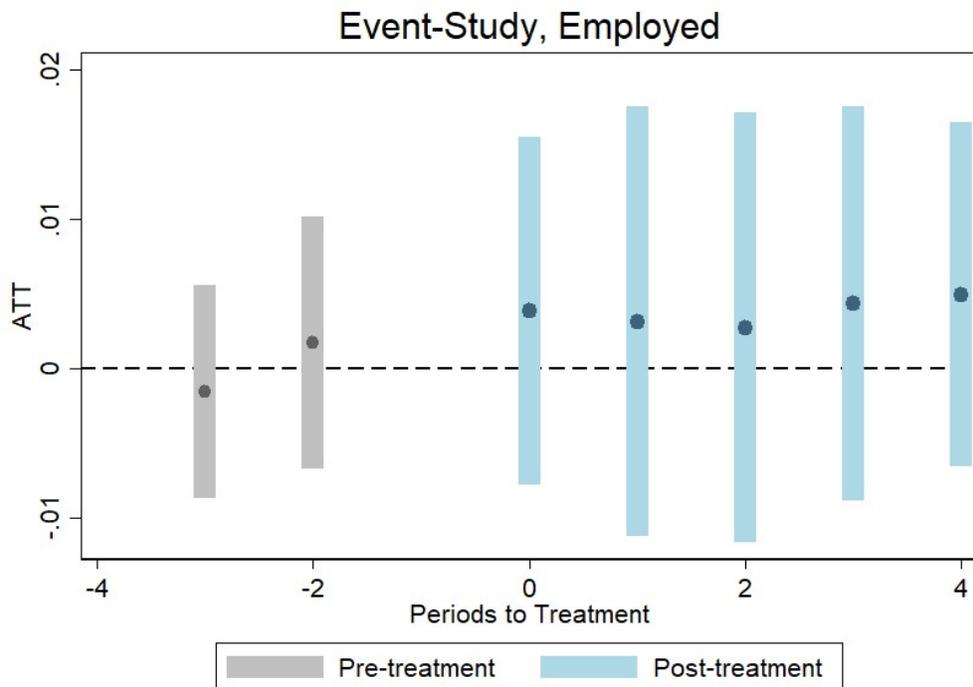
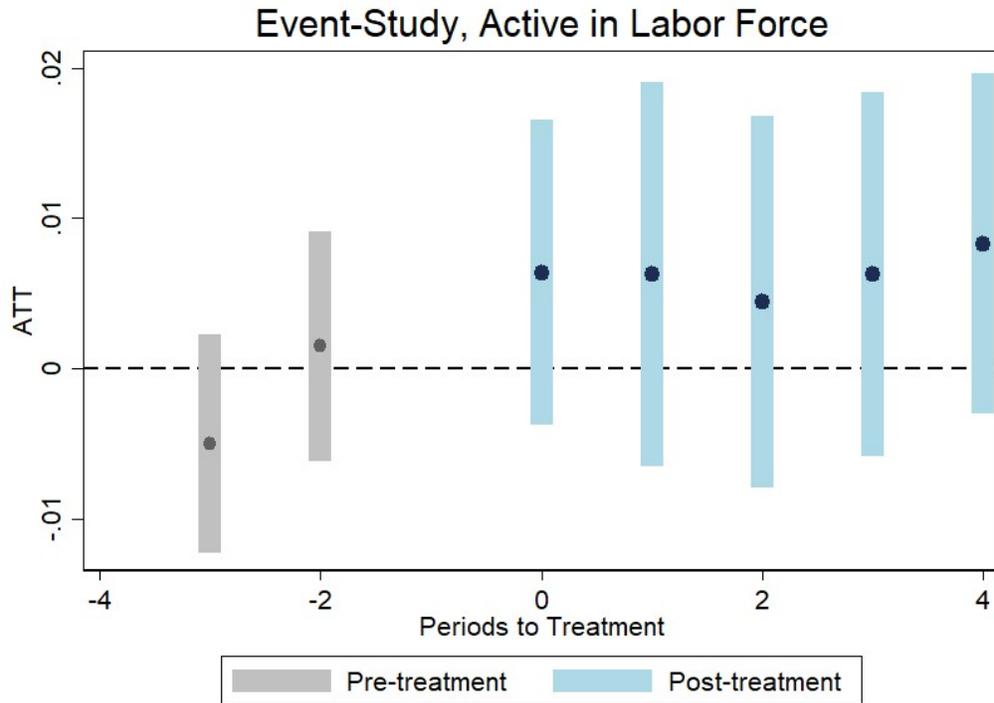
Note: Sample: adults between ages 18–65. All models include controls for age, education, and sex of household head. Each treatment group is defined by the additional monthly CTC payments as a result of the CTC expansion– rounded to the nearest \$25. Robust standard errors in parentheses are clustered at the state level. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table OA5:** Difference-in-differences Estimates of the Effect of the CTC Expansion on Employment Outcomes Using the Callaway and Sant’Anna (2020) Methodology and Defining Treatment Group by the Change in the Relative Wage (CPS, January 2021 through December 2021)

<b>Treatment-Group:</b> Change in the Relative Wage	<b>Treated Units</b>	<b>Effect Estimate</b>	
		<b>1: Employed</b>	<b>2: Active in Labor Force</b>
All Treated Households	208,572	0.004 (0.004)	0.006 (0.004)
-1% Δ in Relative Wage	18,263	-0.0001 (0.007)	0.003 (0.006)
-2% Δ in Relative Wage	27,455	0.001 (0.006)	0.004 (0.006)
-3% Δ in Relative Wage	41,780	-0.001 (0.005)	0.002 (0.005)
-4% Δ in Relative Wage	16,830	0.003 (0.007)	0.006 (0.006)
-5% Δ in Relative Wage	22,265	-0.002 (0.006)	0.002 (0.006)
-6% Δ in Relative Wage	16,686	0.003 (0.007)	0.004 (0.007)
-7% Δ in Relative Wage	8,735	0.0003 (0.006)	0.003 (0.007)
-8% Δ in Relative Wage	3,869	0.002 (0.007)	0.004 (0.007)
≤ -9% Δ in Relative Wage	2,174	-0.0001 (0.007)	0.002 (0.007)

Note: Sample: adults between ages 18–65. All models include controls for age, education, and sex of household head. Each treatment group is defined by the additional monthly CTC payments as a result of the CTC expansion– rounded to the nearest \$25. Robust standard errors in parentheses are clustered at the state level. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

**Figure OA1:** Event Study of the Effect of CTC Expansion on Labor Force Participation and Employment using the Current Population Survey from April 2021 to December 2021.



Note: Periods define the number of months since treatment occurred. The first month of treatment is in period zero. Bars represent a 95% confidence interval. Treatment is defined as eligibility for the CTC after the expansion occurred.