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- Key empirical inputs: anti-poverty impacts of such policies, long-run impacts on recipients, and labor supply responses
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- Tax/Transfer Design Question:
  - How much transferred when not working
  - Should there be a “phase-in” (i.e. wage subsidy)
  - Should benefits be paid monthly or once-a-year
Our Study

• In 2021, Congress temporarily changed the Child Tax Credit (CTC) from being "phased-in" (requiring work for benefits) to being fully refundable (can be claimed even if zero income)

• Our research question: Did the expanded Child Tax Credit reduce labor supply?

• We compare labor market outcomes for families who qualify larger and smaller CTC transfers, before and after the policy

• We do not find significant labor supply changes in response to the size of the CTC

• Neither at the introduction of CTC payments, nor upon their expiration
Background: Child Tax Credit
Child Tax Credit - Est. 1997

• Originally a tax credit for children under 17

• Value increased from $500, to $1,000, to $2,000 per child in the 2017

• Over time, became partially refundable, up to 15% of income, currently up to $1,400 per child

• Typically need to earn above a minimum amount to receive refundable portion
  - Early on, minimum as high as $10,000
  - Decreased to $2,500 at the time of TCJA
  - Phases out well above $200K ($400K if married)

• $118B in 2019 (≈ Medicaid and Children’s Health Insurance Program)

• Current version of CTC is defined by the Tax Cut and Jobs Act of 2017 (TCJA)
Child Tax Credit - Extended in 2001

• In 2021, the credit became fully refundable, temporarily as a result of the American Rescue Plan (ARP)

• Increased for lowest incomes to between $3,000 and $3,600 per child

• Advanced payments sent out monthly, starting in July 2021, and ending in December 2021

• Critical detail: families with no earnings eligible for the maximum amount, and level of credit invariant to earnings over an initial range (i.e. no phase-in)

• Can think of this as an unconditional cash transfer to children
CTC Design: TCJA vs ARP

FIGURE 1
Child Tax Credit, Single Parent
For one child, tax year 2021

- Credit for children ages 0–5
- Credit for children ages 6–17
- Prior law credit for children ages 0–16
- Credit for other dependents

Adjusted gross income

$0  $50,000  $100,000  $150,000  $200,000  $250,000  $300,000

$0  $500  $1,000  $1,500  $2,000  $2,500  $3,000  $3,500  $4,000
CTC Incentives

- Factors potentially leading to lower labor supply
  - Increase of benefit size (negative income effect)
  - Replaces phase-in and benefit increase from entering labor force with a more neutral benefit level until phase-out (negative substitution effect)
  - For credit-constrained households, any disincentive effect will occur in each month, since they do not have to wait until tax season to get payment

- Countervailing force: credit-constrained HHs may use additional benefit to overcome cost barriers that prevent work (i.e. child care costs, transport costs)

- Could extend job search during unemployment, but also result in higher quality job match
Prior Literature

- Similar data and design to Ananat et al. (2021, 2022). We bolster with additional statistical tests, and study expiration of CTC expansion

- Most other studies similarly fail to find significant labor supply responses (Roll et al., 2022; Lourie et al., 2022; Karpman et al., 2022; Pilkauskas et al., 2022), though one finds slower employment growth among low education HHs (Han et al., 2022)

- Related literature estimates the effects of making the fully-refundable CTC permanent, with emp. effects ranging from 150k-1.5M (National Academies of Sciences, Engineering, and Medicine, 2019; Brill et al., 2021; Goldin et al., 2022; Bastian, 2022; Corinth et al., 2022)
  - By contrast, we estimate the response to a temporary extension
  - These studies simulate the response to hypothetical changes, while we look at realized outcomes
Data and Method
• Current Population Survey (CPS): monthly data, which captures labor force participation, employment, hours last week, and a categorical variable for family income over the past 12 months

• Group families by percentile of CTC/Income ratio, only keep parents

• Main outcome of interest: Labor force participation rate (LFPR): whether someone is either employed or unemployed, but actively looking for work
Triple Difference Regression

- Compare LFPR on two dimensions:
  - Before (Feb-Jun 2021) and after (Aug-Dec 2021) the implementation of the expanded CTC benefit
  - Households with larger and smaller CTC-to-income ratios

- We get a causal effect of CTC on labor supply under assumption that, but for the CTC, households who qualify for larger or smaller amounts would have had similar trends in LFPR

- To probe this assumption, we look at trends in LFPR between these groups prior to any CTC extension: run a similar analysis in 2019, to rule out “seasonal confounders” such as higher employment during Christmas season among low-income HHs

- We also look for any changes between these groups when the CTC expires at the beginning of 2022, which gives us a second test for labor supply effects
Results
LFPR and CTC: Aug to Dec, 2021

![Graph showing the relationship between LFPR and Percentile of ARP CTC Eligibility for Aug to Dec, 2021.](image-url)
LFPR and CTC: Feb to Jun vs. Aug to Dec, 2021

![Graph showing LFPR and Percentile of ARP CTC Eligibility for 2021 Feb-Jun and 2021 Aug-Dec]
LFPR and CTC: Feb to Jun vs. Aug to Dec, 2019

![Graph showing the comparison of LFPR and Percentile of ARP CTC Eligibility between Feb to Jun and Aug to Dec, 2019. The graph illustrates a downward trend in LFPR as the percentile of ARP CTC Eligibility increases, with two distinct datasets for each period.]
LFPR and CTC: Aug to Dec, 2021

![Graph showing the relationship between LFPR and Percentile of ARP CTC Eligibility for Aug to Dec, 2021. The graph indicates a downward trend as the percentile increases.]
LFPR and CTC: Aug to Dec, 2021 vs. Jan to Mar 2022

![Graph showing the relationship between LFPR and the percentile of ARP CTC Eligibility.]
LFPR and CTC: Aug to Dec, 2019 vs. Jan to Mar 2020

![Graph showing LFPR and Percentile of ARP CTC Eligibility for Aug-Dec 2019 and Jan-Mar 2020.](image-url)
Conclusion
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• Ongoing debate regarding work requirements:
  - EITC vs. Guaranteed Income
  - Additional work requirements for SNAP recipients after debt ceiling bill
  - Fully-refundable CTC

• We fail to detect any significant changes in labor force participation at the onset or expiration of the extended CTC in 2021
  - Caveat: we only look at short-run effects of a temporary policy

• Other results not shown:
  - Small increase in employment
  - Small decrease in unemployment