

# Taxation and Labor Force Participation: The EITC Reconsidered

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October 2018

# The Extensive Margin of Labor Supply

- ▶ A consensus view that extensive margin responses are larger than intensive margin responses
- ▶ Where does this consensus originate from?
  - ▶ Early labor supply literature (Heckman 1993)
  - ▶ Macro business cycle literature (Hansen 1985; Rogerson 1988)
  - ▶ Labor supply literature studying EITC reform (Eissa & Liebman 1996; Meyer & Rosenbaum 2001)
- ▶ A meta study by Chetty et al. (2013) puts the extensive margin elasticity at around 0.3

# The Earned Income Tax Credit (EITC)

- ▶ A means-tested transfer that is conditional on positive earnings and children
- ▶ A large literature studies the labor supply effects of the EITC, particularly on single mothers
  - ▶ Most of this work exploits federal EITC expansions enacted in 1986, 1990, and 1993
- ▶ Nichols & Rothstein (2015) summarize the consensus view:  
*There is remarkable consensus around a few key results (...) essentially all authors agree that the EITC expansion led to sizeable increases in single mothers' employment rates*

# Literature

- ▶ Labor market impacts of the EITC:

Dickert, Houser & Scholz (1995), Eissa & Liebman (1996), Ellwood (2000), Meyer & Rosenbaum (2001), Neumark & Wascher (2001), Hotz & Scholz (2003), Grogger (2003), Eissa & Hoynes (2004, 2006, 2011), Cancian & Levinson (2005), Hotz, Mullin & Scholz (2006), Hoynes (2009), Rothstein (2010), Gelber & Mitchell (2012), Chetty, Friedman & Saez (2013), Looney & Manoli (2013), Bastian (2018)

- ▶ Labor market impacts of the FC/WFTC/WTC:

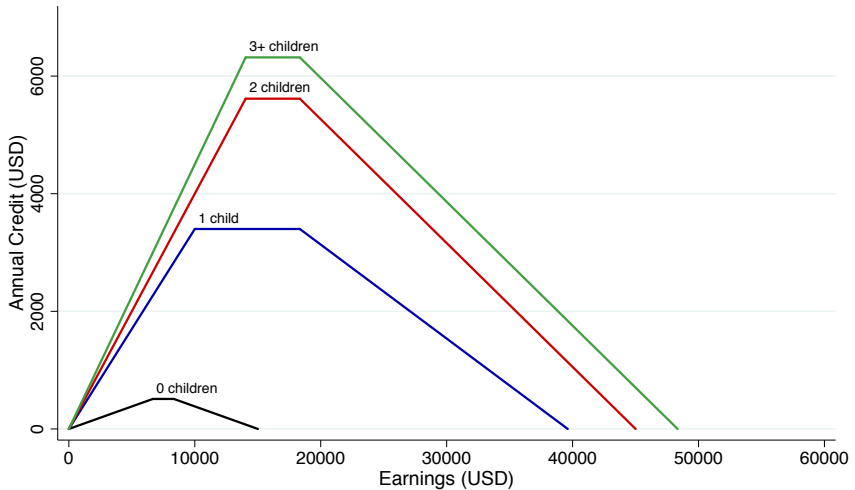
Blundell et al. (2000), Blundell & Hoynes (2004), Blundell, Brewer & Shepard (2005), Brewer et al. (2006), Leigh (2007), Francesconi & Klauw (2007), Francesconi, Rainer & Klaauw (2009), Gregg, Harkness & Smith (2009), Blundell et al. (2016)

# Why Revisit This Question?

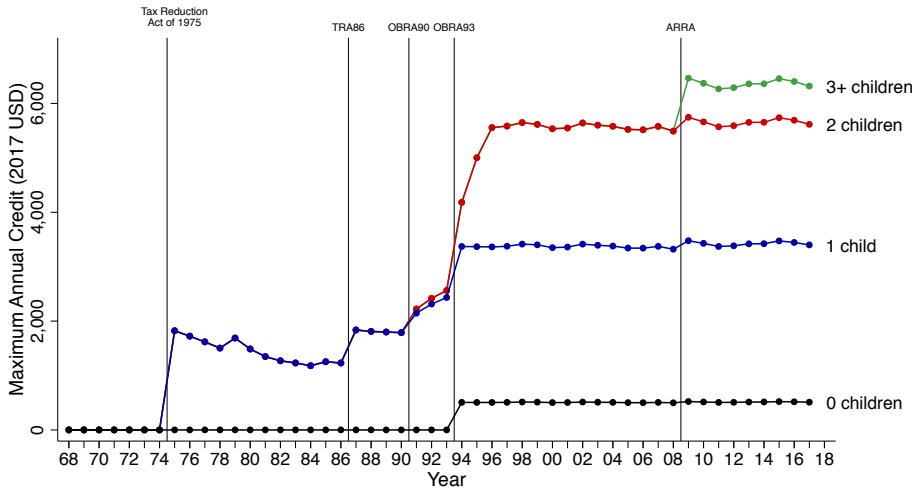
- ▶ Have I found a new source of identifying variation? (NO)
  - ▶ I study EITC reforms in the US (federal and state)
  - ▶ I study WFTC/WTC reforms in the UK
- ▶ Have I gained access to better data? (NO)
  - ▶ I use CPS data for the US and LFS/BHPS data for the UK
- ▶ So I study the same data and reforms, but viewed through a different lens
  - ▶ The consensus view is based on work from about 20 years ago

## In-Work Transfers in the US and UK

# EITC Schedule in 2017



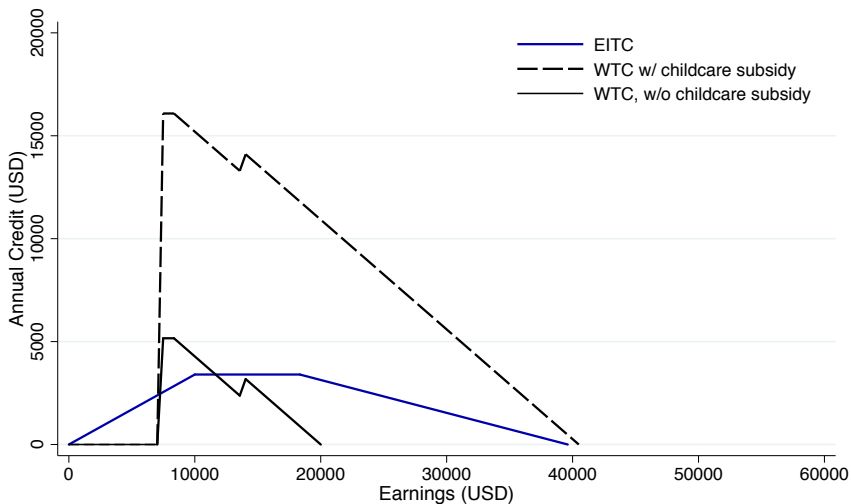
# EITC Maximum Credit Over Time



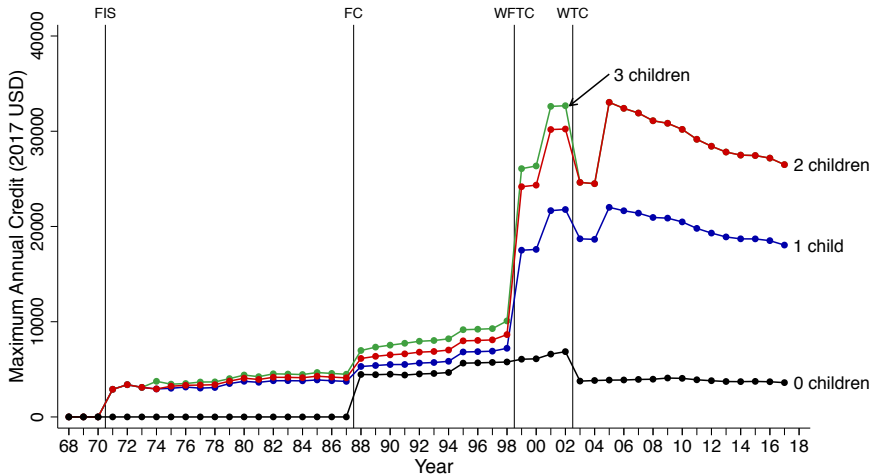


# EITC vs WTC Schedules in 2017

Single Women with 1 Child



# WTC Maximum Credit Over Time



With Child Tax Credit

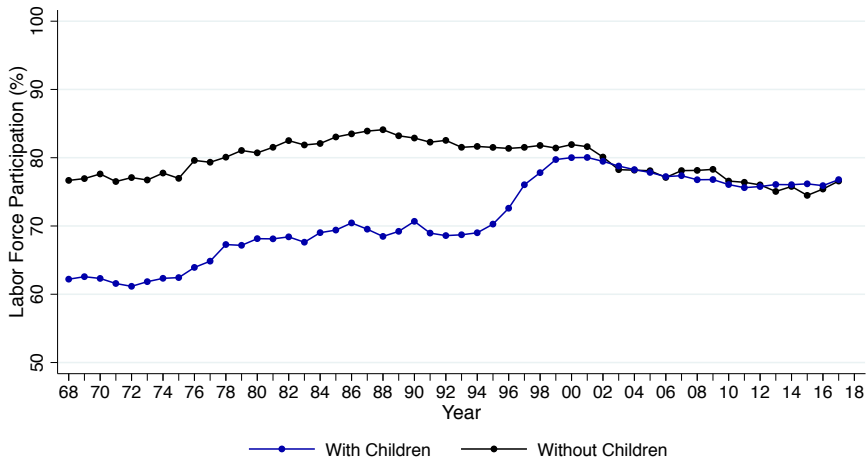
## EITC Effects on the Extensive Margin?

# Data

- ▶ Current Population Survey (CPS), March files
  - ▶ 50-year period (1968-2018)
  - ▶ From around 150,000 to 200,000 individuals per year
- ▶ Measures of extensive margin labor supply:
  1. **Employed last week**
  2. **Participated last week**
    - ▶ Employed or unemployed last week
  3. **Employed last year**
    - ▶ Positive earnings last year
  4. **Participated last year**
    - ▶ Employed or unemployed for 1+ weeks last year

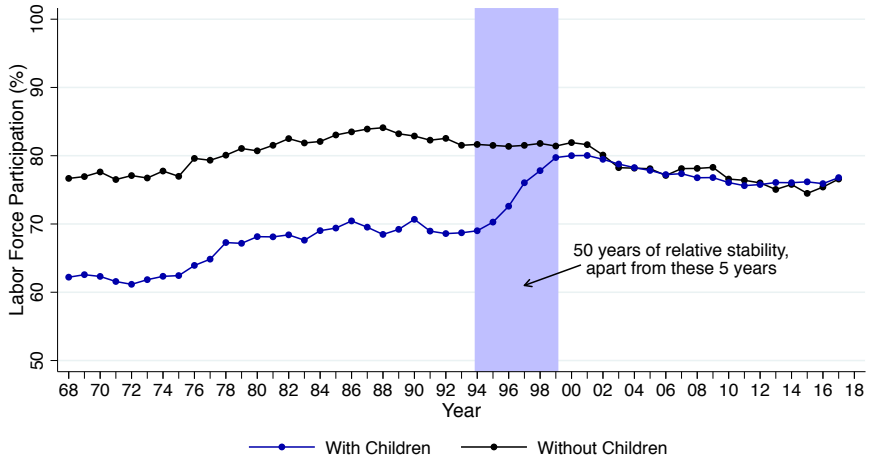
# Labor Force Participation of Single Women

With and Without Children



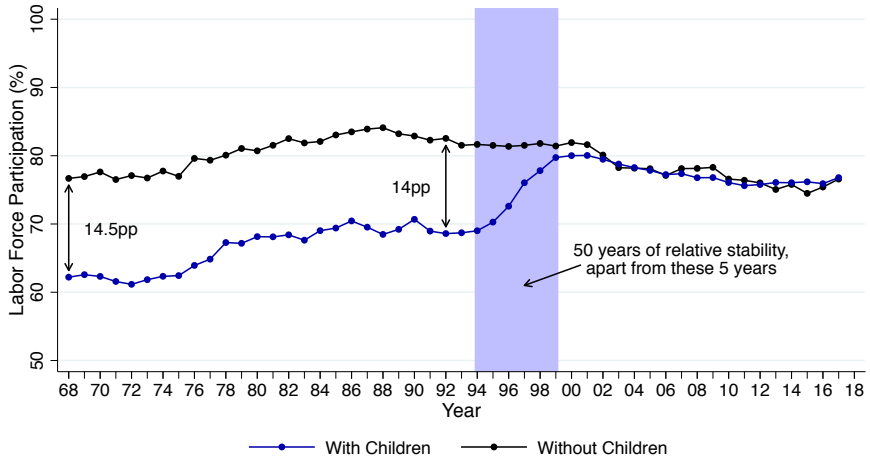
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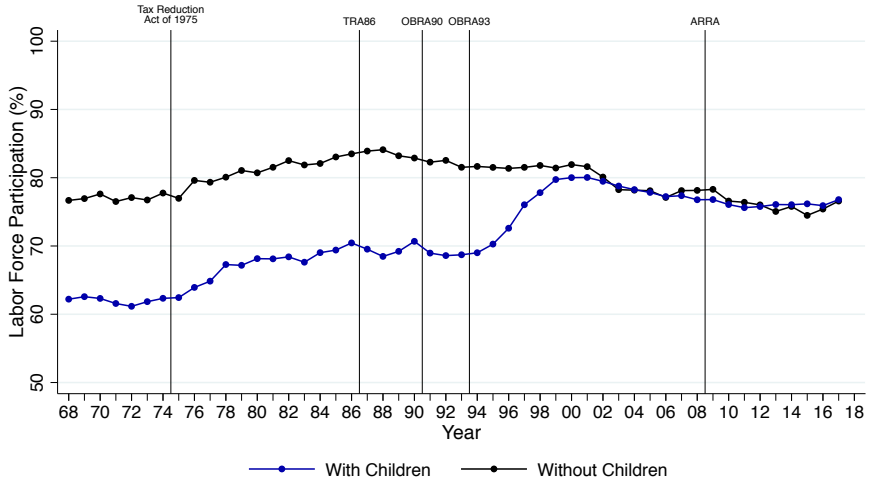
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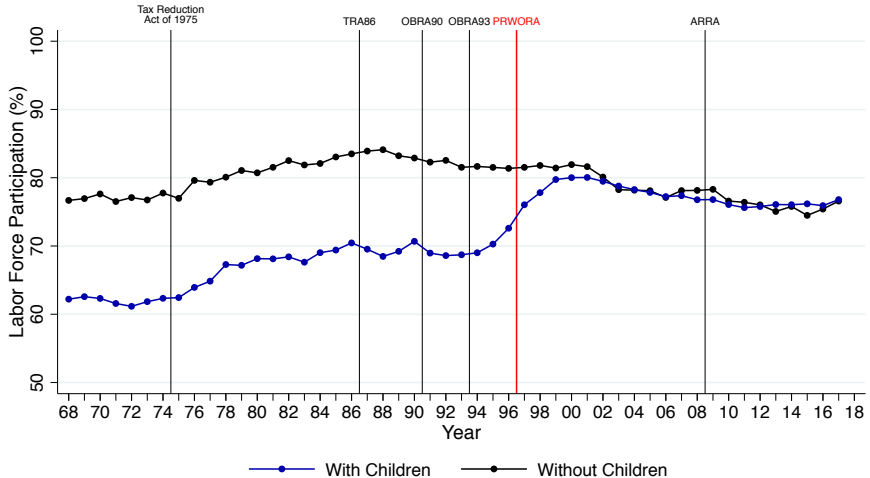
With and Without Children





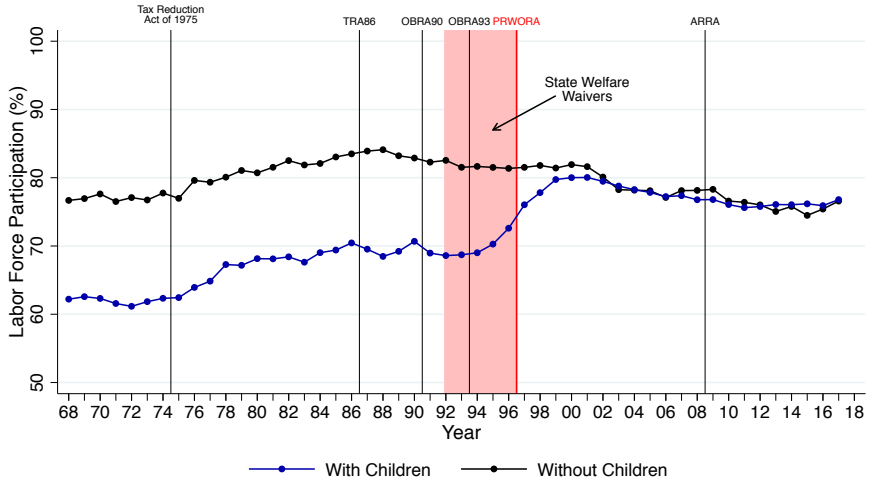
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With and Without Children



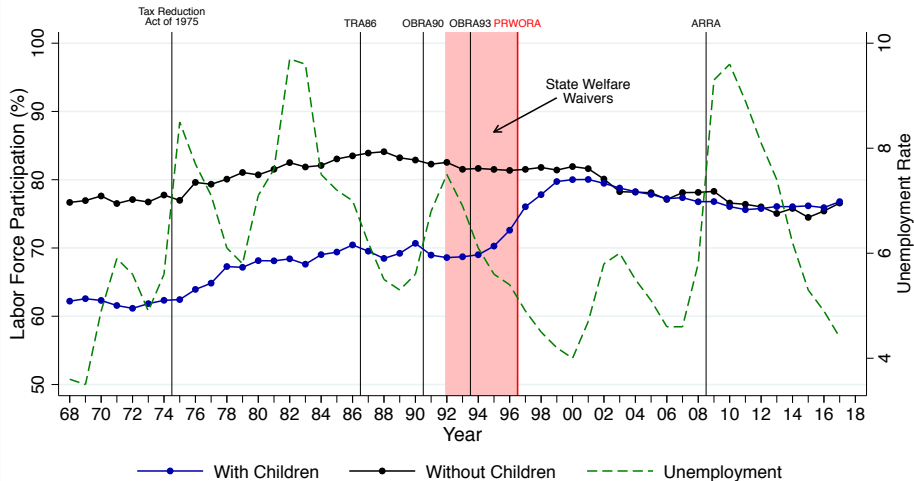
# Labor Force Participation of Single Women

## With and Without Children



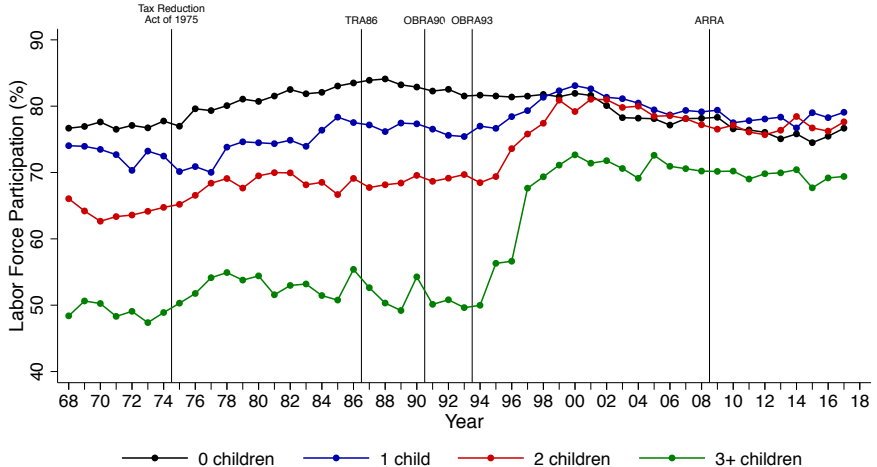
# Labor Force Participation of Single Women

With and Without Children



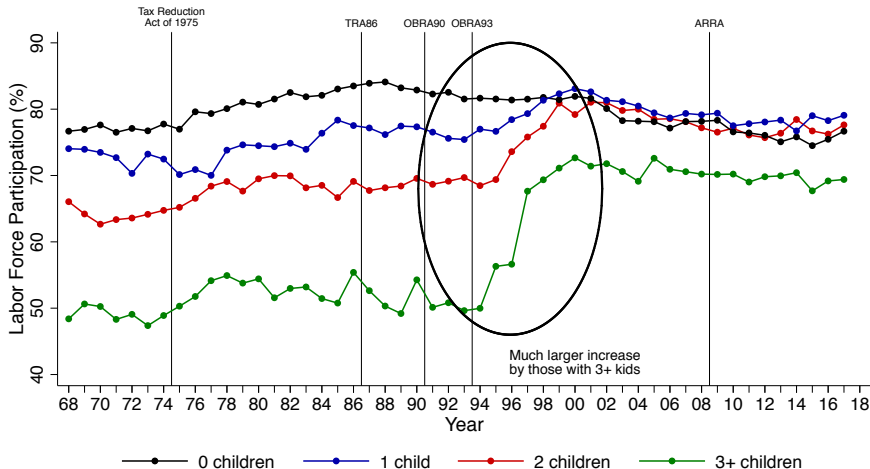
# Labor Force Participation of Single Women

By Number of Children



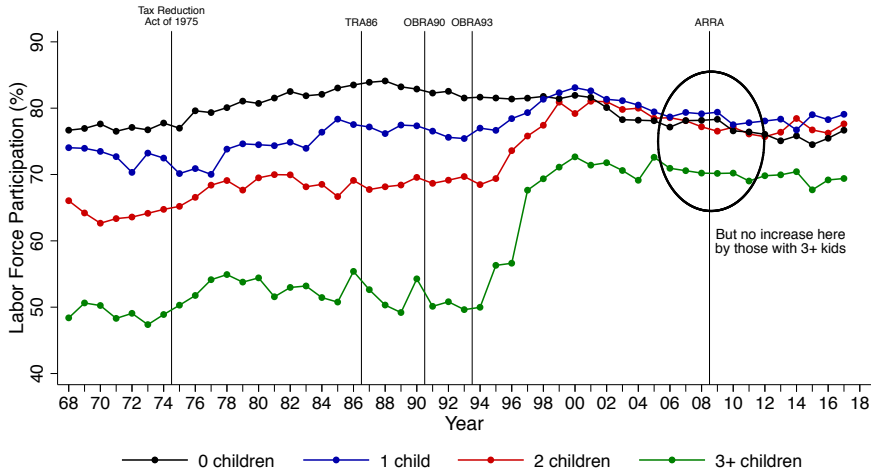
# Labor Force Participation of Single Women

## By Number of Children



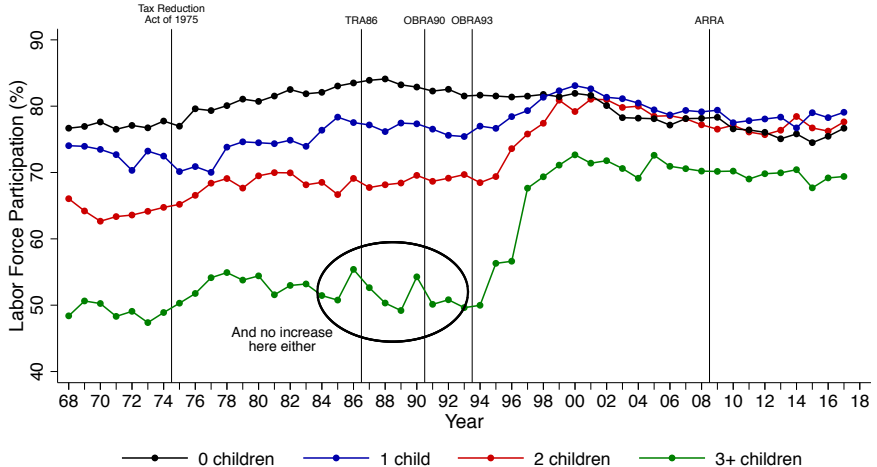
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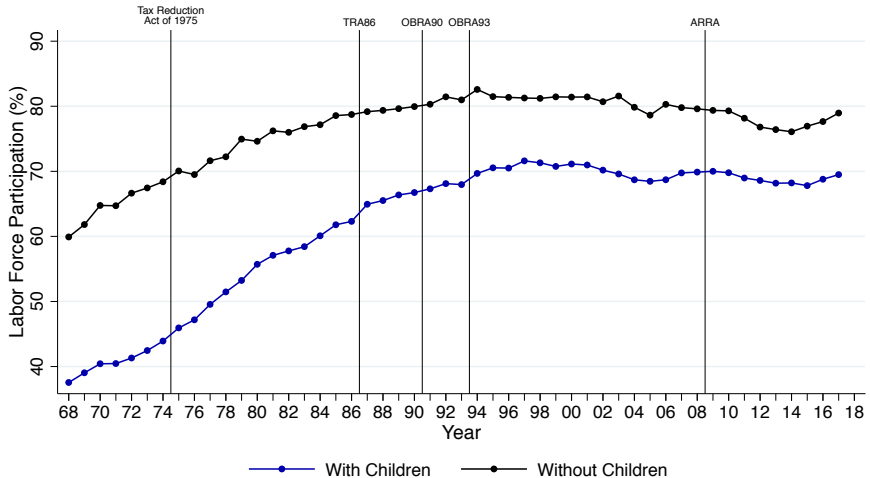
# Labor Force Participation of Single Women

By Number of Children



# Labor Force Participation of Married Women

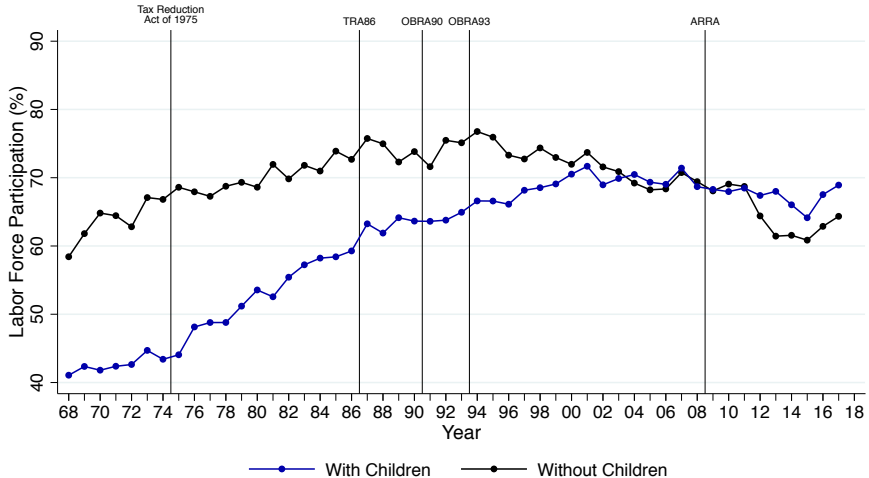
With and Without Children





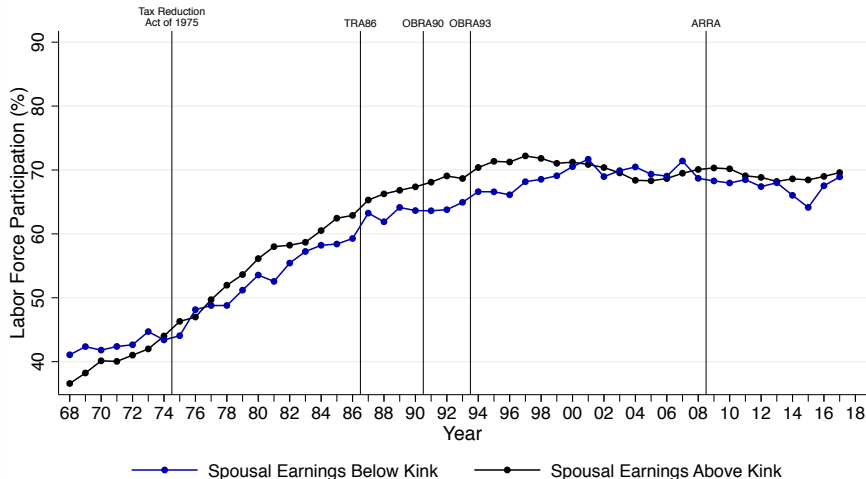
# Labor Force Participation of Married Women

With and Without Children (Spousal Earnings Below First Kink)



# Labor Force Participation of Married Women

## Spousal Earnings Below and Above First Kink (Conditional on Children)



## Red Flags

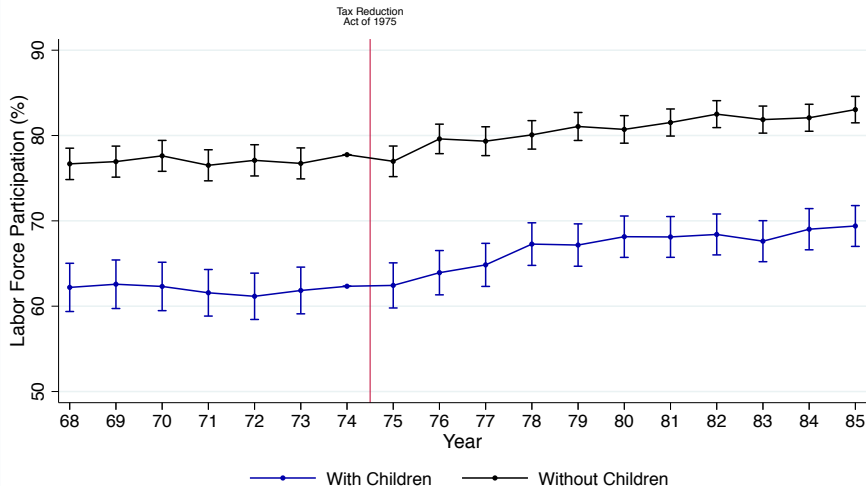
The participation increase for single mothers in 1994-99 is massive and follows the 1993 EITC reform, but...

- ▶ How do we separate EITC effects from the key confounders?
- ▶ Why do those with 3+ kids increase participation so much more than those with 2 kids after 1993 (but not elsewhere)?
- ▶ Why are there no visible effects for married women?
- ▶ Why are there no visible effects of the 1975, 1986, 1990, and 2009 reforms?
- ▶ It is difficult to reconcile the patterns with optimization friction

# Effect of the 1975 Reform

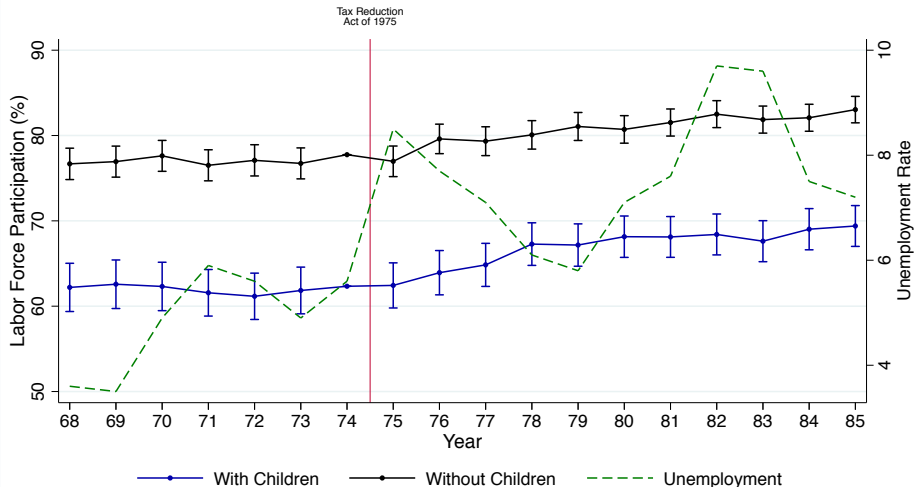
# Labor Force Participation of Single Women

With and Without Children



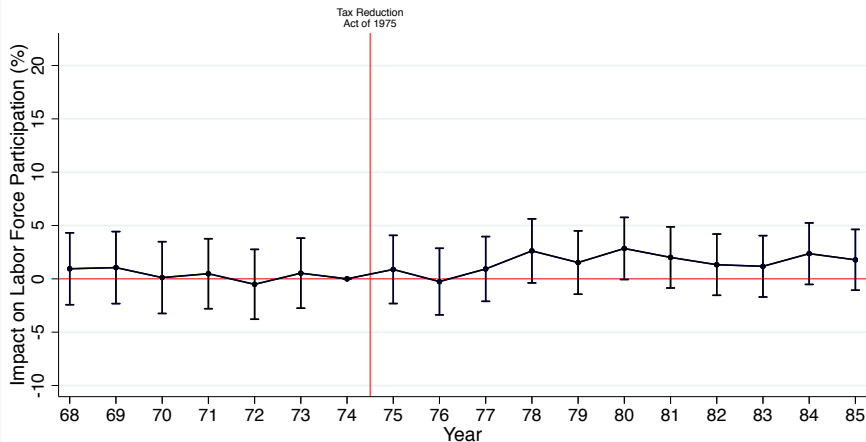
# Labor Force Participation of Single Women

With and Without Children



# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children



# 1975 Reform: Conclusions

- ▶ No extensive margin effects for single women
  - ▶ Business cycle variation that coincides with the reform
  - ▶ This mainly affects the earnings-based measure of participation  
→ illusory short-term effect of the EITC
- ▶ No extensive margin effects for married women either
- ▶ Reconciling these conclusions with Bastian (2018)
  - ▶ Confounding effects of business cycles (single women) and secular trends (married women) that vary by children

Married Women

Bastian (2018)



# Effect of the 1993 Reform

# Empirical Specification

DiD specification:

$$\begin{aligned} P_{ist} = & \sum_j \alpha_j \cdot Year_{j=t} + \beta \cdot Kids_i + \sum_j \gamma_j \cdot Year_{j=t} \cdot Kids_i \\ & + \sum_j \sum_k \delta_j^k \cdot Year_{j=t} \cdot W_{sj}^k + \sum_j \sum_k \zeta_j^k \cdot Year_{j=t} \cdot Kids_i \cdot W_{sj}^k \\ & + \eta \cdot U_{st} + \theta \cdot U_{st} \cdot Kids_i + \nu_{ist} \end{aligned}$$

where  $W_{st}^k$  is an indicator for state  $s$  having waiver type  $k$  in year  $t$  and  $U_{st}$  is the unemployment rate in state  $s$  in year  $t$

- ▶ Six welfare waivers: termination time limits, work-requirement time limits, family caps, JOBS exemptions, JOBS sanctions, and earnings disregards

# Empirical Specification

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# Empirical Specification

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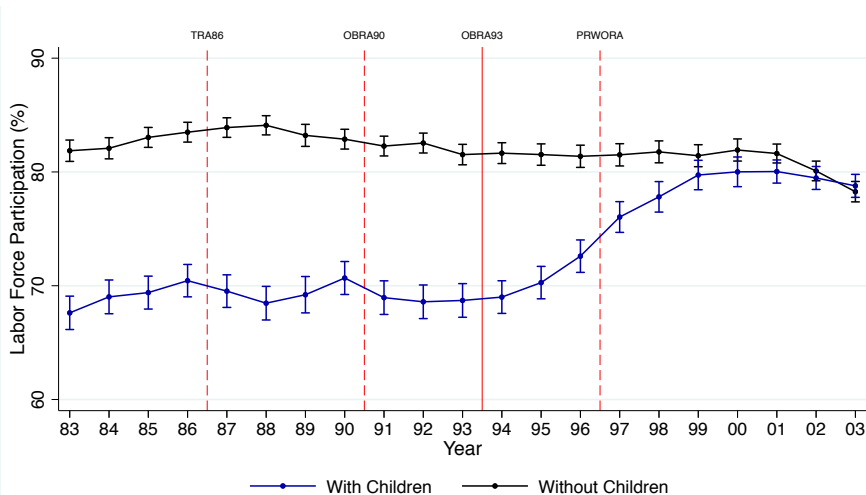
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- **Six welfare waivers:** termination time limits, work-requirement time limits, family caps, JOBS exemptions, JOBS sanctions, and earnings disregards

# Labor Force Participation of Single Women

With and Without Children



Annual Participation

Weekly Employment

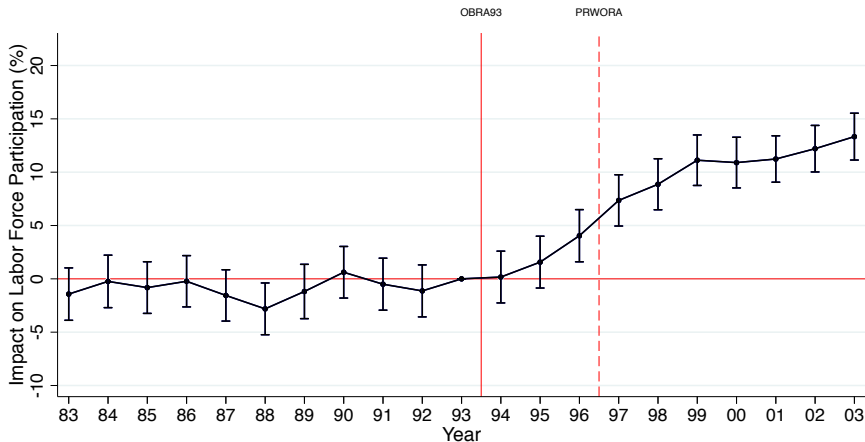
Annual Employment

Low Education

With 1 and 2+ Children

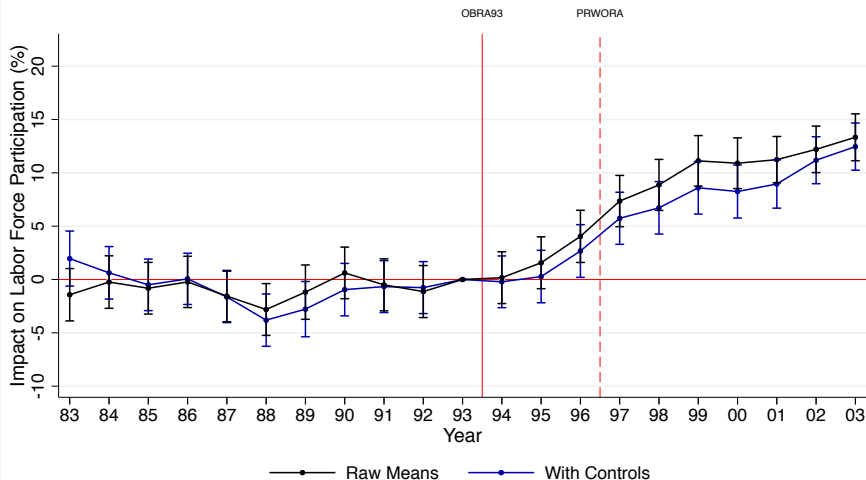
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children



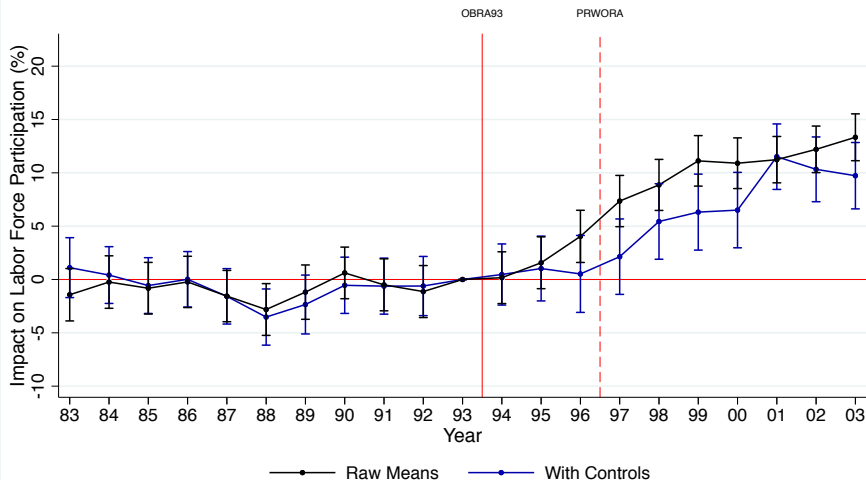
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Controlling for State Unemployment)



# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Controlling for State Unemployment and Welfare Waivers)



Annual Participation

Weekly Employment

Annual Employment

Low Education

With 1 and 2+ Children

Any Waiver Approved

Any Waiver Implemented



# 1993 Reform: Conclusions

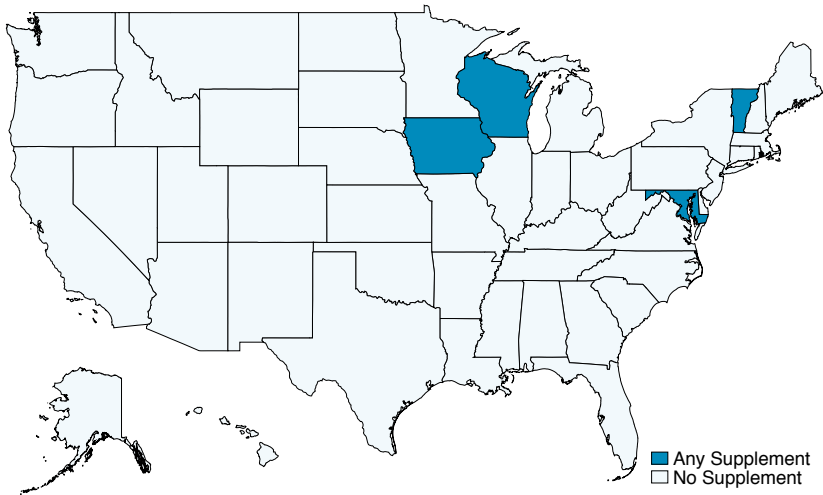
- ▶ The participation increase for single mothers is correlated with unemployment changes and welfare waivers across states
- ▶ Controlling for state-level variation in unemployment and welfare waivers eliminates any significant effect of the EITC between 1994-96 (prior to PRWORA)
  - ▶ A weak test as it absorbs only cross-state effects, not any national effects
- ▶ The drivers of the 1990s participation boom are unidentified, but the patterns are consistent with no effect of the EITC

# State EITC Supplements

# State EITC Supplements

- ▶ Between 1984-2018, many states instituted EITC supplements
  - ▶ 28 states currently have EITC supplements
  - ▶ Many supplements are small or were increased only gradually
- ▶ Some states implemented larger reforms
  - ▶ Define “large reform” as an increase in the state EITC of at least **20% (refundable) of the federal credit within 3 years**
  - ▶ 8 states had such reforms

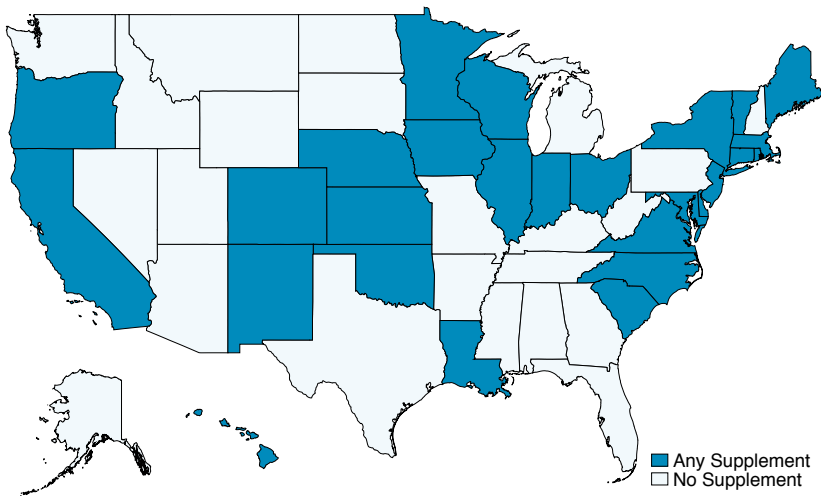
# States with an EITC Supplement in 1990



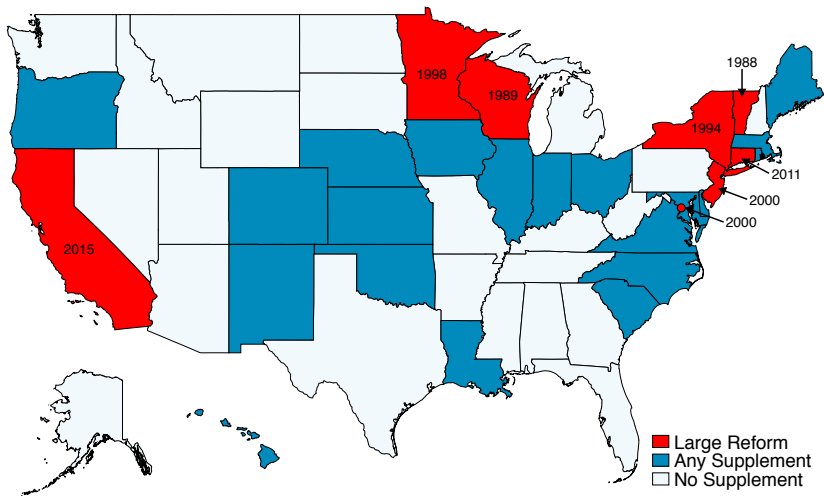




# States with an EITC Supplement in 2018



# States with an EITC Supplement in 2018





# Synthetic Control Approach

- ▶ For each state with an EITC supplement, a synthetic control state is created from those without a supplement
- ▶ I focus on state reforms:
  - ▶ Introduction of any state EITC supplement
  - ▶ Large reforms, as defined earlier
- ▶ I match on pre-reform variables:
  - ▶ Labor force participation (level and trend), unemployment rate (level and change), and welfare participation rate

# Specification

DiD specification:

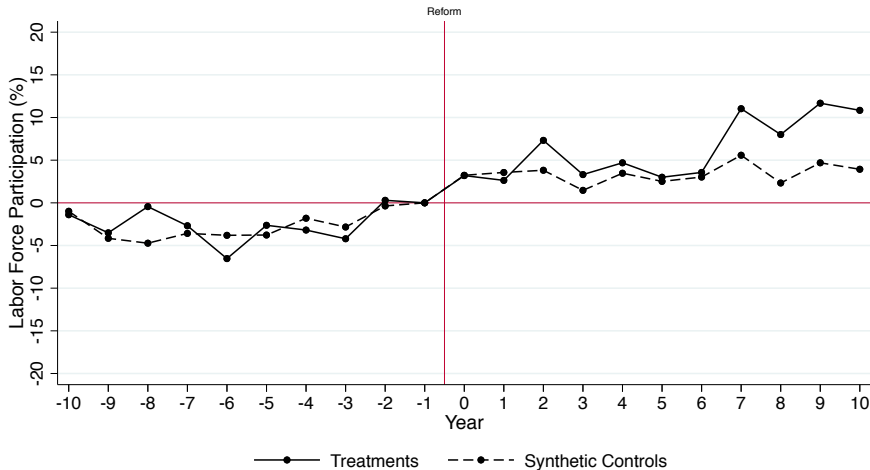
$$P_{st} = \sum_j \alpha_j \cdot Event_{j=t} + \beta \cdot Treat_s + \sum_j \gamma_j \cdot Event_{j=t} \cdot Treat_s + \lambda_s + \nu_{st}$$

where  $Event_{j=t}$  are event time indicators,  $Treat_s$  is an indicator for being a treatment state, and  $\lambda_s$  is a state fixed effect

- ▶ The specification is run on an unbalanced panel of states over an event window from -10 to +10

# Large State EITC Reforms: Event Study

## Treatment and Synthetic Control States



All Reforms

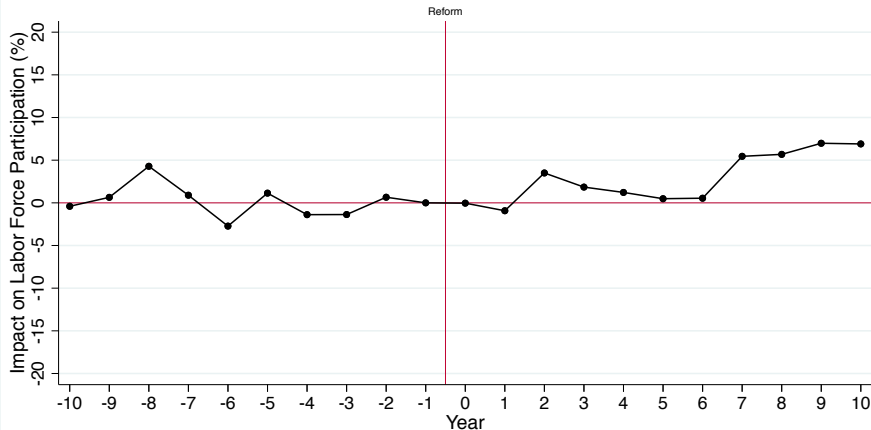
Annual Participation

Weekly Employment

Annual Employment

# Large State EITC Reforms: Event Study

DiD: Difference Between Treatment and Synthetic Control States



Placebos

All Reforms

Annual Participation

Weekly Employment

Annual Employment

# State EITC Supplements: Conclusions

- ▶ State EITCs create variation that does not rely on children
  - ▶ This avoids confounders that vary by children
  - ▶ But introduces confounders that vary by state  
→ synthetic control approach
- ▶ Most state EITC reforms have been too small for a credible DiD, but 8 reforms were sizeable
- ▶ Evidence from large state EITC reforms:
  - ▶ No clear evidence of any extensive margin effects

## WFTC Effects on the Extensive Margin?

# Data

- ▶ **Main data: Labour Force Survey (LFS):**
  - ▶ Repeated cross-section
  - ▶ 1992-2017
  - ▶ Around 400,000 individuals per year
- ▶ **Alternate data: British Household Panel Survey (BHPS):**
  - ▶ Panel
  - ▶ 1991-2008
  - ▶ Started with 10,000 individuals in 1991

# Empirical Specification

DiD specification:

$$P_{irt} = \sum_j \alpha_j \cdot Year_{j=t} + \beta \cdot Kids_i + \sum_j \gamma_j \cdot Year_{j=t} \cdot Kids_i \\ + \delta \cdot U_{rt} + \zeta \cdot U_{rt} \cdot Kids_i + X_i \cdot \phi + X_i \cdot Kids_i \cdot \psi + \nu_{irt}$$

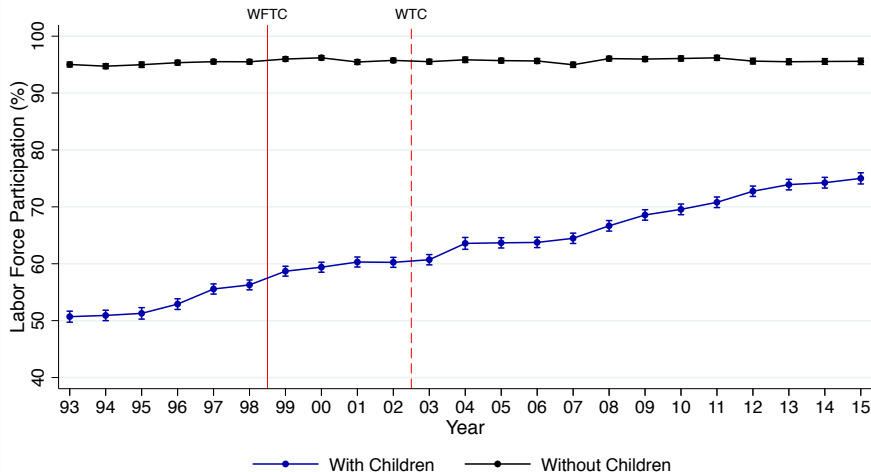
where  $U_{rt}$  is the unemployment rate in region  $r$  in year  $t$ , and  $X_i$  includes dummies for age, age of youngest child, and education

- ▶ Allow for linear, group-specific pre-trend, i.e. residualize  $P_{irt}$  using linear trend estimated on pre-data



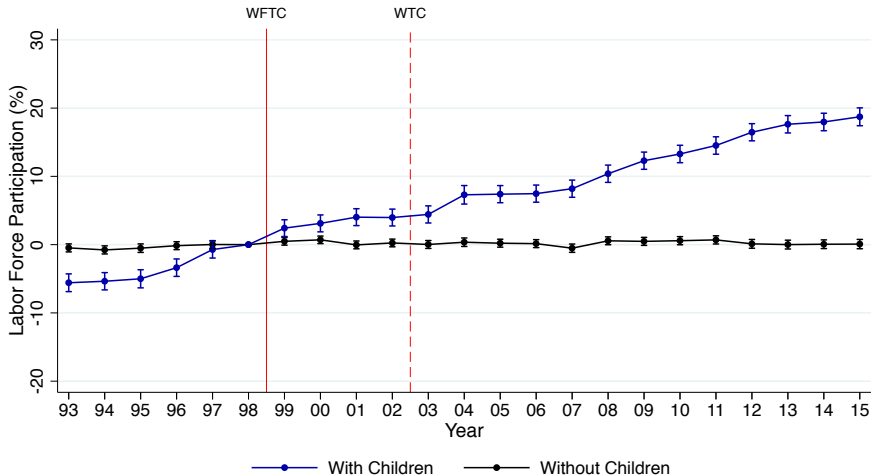
# Labor Force Participation of Single Women

With and Without Children



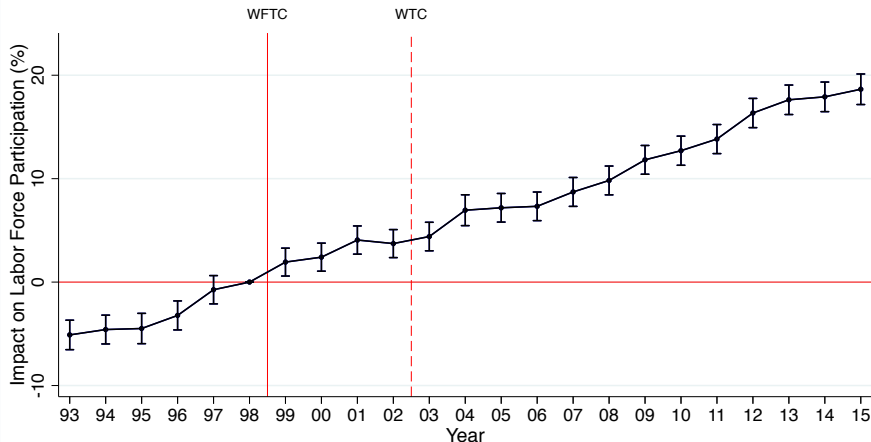
# Labor Force Participation of Single Women

With and Without Children  
(Normalized)



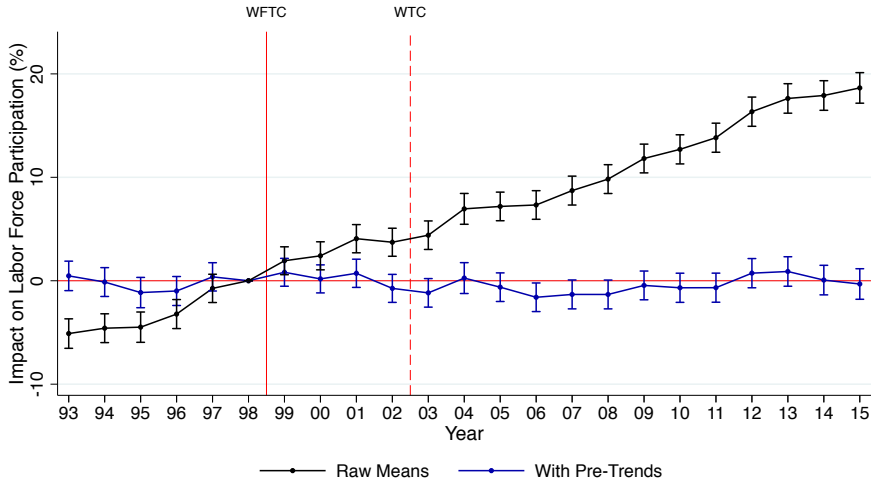
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children



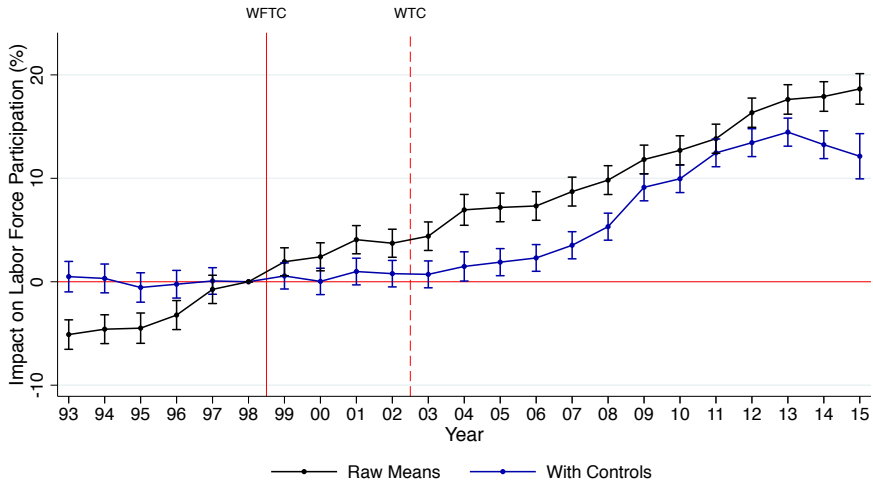
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Adding Linear Pre-Trends)



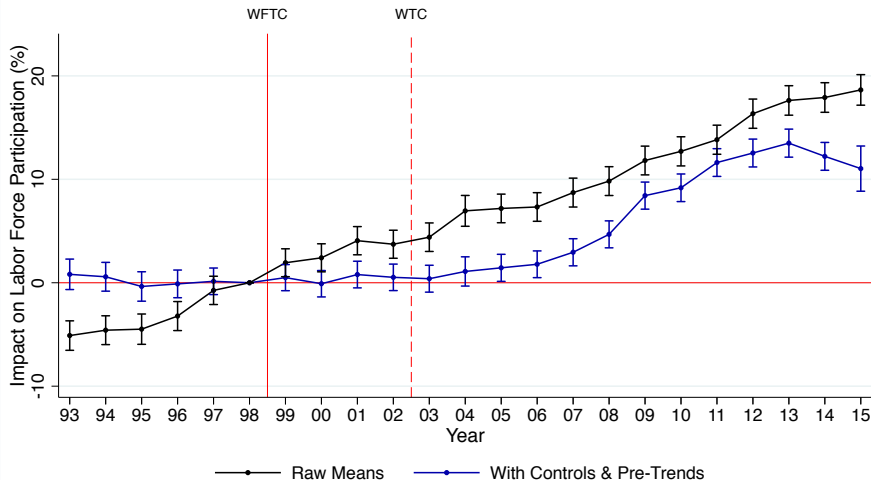
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Controlling for Unemployment and Demographics)



# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Adding Pre-Trend Controls)



# 1999 WFTC Reform: Findings and Issues

- ▶ The real size of the 1999 WFTC expansion:
  - ▶ The WFTC expansion was massive in itself, but there were offsetting changes from the welfare system
  - ▶ Still, a sizeable net incentive for the typical single mother (e.g., Blundell & Hoynes 2004)
- ▶ The effects on the extensive margin of labor supply:
  - ▶ No effects on labor force participation
    - ▶ This holds in both LFS and BHPS BHPS
  - ▶ Suggestive effects on employment
    - ▶ DiD effect driven by break in the control group → parallel trend assumption is tenuous

# Conclusions



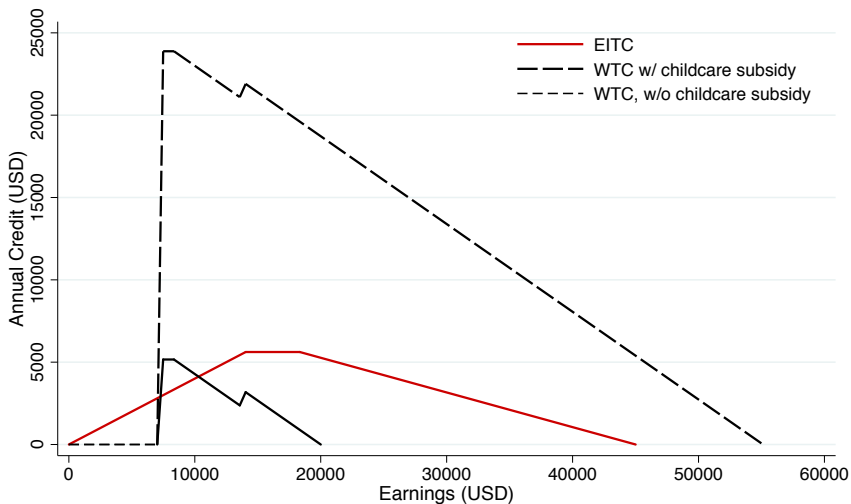
# Where Does This Leave Us?

- ▶ A consensus view that participation responses can be sizeable
  - ▶ This view is partly grounded in EITC studies
  - ▶ But no study identifies these responses to a modern bar
  - ▶ Cross-country puzzle (Kleven 2014)
- ▶ Revisiting historical EITC and WFTC reforms, I find no clear evidence of participation responses
- ▶ What happened with single mothers in the US in the 1990s?
  - ▶ Maybe a unique combination of EITC reform, welfare reform, economic upturn, and changing social norms?
  - ▶ Economic history rather than anything externally valid

# Appendix

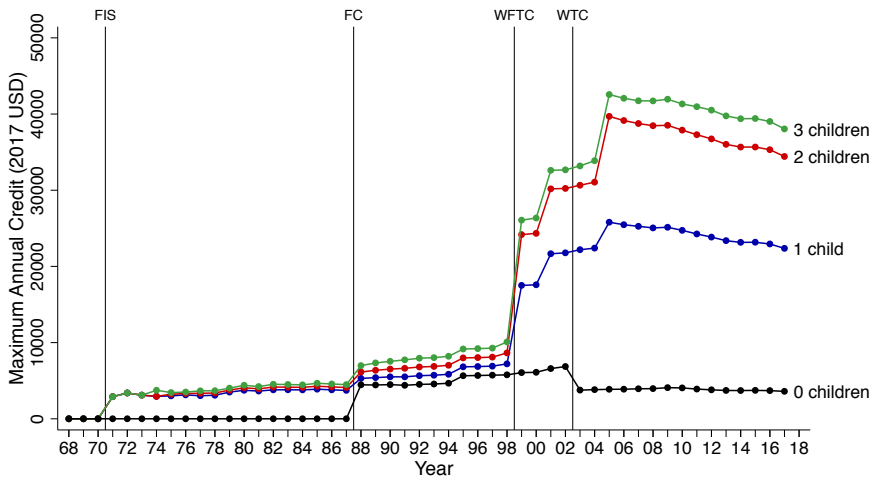
# WTC Maximum Credit Over Time

Single Women with 2 Children



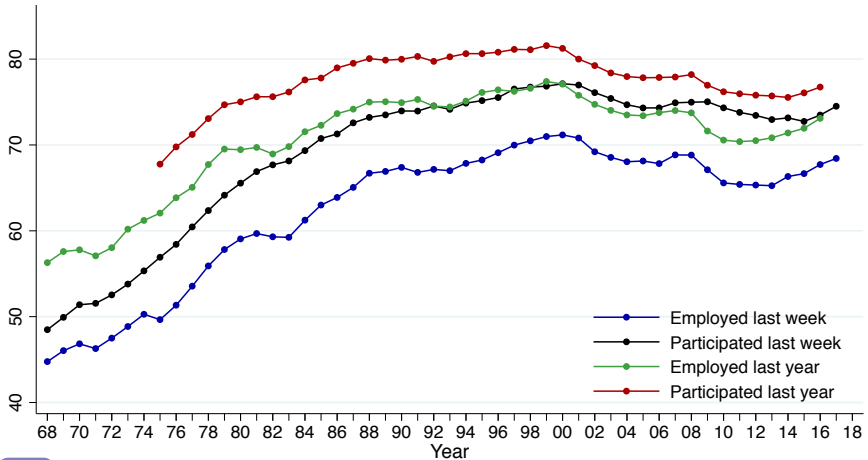
# WTC Maximum Credit Over Time

Including the Child Tax Credit



# Extensive Margin Measures

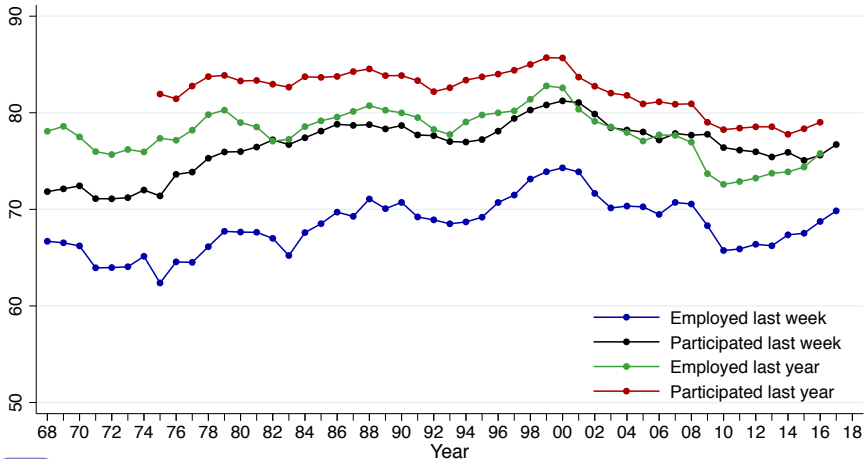
All Women, 20-50



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# Extensive Margin Measures

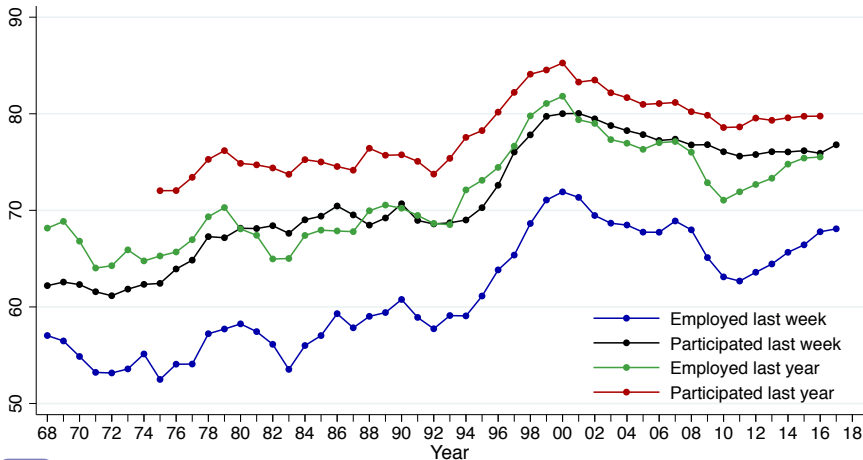
Single Women, 20-50



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# Extensive Margin Measures

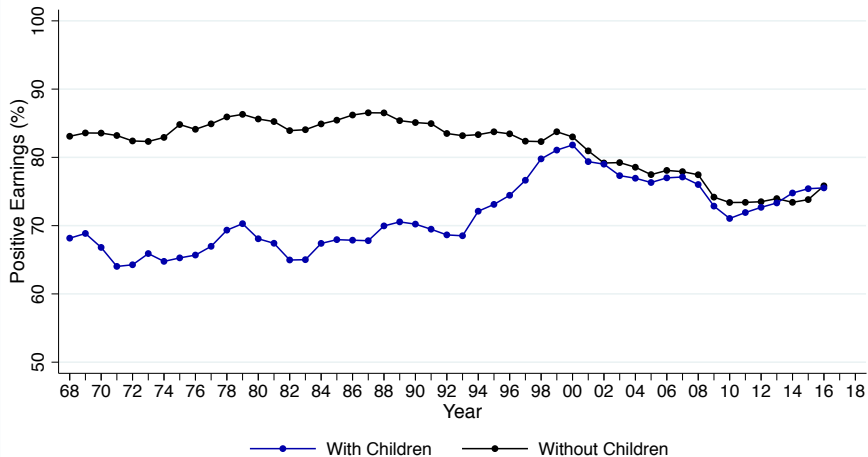
Single Mothers, 20-50



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# Labor Force Participation of Single Women

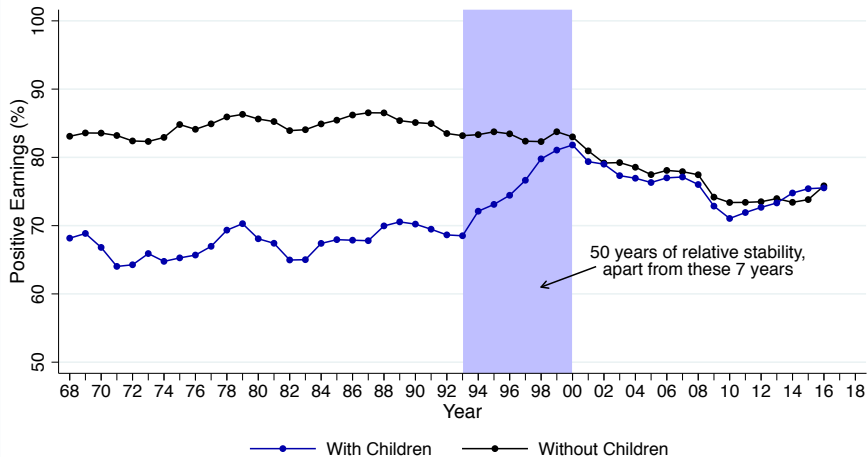
With and Without Children  
(Annual Employment)





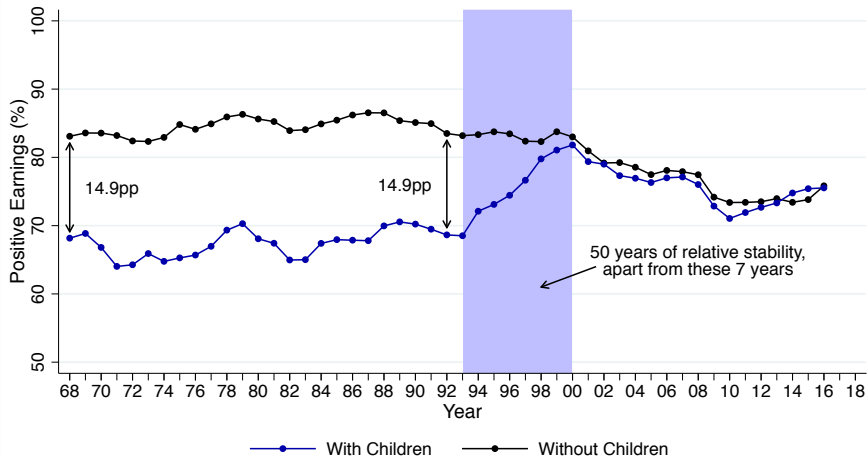
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



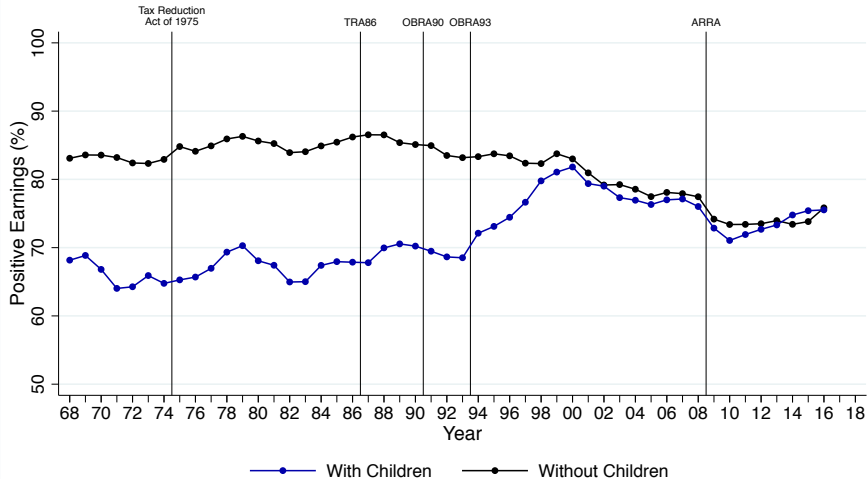
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With and Without Children  
(Annual Employment)



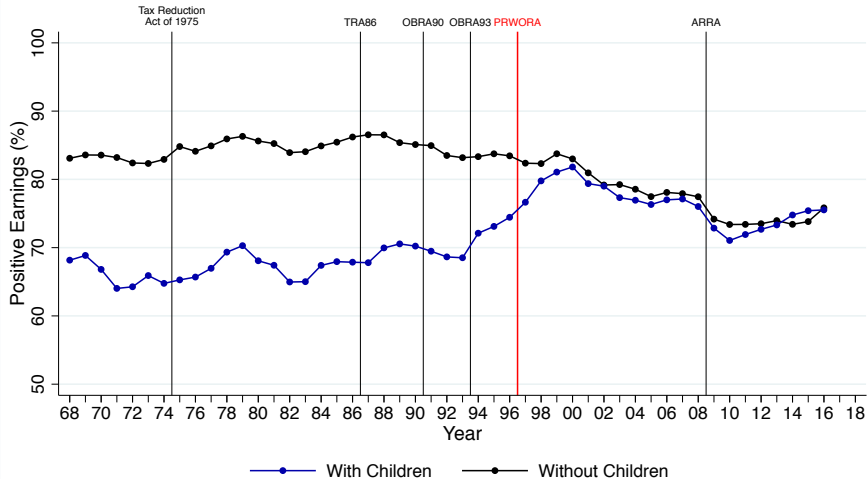
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With and Without Children  
(Annual Employment)



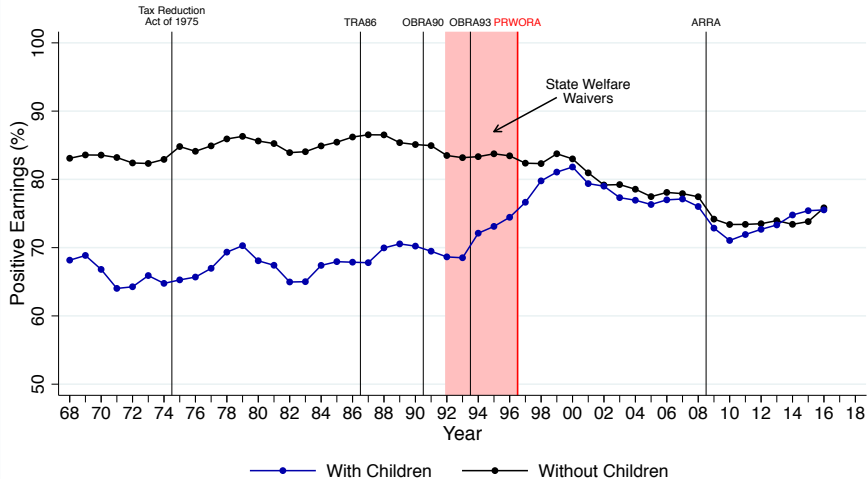
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



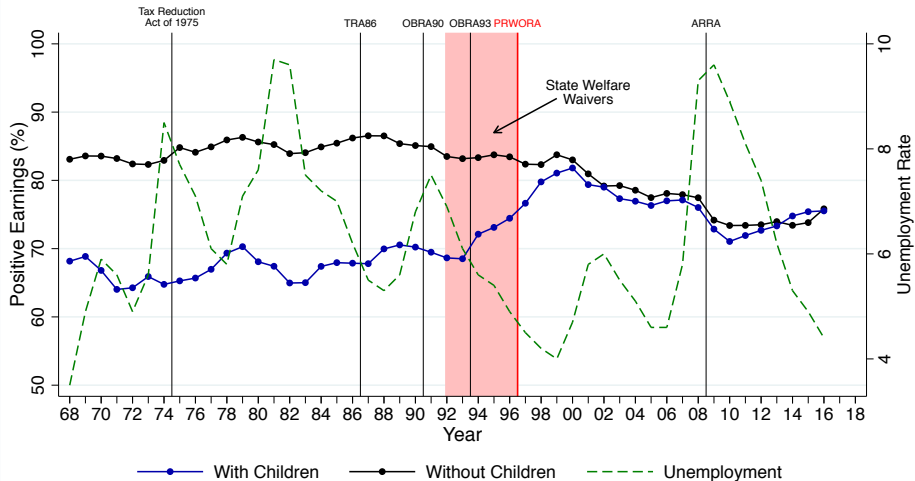
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



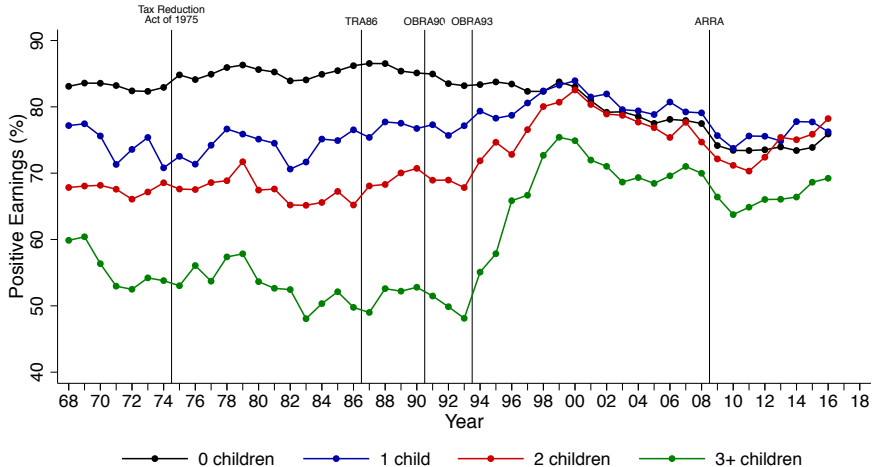
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



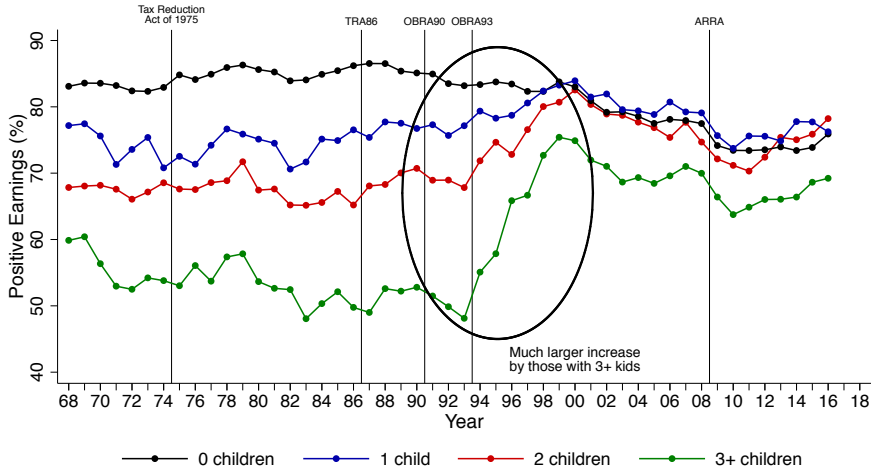
# Labor Force Participation of Single Women

By Number of Children  
(Annual Employment)



# Labor Force Participation of Single Women

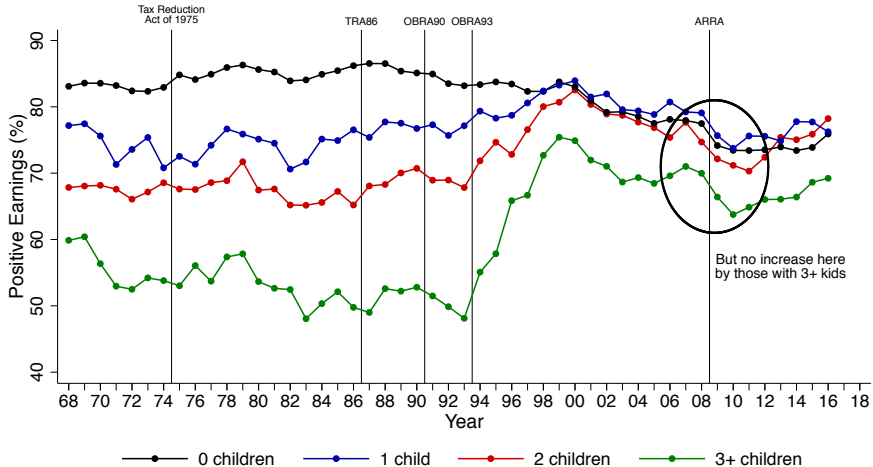
By Number of Children  
(Annual Employment)





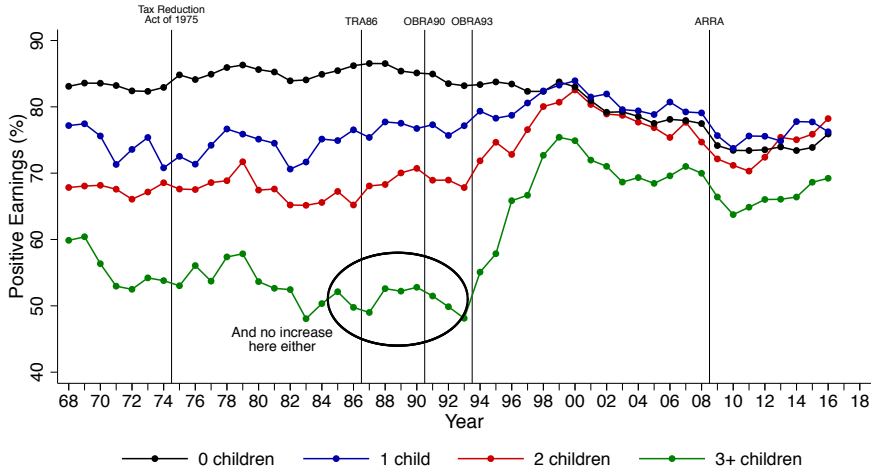
# Labor Force Participation of Single Women

By Number of Children  
(Annual Employment)



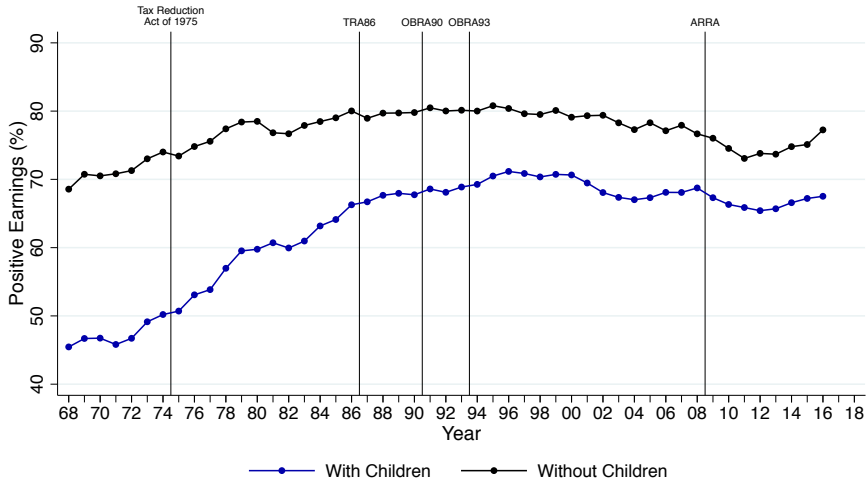
# Labor Force Participation of Single Women

By Number of Children  
(Annual Employment)



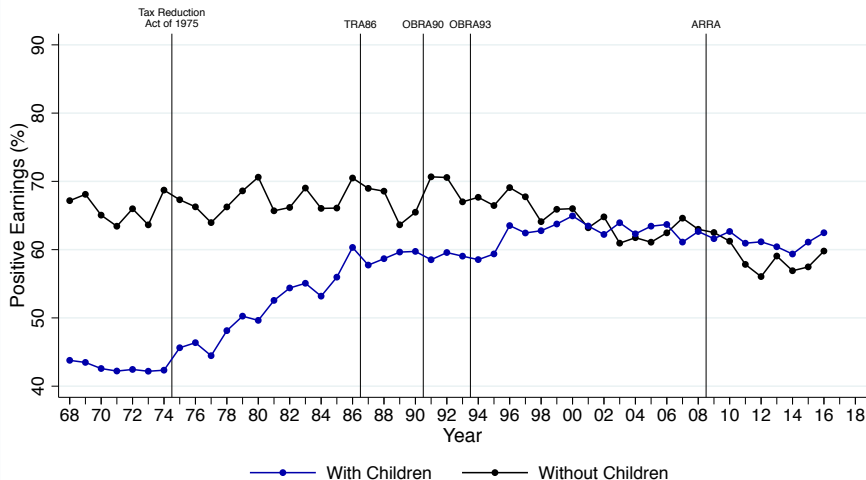
# Labor Force Participation of Married Women

With and Without Children  
(Annual Employment)



# Labor Force Participation of Married Women

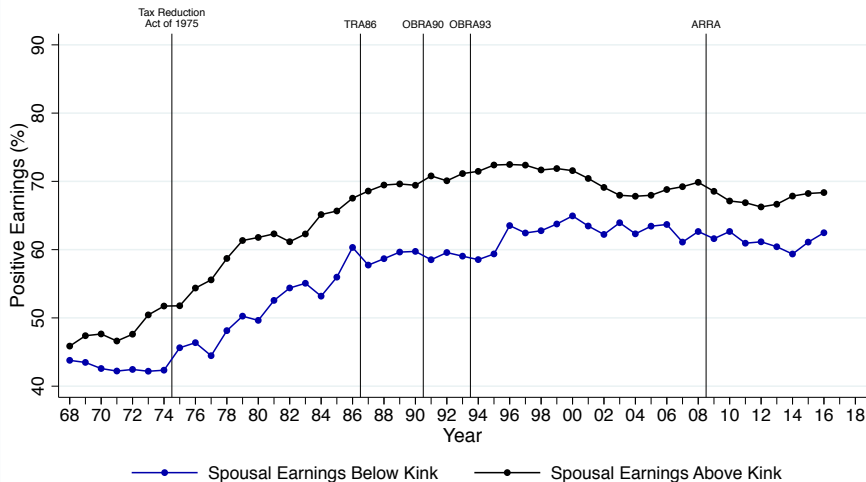
With and Without Children (Spousal Earnings Below First Kink)  
(Annual Employment)



# Labor Force Participation of Married Women

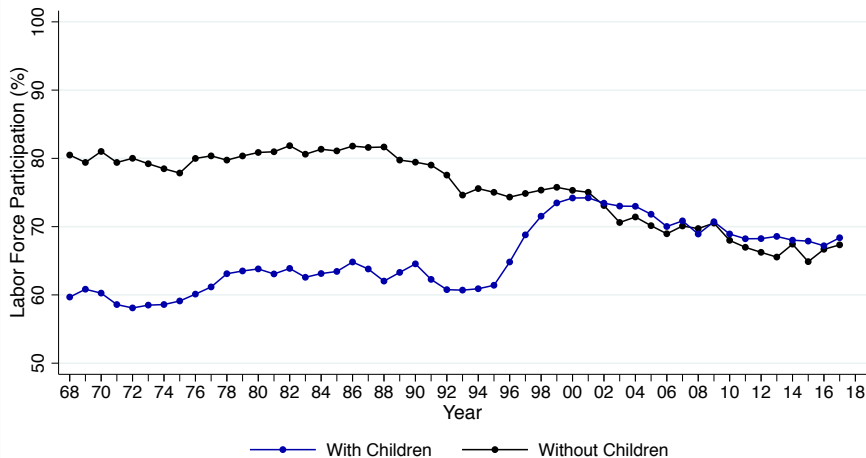
## Spousal Earnings Below and Above First Kink (Conditional on Children)

### (Annual Employment)



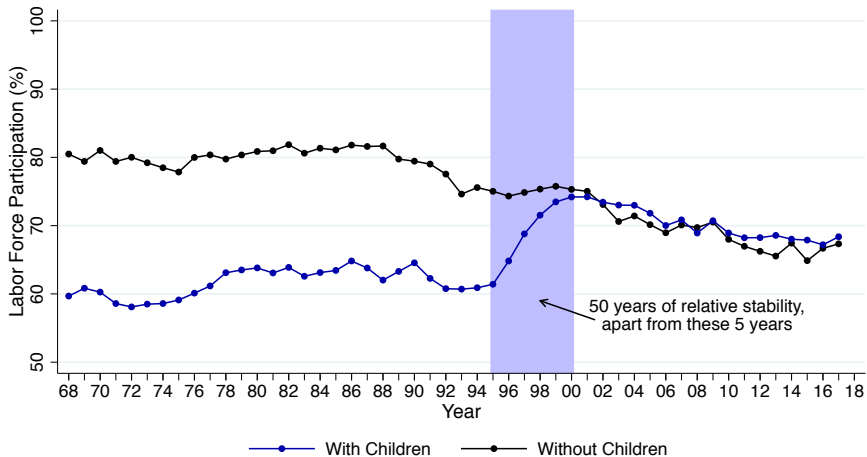
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



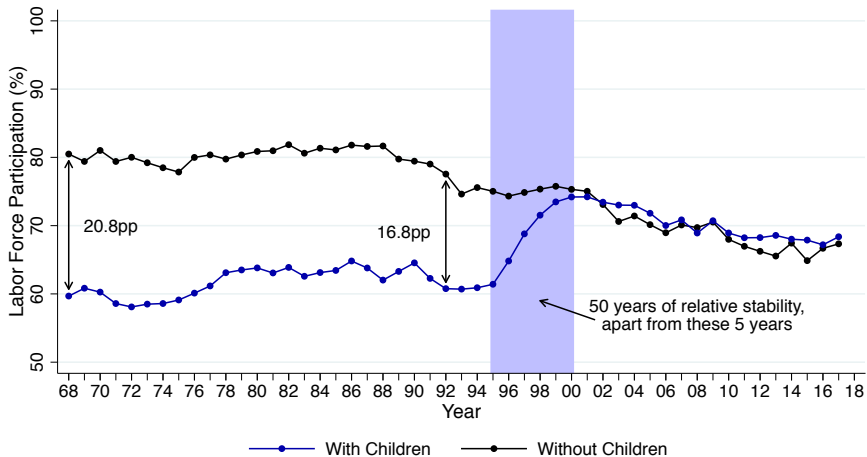
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



# Labor Force Participation of Single Women

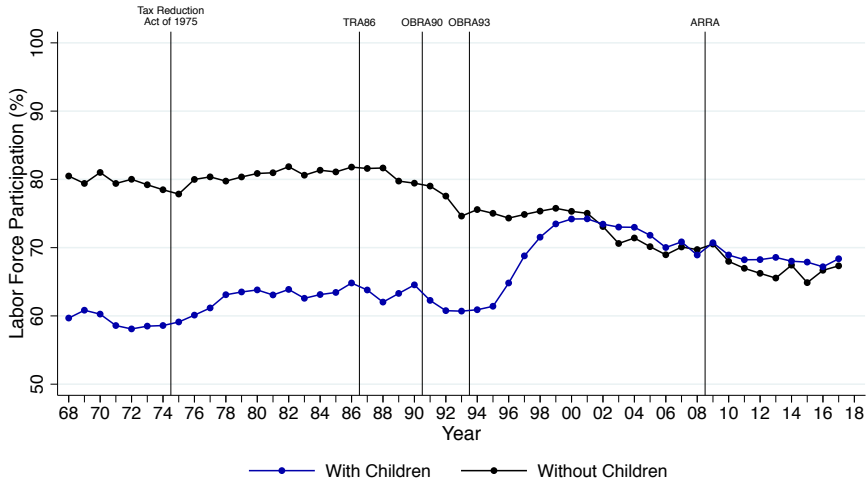
With and Without Children  
(Low Education)





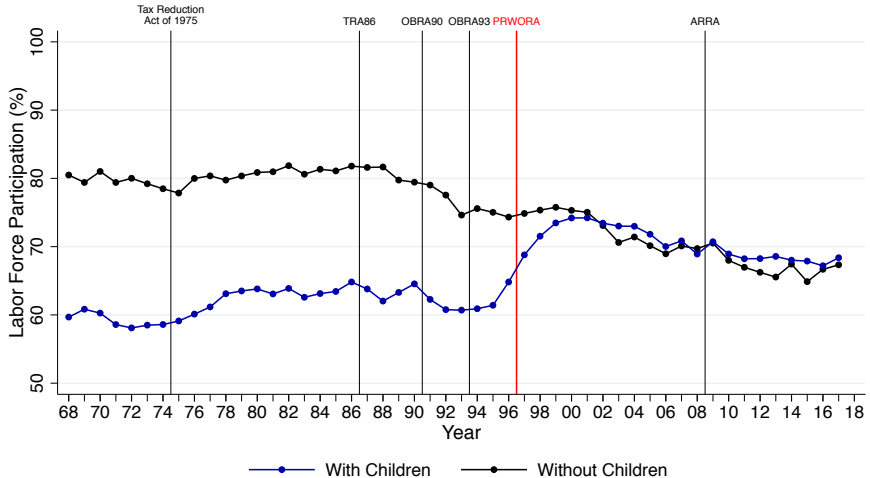
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



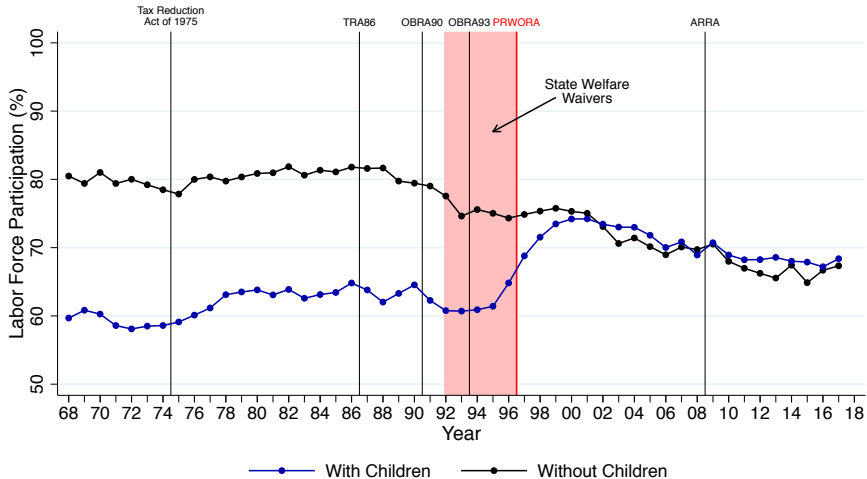
# Labor Force Participation of Single Women

## With and Without Children (Low Education)



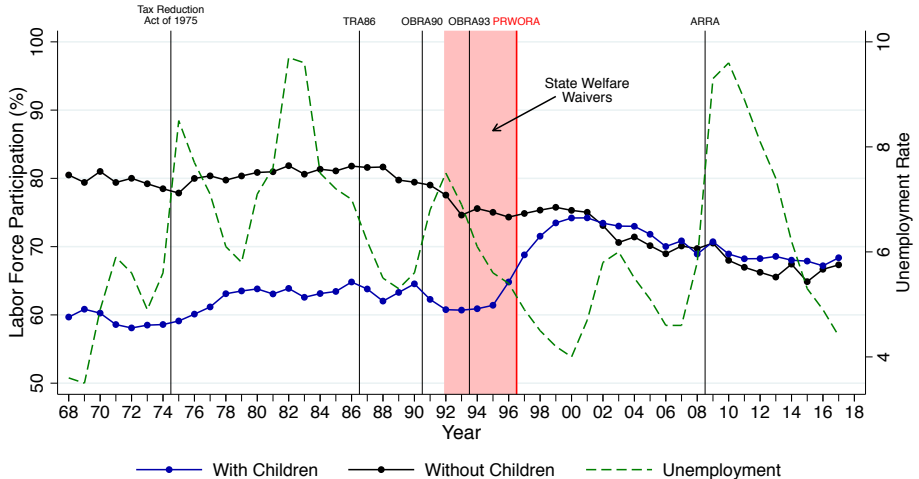
# Labor Force Participation of Single Women

## With and Without Children (Low Education)



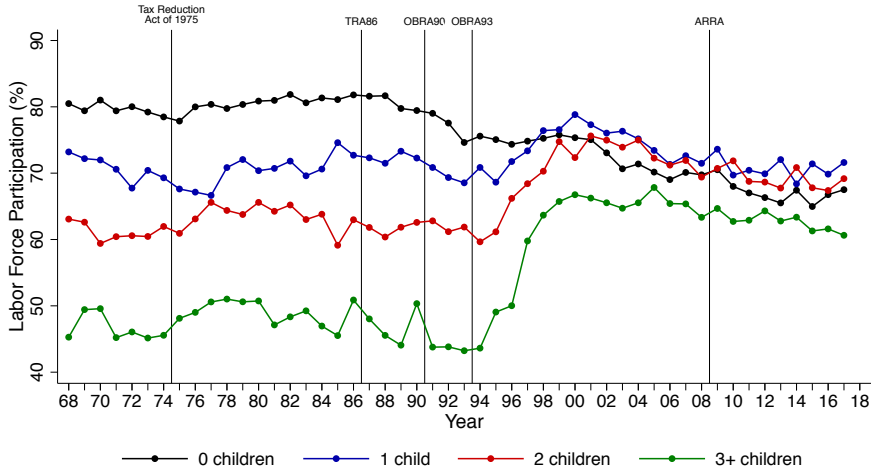
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



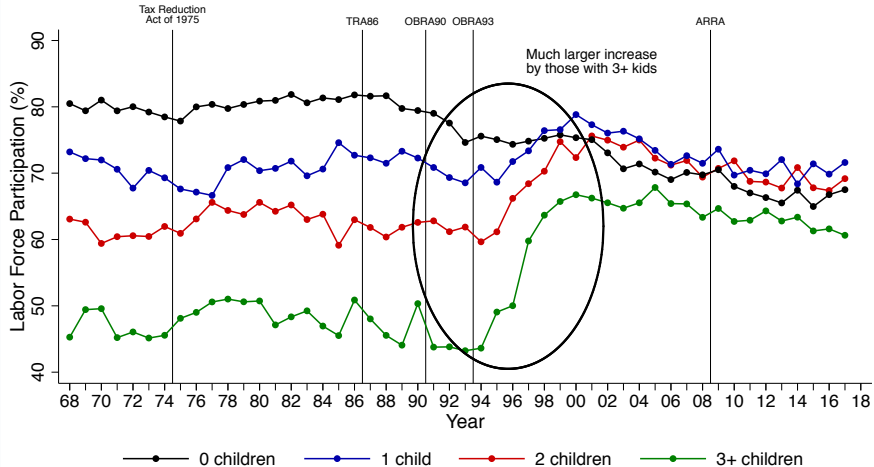
# Labor Force Participation of Single Women

By Number of Children  
(Low Education)



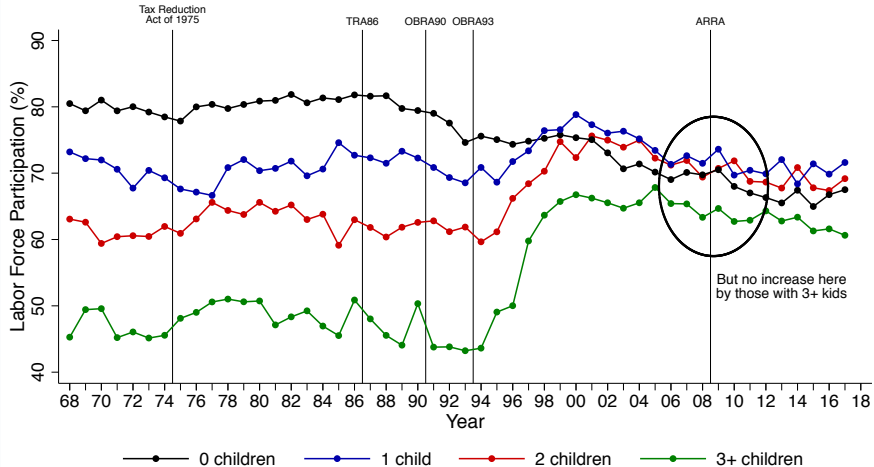
# Labor Force Participation of Single Women

By Number of Children  
(Low Education)



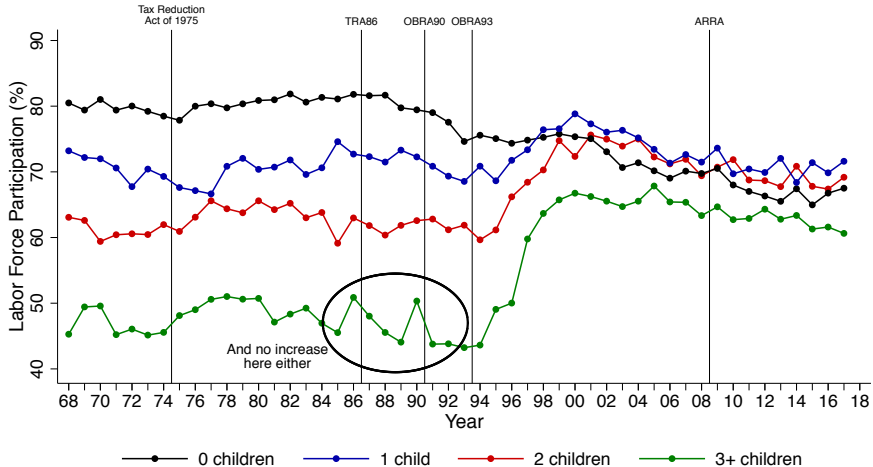
# Labor Force Participation of Single Women

By Number of Children  
(Low Education)



# Labor Force Participation of Single Women

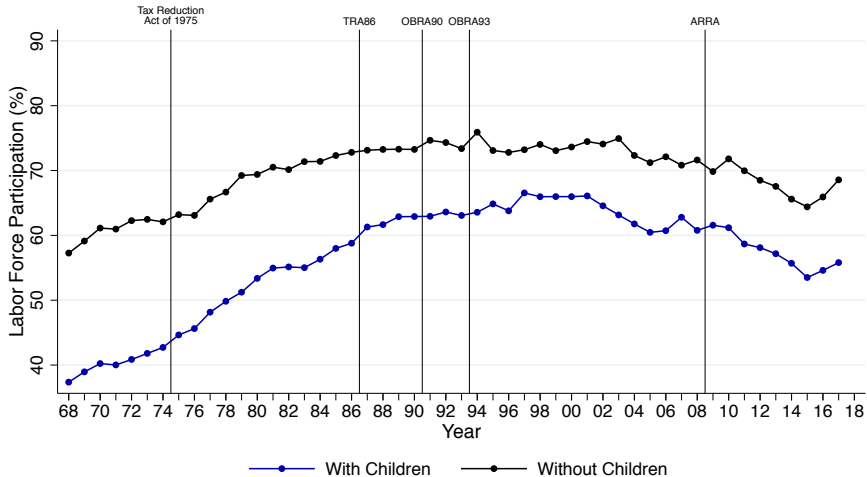
By Number of Children  
(Low Education)





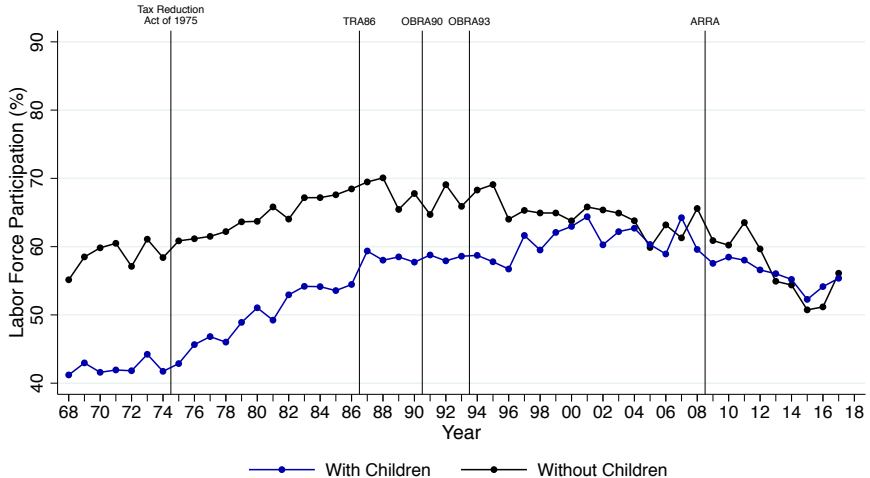
# Labor Force Participation of Married Women

With and Without Children  
(Low Education)



# Labor Force Participation of Married Women

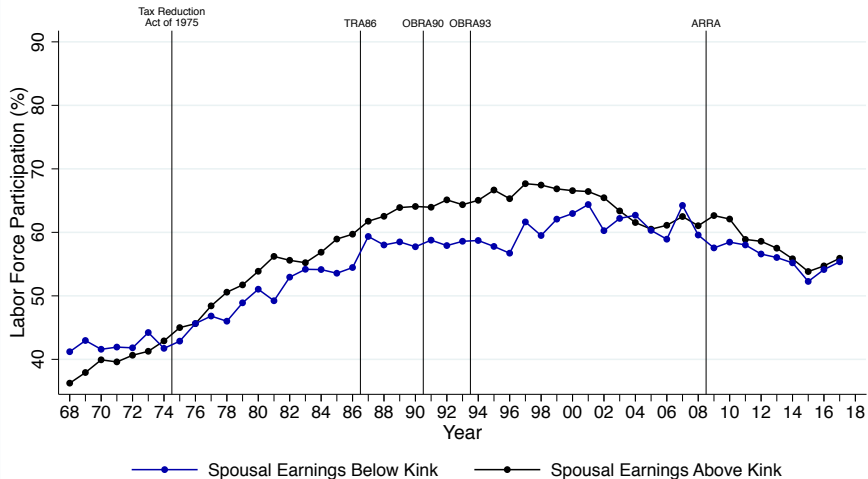
With and Without Children (Spousal Earnings Below First Kink)  
(Low Education)



# Labor Force Participation of Married Women

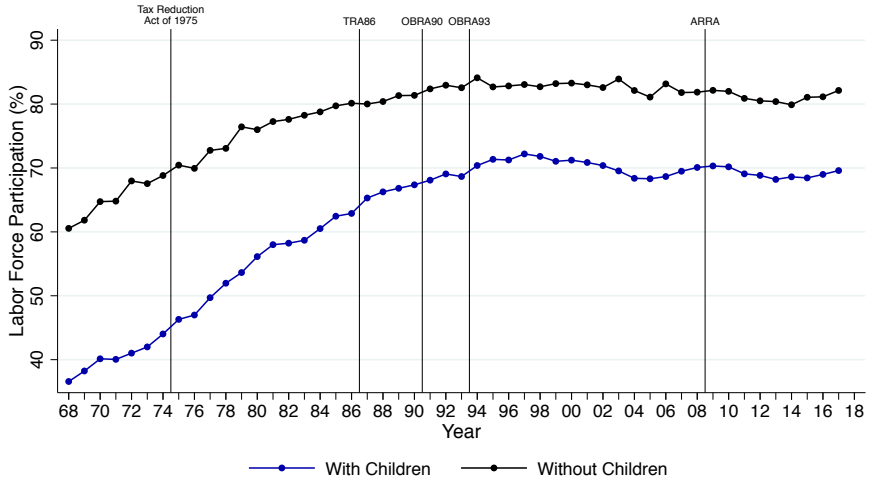
## Spousal Earnings Below and Above First Kink (Conditional on Children)

### (Low Education)



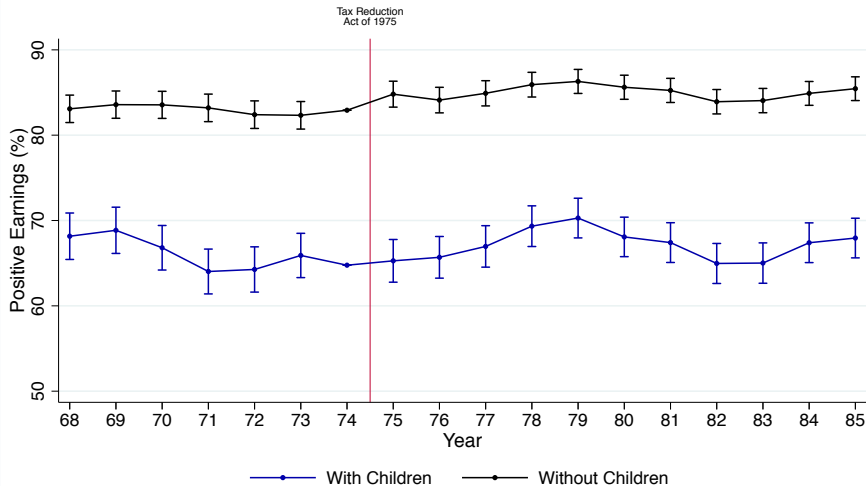
# Labor Force Participation of Married Women

With and Without Children (Spousal Earnings Above First Kink)



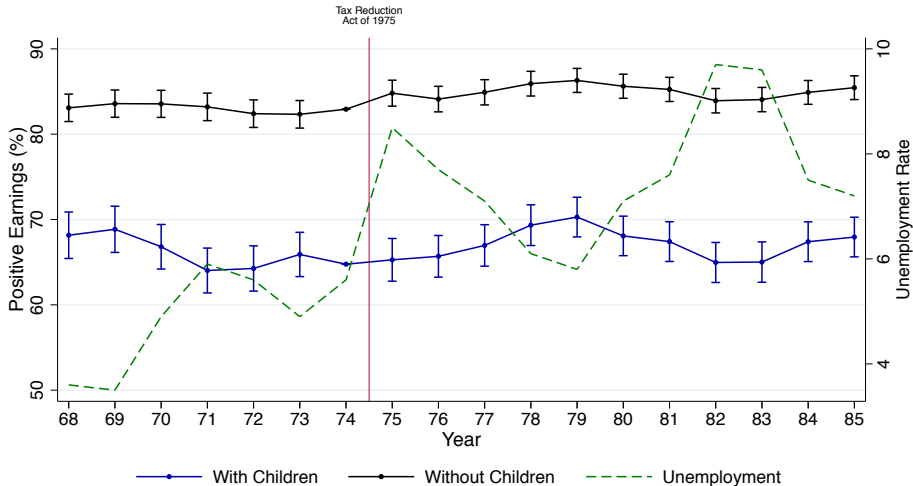
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



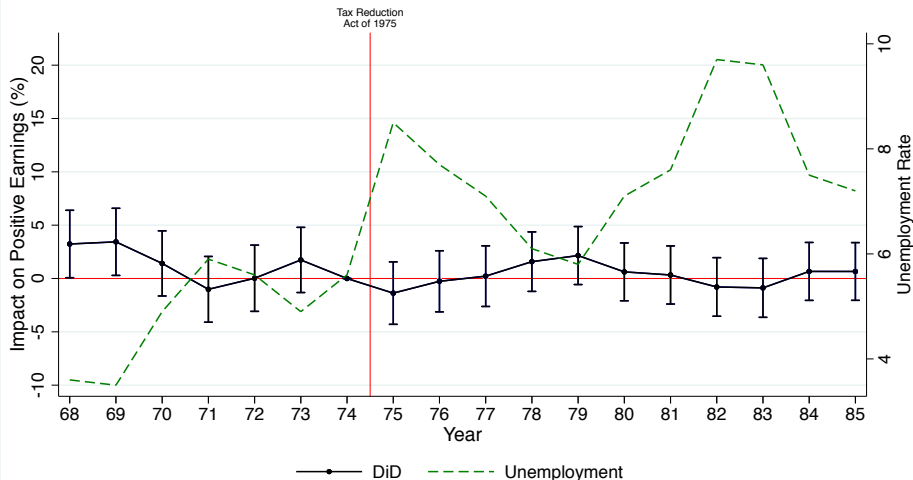
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



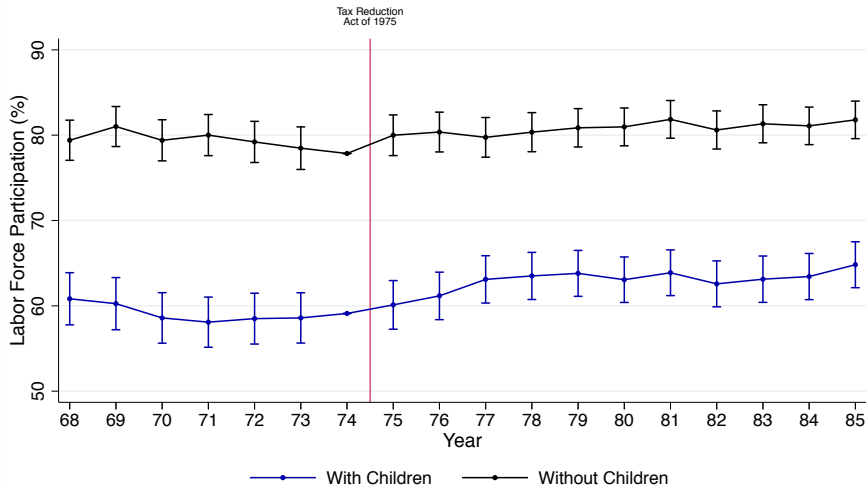
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Annual Employment)



# Labor Force Participation of Single Women

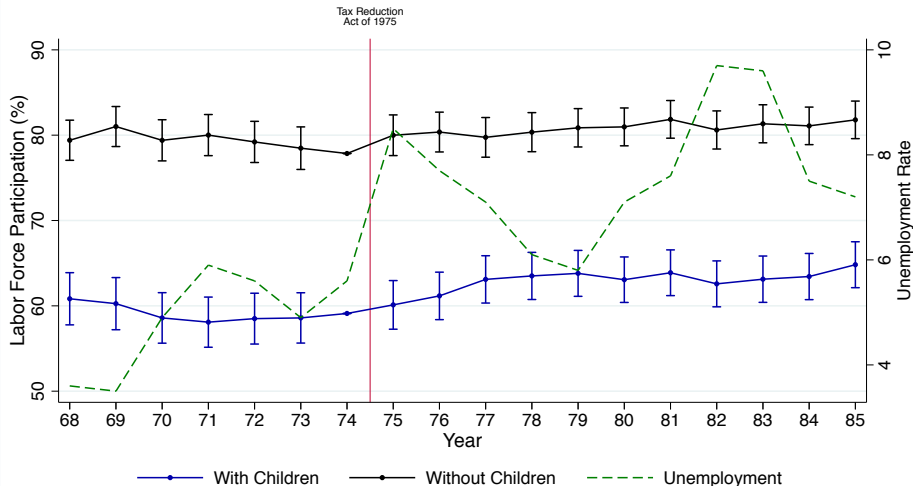
With and Without Children  
(Low Education)





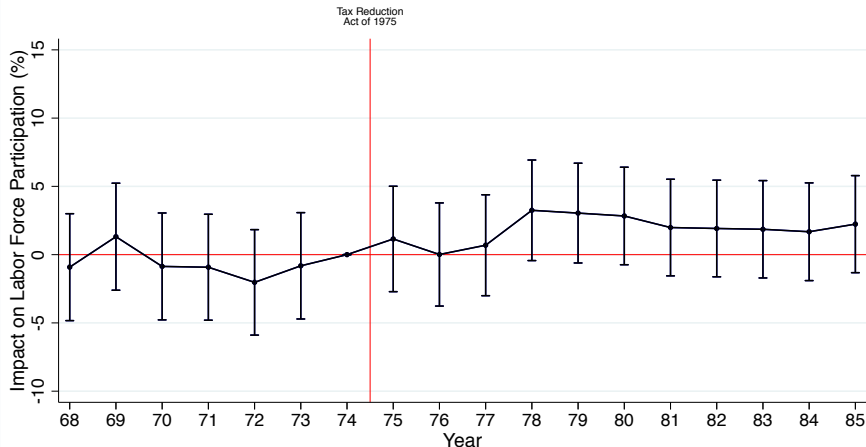
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



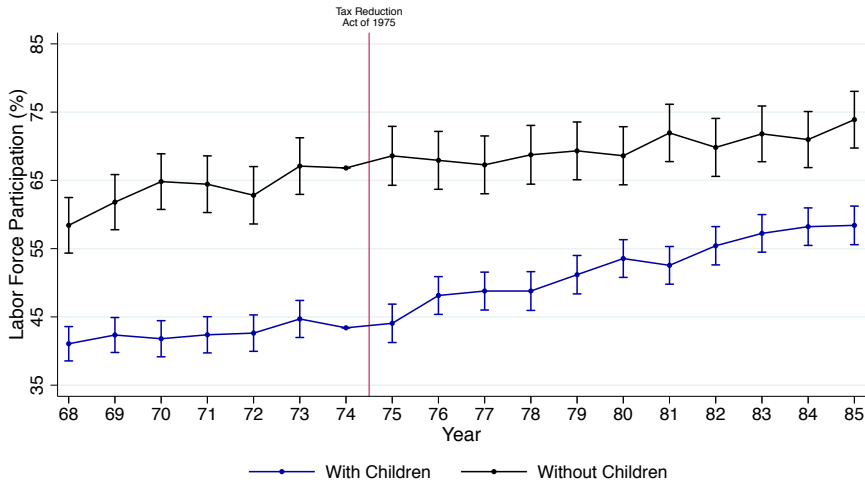
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Low Education)



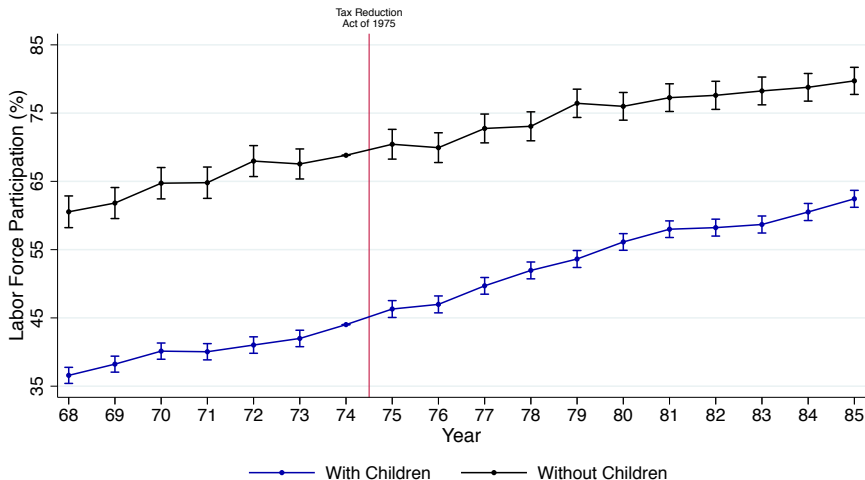
# Labor Force Participation of Married Women

With and Without Children  
(Spousal Earnings Below First Kink)



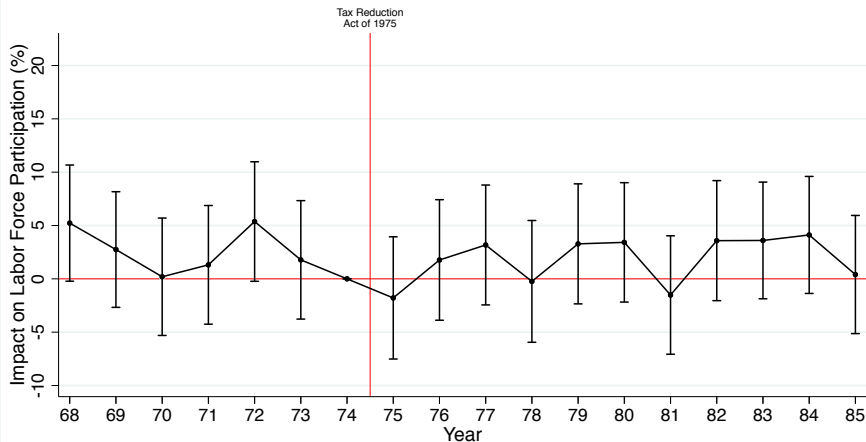
# Labor Force Participation of Married Women

With and Without Children  
(Spousal Earnings Above First Kink)



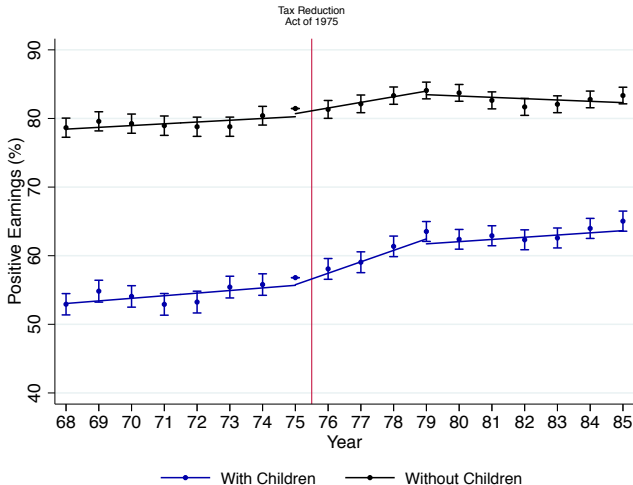
# Labor Force Participation of Married Women

Triple-Diff: With and Without Children, Below and Above Kink



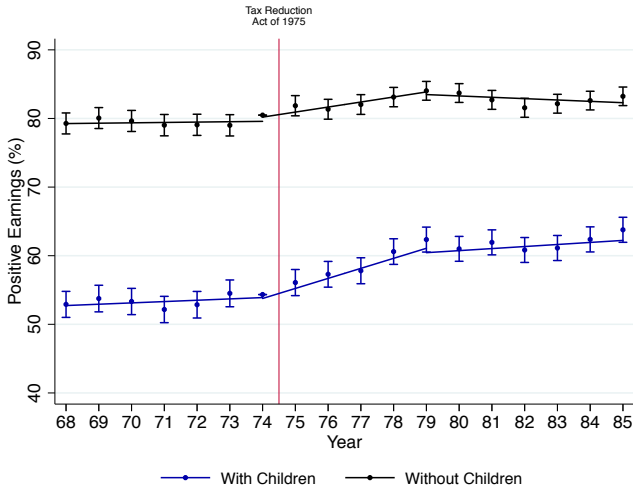
# Bastian Replication

Single Women and Married Women with Spousal Earnings Below EITC Exhaustion



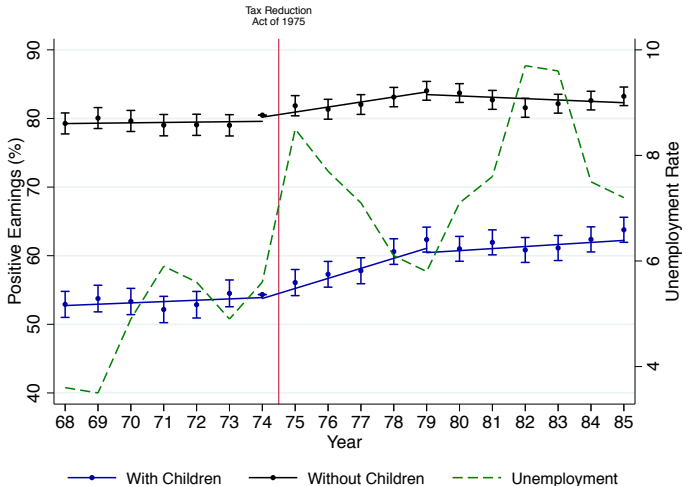
# Refining the Specification

Single Women and Married Women with Spousal Earnings Below First EITC Kink



# Adding the Unemployment Series

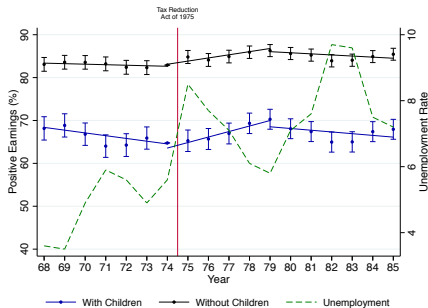
Single Women and Married Women with Spousal Earnings Below First EITC Kink





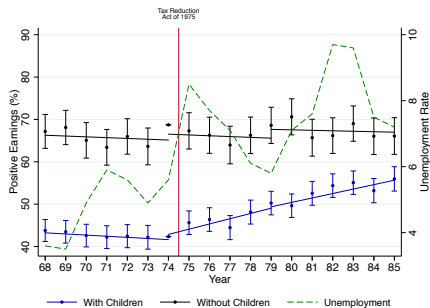
# Splitting the Sample

## Single Women



## Married Women

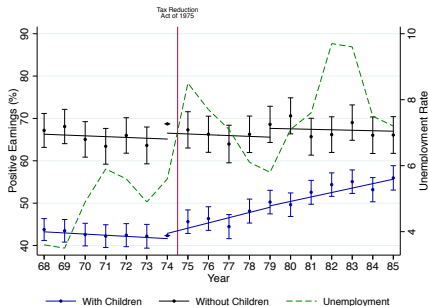
(Spousal Earnings Below First Kink)



# Married Women Placebo Test

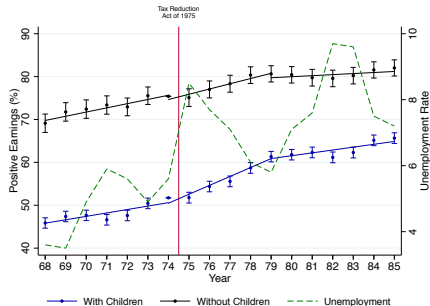
## Married Women

(Spousal Earnings Below First Kink)



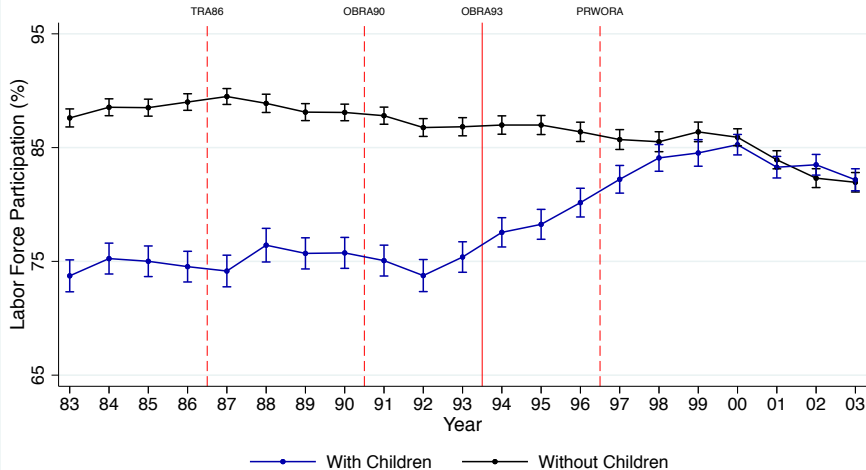
## Married Women

(Spousal Earnings Above First Kink)



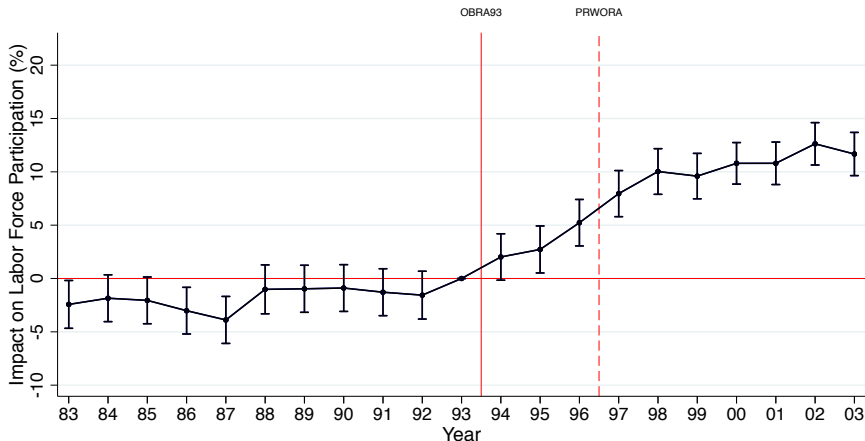
# Labor Force Participation of Single Women

With and Without Children  
(Annual Participation)



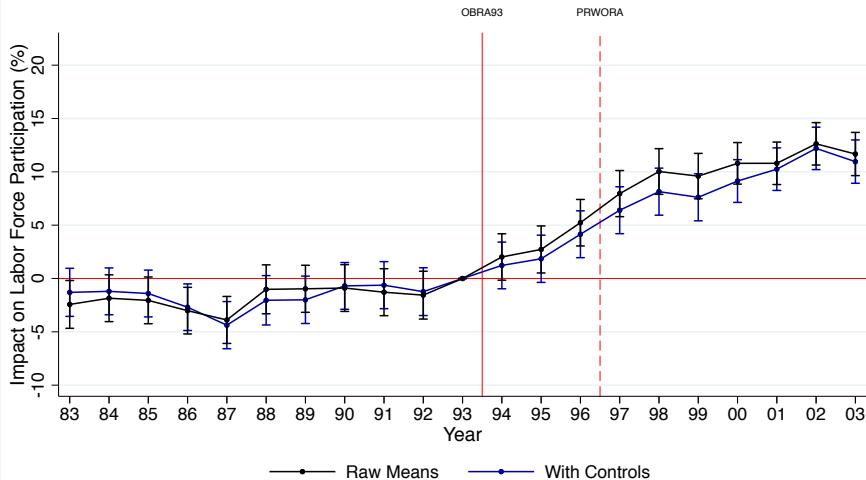
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Annual Participation)



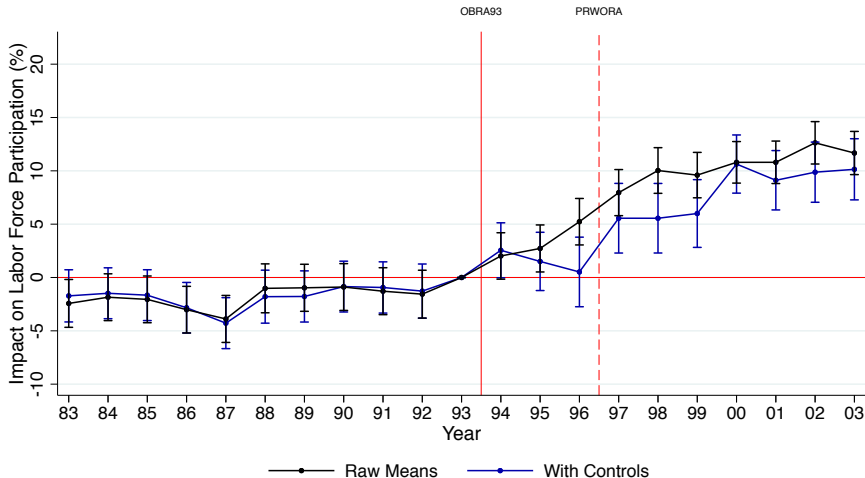
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Annual Participation, Unemployment Controls)



# Labor Force Participation of Single Women

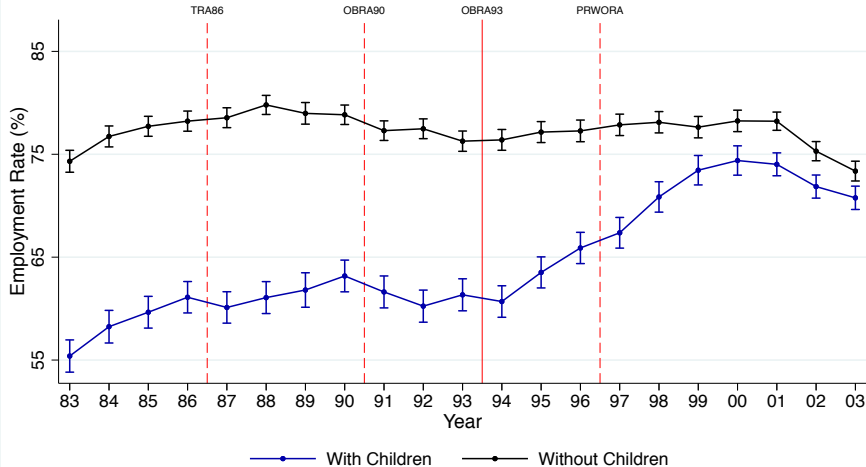
DiD: Difference Between Those With and Without Children  
(Annual Participation, Unemployment and Welfare Waiver Controls)



Weekly Participation

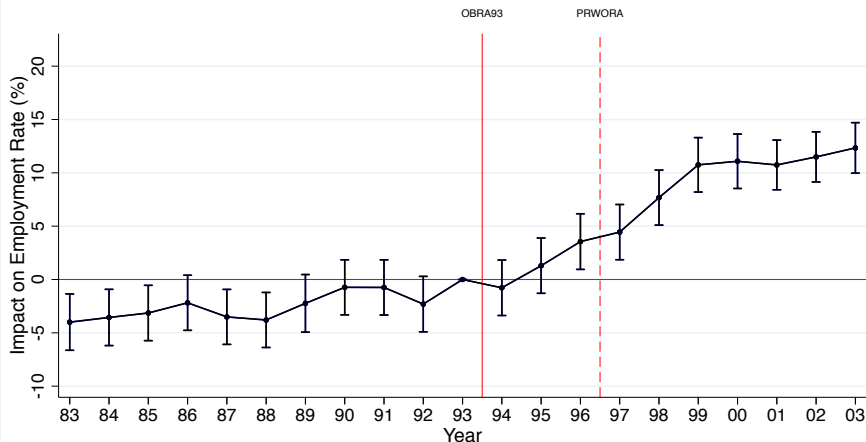
# Labor Force Participation of Single Women

With and Without Children  
(Weekly Employment)



# Labor Force Participation of Single Women

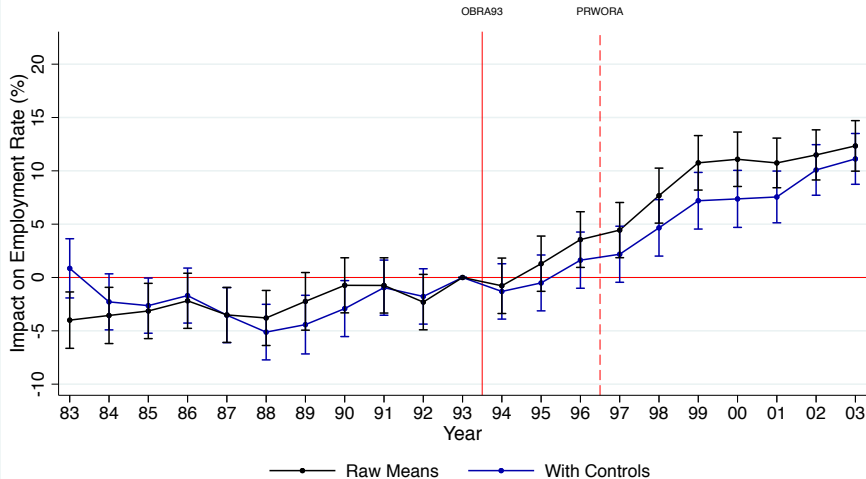
DiD: Difference Between Those With and Without Children  
(Weekly Employment)





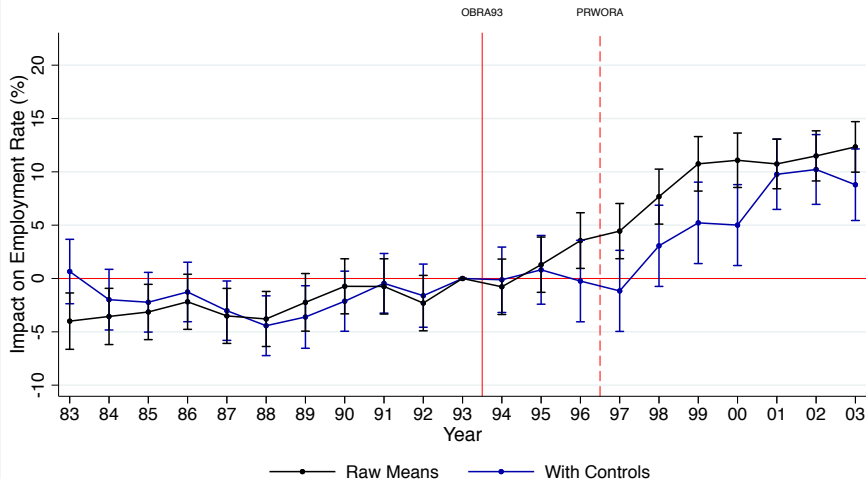
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Weekly Employment, Unemployment Controls)



# Labor Force Participation of Single Women

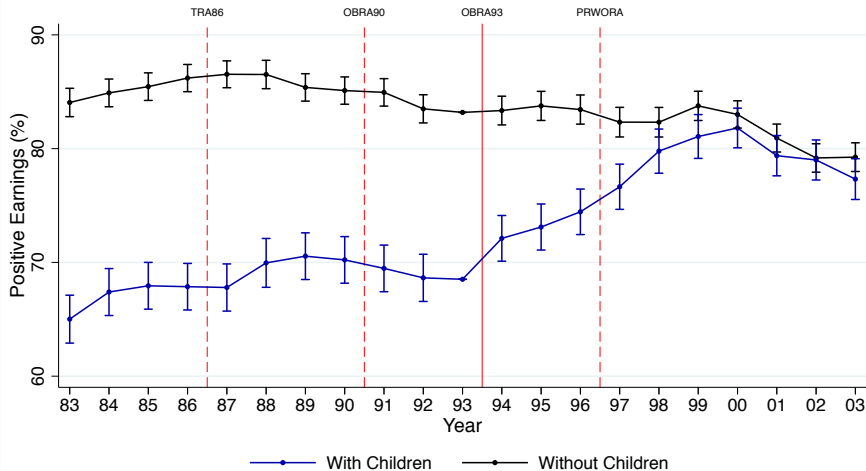
DiD: Difference Between Those With and Without Children  
(Weekly Employment, Unemployment and Welfare Waiver Controls)



Weekly Participation

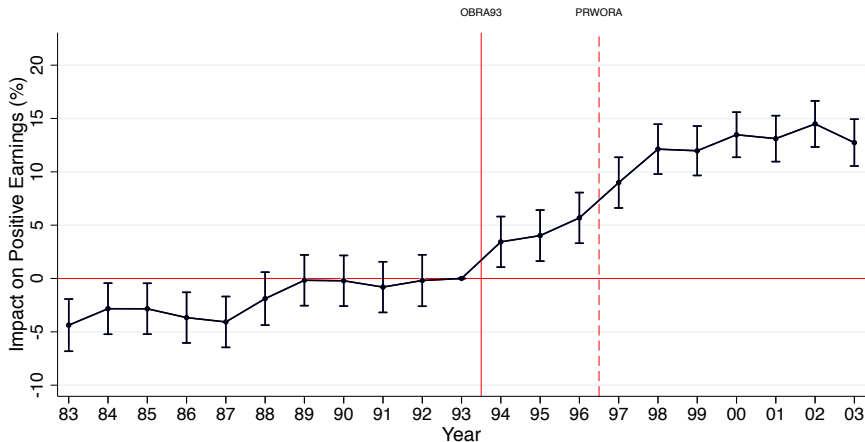
# Labor Force Participation of Single Women

With and Without Children  
(Annual Employment)



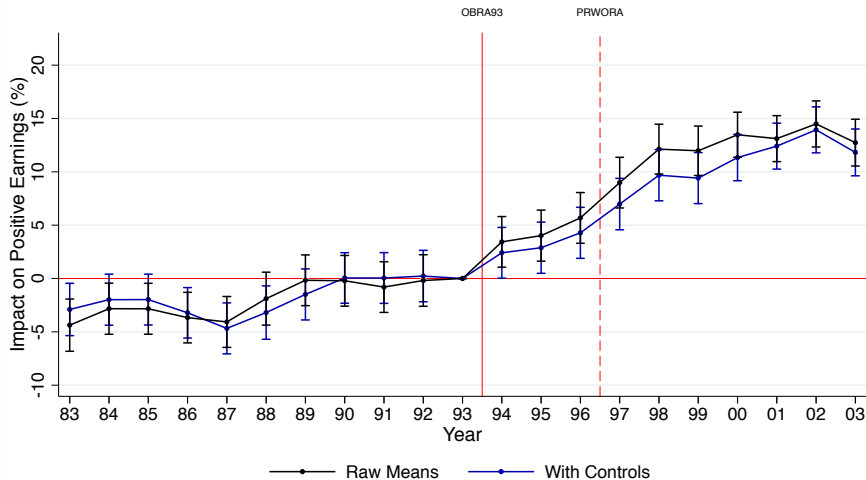
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Annual Employment)



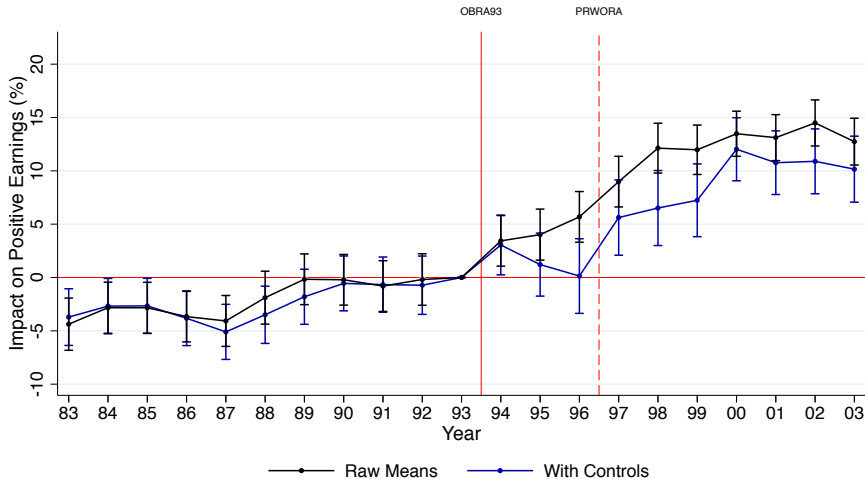
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Annual Employment, Unemployment Controls)



# Labor Force Participation of Single Women

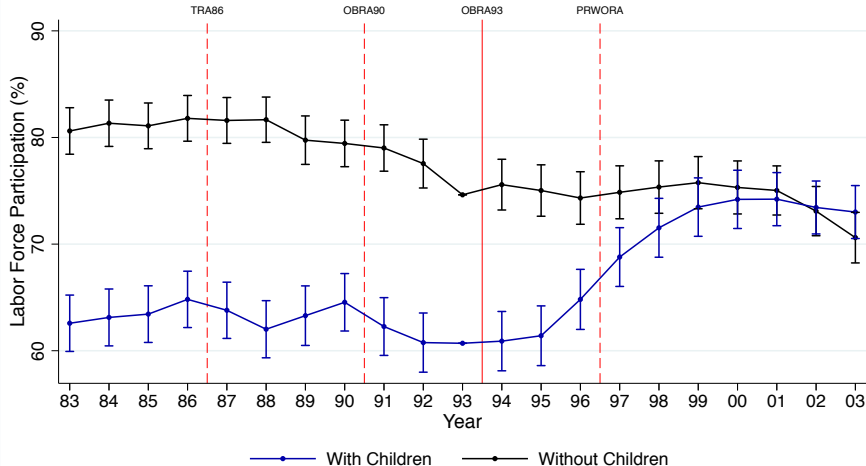
DiD: Difference Between Those With and Without Children  
(Annual Employment, Unemployment and Welfare Waiver Controls)



Weekly Participation

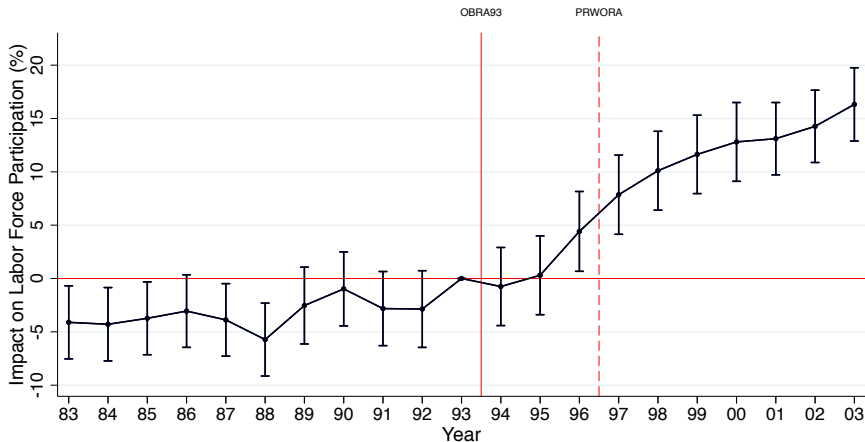
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



# Labor Force Participation of Single Women

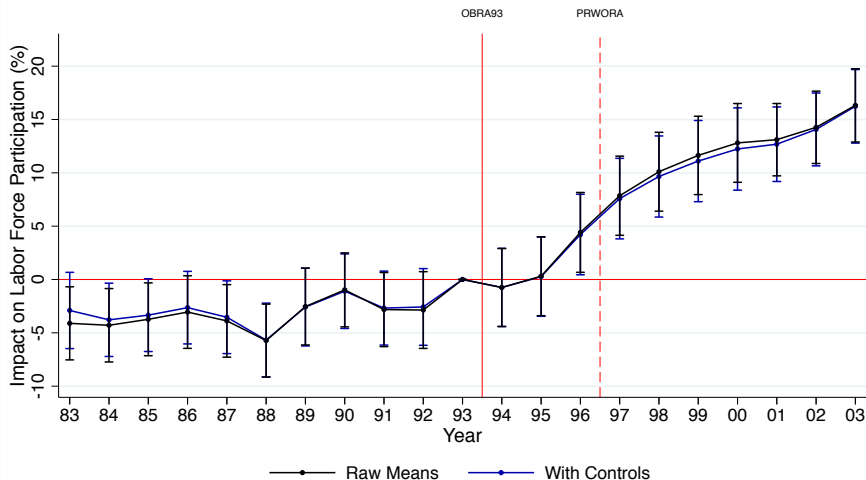
DiD: Difference Between Those With and Without Children  
(Low Education)





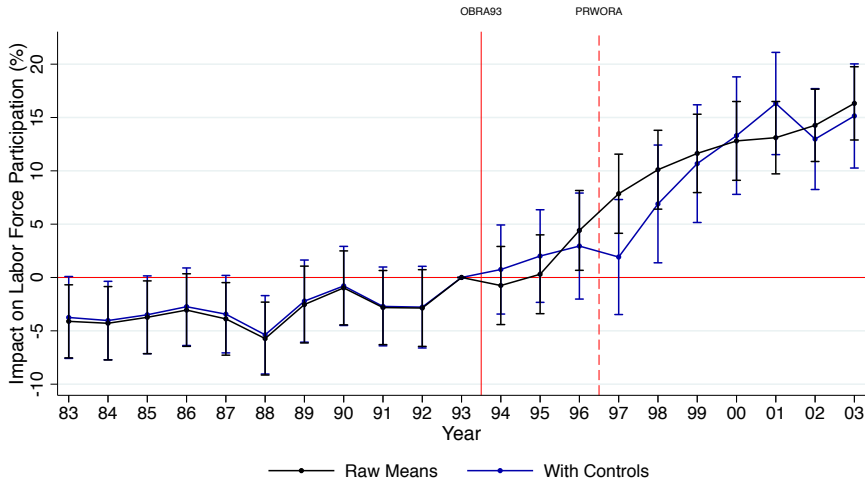
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Low Education, Unemployment Controls)



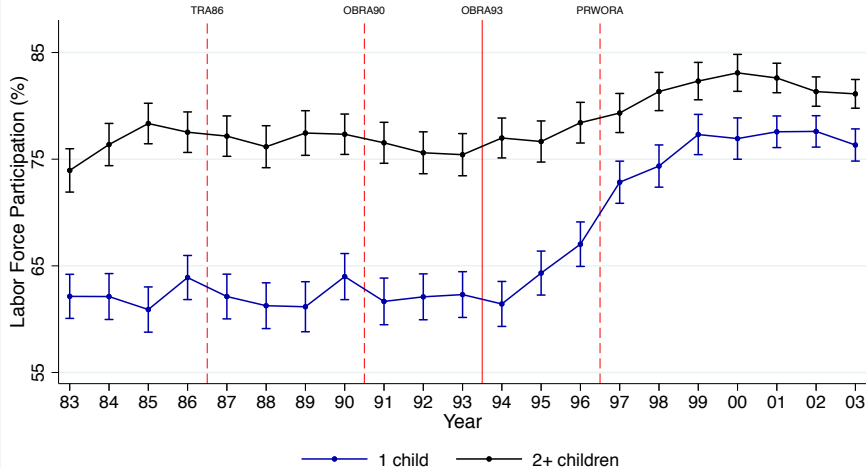
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Low Education, Unemployment and Welfare Waiver Controls)



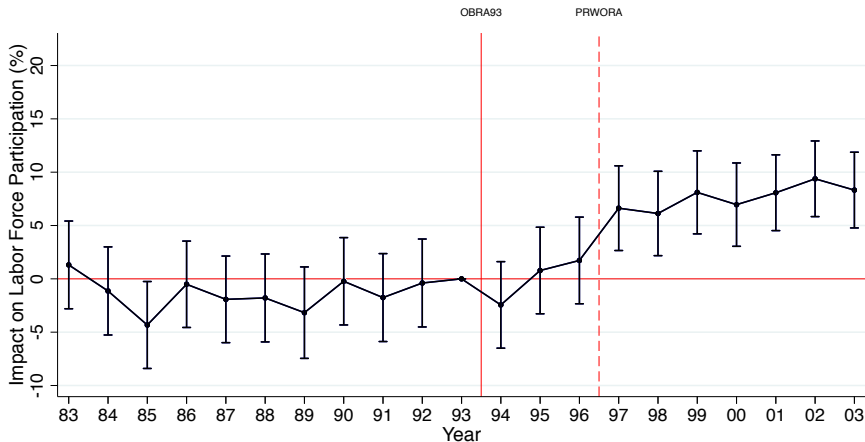
# Labor Force Participation of Single Women

With 1 and 2+ Children



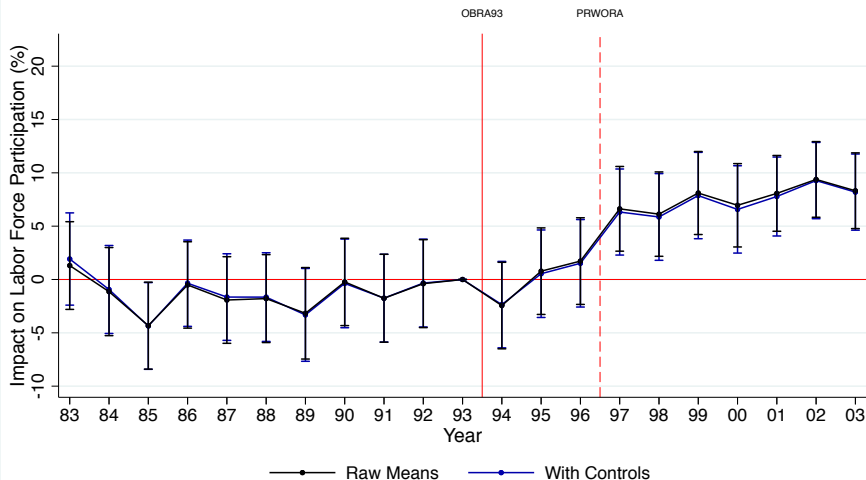
# Labor Force Participation of Single Women

DiD: Difference Between Those With 1 and 2+ Children



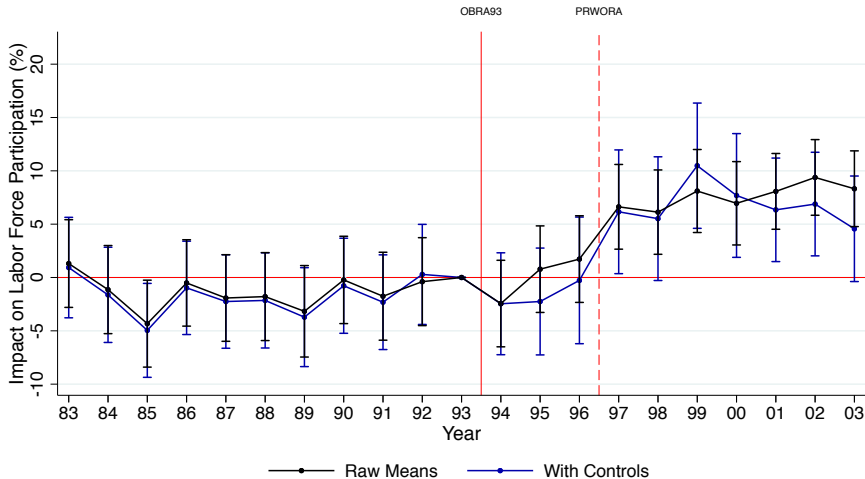
# Labor Force Participation of Single Women

DiD: Difference Between Those With 1 and 2+ Children  
(Unemployment Controls)



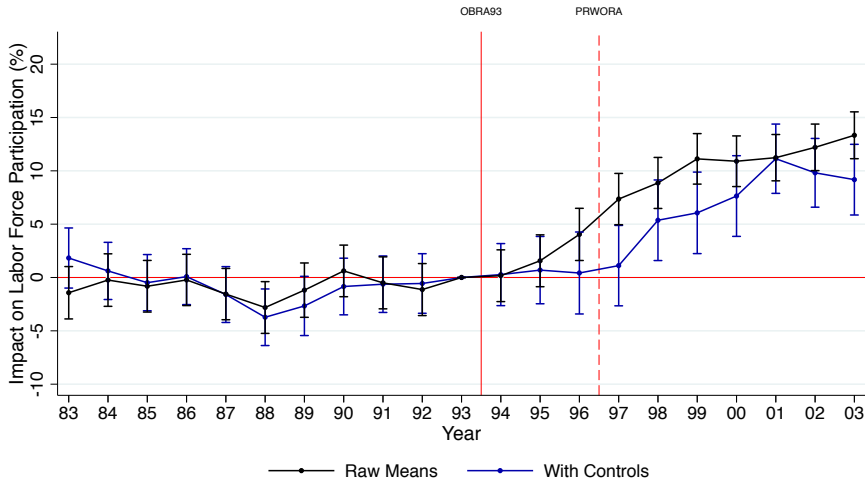
# Labor Force Participation of Single Women

DiD: Difference Between Those With 1 and 2+ Children  
(Unemployment and Welfare Waiver Controls)



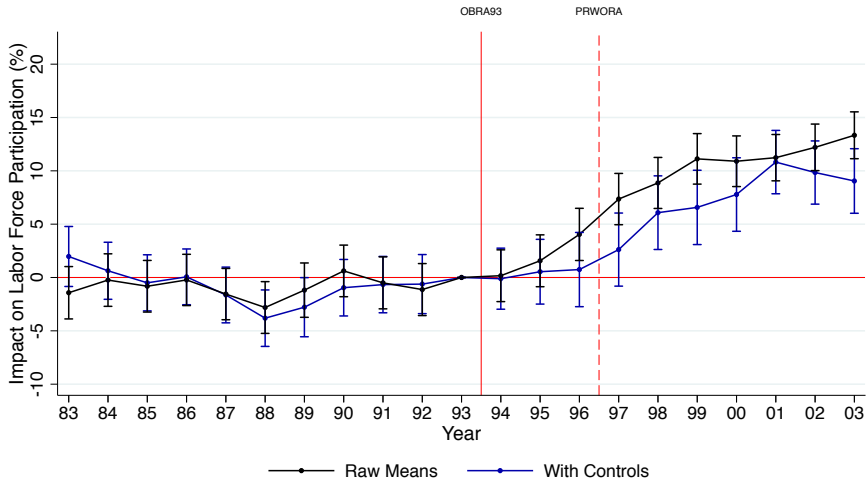
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Any Waiver Approved, Unemployment and Welfare Waiver Controls)



# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Any Waiver Implemented, Unemployment and Welfare Waiver Controls)



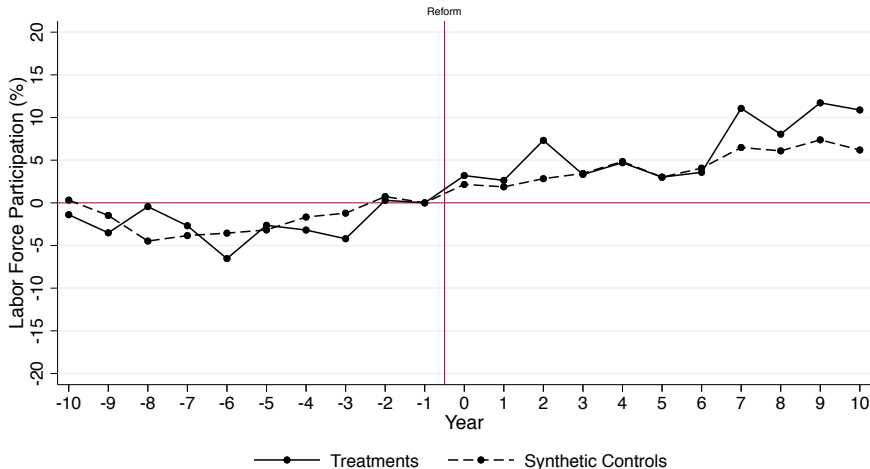


# Synthetic States

- ▶ **California:** 40% Alabama, 29% Arizona, 27% Nevada, 3% Montana, 2% Washington
- ▶ **Connecticut:** 26% Missouri, 14% South Dakota, 9% Texas, 9% Tennessee, 7% Alaska, 35% other states
- ▶ **DC:** 54% Alaska, 46% Kentucky
- ▶ **Minnesota:** 61% Pennsylvania, 39% Tennessee
- ▶ **New Jersey:** 25% Kentucky, 21% Alaska, 18% New Hampshire, 13% Arizona, 11% Montana, 12% other states
- ▶ **New York:** 51% Pennsylvania, 49% West Virginia
- ▶ **Vermont:** 61% Washington, 31% Arkansas, 8% Pennsylvania
- ▶ **Wisconsin:** 53% Washington, 27% Pennsylvania, 20% Missouri

# All State EITC Introductions: Event Study

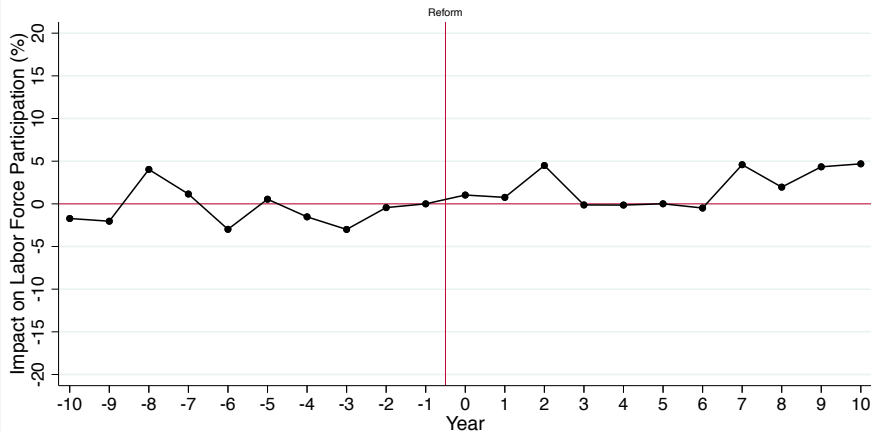
## Treatment and Synthetic Control States



Large Reforms

# All State EITC Introductions: Event Study

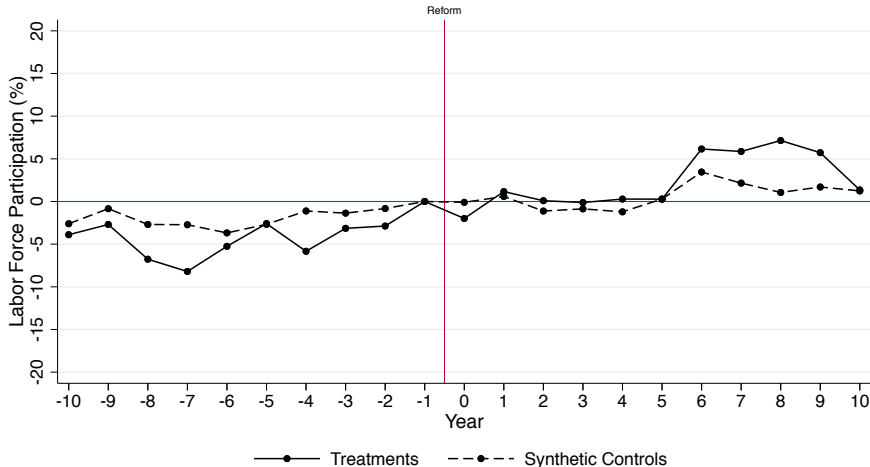
DiD: Difference Between Treatment and Synthetic Control States



Large Reforms

# Large State EITC Reforms: Event Study

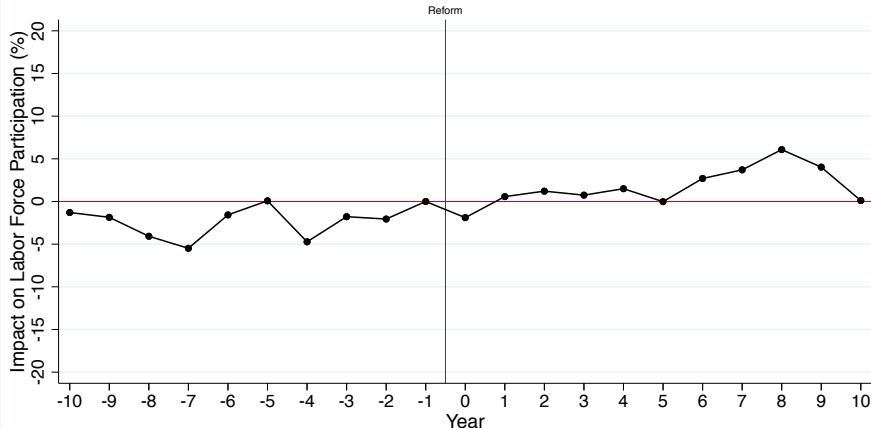
Treatment and Synthetic Control States  
(Annual Participation)



Weekly Participation

# Large State EITC Reforms: Event Study

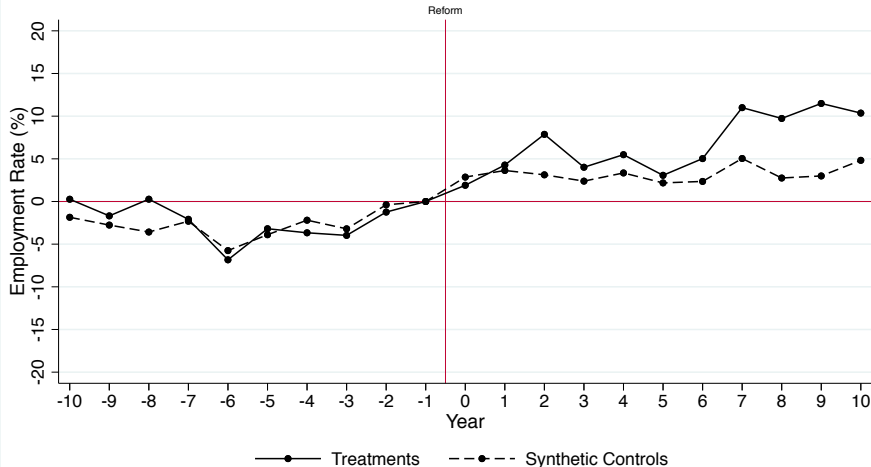
DiD: Difference Between Treatment and Synthetic Control States  
(Annual Participation)



Weekly Participation

# Large State EITC Reforms: Event Study

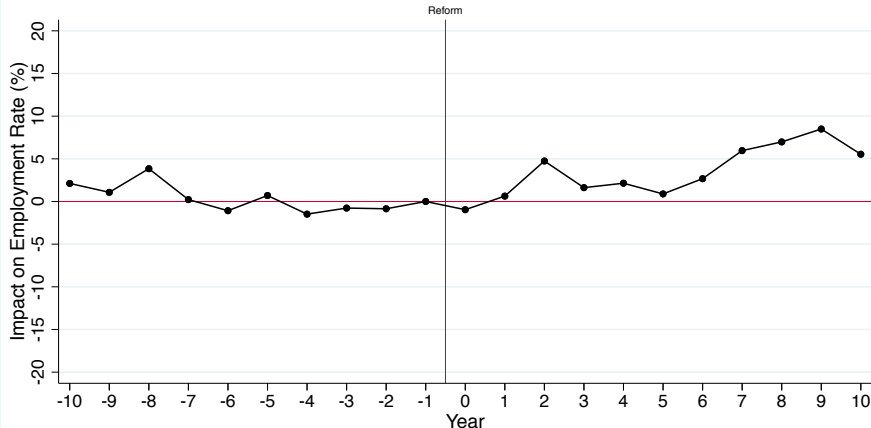
Treatment and Synthetic Control States  
(Weekly Employment)



Weekly Participation

# Large State EITC Reforms: Event Study

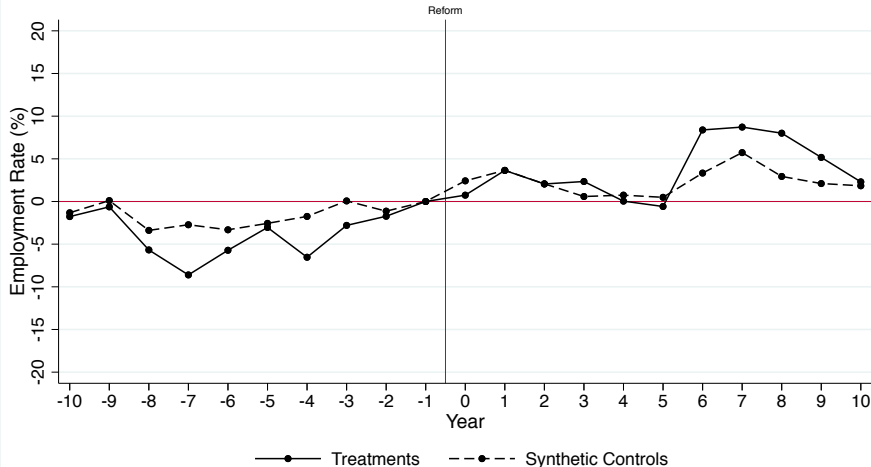
DiD: Difference Between Treatment and Synthetic Control States  
(Weekly Employment)



Weekly Participation

# Large State EITC Reforms: Event Study

Treatment and Synthetic Control States  
(Annual Employment)

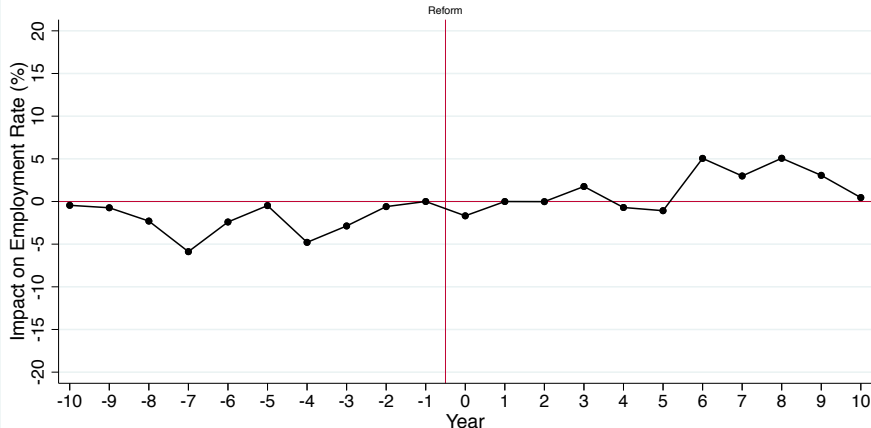


Weekly Participation



# Large State EITC Reforms: Event Study

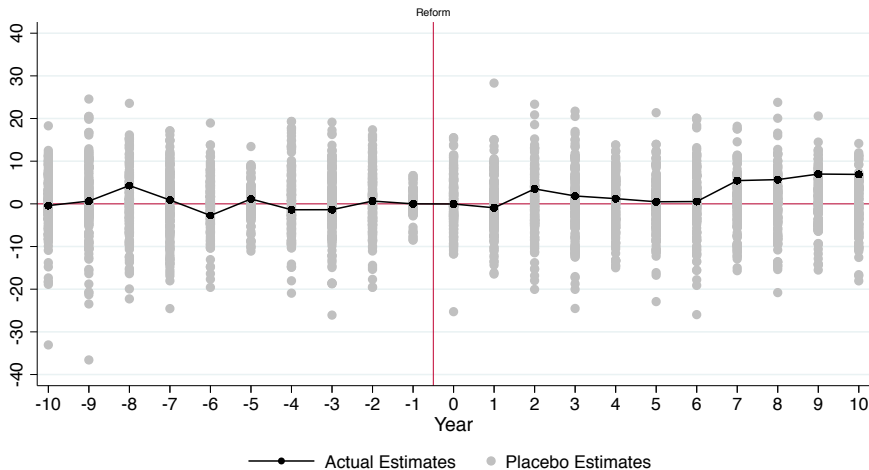
DiD: Difference Between Treatment and Synthetic Control States  
(Annual Employment)



Weekly Participation

# Large State EITC Reforms: Event Study

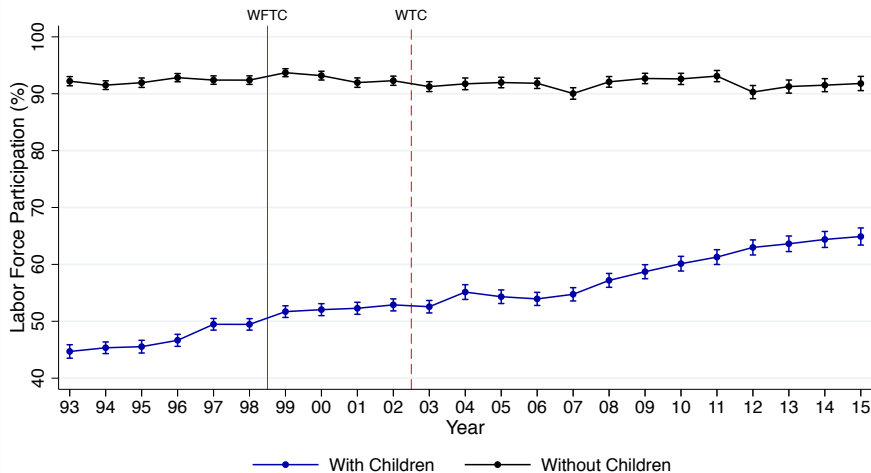
Actual DiD Estimates vs Placebo DiD Estimates



[Back](#)

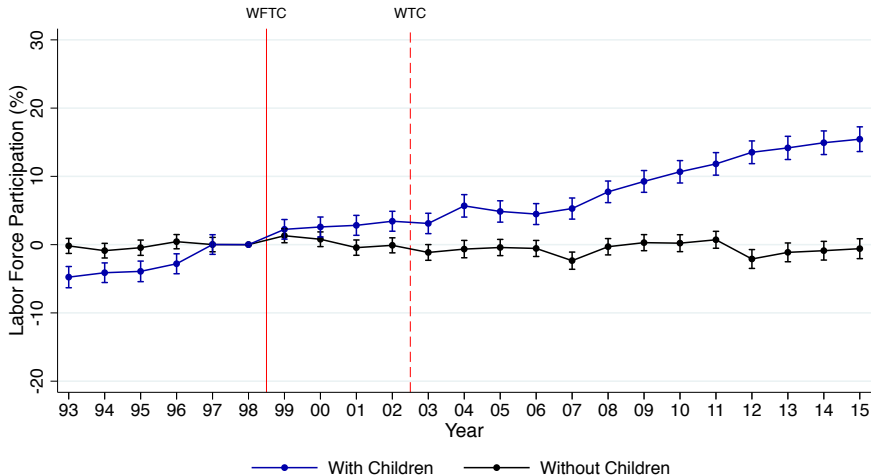
# Labor Force Participation of Single Women

With and Without Children  
(Low Education)



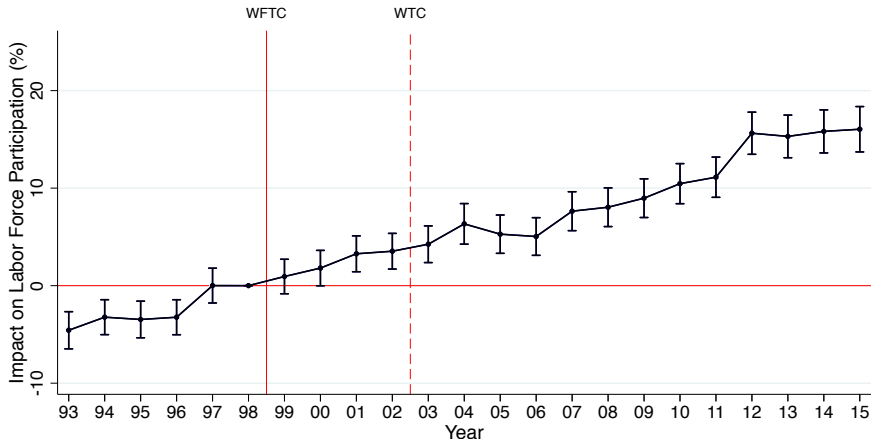
# Labor Force Participation of Single Women

With and Without Children  
(Low Education, Normalized)



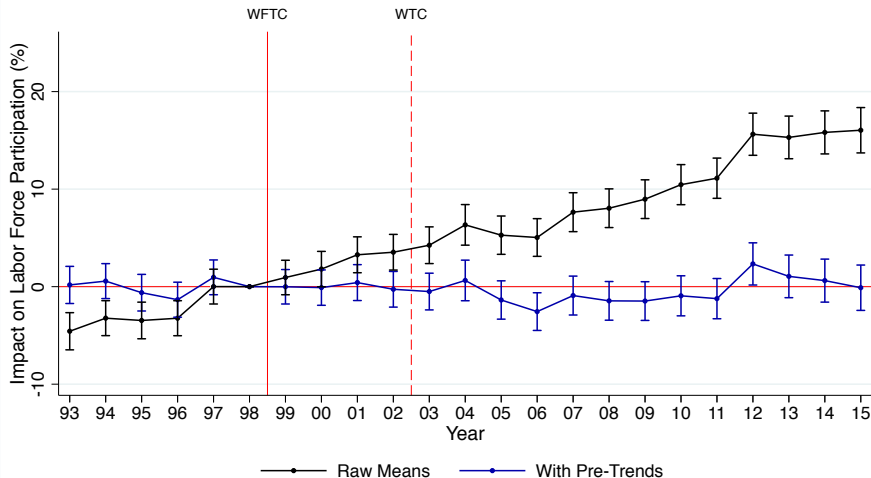
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Low Education)



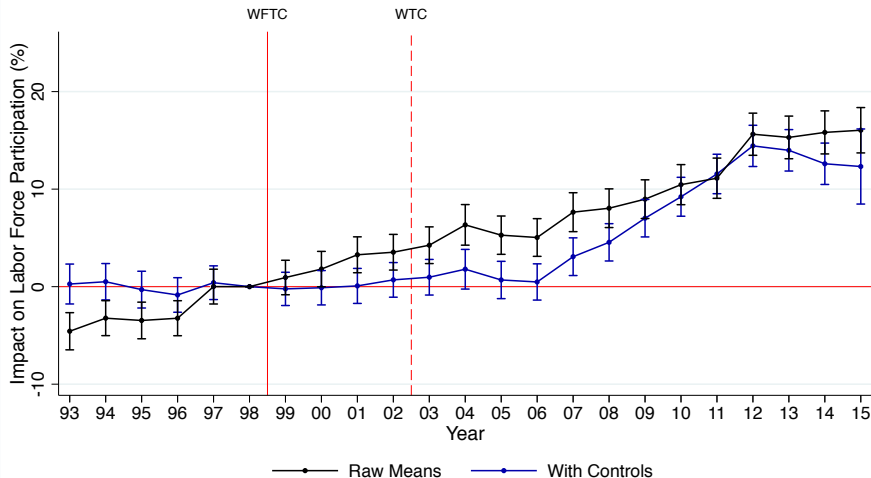
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Low Education, Adding Linear Pre-Trends)



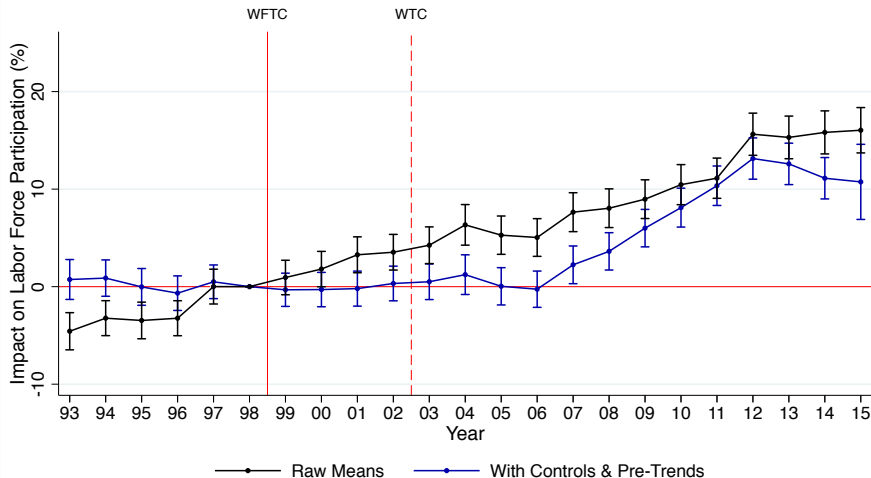
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Low Education, Controlling for Unemployment and Demographics)



# Labor Force Participation of Single Women

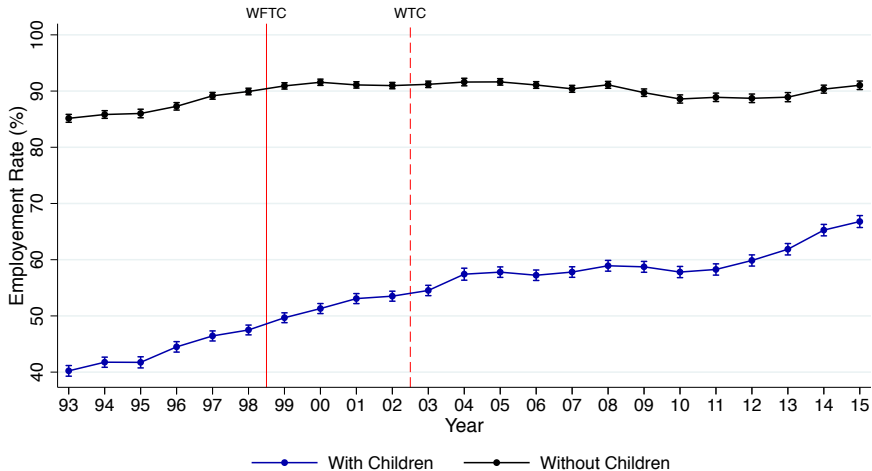
DiD: Difference Between Those With and Without Children  
(Low Education, Adding Pre-Trend Controls)





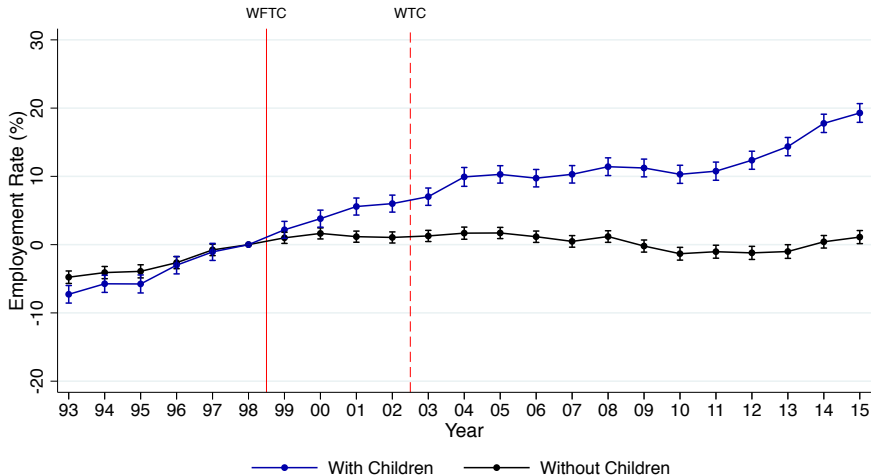
# Labor Force Participation of Single Women

With and Without Children  
(Employment, All Edu)



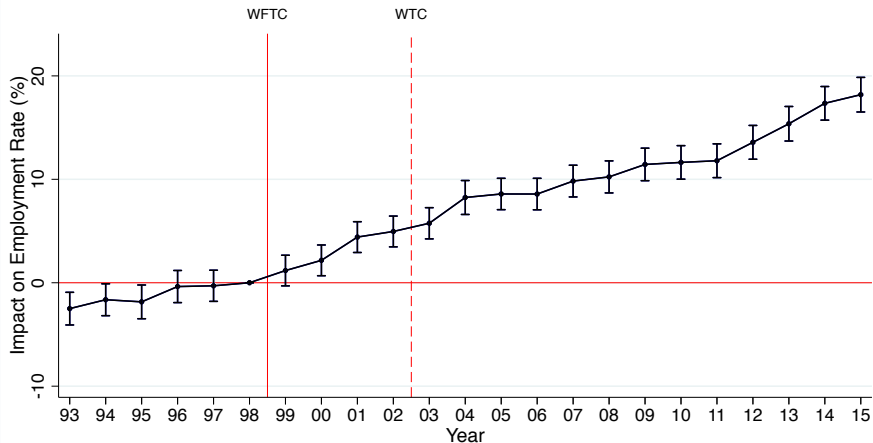
# Labor Force Participation of Single Women

With and Without Children  
(Employment, All Educations, Normalized)



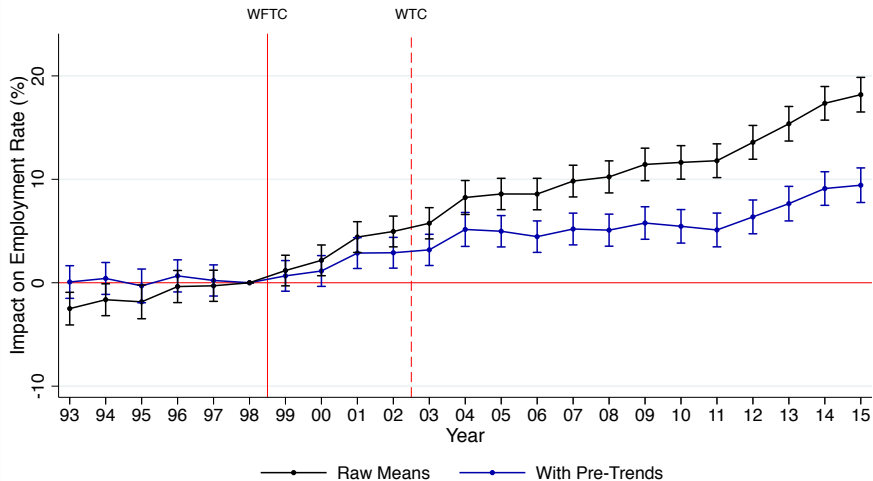
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Employment, All Educations)



# Labor Force Participation of Single Women

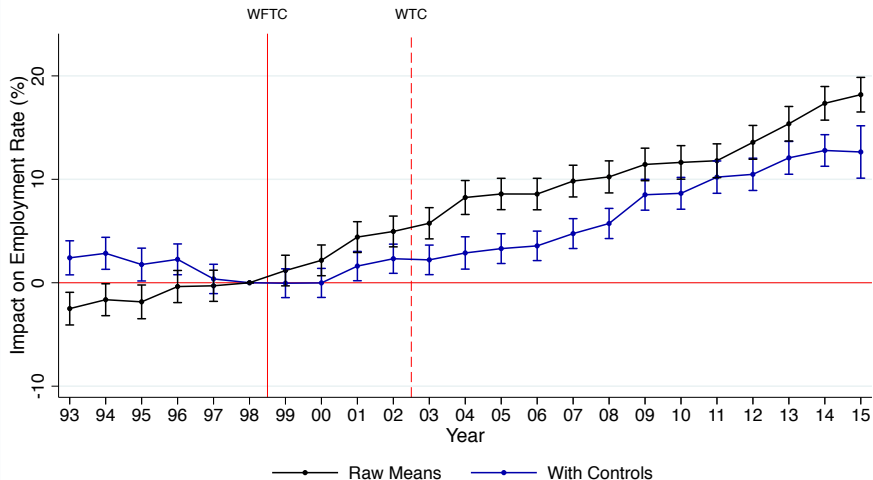
DiD: Difference Between Those With and Without Children  
(Employment, All Educations, Adding Linear Pre-Trends)



# Labor Force Participation of Single Women

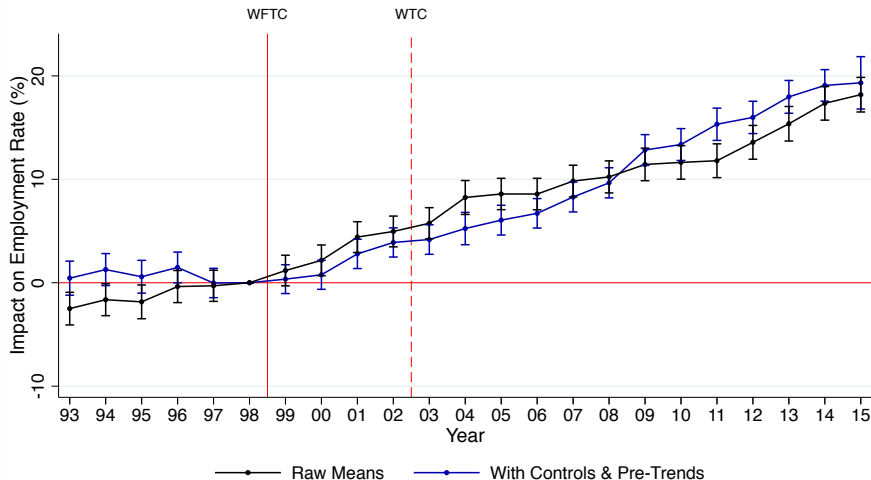
DiD: Difference Between Those With and Without Children

(Employment, All Educations, Controlling for Unemployment and Demographics)



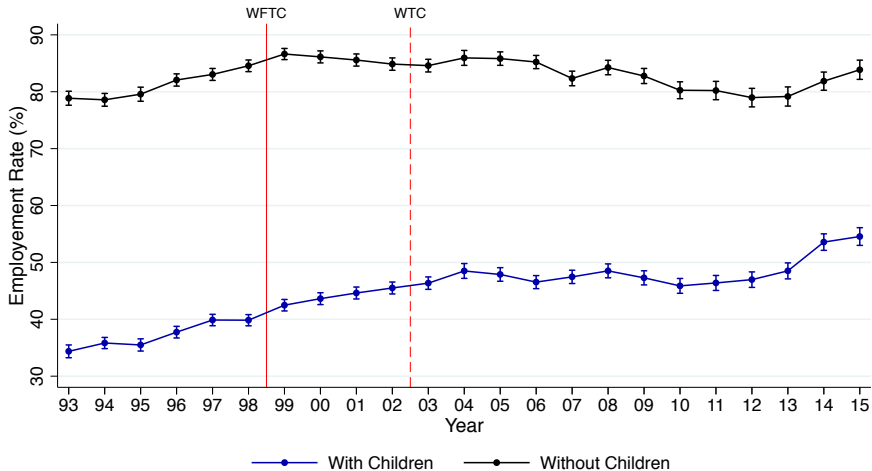
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Employment, All Educations, Adding Pre-Trend Controls)



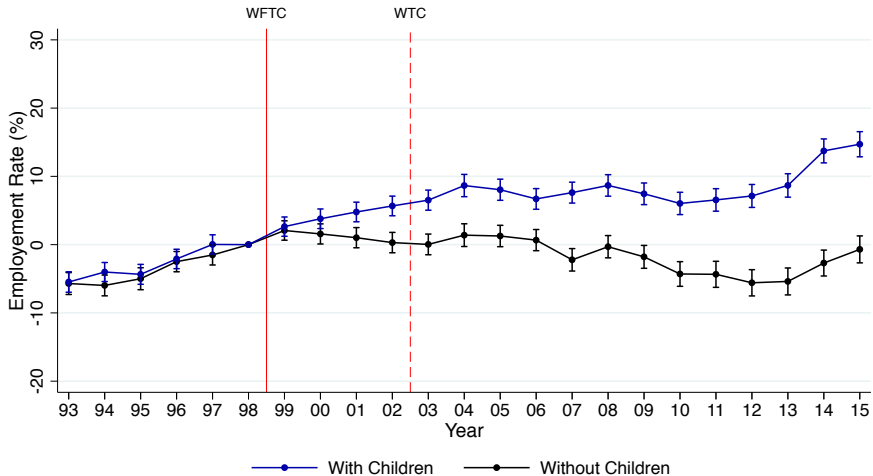
# Labor Force Participation of Single Women

With and Without Children  
(Employment, Low Education)



# Labor Force Participation of Single Women

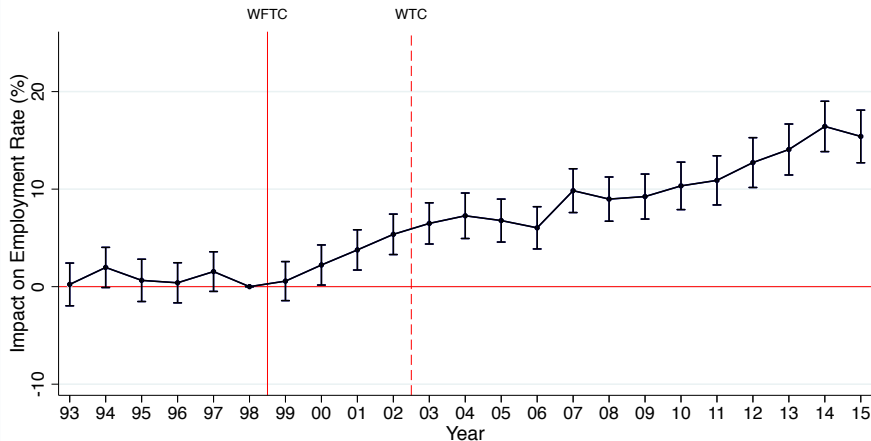
With and Without Children  
(Employment, Low Education, Normalized)





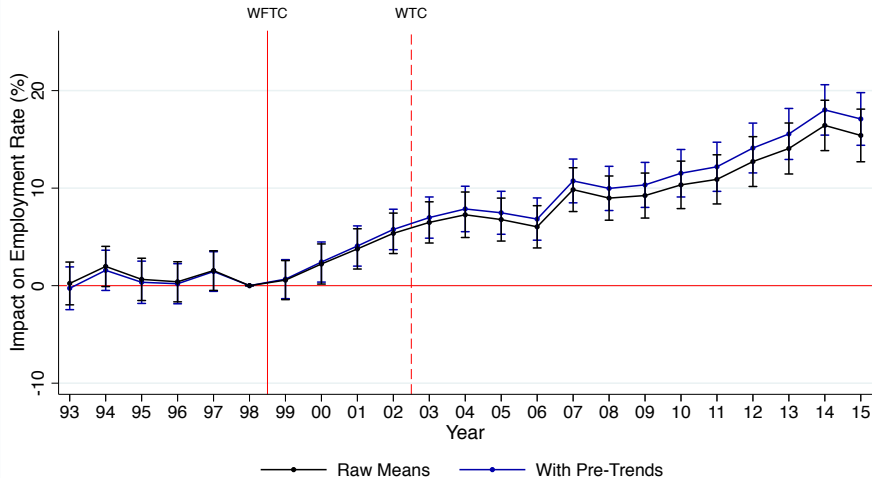
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Employment, Low Education)



# Labor Force Participation of Single Women

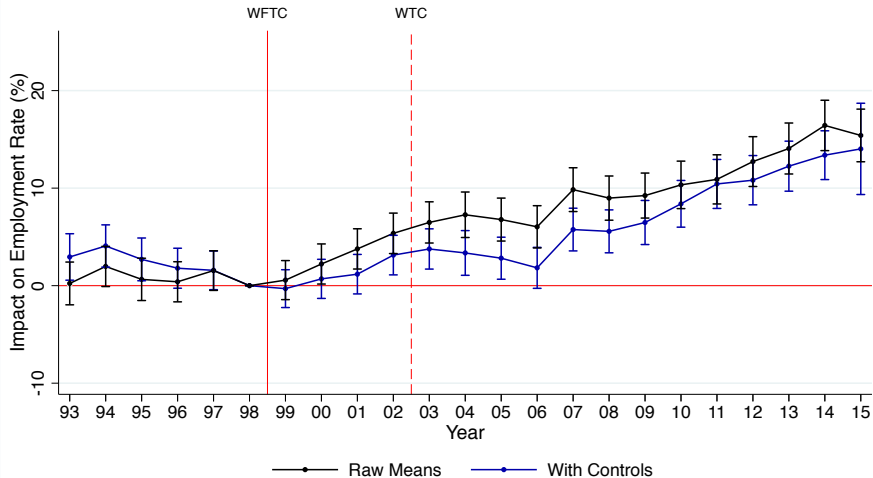
DiD: Difference Between Those With and Without Children  
(Employment, Low Education, Adding Linear Pre-Trends)



# Labor Force Participation of Single Women

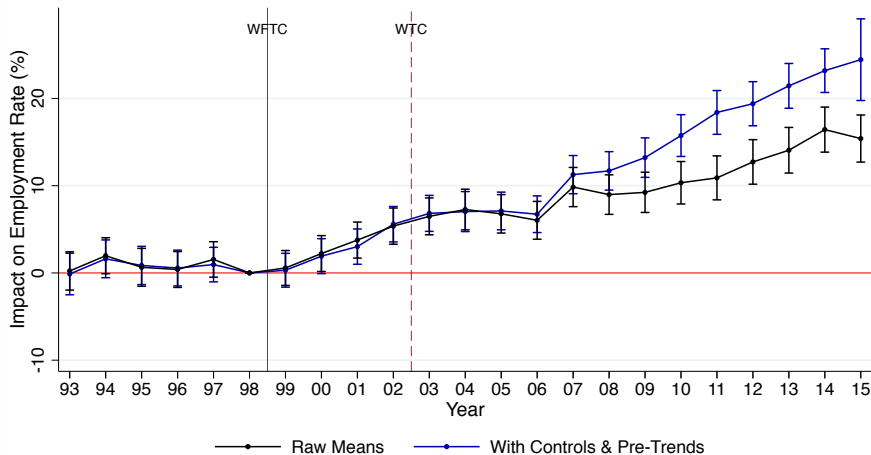
DiD: Difference Between Those With and Without Children

(Employment, Low Education, Controlling for Unemployment and Demographics)



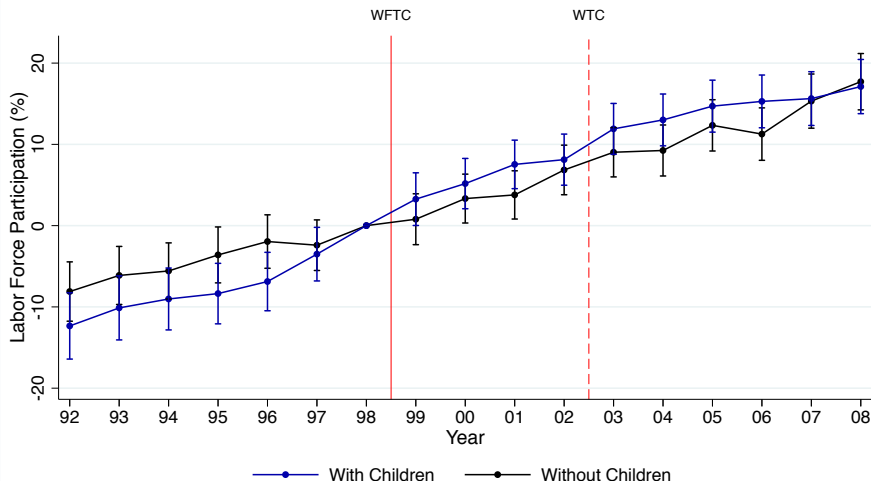
# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(Employment, Low Education, Adding Pre-Trend Controls)



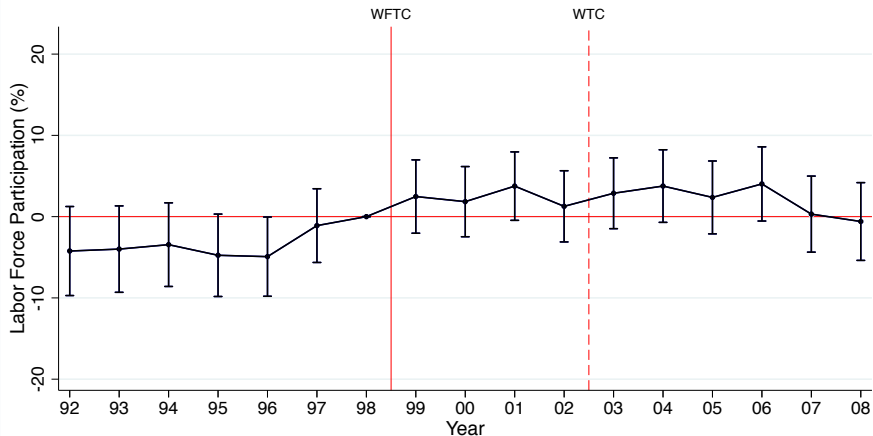
# Labor Force Participation of Single Women

With and Without Children  
(BHPS, Normalized)



# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(BHPS)



# Labor Force Participation of Single Women

DiD: Difference Between Those With and Without Children  
(BHPS, Controlling for Demographics)

