

Earnings Growth during the Pandemic and the ARPA Tax Credit Expansions



Federal Reserve
Bank of Dallas

Xiaohan Zhang
Communications & Outreach
June/2022

The views expressed are my own and do not necessarily reflect official positions of the Federal Reserve System.

Outline

- Understand postpandemic Earnings Growth
 - By income groups
 - Inflation and earnings growth
 - Decompose: Composition and Aggregation
 - By industry
- ARPA labor tax credits: inequality and take-up
 - Brief introduction of EITC and CTC
 - Tax Credits by income groups
 - Tax Credits and employment
 - Take-up*

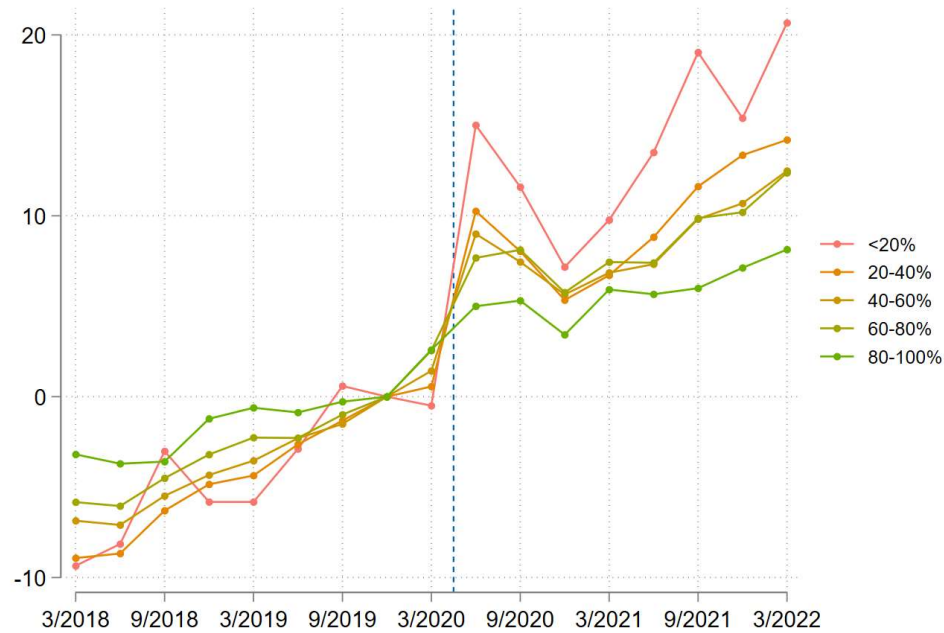
*SOURCE: DFC blog post "*Greater Hispanic Outreach Can Improve Take-Up of Earned Income Tax Credit*".
<https://www.dallasfed.org/cd.aspx>

Outline

- Understand postpandemic Earnings Growth
 - By income groups
 - Inflation and earnings growth
 - Decompose: Composition and Aggregation
 - By industry
- ARPA labor tax credits: inequality and take-up
 - Brief introduction of EITC and CTC
 - Tax Credits by income groups
 - Tax Credits and employment
 - Take-up*

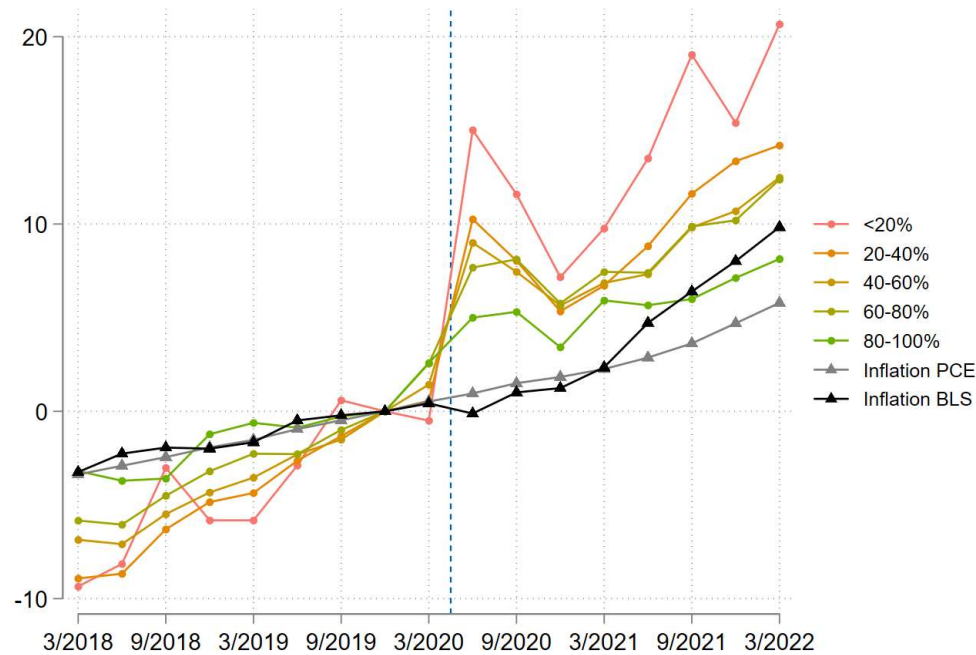
*SOURCE: DFC blog post "*Greater Hispanic Outreach Can Improve Take-Up of Earned Income Tax Credit*".
<https://www.dallasfed.org/cd.aspx>

Earnings Growth by Income Quintiles



NOTE: All earners are divided into five groups by income percentiles. Each group's statistic for fourth quarter 2019 is normalized to 0% growth. Vertical line indicates the start of the COVID-19 pandemic. SOURCE: IPUMS-CPS, author's calculation.

Inflation and Nominal Earnings Growth

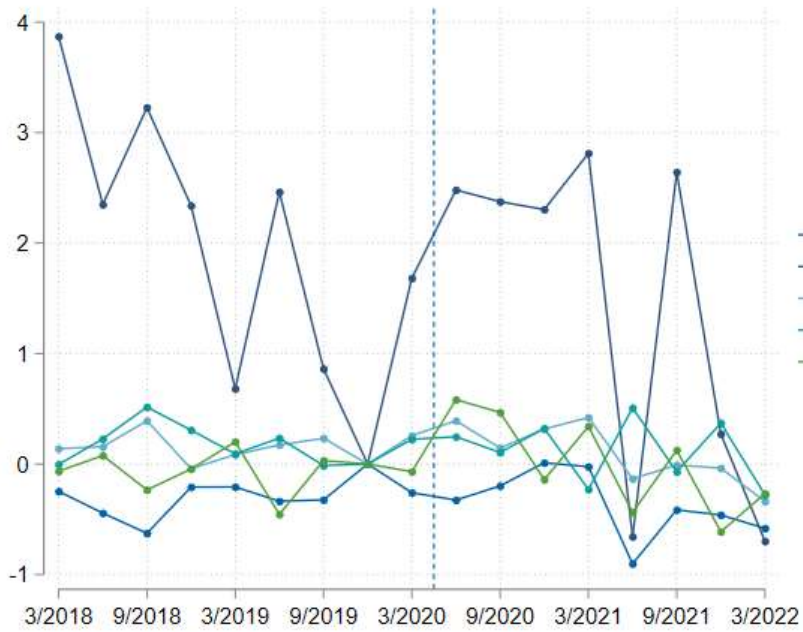


NOTE: All earners are divided into five groups by income percentiles. Each group's statistic for fourth quarter 2019 is normalized to 0% growth. Vertical line indicates the start of the COVID-19 pandemic. SOURCE: IPUMS-CPS, author's calculation.

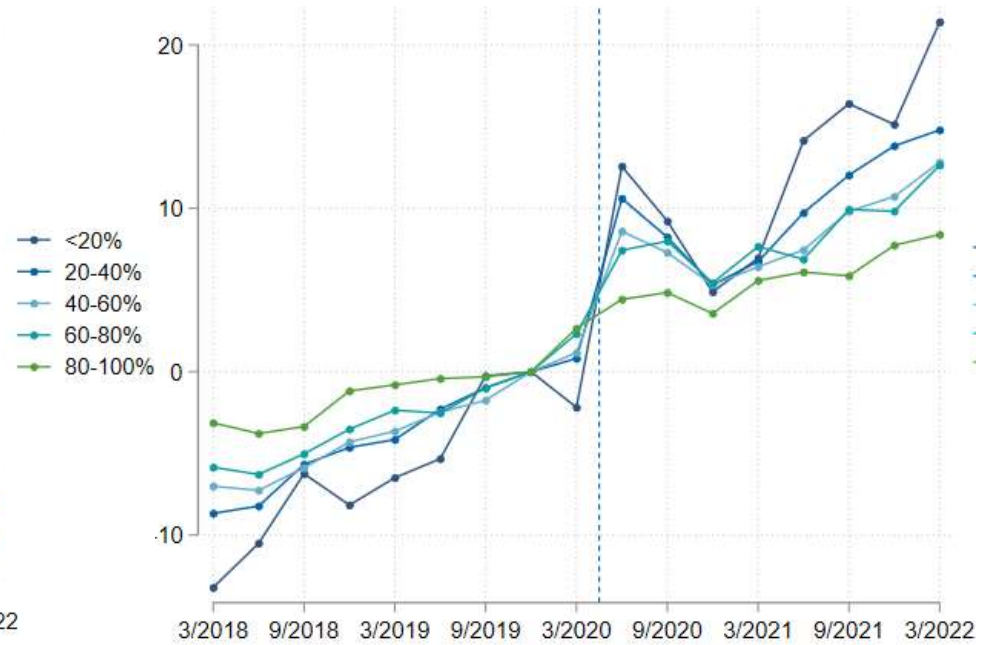
Decompose Earnings Growth

- **Total Change = Composition+ Aggregation**
- **Composition effect**
Change in workforce composition, mainly people losing their jobs or coming into the workforce do not earn the same wage as those who remained.
- **Aggregation effect**
Changes in wage/earnings net of compositional effects.
- [Howard, Rich and Tracy \(2022a,b\)](#) found unusually large composition effects in the positive direction in 2020:Q2 and the opposite sign in 2021:Q2.

Composition and Aggregation Effects



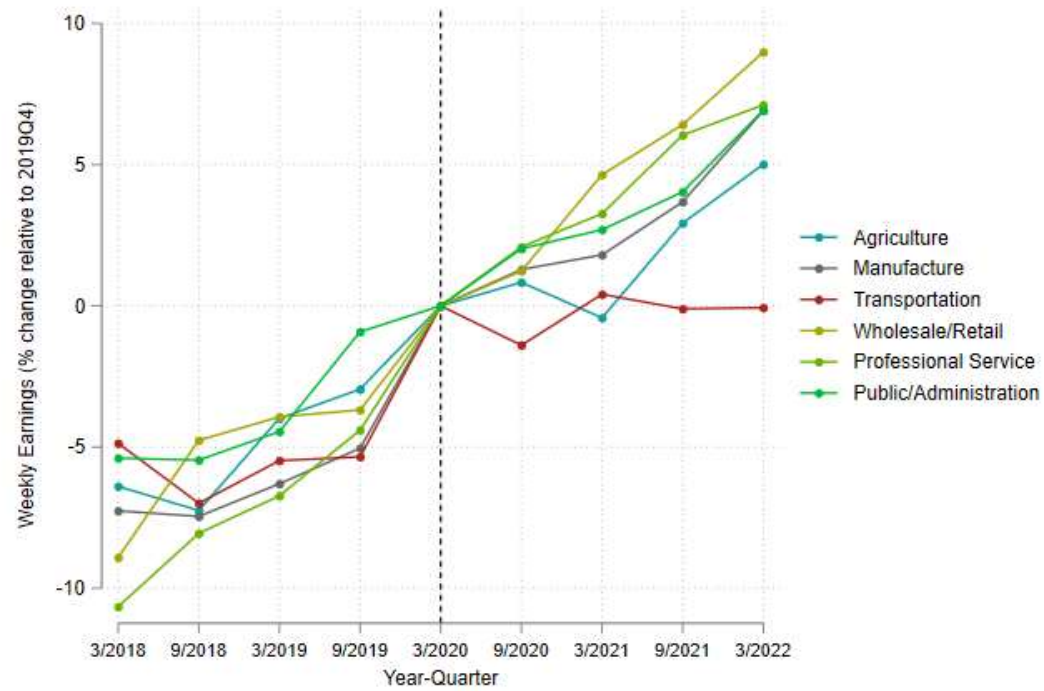
(a) Composition effect



(b) Aggregation effect

Methodology explained in Howard, Rich and Tracy (2022a,b)

By Industry



Outline

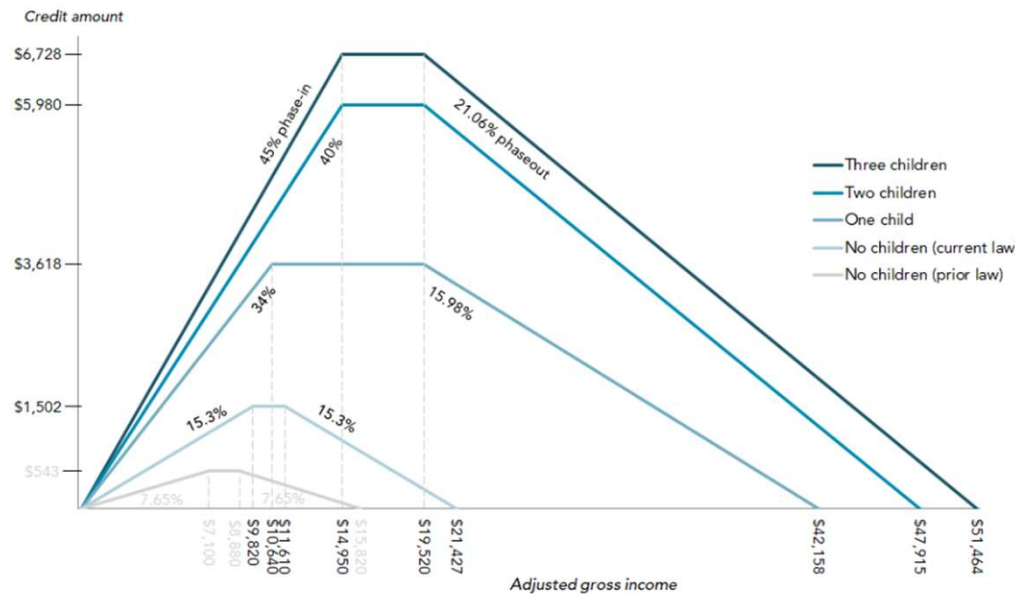
- Understand postpandemic Earnings Growth
 - By income groups (Low-income quintiles grew faster)
 - Inflation and earnings growth (Earnings grew faster in general)
 - Decompose: Composition and Aggregation (Aggregation effect dominates)
 - By industry (Transportation lags behind)
- ARPA labor tax credits: inequality and take-up
 - Brief introduction of EITC and CTC
 - Tax Credits by income groups
 - Tax Credits and employment
 - Take-up

Outline

- Understand postpandemic Earnings Growth
 - By income groups
 - Inflation and earnings growth
 - Decompose: Composition and Aggregation
 - By industry
- ARPA labor tax credits: inequality and take-up
 - Brief introduction of EITC and CTC
 - Tax credits by income groups
 - Tax credits and employment
 - Take-up

Brief introduction of EITC

Earned Income Tax Credit
2021



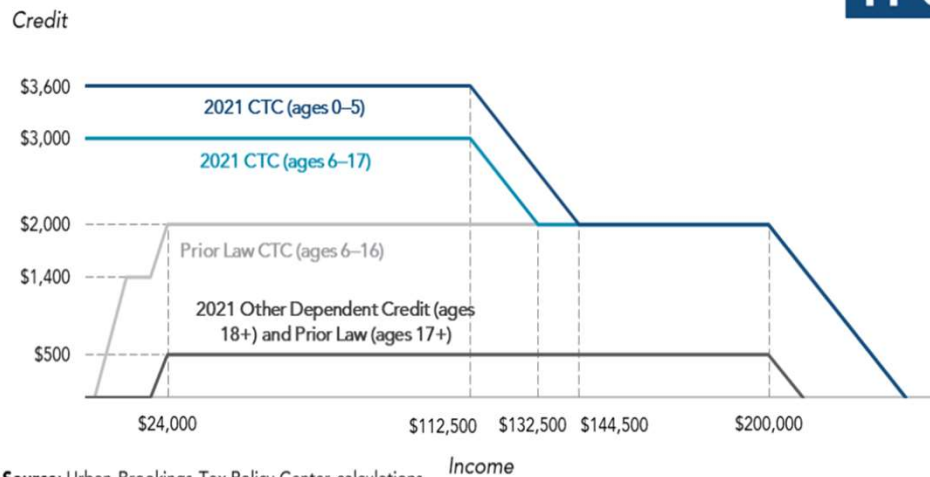
Source: Urban-Brookings Tax Policy Center (2021); Internal Revenue Procedure 2020-45, Internal Revenue Service; and H.R. 1319, "American Rescue Plan Act of 2021," 117th Cong. (2021).
Notes: Assumes all income comes from earnings. Amounts are for taxpayers filing a single or head-of-household tax return. For married couples filing a joint tax return, the credit begins to phase out at income \$5,940 higher than shown, or \$5,950 if the couple has children.

- Total EITC benefit varies by:
 - Income
 - Marital Status
 - Number of children/dependents

- EITC requires:
 - Age limit (19-65)
 - Immigration (non-SSN holders can claim if dependent have SSN)

Brief introduction of CTC

American Rescue Plan Act Expands 2021 Child Tax Credit



Source: Urban-Brookings Tax Policy Center calculations.

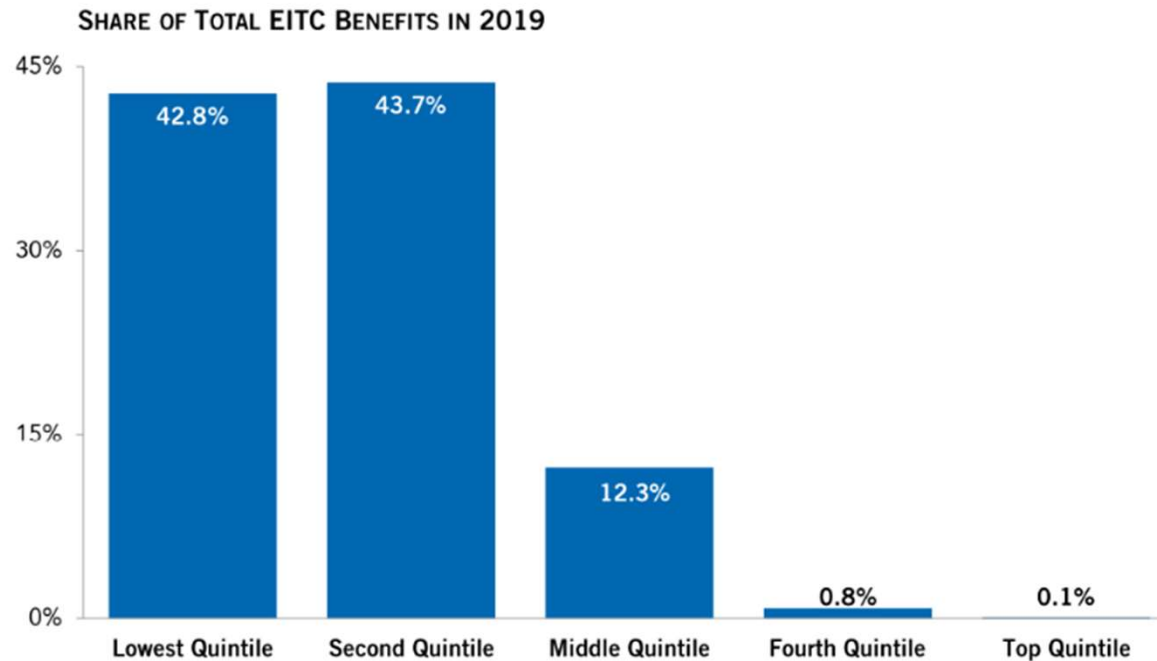
Note: CTC = Child Tax Credit. Proposal makes credit fully refundable; prior law limited the refundable portion to \$1,400. Illustration assumes all income comes from earnings, taxpayer is head of household, and child meets all tests to be a CTC-qualifying dependent. Credit for married couples begins first phase out at \$150,000 of income until credit reaches pre-2021 level; begins second phase out at \$400,000 of income. Under prior law, credit for other dependents applied to dependents ages 17 and up.

- Total CTC benefit varies by:
 - Income
 - Age of the child
- EITC requires:
 - Qualifying child has SSN

Tax Credits by Income Groups



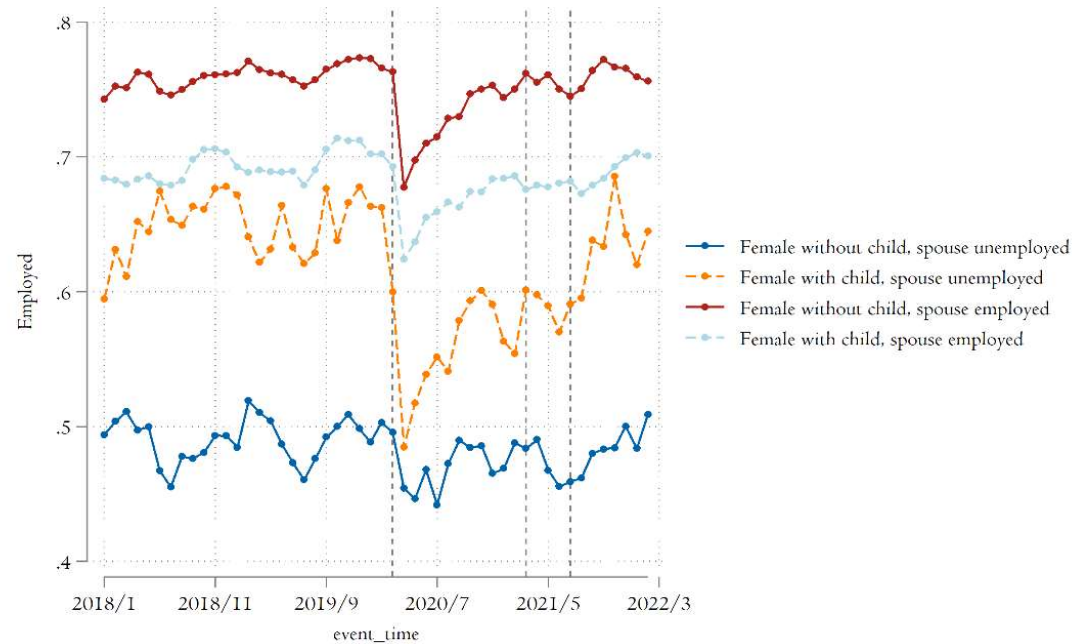
The Earned Income Tax Credit largely benefits those with lower incomes



Tax Credits and Employment

- Research suggests that the EITC reduces poverty
- Encouraged women with children to work, especially a substantial impact on the labor force participation of single mothers
- (see, Eissa and Liebman, 1996; Meyer and Rosenbaum, 2001; Meyer, 2002; Eissa and Hoynes, 2004; Hoynes and Patel, 2018; Bastian, 2020).

Employment after the CTC Expansion: Married Women

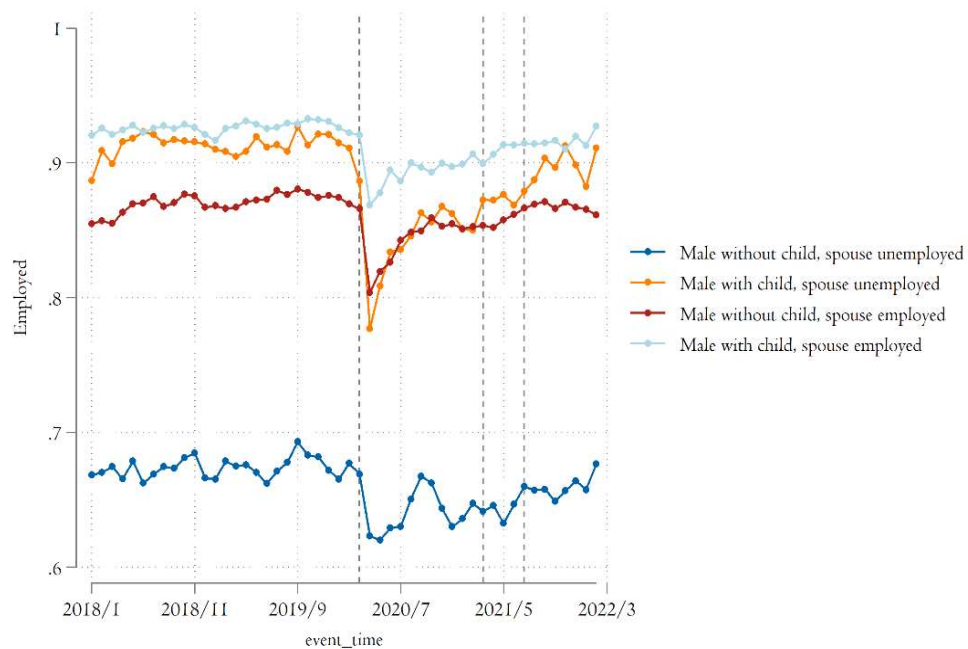


COVID-19(3/2020), ARPA(3/2021), first check(7/2021)

NOTE: The figure depicts the employment probability among males with different family backgrounds. The two vertical lines indicate March 2021, the announcement of expanded CTC plans and July 2021, the arrival of the first CTC check.

SOURCE: IPUMS-CPS, author's calculation.

Employment after the CTC Expansion: Married Men



COVID-19(3/2020), ARPA(3/2021), first check(7/2021)

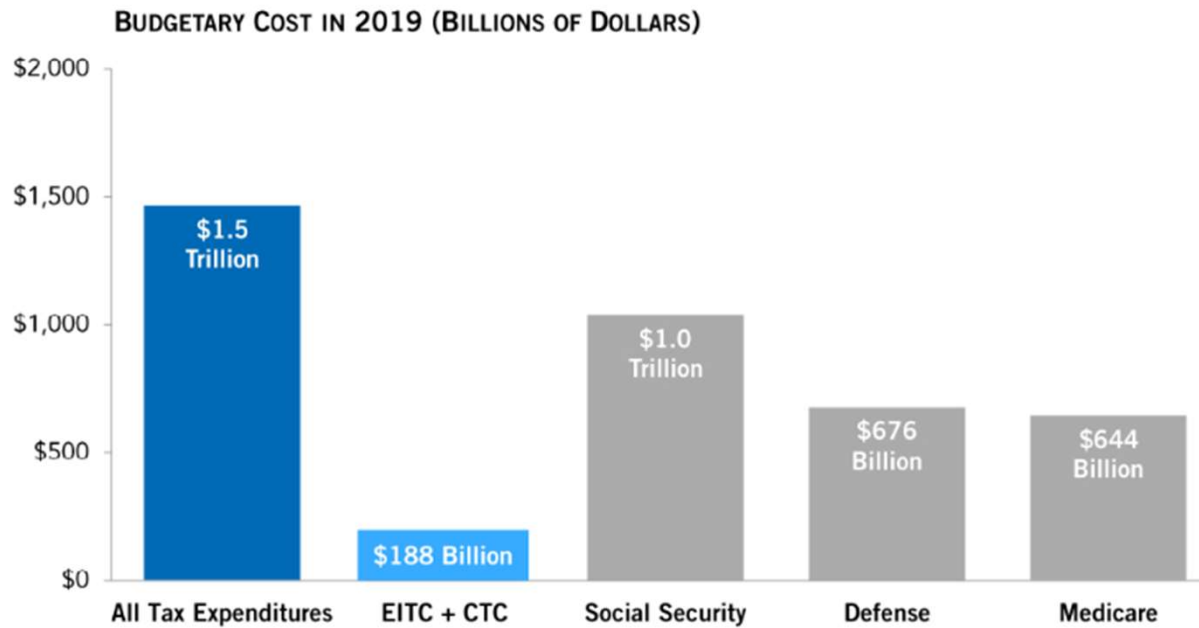
NOTE: The figure depicts the employment probability among males with different family backgrounds. The two vertical lines indicate March 2021, the announcement of expanded CTC plans and July 2021, the arrival of the first CTC check.

SOURCE: IPUMS-CPS, author's calculation.

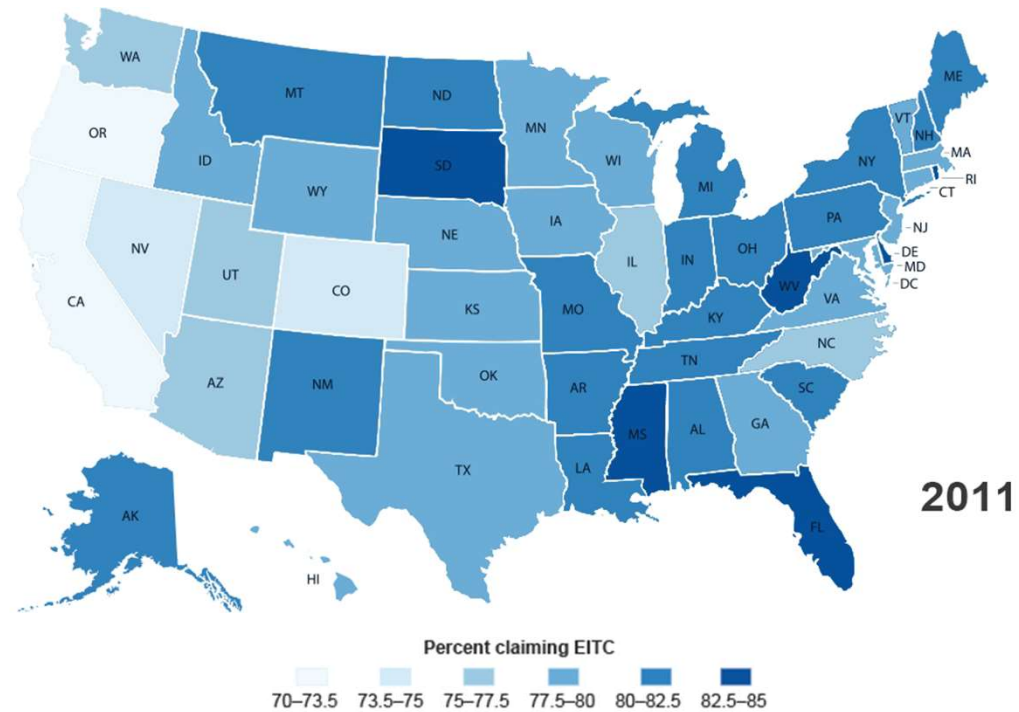
The Cost of EITC and CTC



The cost of EITC and CTC are small in comparison to all tax expenditures and the government's major programs



EITC Take-up



NOTES: The dynamic U.S. map scrolls through Earned Income Tax Credit (EITC) take-up rates by state for tax years 2011 through 2018. The take-up rate is calculated as the percent of eligible households that claim EITC benefits (100=100 percent). In the legend, percentages on the left begin each range. Washington, D.C., is included in the results.

SOURCE: DFC blog post "[Greater Hispanic Outreach Can Improve Take-Up of Earned Income Tax Credit](#)"

EITC Take-up

- We conducted a county-level analysis of the correlation between socioeconomic factors and EITC take-up.
- We find EITC take-up is lower in counties with a greater share of low-income Hispanic residents.
- Further analysis shows that the gap between the Hispanic and white populations closes once the language barriers are removed.
- These results are robust after removing the inherent differences of county or year.

- Conclusion: English proficiency matters

*SOURCE: DFC blog post "*Greater Hispanic Outreach Can Improve Take-Up of Earned Income Tax Credit*".
<https://www.dallasfed.org/cd.aspx>

Outline

- Understand postpandemic Earnings Growth
 - By income groups
 - Inflation and earnings growth
 - Decompose: Composition and Aggregation
 - By industry
- ARPA labor tax credits: inequality and take-up
 - Brief introduction of EITC and CTC (only for workers)
 - Tax Credits by income groups (targets LMI workers)
 - Tax Credits and employment (work incentive for the unemployed)
 - Take-up (low for those with income barrier)

References



- All Dallas Fed studies discussed in this presentation are (will be) available through Dallas Fed Communities.

- Follow us



- Or subscribe:

<https://www.dallasfed.org/cd.aspx>