

The Effectiveness of Employment-Based Tax Credits Under Labor Market Frictions: Evidence from the Child Tax Credit

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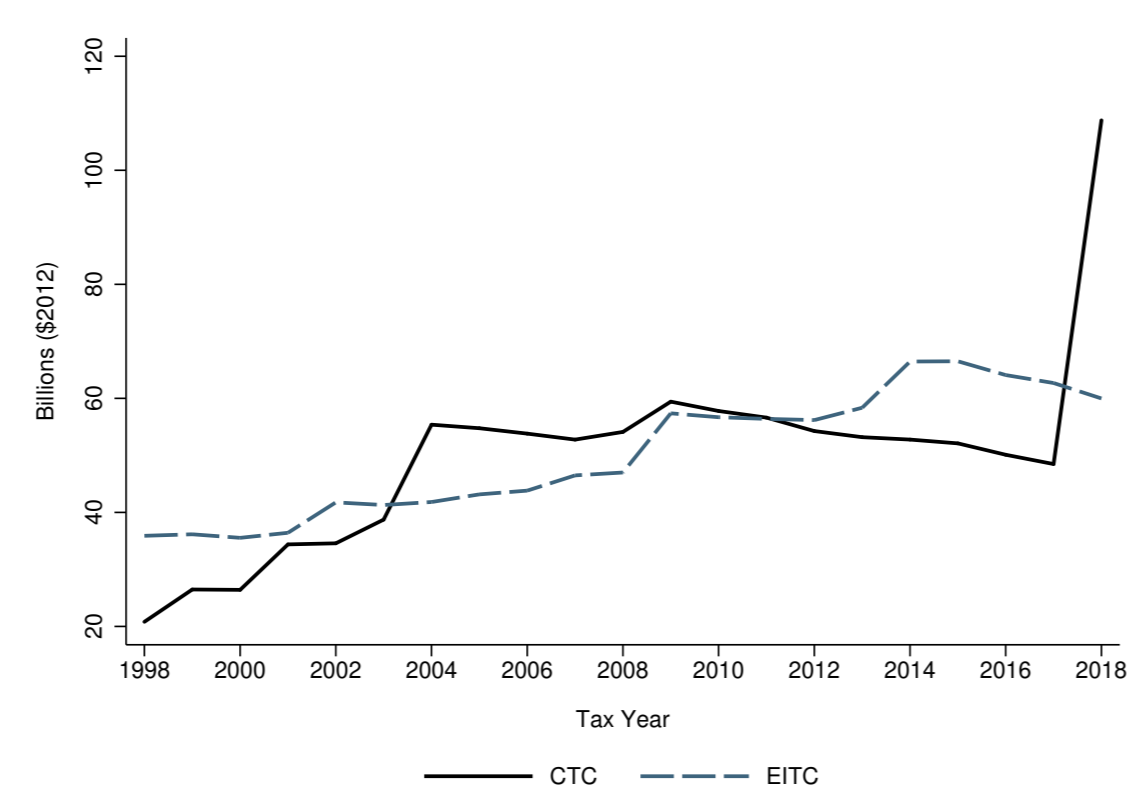


Motivation and Research Questions

Motivation:

- Over \$119 billion in federal spending (2019 tax year) on the Child Tax Credit (CTC)
- Little is known on the effectiveness of employment-based tax credits on their impact on labor supply, let alone, when the individual faces labor market frictions.
- Unauthorized mothers are eligible for the CTC and deal with extreme labor market frictions.
- 2.3 million unauthorized workers claimed \$4.2 billion in refundable CTC (2010).

Figure 1. Federal Expenditure on the CTC and the EITC



Research Question:

Do unauthorized single mothers respond to the 2008-09 expansion of the CTC?

Contribution:

- First to study the response of unauthorized immigrants to tax incentives.
- First to study the effectiveness of employment-based tax credits under labor market frictions.

Data

American Community Survey (ACS) 1-Year:

- Nationally representative samples of 1% of households.
- Data on employment, earnings, education, and demographics

Sample:

- Sample period: 2005-2012 survey years
- Sample individuals: single unauthorized women aged 20-50

Identifying Unauthorized Mothers in the ACS

! Residual Method proposed by Borjas and Cassidy (2019)

! Assign all immigrant women as having authorized status if:

- that person arrived before 1980;
- that person is a citizen;
- that person receives Social Security benefits, SSI, Medicaid, Medicare, or Military Insurance;
- that person is a veteran, or currently in the Armed Forces;
- that person works in the government sector;
- that person was born in Cuba;
- that person's occupation requires some form of licensing (such as physicians, registered nurses, and lawyers);
- that person's spouse or parent is a legal immigrant or citizen.

! All immigrant women not identified as a legal immigrant (the residual) are classified as unauthorized.

Effect of CTC on Unauthorized Mothers Over Time

Figure 2. On Employment

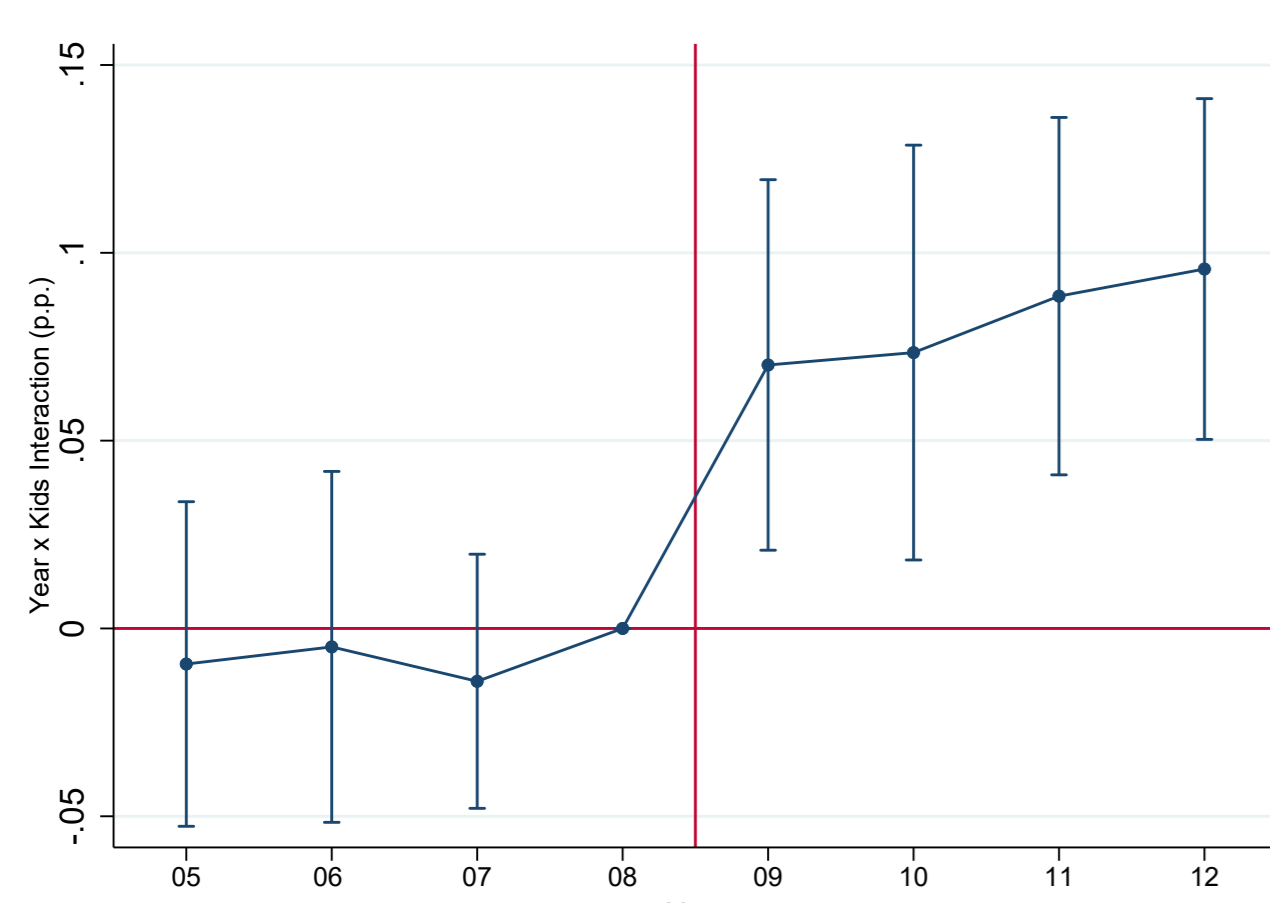


Figure 3. On Labor Force Participation

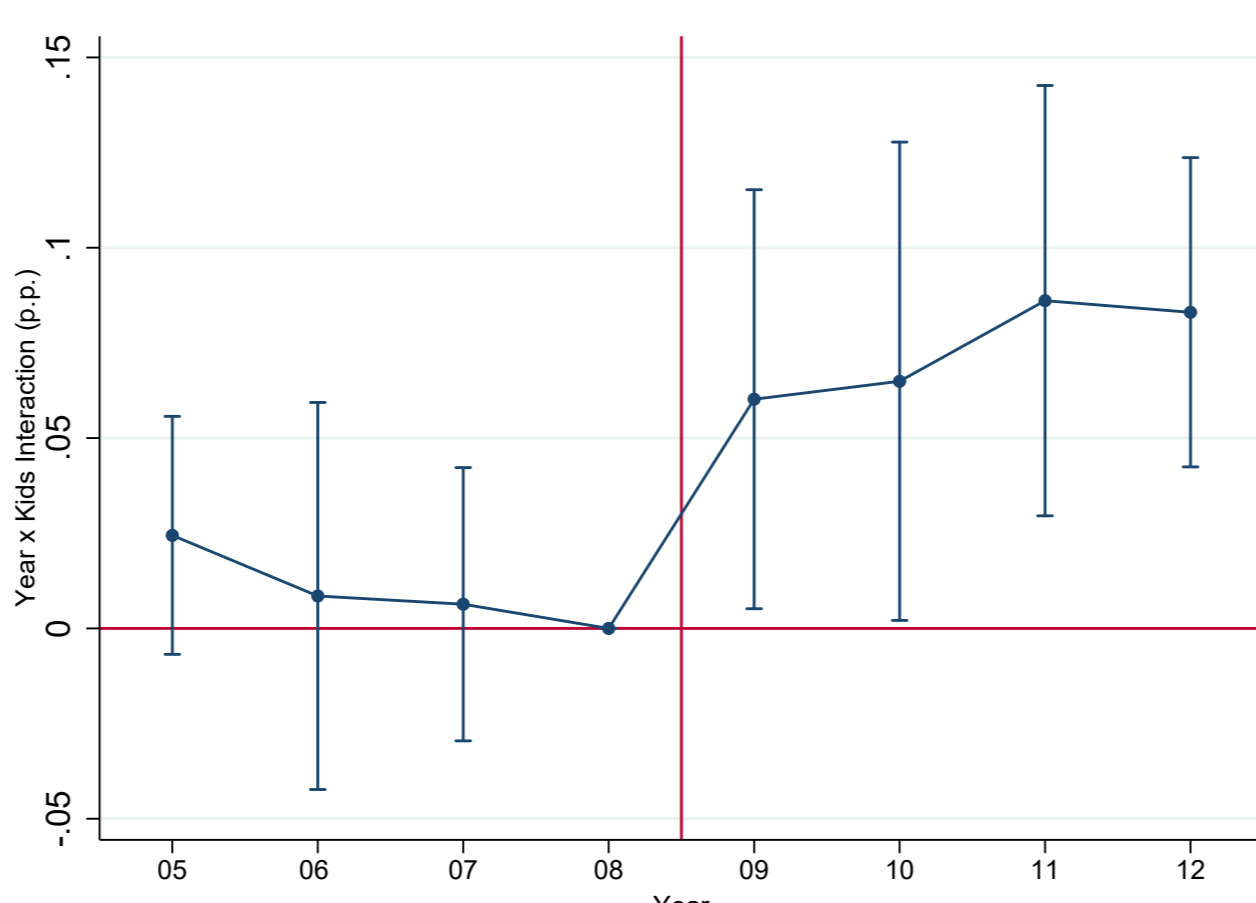


Figure 4. On Self-Employment

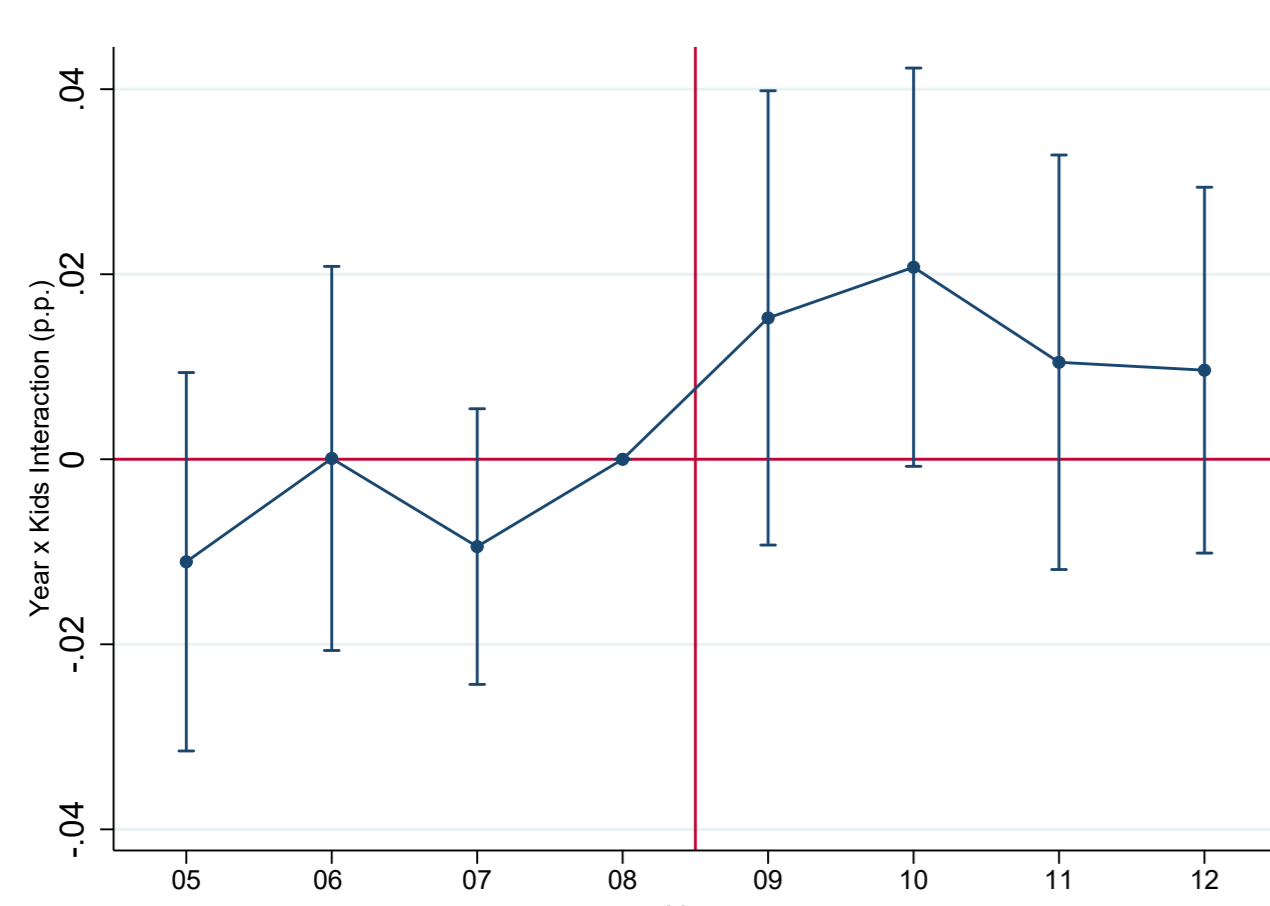
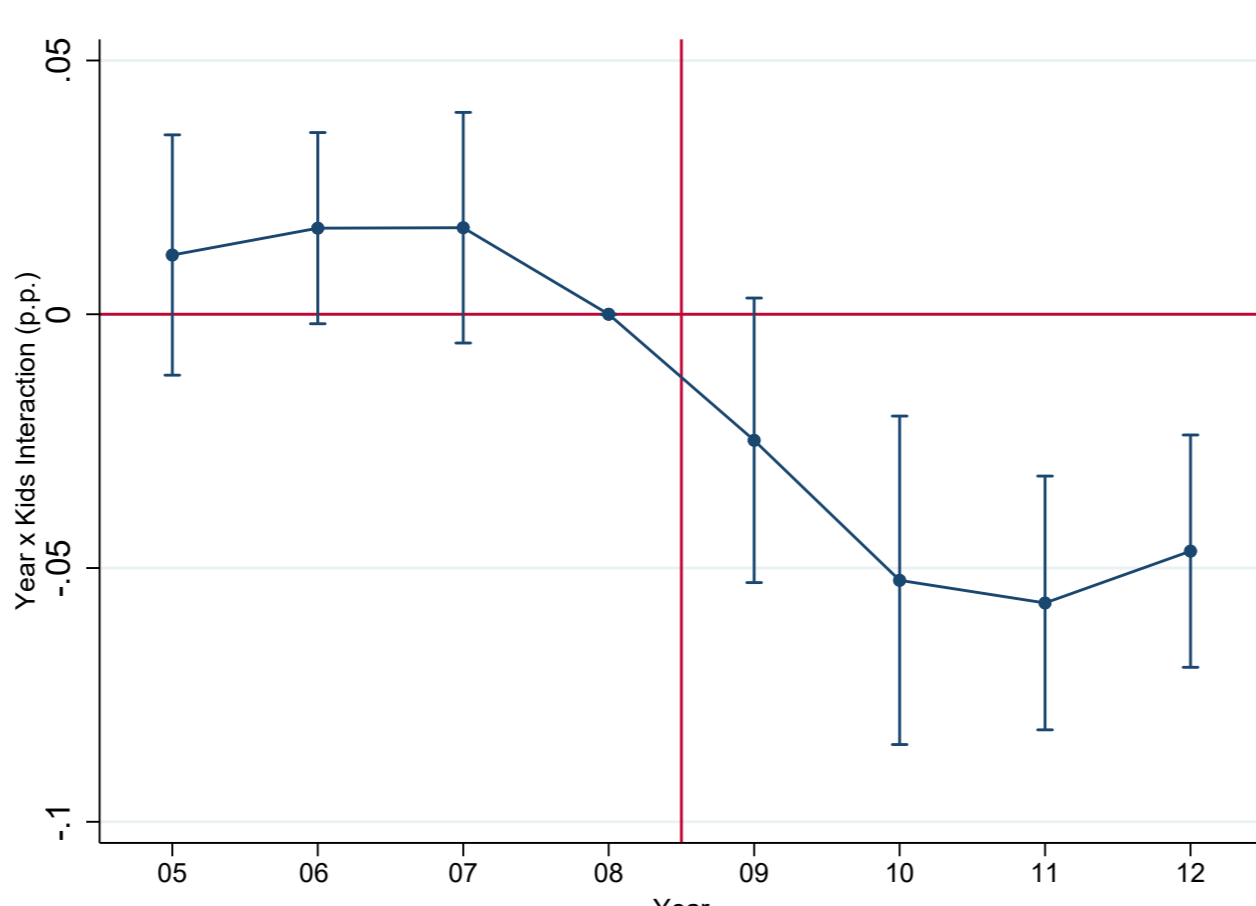
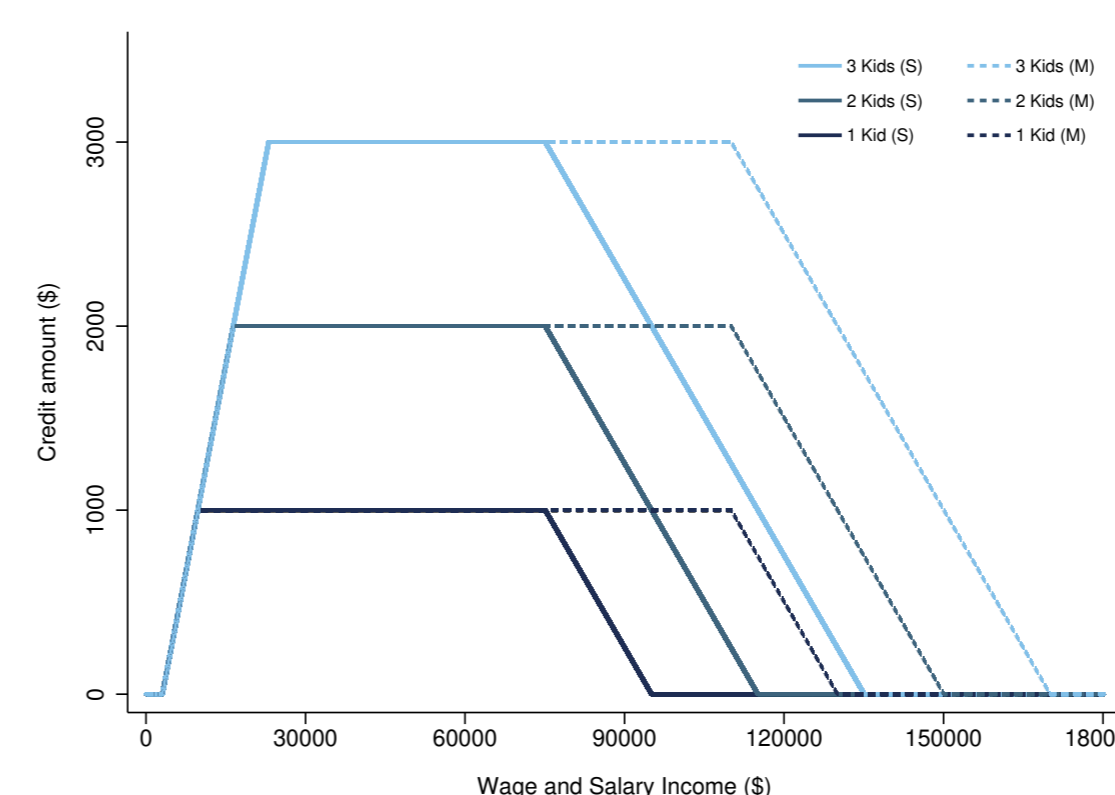


Figure 5. On School Attendance



What is the Child Tax Credit?

Figure 6. 2017 CTC Schedule by Number of Qualifying Children



- Employment-based tax credit program implemented in tax year 1998
- Provides tax credit of up to \$1,000 per child as of tax year 2017 (\$2,000 beginning in 2018) for those who have a qualifying child
- Eligibility depends on earnings: "minimum earned income threshold"
- Partially refundable: Additional CTC (ACTC)
- Changes in the generosity and eligibility took place in 2001, 2003, 2008-09, 2018
- Temporary expansion of the CTC for the 2021 tax year: \$3,000 - \$3,600 per child and fully refundable

The 2008-09 Child Tax Credit Expansion

- In 2008 and 2009, the minimum threshold to claim the CTC was reduced
- Increased the number of low-income mothers eligible for the CTC

Figure 7. 1 CTC Eligible Child

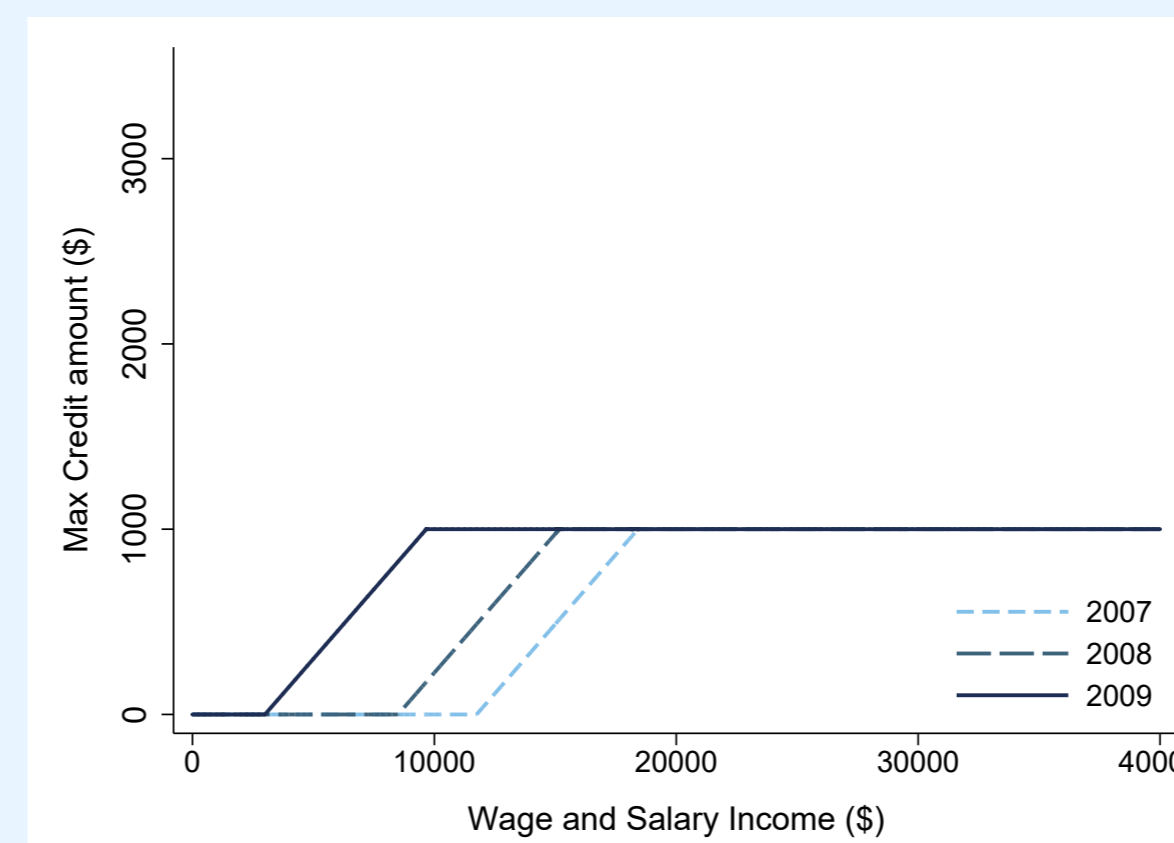
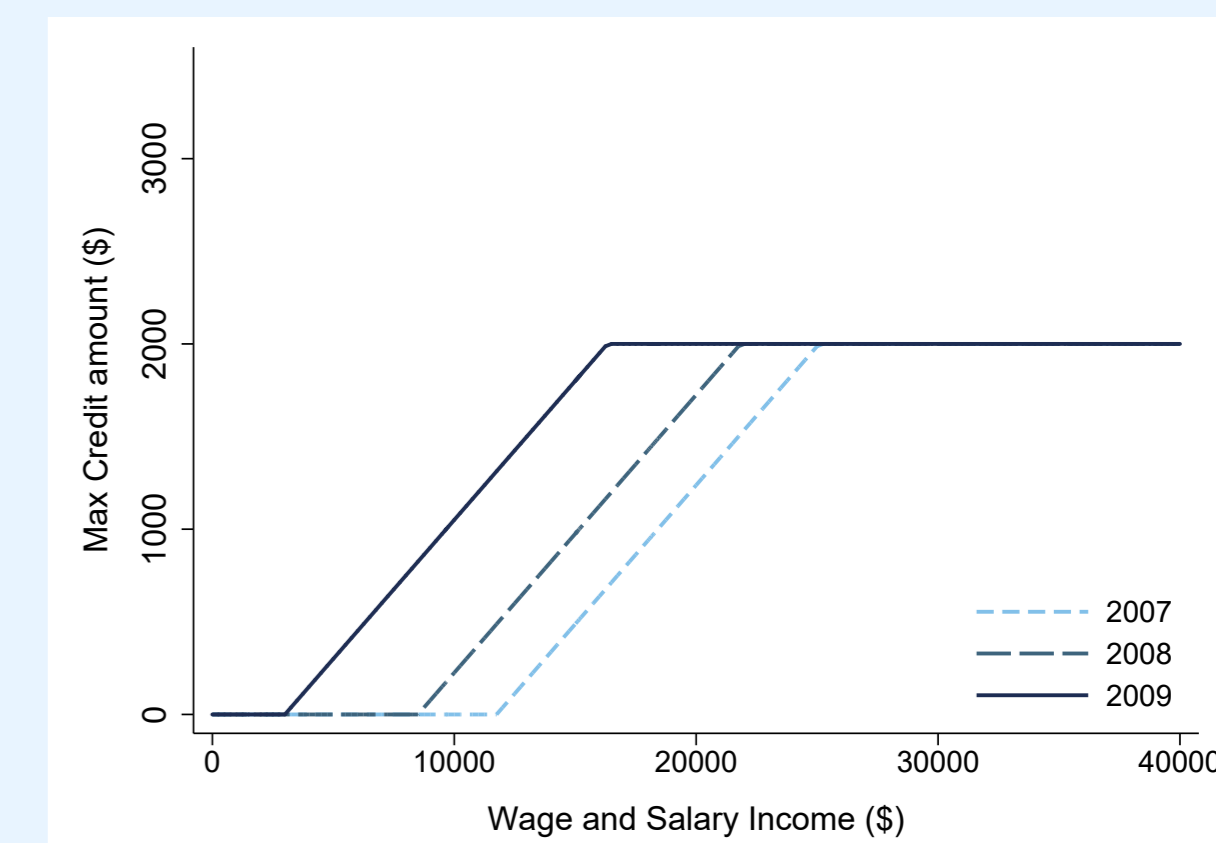


Figure 8. 2 CTC Eligible Children



Model: Difference-in-Differences

$$Y_{ikst} = \alpha + \beta_1 kids_k \times post_t + \beta_2 kids_k + \beta_3 post_t + X'_{it}\gamma + Z'_{st}\phi + kids_k * Z'_{st}\Phi + \lambda_s + \lambda_t + \epsilon_{ikst}$$

- Y_{ikst} : labor market outcomes of individual i in year t
- $kids_k$: indicator variable if the single unauthorized woman has at least one qualifying child
- $post_t$: indicator equal to 1 for years 2009 to 2012 and zero otherwise
- X_{it} : demographics characteristics
- Z_{st} : vector of immigration policies enacted at the state level as well as the unemployment rate
- λ_s and λ_t : state and time fixed effects

! β_1 : average change in the outcome of interest of unauthorized mothers relative to the change experienced by their childless counterparts after the expansion of the CTC

Labor Market Response of the CTC by Unauthorized Mothers

	Working	Labor Force	Self-employed	In School
kids*post	0.092*** (0.022)	0.070*** (0.022)	0.016* (0.009)	-0.052*** (0.011)
kids	-0.075*** (0.022)	-0.074*** (0.020)	0.024*** (0.008)	-0.107*** (0.013)
Mean of variable	0.55	0.63	0.08	0.06
N	65,859	65,859	65,859	65,859
R ²	0.082	0.079	0.033	0.370

Standard errors in parenthesis * $p < .10$, ** $p < .05$, *** $p < .01$

Conclusion

- Tax credits that incentivize work are effective in promoting employment and labor force participation.
- These incentives work even when individual faces severe labor market frictions.
- The 2008-09 expansion of the CTC increased the labor market supply of unauthorized single mothers relative to unauthorized single women.
- Labor supply increase led to a large decrease in school attendance.
- Suggestive evidence that unauthorized mothers use the informal market initially to compensate for labor market frictions in the formal labor market.