

**Table 1**  
**Parameters of the 11 Negative Income Tax Programs**

Program Number	G (\$)	$\tau$	Declining Tax Rate	Break-even Income (\$)
1	3,800	.5	No	7,600
2	3,800	.7	No	5,429
3	3,800	.7	Yes	7,367
4	3,800	.8	Yes	5,802
5	4,800	.5	No	9,600
6	4,800	.7	No	6,857
7	4,800	.7	Yes	12,000
8	4,800	.8	Yes	8,000
9	5,600	.5	No	11,200
10	5,600	.7	No	8,000
11	5,600	.8	Yes	10,360

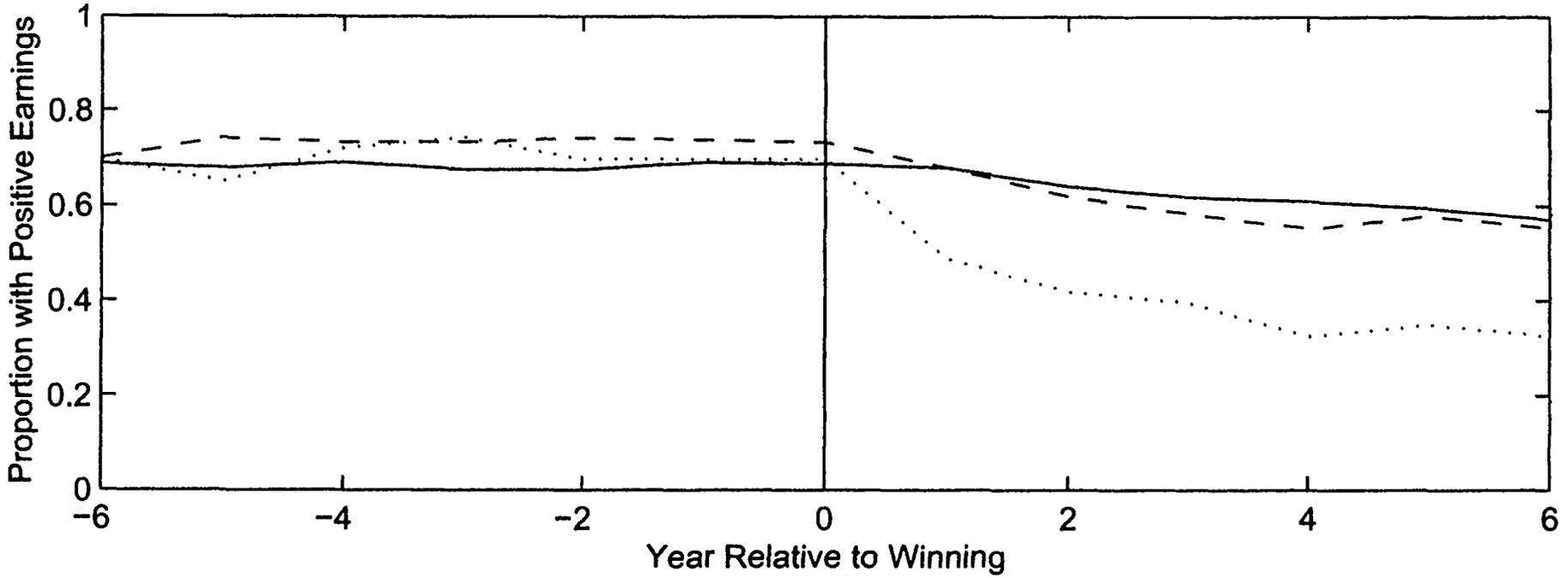


FIGURE 2. PROPORTION WITH POSITIVE EARNINGS FOR NONWINNERS, WINNERS, AND BIG WINNERS

Note: Solid line = nonwinners; dashed line = winners; dotted line = big winners.

Source: Imbens et al (2001), p. 784

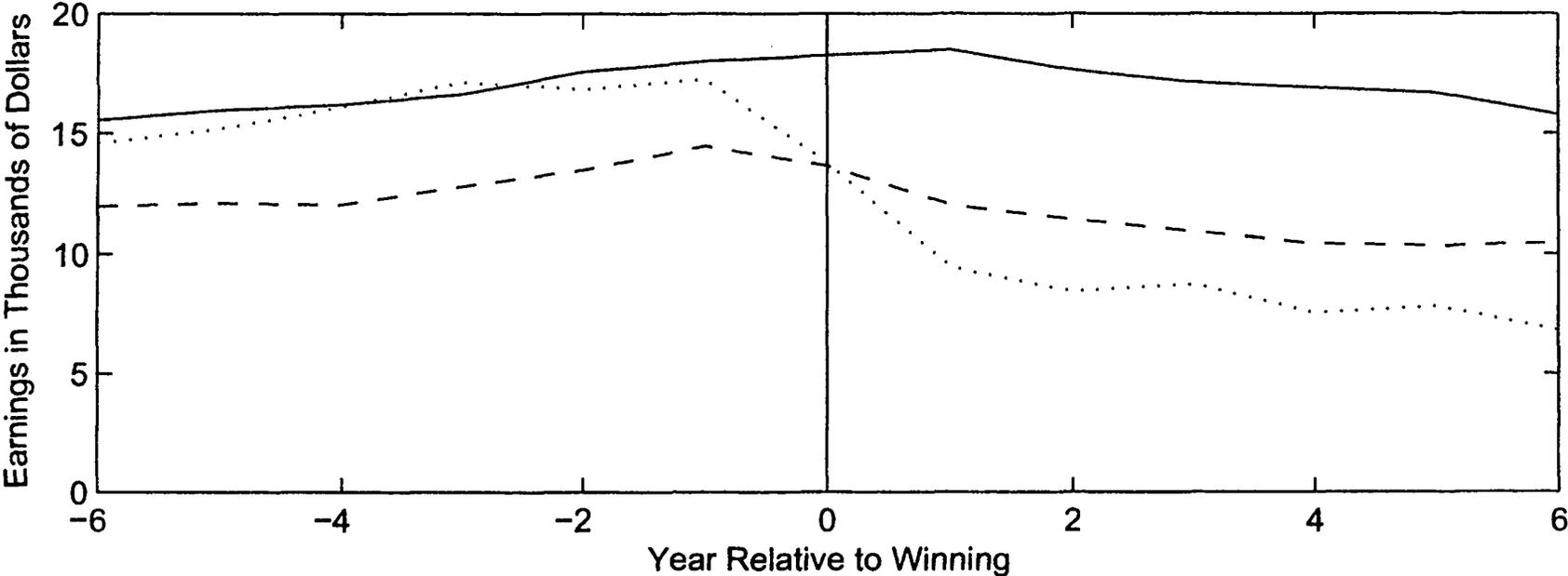


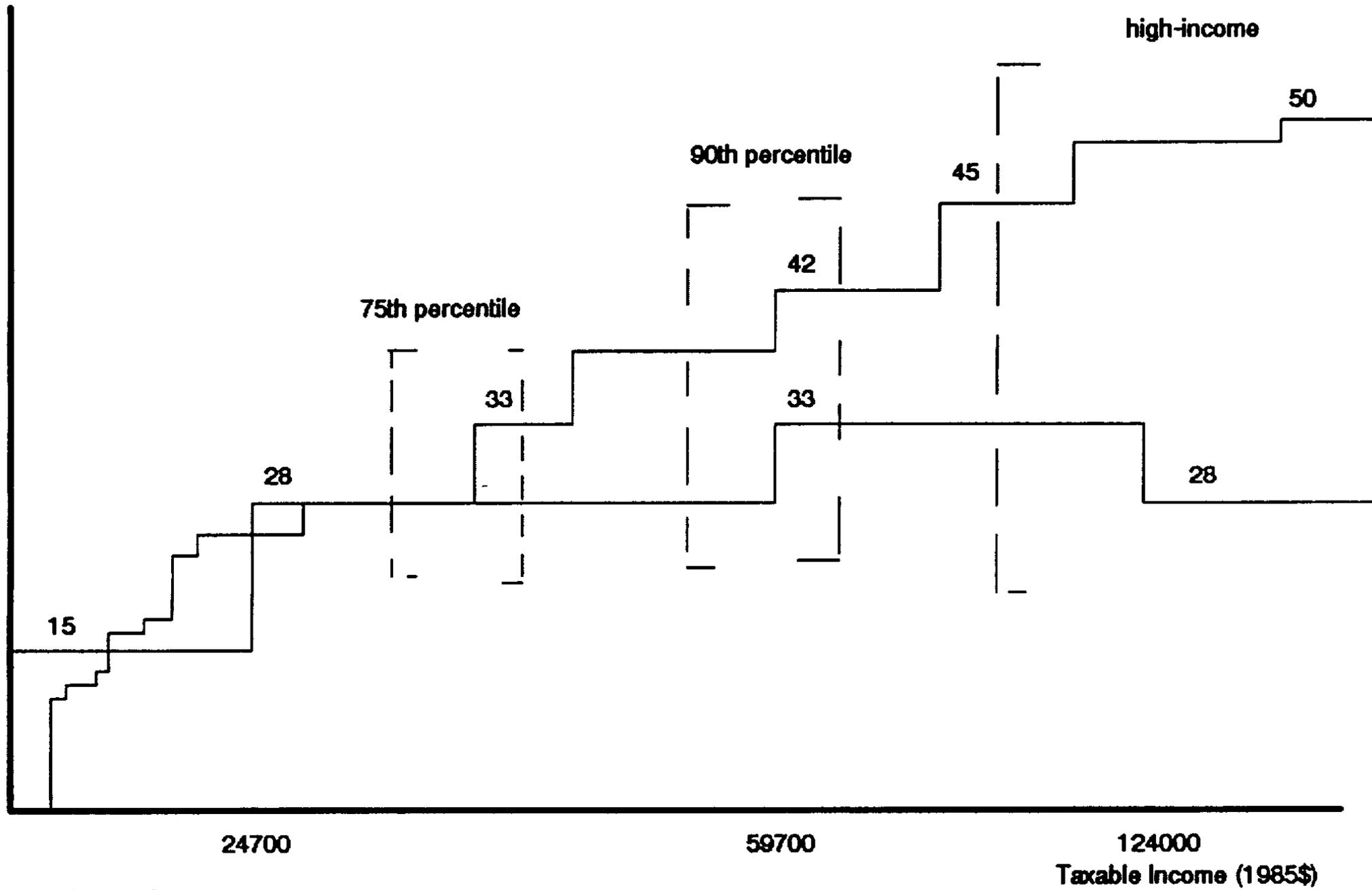
FIGURE 1. AVERAGE EARNINGS FOR NONWINNERS, WINNERS, AND BIG WINNERS

Note: Solid line = nonwinners; dashed line = winners; dotted line = big winners.

Source: Imbens et al. (2001), p. 783

marginal  
tax rate

Figure II



Source: Federal Govt

Table IIa  
Marginal Tax Rate

Group	Before TRA86	After TRA86	Change	Relative Change
High	.521 (.002)	.382 (.001)	-.139 (.002)	
75 <sup>th</sup> Percentile	.365 (.001)	.324 (.001)	-.041 (.001)	<b>-.098</b> <b>(.002)</b>
90 <sup>th</sup> Percentile	.430 (.001)	.360 (.001)	-.07 (.001)	<b>-.069</b> <b>(.002)</b>

The marginal tax rate is calculated using family wage and salary, self-employment, interest, dividend, farm and social-security income. I assume all couples file jointly, and that all itemize their deductions. Itemized deductions and capital gains are imputed using Statistics of Income data. These figures include the secondary earner deduction, as well as social security taxes. Standard errors are in parentheses. Before TRA86 is tax years 1983-1985; After TRA86 is tax years 1989-1991.

Table III  
Differences-in-Differences Estimates  
CPS Married Women Before and After TRA86

A: Labor Force Participation

Group	Before TRA86	After TRA86	Change	Difference-in- Difference
High	0.464 (.018) [756]	0.554 (.018) [718]	0.090 (.025) {19.5%}	
75 <sup>th</sup> Percentile	0.687 (.010) [3799]	0.740 (.010) [3613]	0.053 (.010) {7.2%}	<b>0.037 (.028)</b> <b>{12.3%}</b>
90 <sup>th</sup> Percentile	0.611 (.010) [3765]	0.656 (.010) [3584]	0.045 (.010) {6.5%}	<b>0.045 (.028)</b> <b>{13%}</b>

Source: Eissa 1995

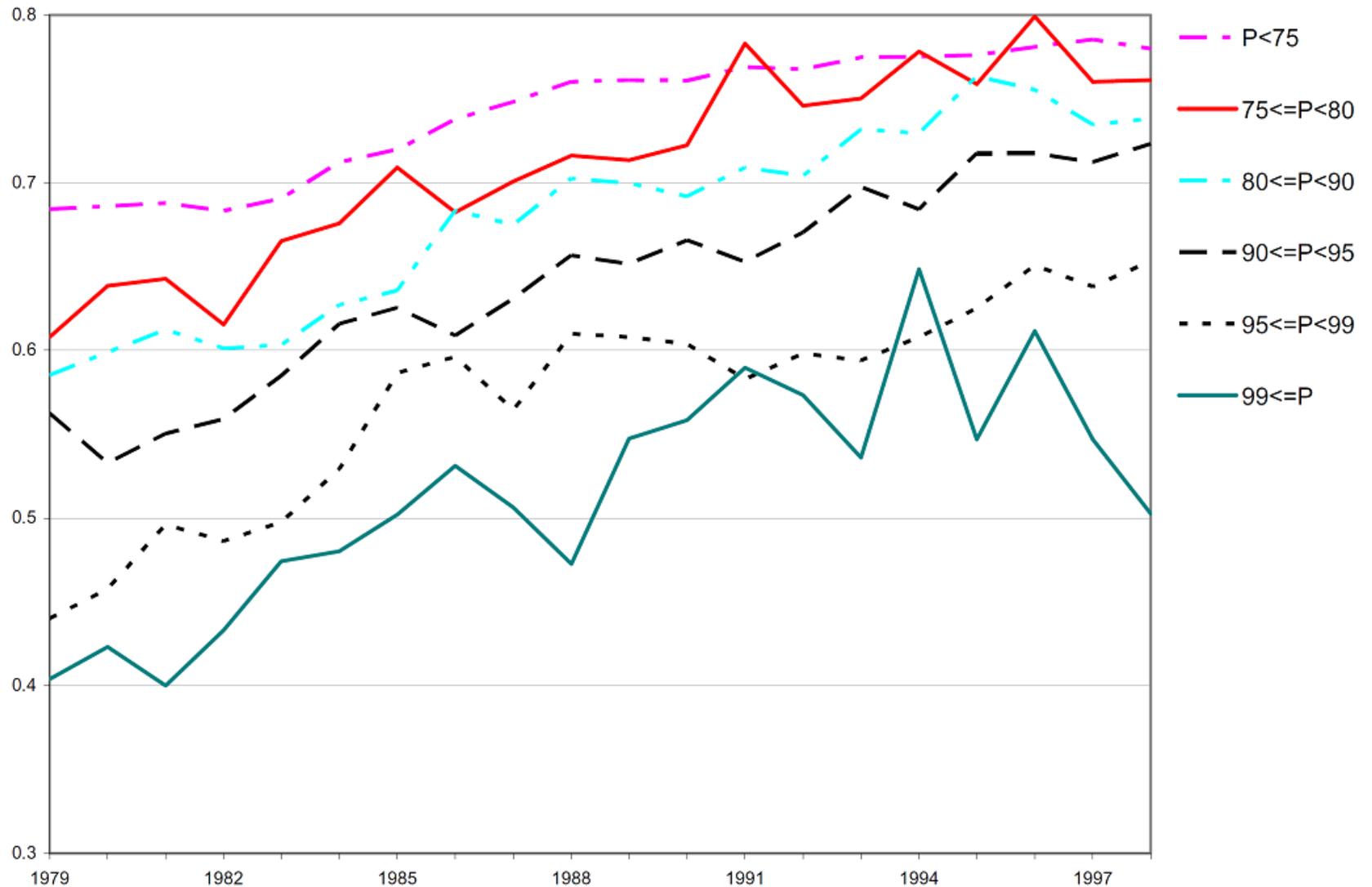
B: Hours Conditional on Employment

Group	Before TRA86	After TRA86	Change	Difference-in- Difference
High	1283.0 (46.3) [351]	1446.3 (41.1) [398]	163.3 (61.5) {12.7%}	
75 <sup>th</sup> Percentile	1504.1 (14.3) [2610]	1558.9 (13.9) [2676]	54.8 (20.0) {3.6%}	<b>108.6 (65.1)</b> <b>{9.4%}</b>
90 <sup>th</sup> Percentile	1434.1 (16.4) [2303]	1530.1 (15.9) [2348]	96.0 (22.8) {6.8%}	<b>67.3 (64.8)</b> <b>{6.2%}</b>

Each cell contains the mean for that group, along with standard errors in (), number of observations in [], and % increase in {}. Means are unweighted.

Source: Eissa 1995

Figure 10  
 Fraction of Married Women with Positive Annual Earnings by Income Group  
 in March CPS



Notes: Groups are based on other household income (husband's earnings plus asset income) as described in Eissa (1995). Group 1  $\leq 75^{\text{th}}$  percentile. Group 75 is  $>75^{\text{th}}$  percentile and  $\leq 80^{\text{th}}$  percentile. Group 80 is  $>80^{\text{th}}$  and  $\leq 90^{\text{th}}$ . Group 90 is  $>90^{\text{th}}$  and  $\leq 95^{\text{th}}$ . Group 95 is  $>95^{\text{th}}$  and  $\leq 99^{\text{th}}$ . Group 99 is  $>99^{\text{th}}$ .

Source: Liebman and Saez (2006)

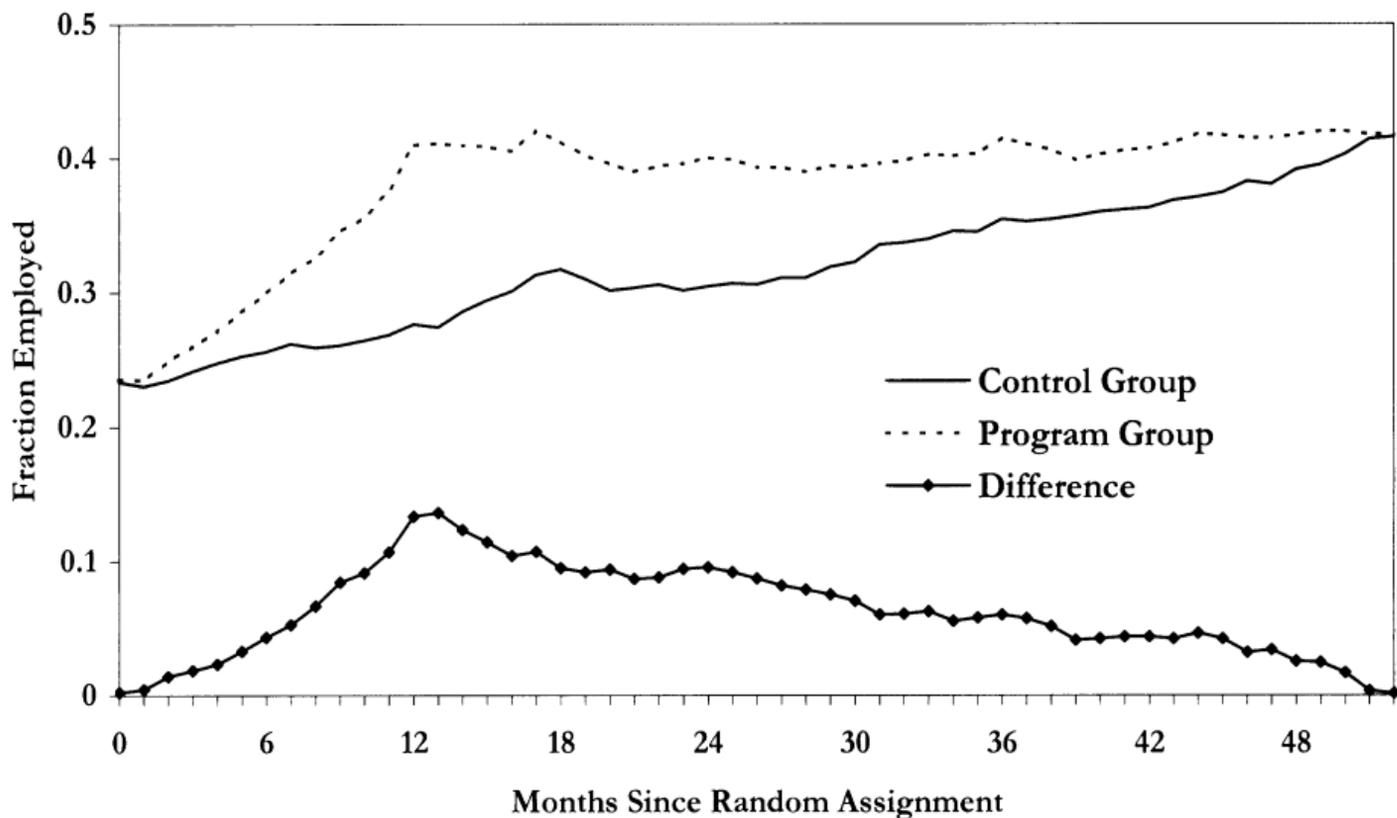
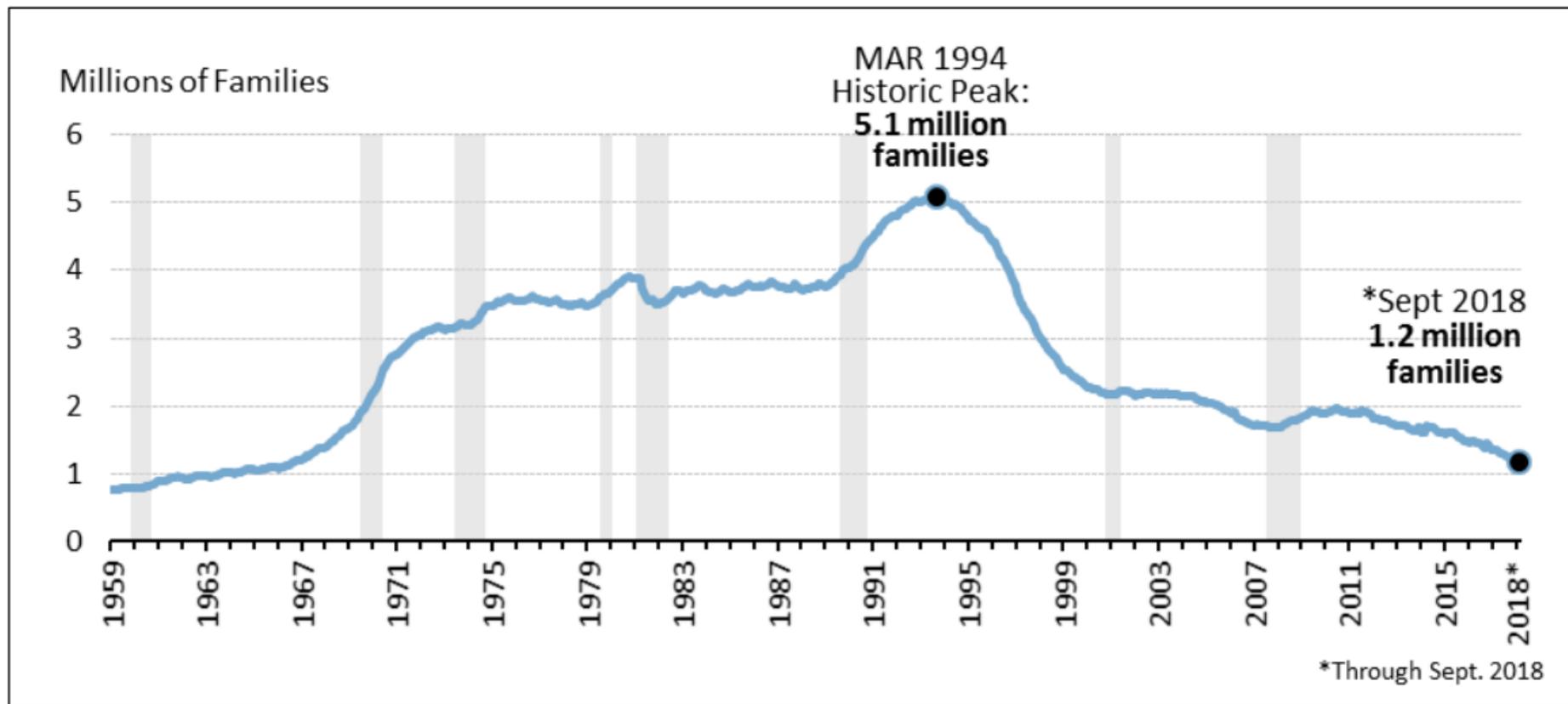


FIGURE 3.—Monthly employment rates.

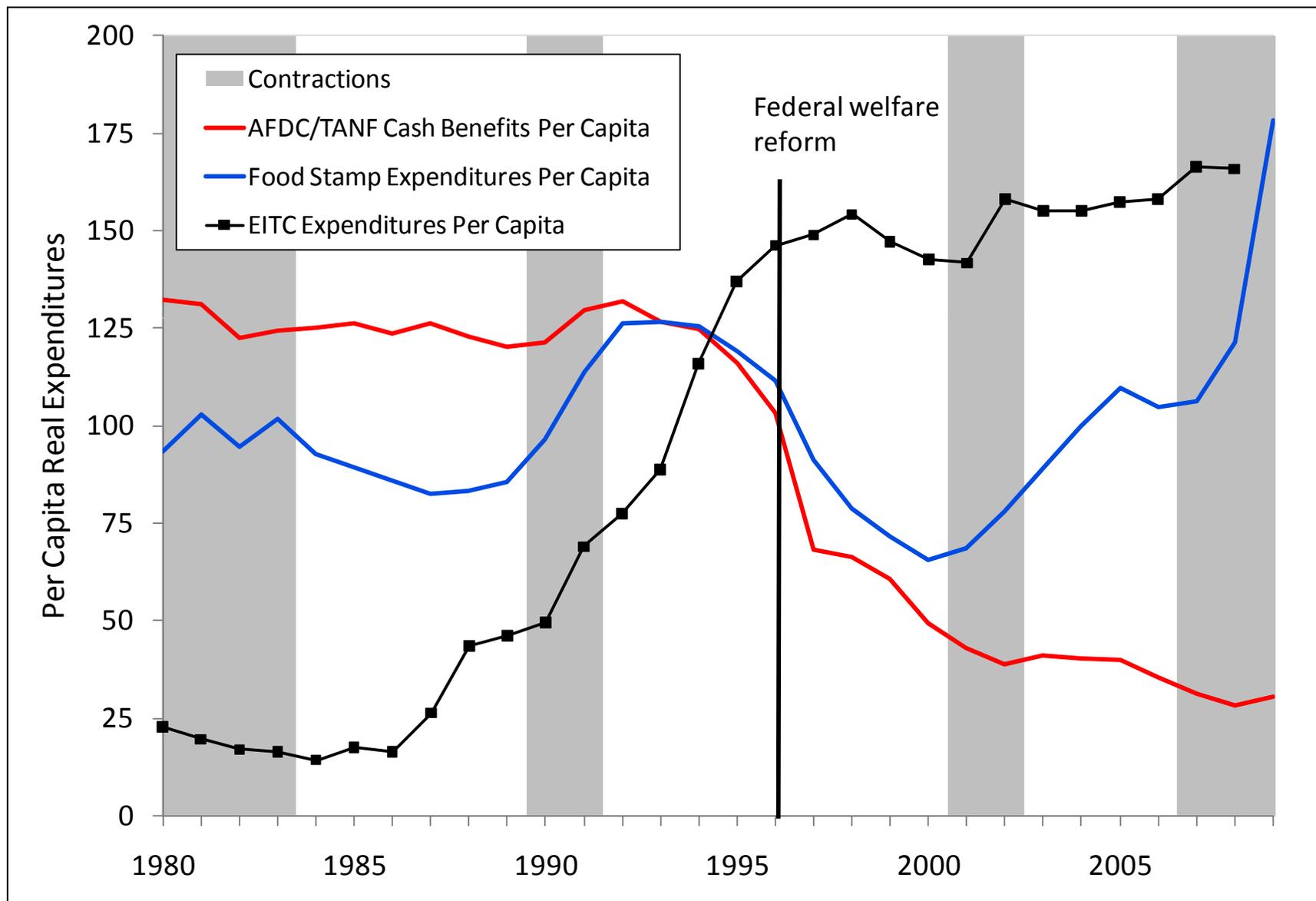
Source: Card and Hyslop, 2005, p. 1734

**Figure 2. Number of Families Receiving Cash Assistance, July 1959-September 2018**



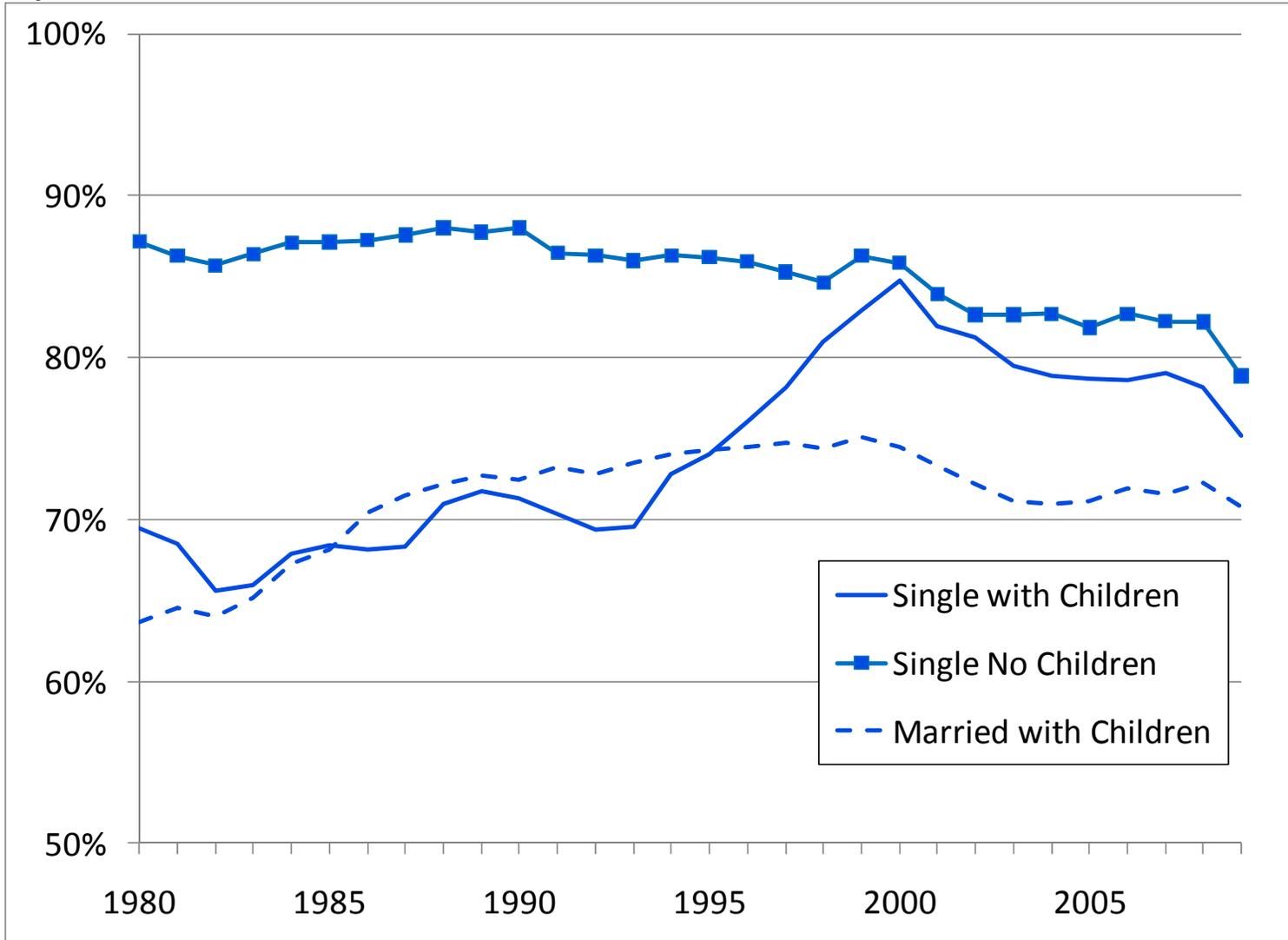
**Source:** Congressional Research Service (CRS) with data from the U.S. Department of Health and Human Services (HHS).

# The landscape providing assistance to poor families with children has changed substantially



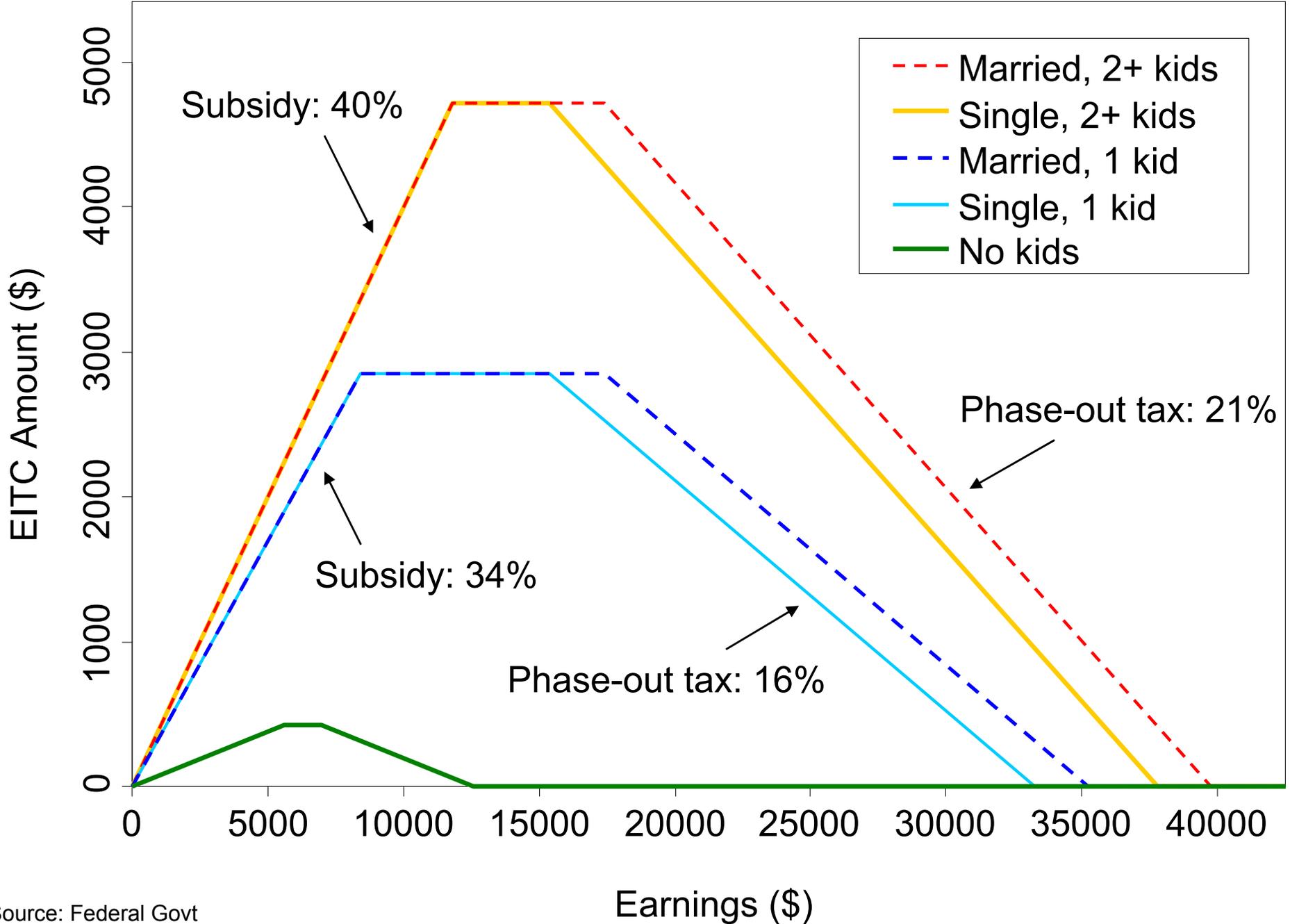
Source: Bitler and Hoynes, Brookings Papers on Economic Activity, 2011.

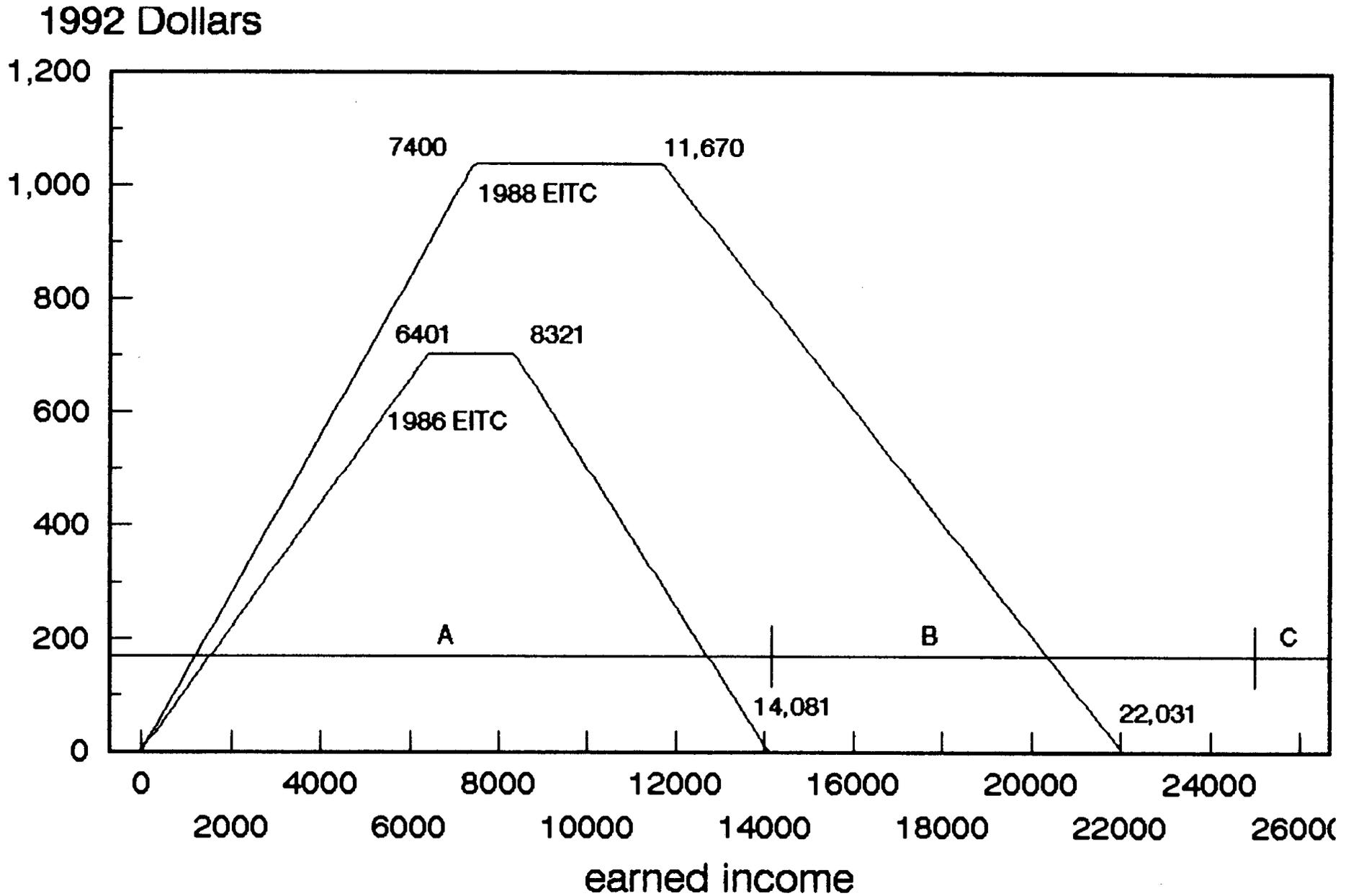
## Annual Employment Rates for Women By Marital Status and Presence of Children, 1980-2009



Source: Bitler and Hoynes, Brookings Papers on Economic Activity, 2011.

# EITC Amount as a Function of Earnings





Source: Eissa and Liebman (1996), p. 631

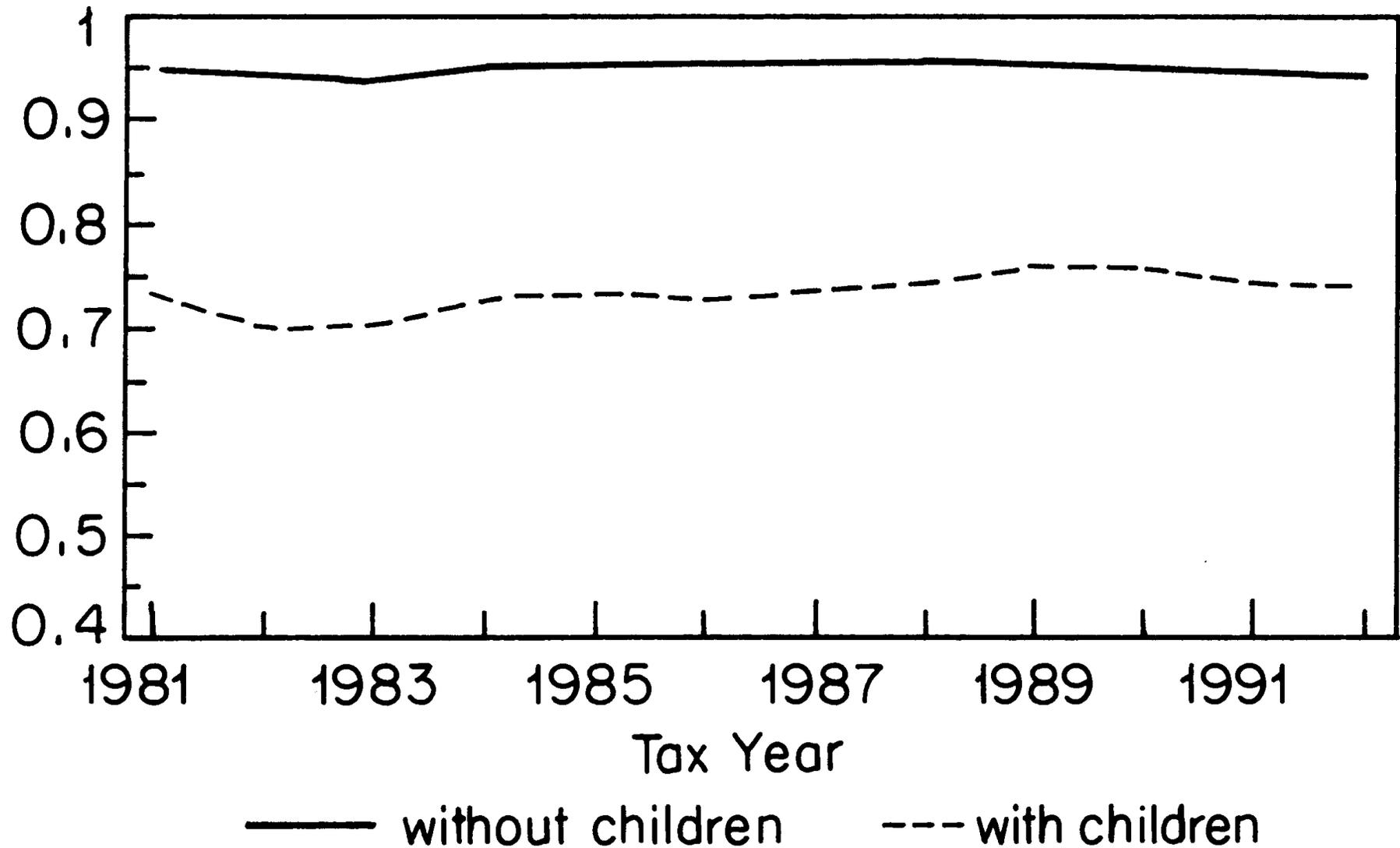
FIGURE IV  
1986 and 1988 Earned Income Tax Credit

TABLE II  
LABOR FORCE PARTICIPATION RATES OF UNMARRIED WOMEN

	Pre-TRA86 (1)	Post-TRA86 (2)	Difference (3)	Difference-in- differences (4)
<i>A. Treatment group:</i>				
With children [20,810]	0.729 (0.004)	0.753 (0.004)	0.024 (0.006)	
<i>Control group:</i>				
Without children [46,287]	0.952 (0.001)	0.952 (0.001)	0.000 (0.002)	<i>0.024 (0.006)</i>
<i>B. Treatment group:</i>				
Less than high school, with children [5396]	0.479 (0.010)	0.497 (0.010)	0.018 (0.014)	
<i>Control group 1:</i>				
Less than high school, without children [3958]	0.784 (0.010)	0.761 (0.009)	-0.023 (0.013)	<i>0.041 (0.019)</i>
<i>Control group 2:</i>				
Beyond high school, with children [5712]	0.911 (0.005)	0.920 (0.005)	0.009 (0.007)	<i>0.009 (0.015)</i>
<i>C. Treatment group:</i>				
High school, with children [9702]	0.764 (0.006)	0.787 (0.006)	0.023 (0.008)	
<i>Control group 1:</i>				
High school, without children [16,527]	0.945 (0.002)	0.943 (0.003)	-0.002 (0.004)	<i>0.025 (0.009)</i>
<i>Control group 2:</i>				
Beyond high school, with children [5712]	0.911 (0.005)	0.920 (0.005)	0.009 (0.007)	<i>0.014 (0.011)</i>

Data are from the March CPS, 1985–1987 and 1989–1991. Pre-TRA86 years are 1984–1986. Post-TRA86 years are 1988–1990. Labor force participation equals one if annual hours are positive, zero otherwise. Standard errors are in parentheses. Sample sizes are in square brackets. Means are weighted with CPS March supplement weights.

## All Unmarried Females



# Unmarried Males With Less Than High School Education

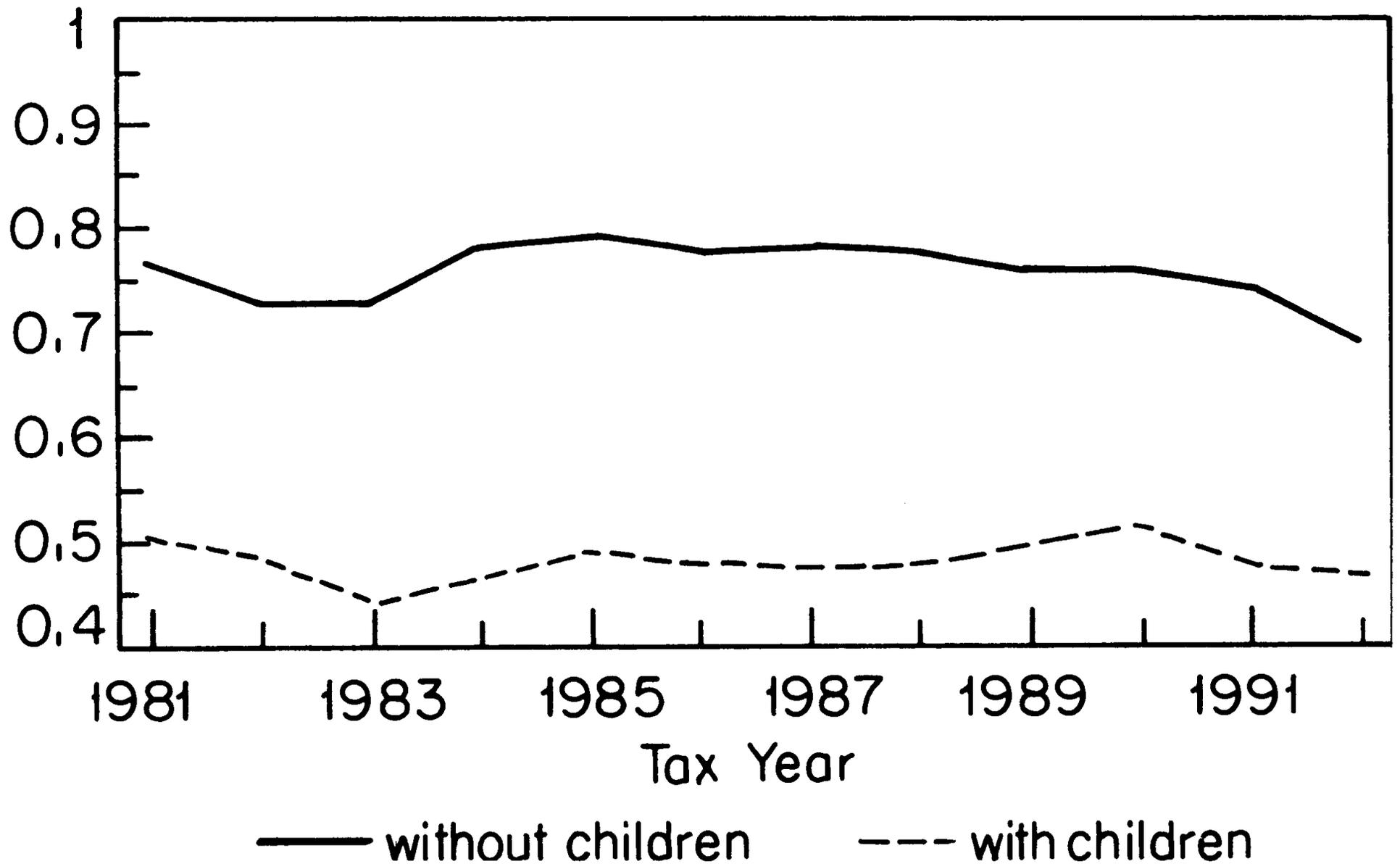
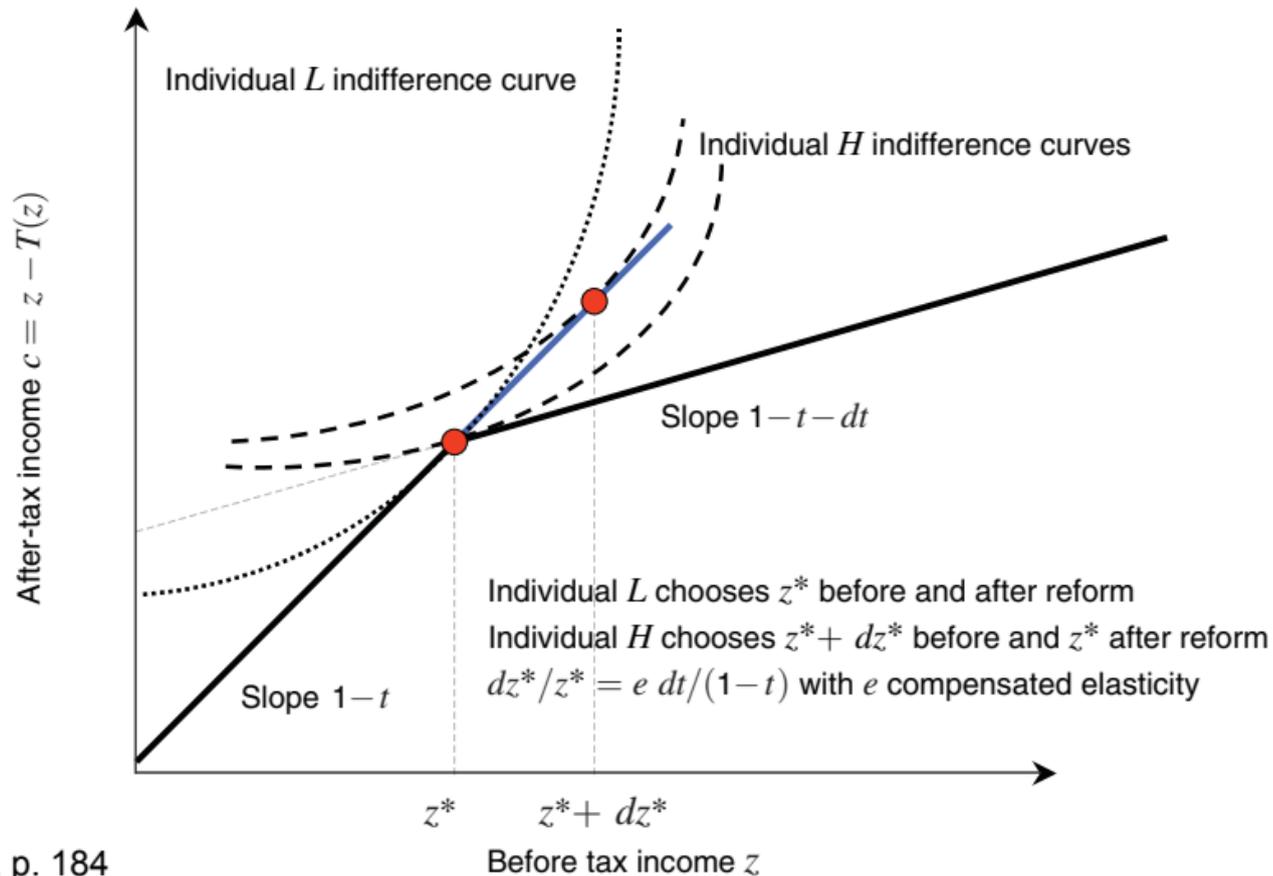


FIGURE II

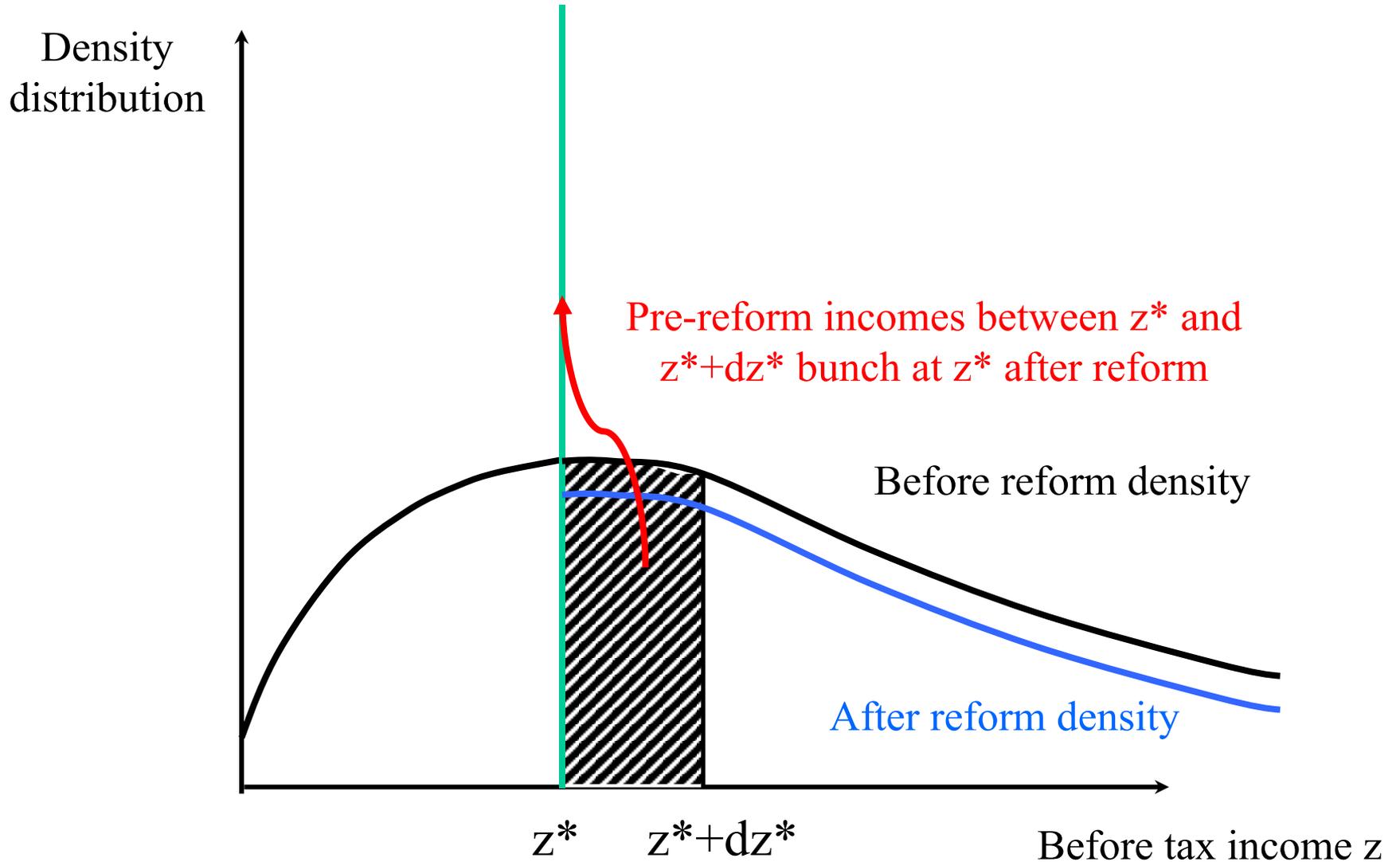
Labor Force Participation Rates 1981 to 1992, Unmarried Females Ages 16–44

Source: Eissa and Liebman (1996), p. 624

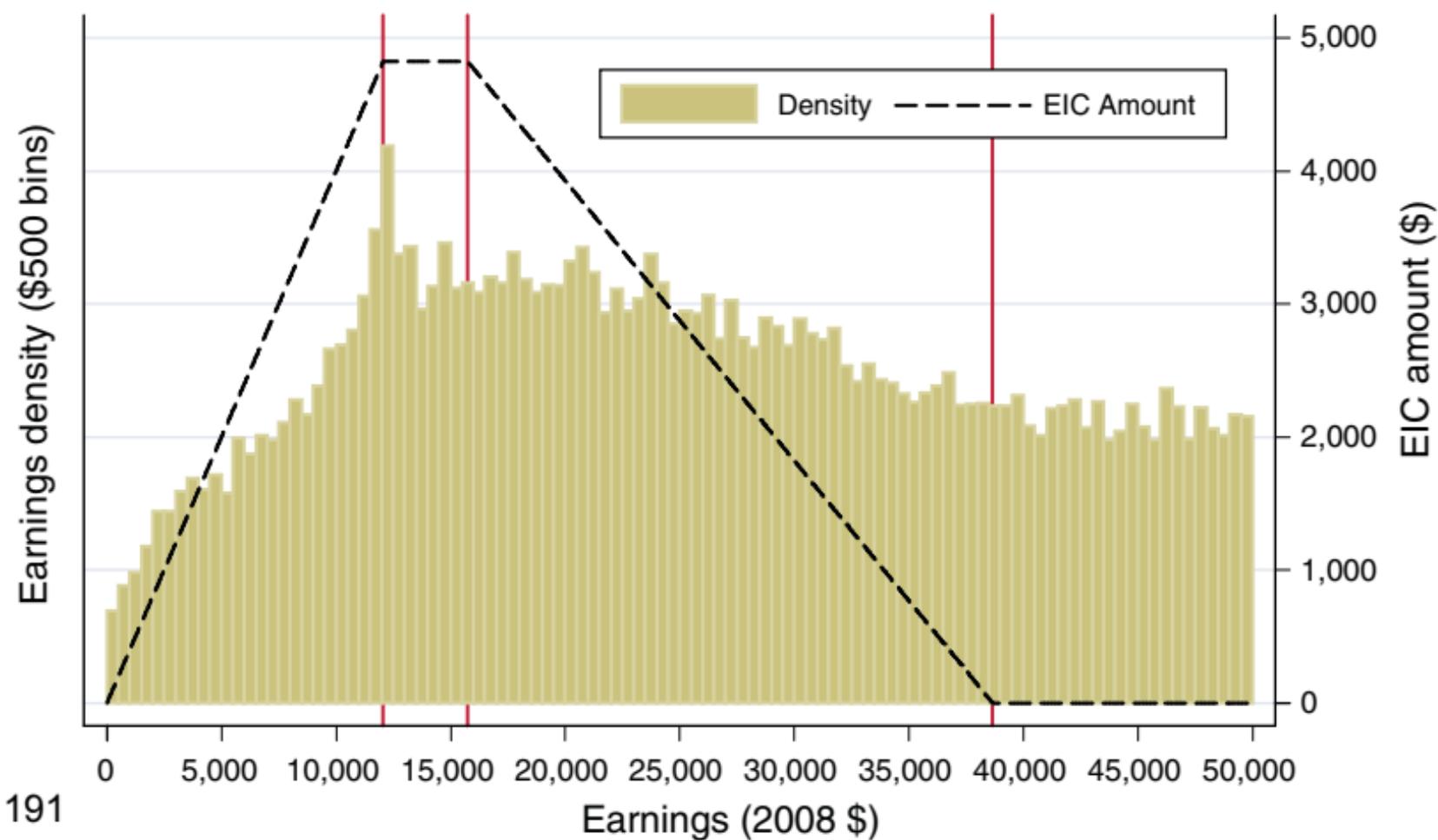
Panel A. Indifference curves and bunching



## B. Density Distributions and Bunching

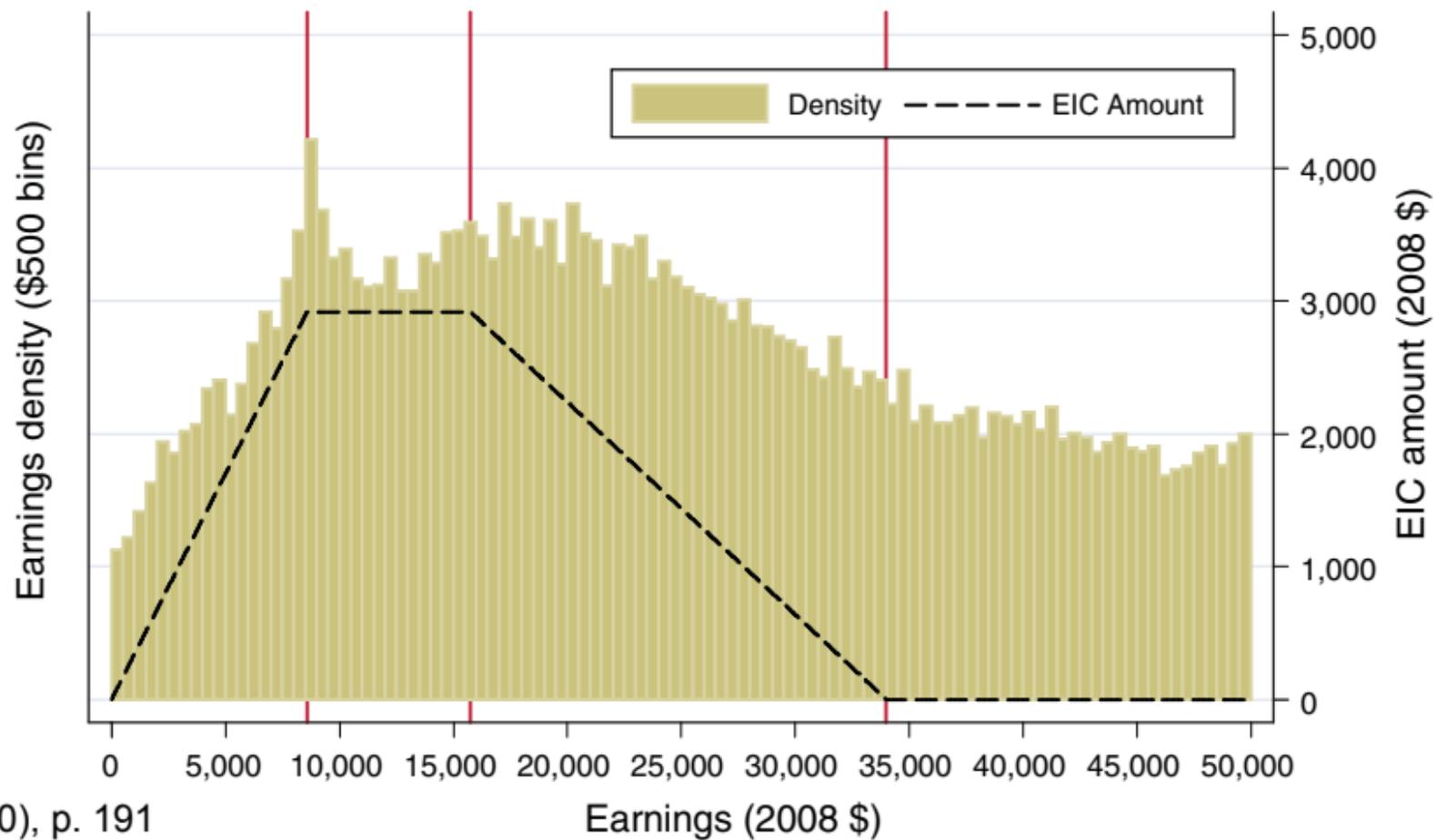


B. Two children or more



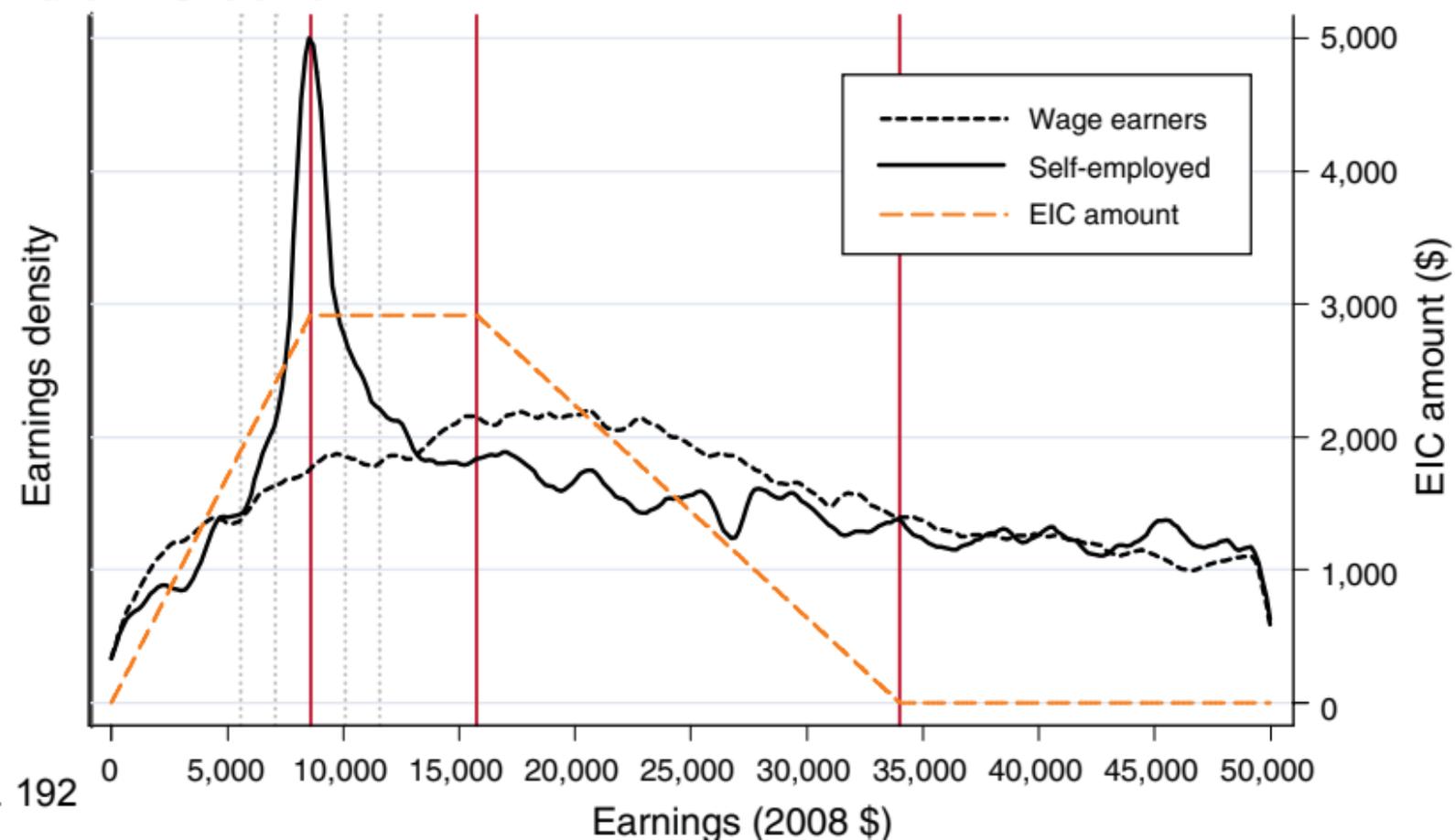
Source: Saez (2010), p. 191

Panel A. One child

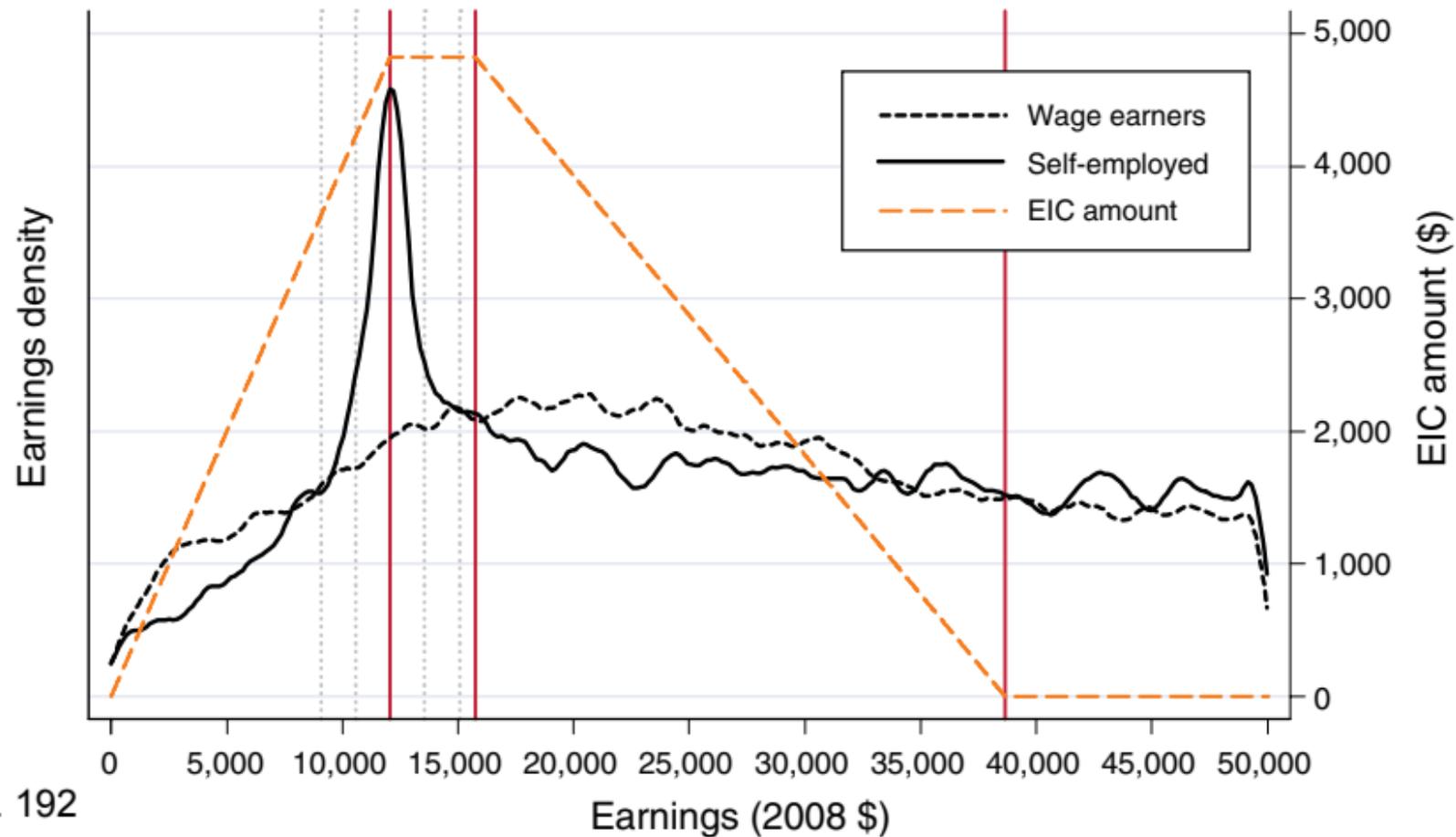


Source: Saez (2010), p. 191

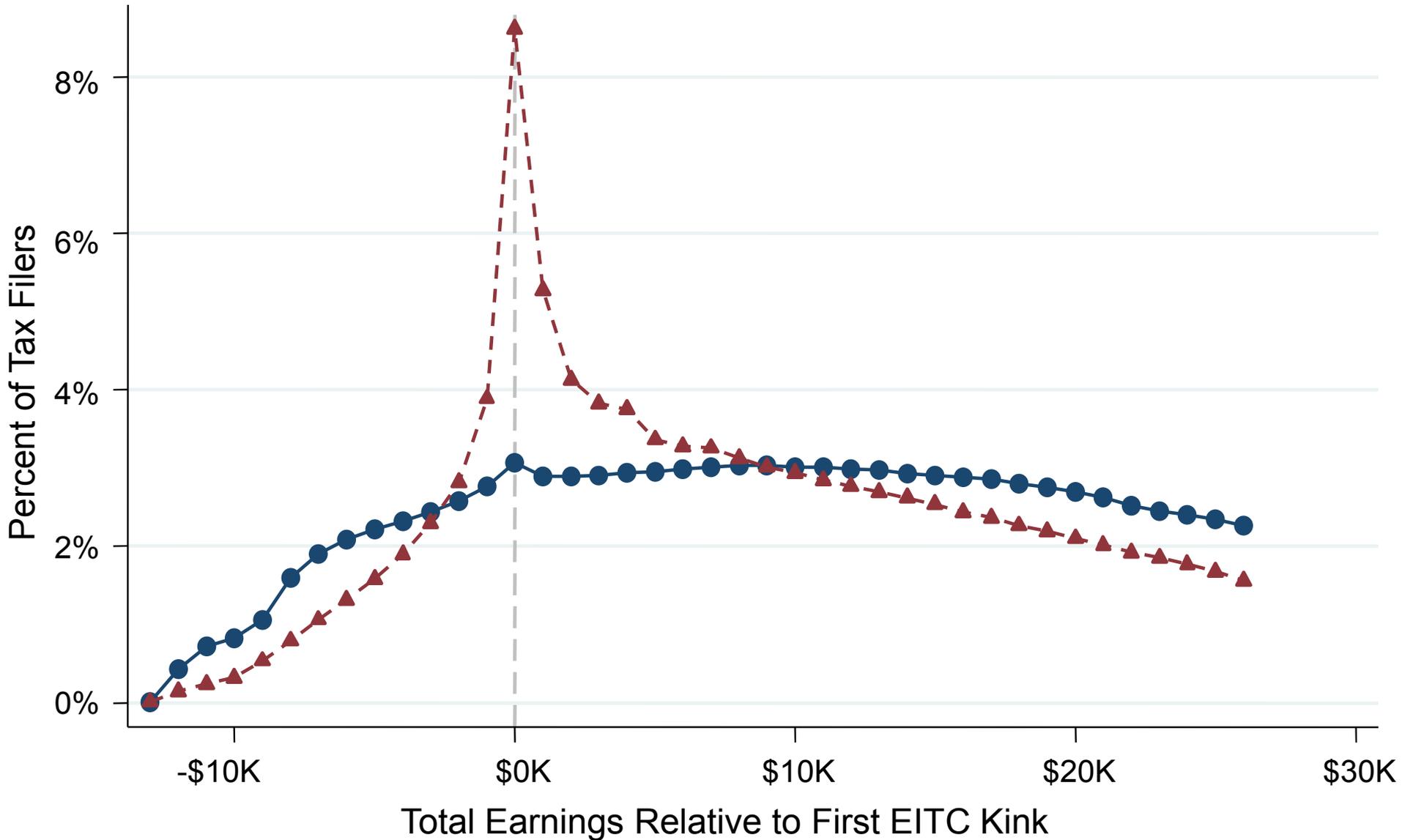
Panel A. One child



Panel B. Two or more children



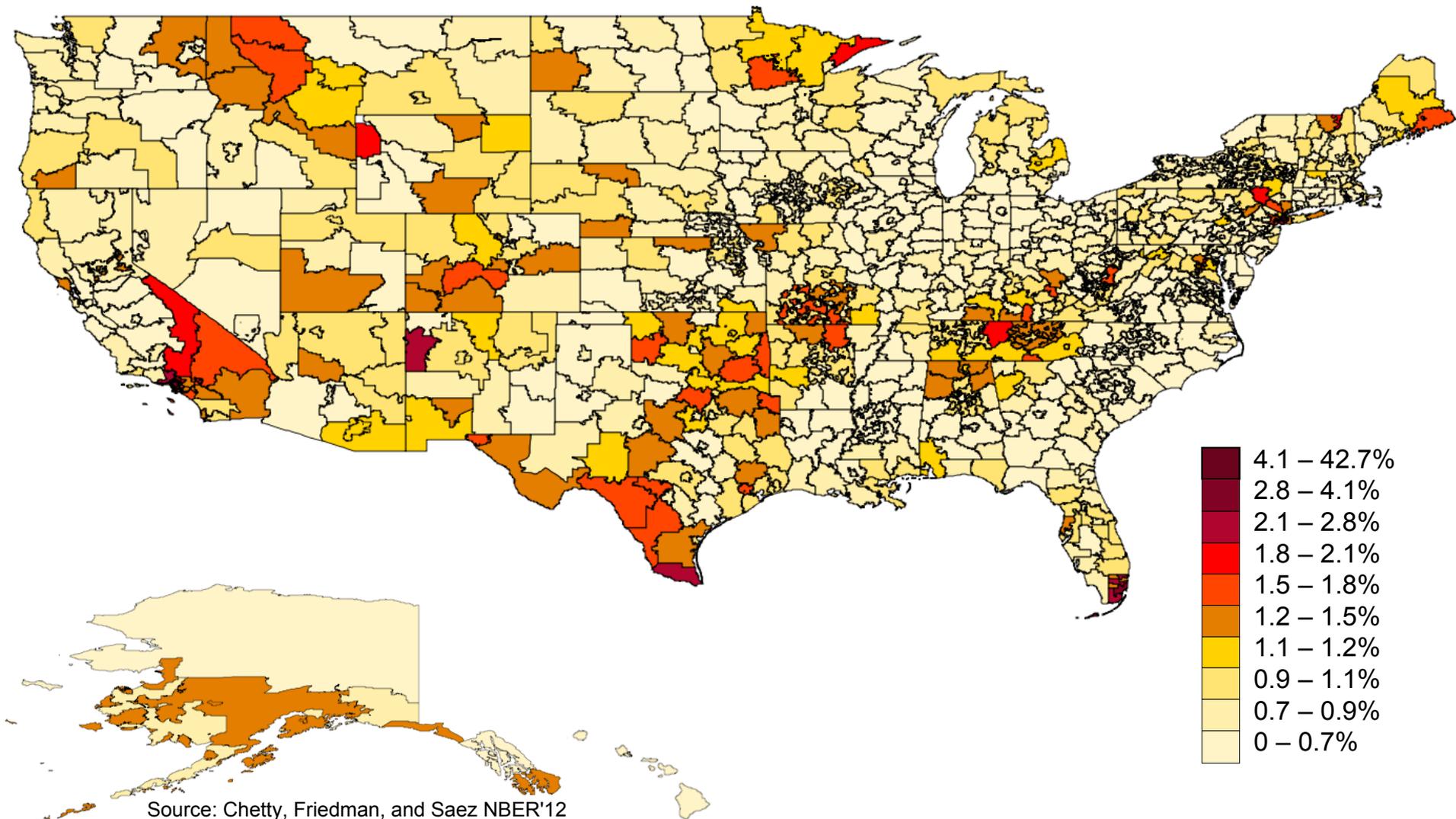
# Earnings Distributions in Lowest and Highest Bunching Deciles



Source: Chetty, Friedman, and Saez NBER'12

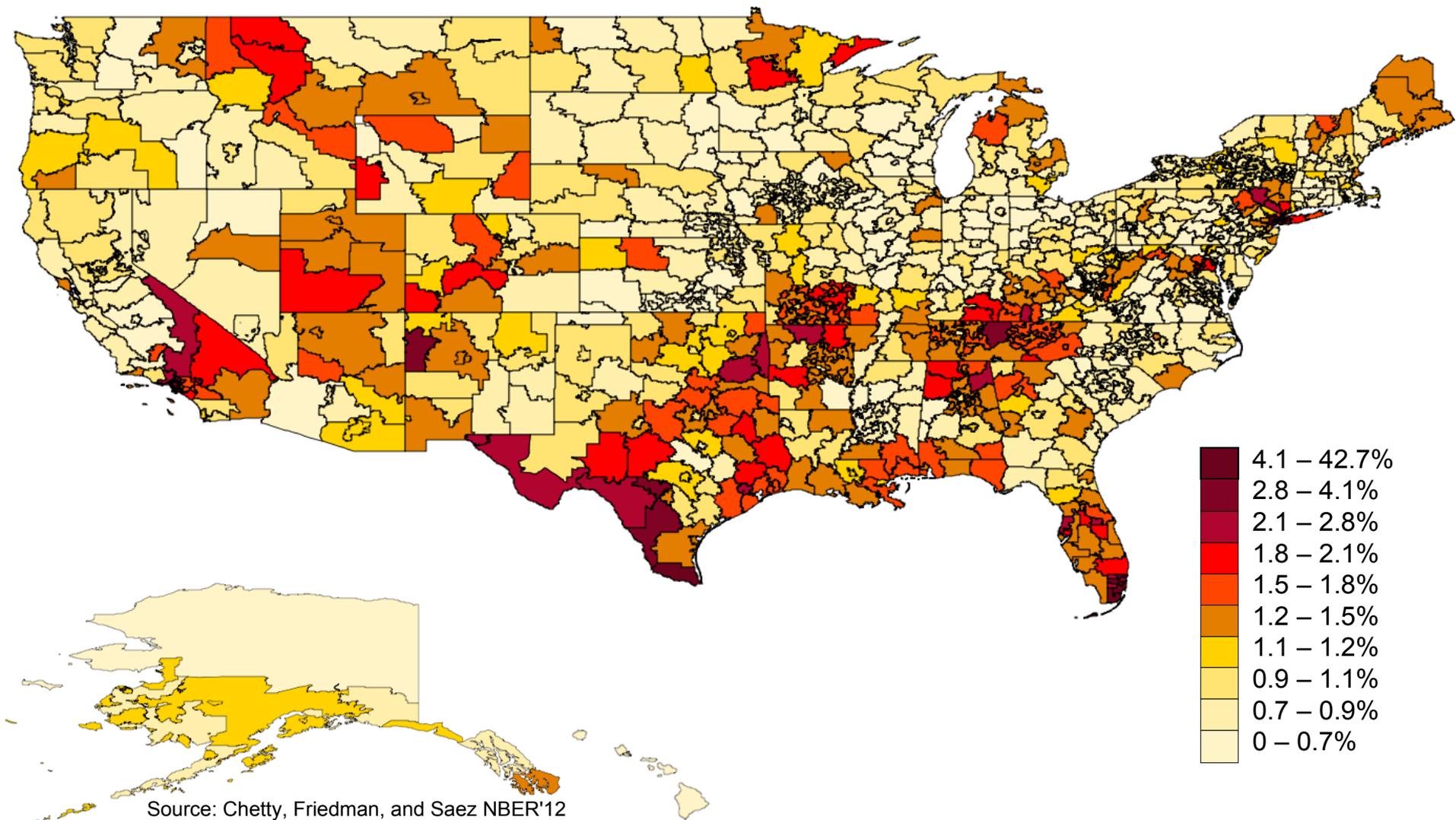
—●— Lowest Bunching Decile —▲— Highest Bunching Decile

# Fraction of Tax Filers Who Report SE Income that Maximizes EITC Refund in 1996

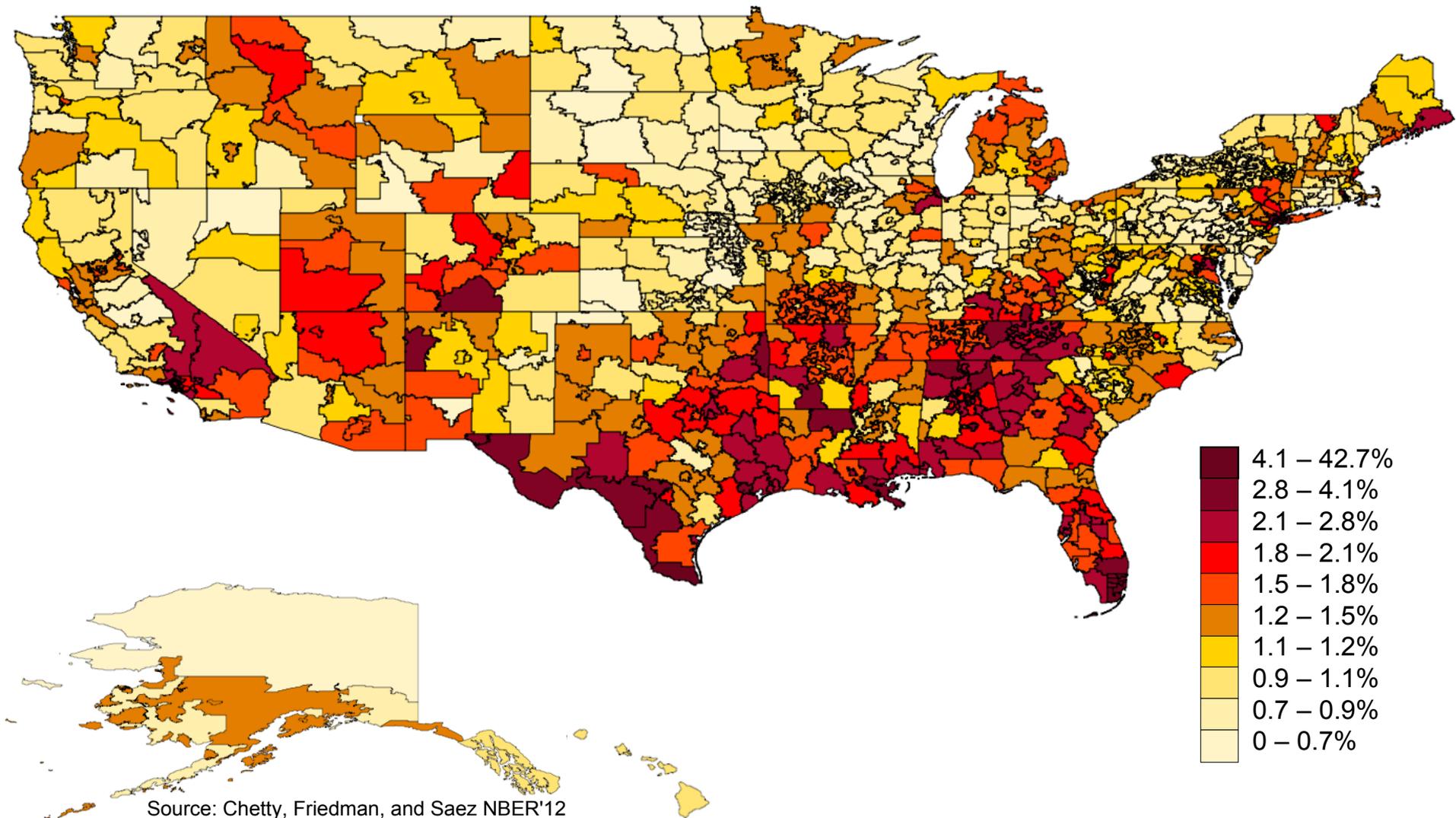


Source: Chetty, Friedman, and Saez NBER'12

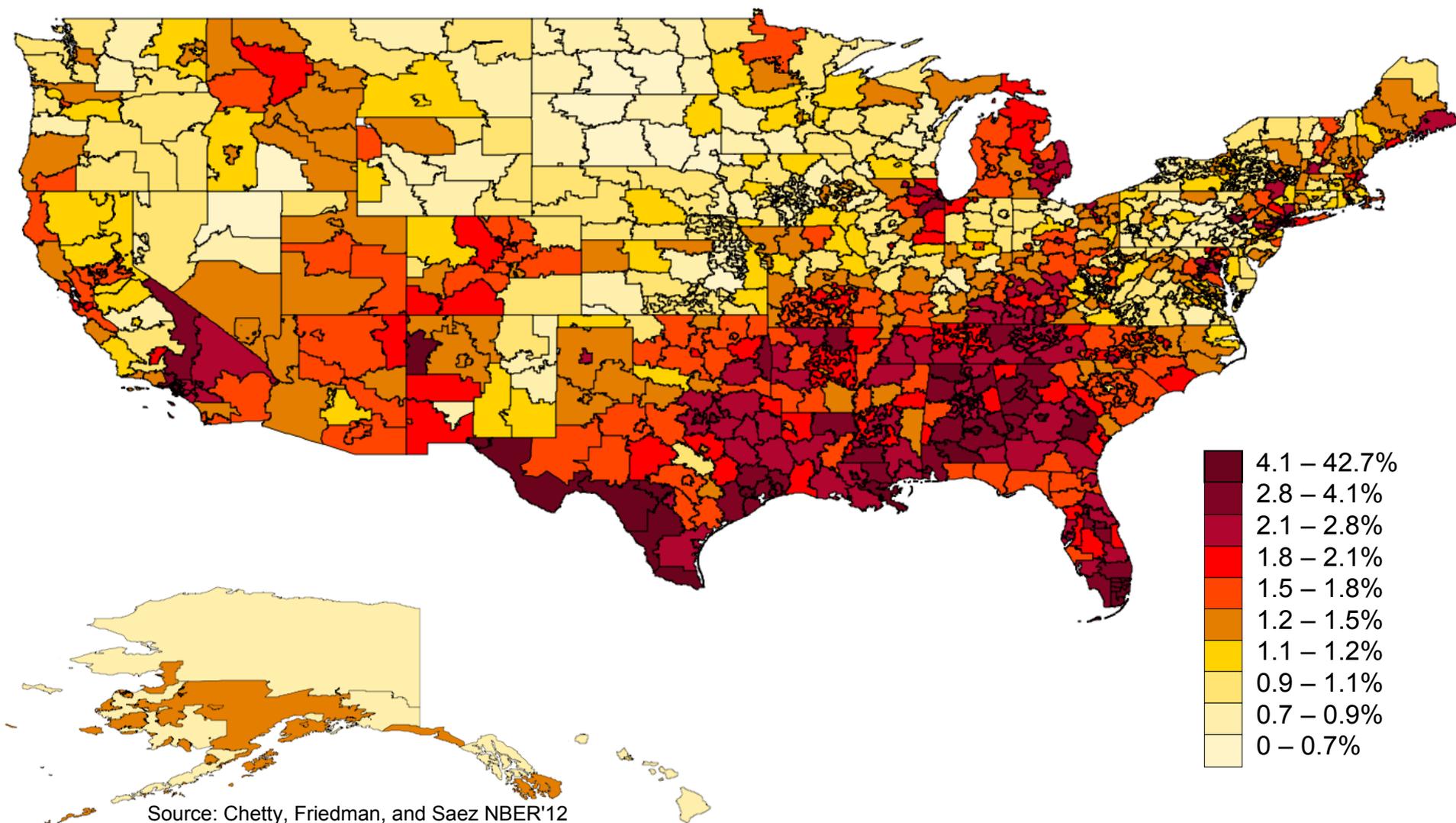
# Fraction of Tax Filers Who Report SE Income that Maximizes EITC Refund in 1999



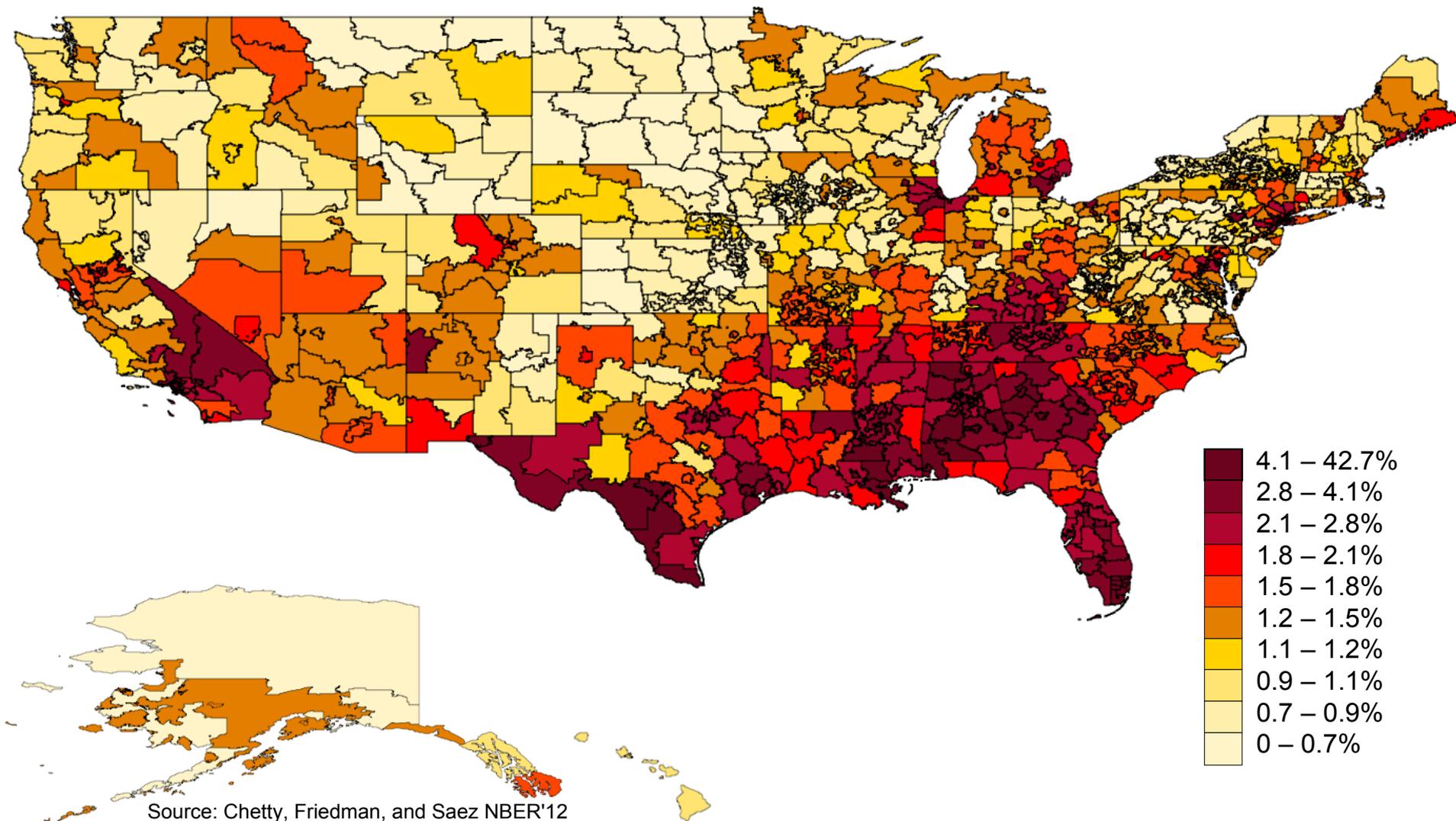
# Fraction of Tax Filers Who Report SE Income that Maximizes EITC Refund in 2002



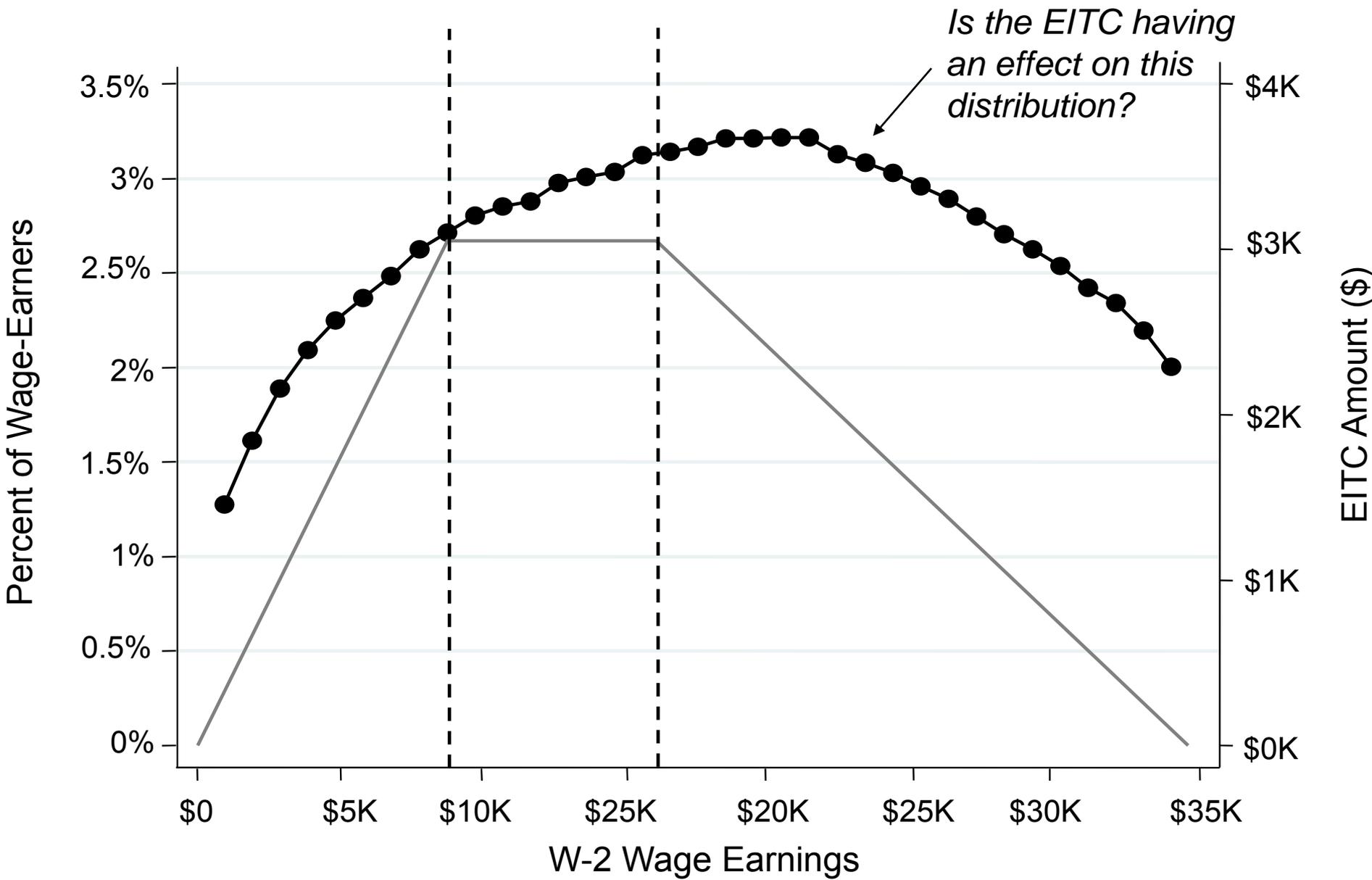
# Fraction of Tax Filers Who Report SE Income that Maximizes EITC Refund in 2005



# Fraction of Tax Filers Who Report SE Income that Maximizes EITC Refund in 2008



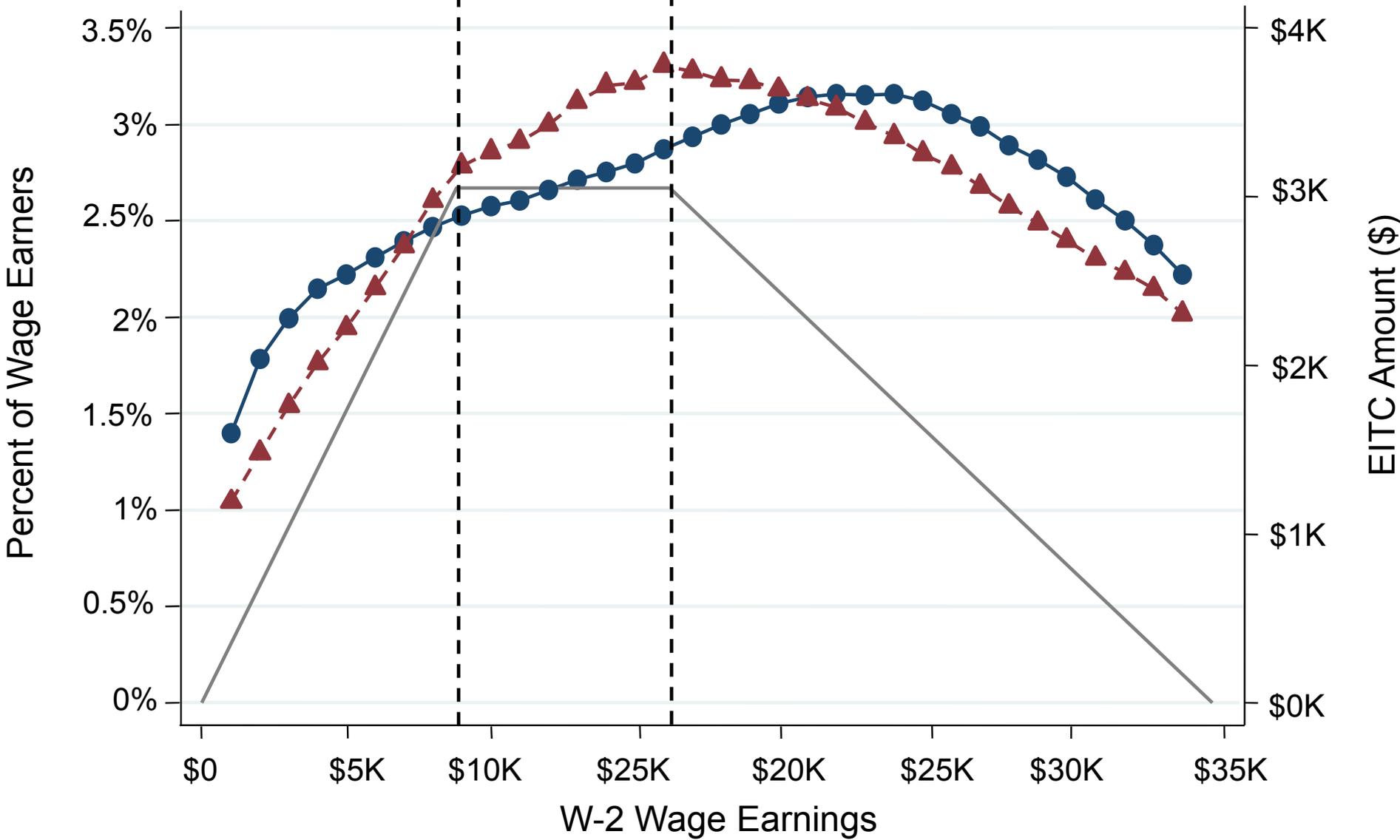
# Income Distribution For Single Wage Earners with One Child



*Is the EITC having an effect on this distribution?*

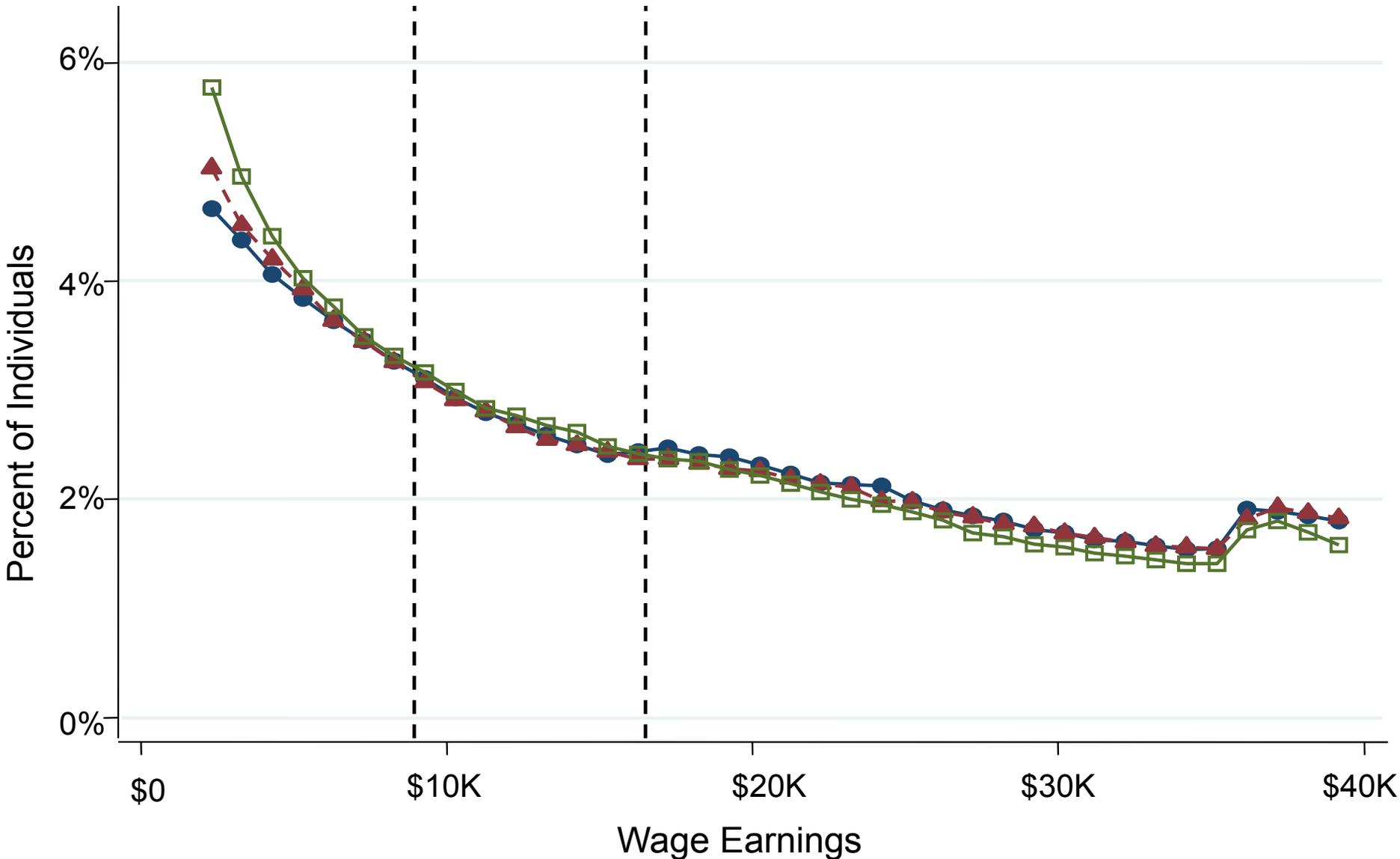
Source: Chetty, Friedman, and Saez NBER'12

# Income Distribution For Single Wage Earners with One Child High vs. Low Bunching Areas



Source: Chetty, Friedman, and Saez NBER'12

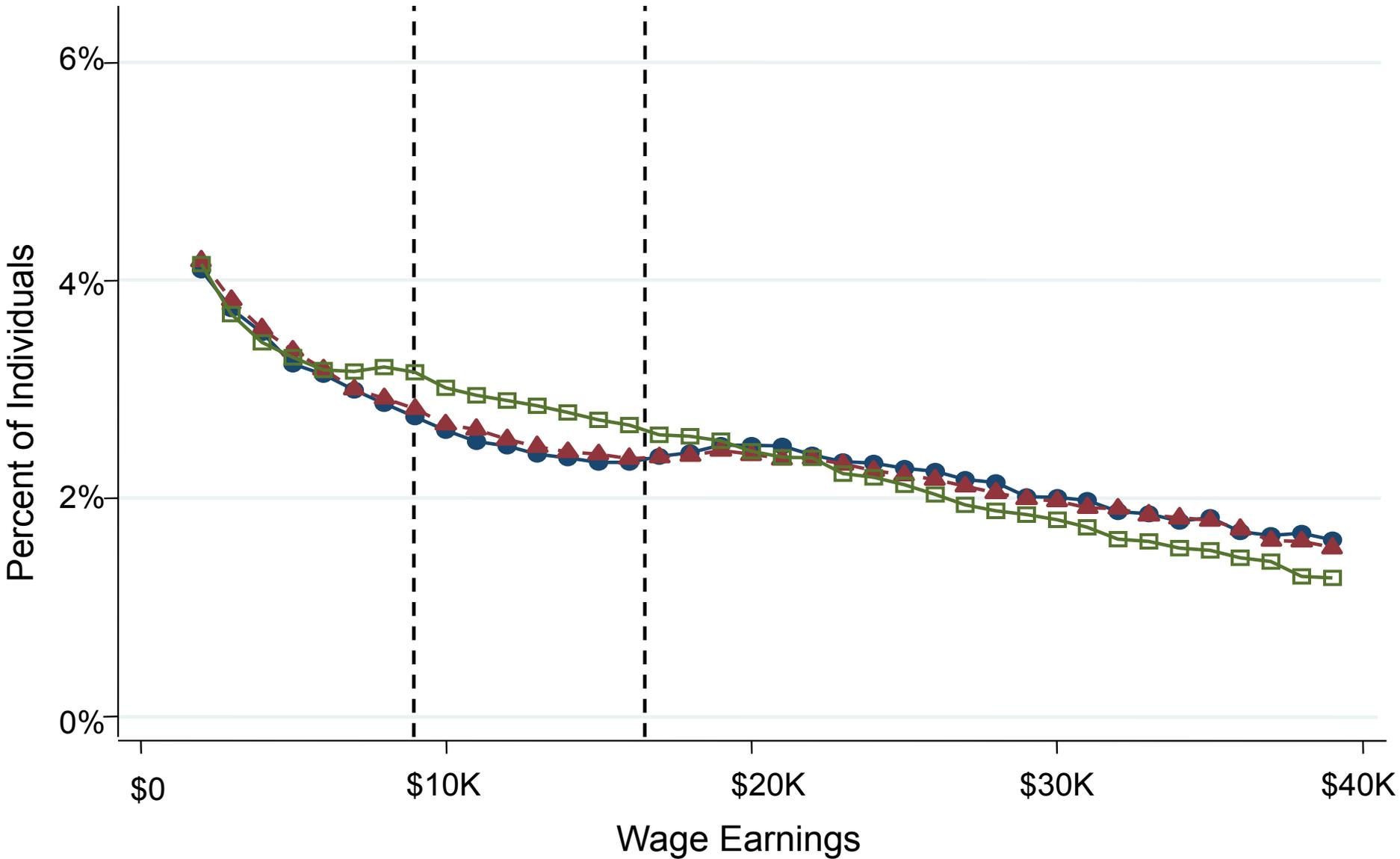
# Earnings Distribution in the Year Before First Child Birth for Wage Earners



Source: Chetty, Friedman, and Saez NBER'12

Lowest Sharp Bunching Decile      Middle Sharp Bunching Decile      Highest Sharp Bunching Decile

# Earnings Distribution in the Year of First Child Birth for Wage Earners



Source: Chetty, Friedman, and Saez NBER'12

Lowest Sharp Bunching Decile      Middle Sharp Bunching Decile      Highest Sharp Bunching Decile

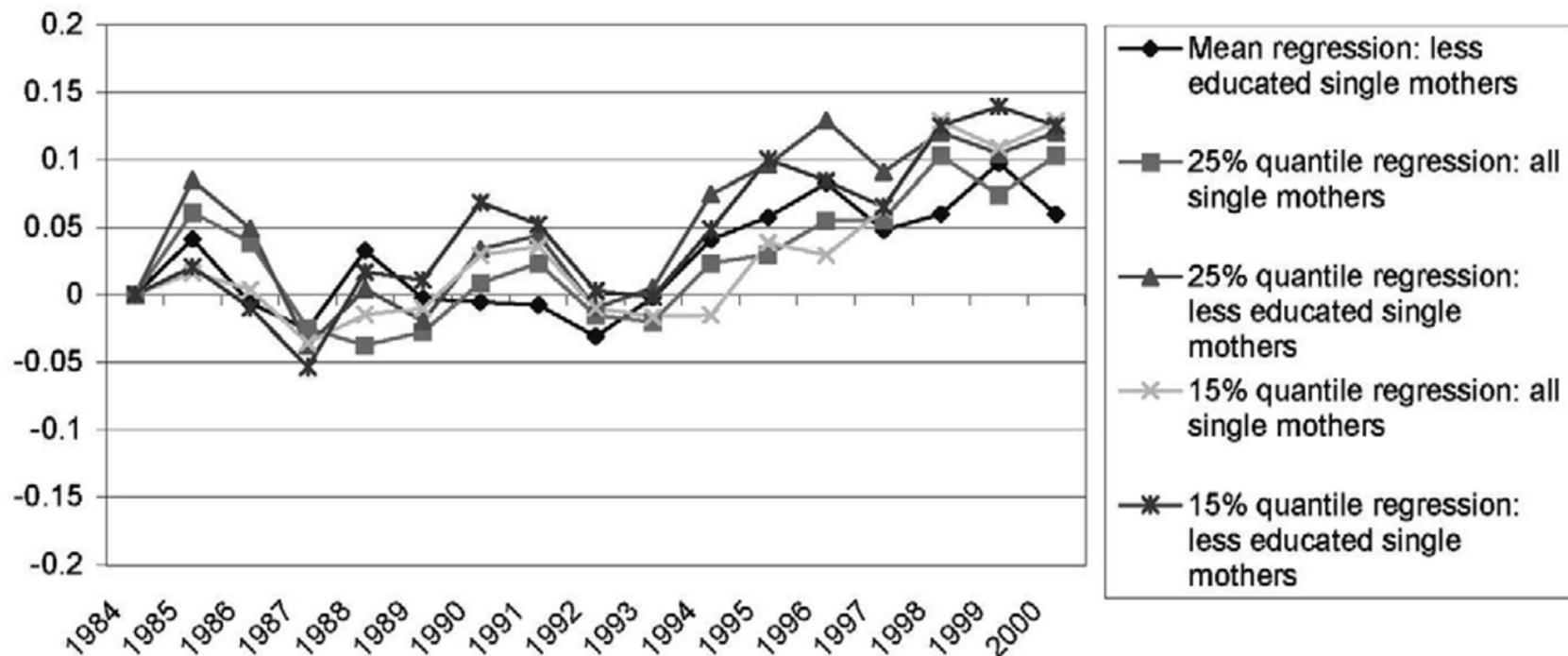


Fig. 2. Total consumption: single mothers, 1984–2000.

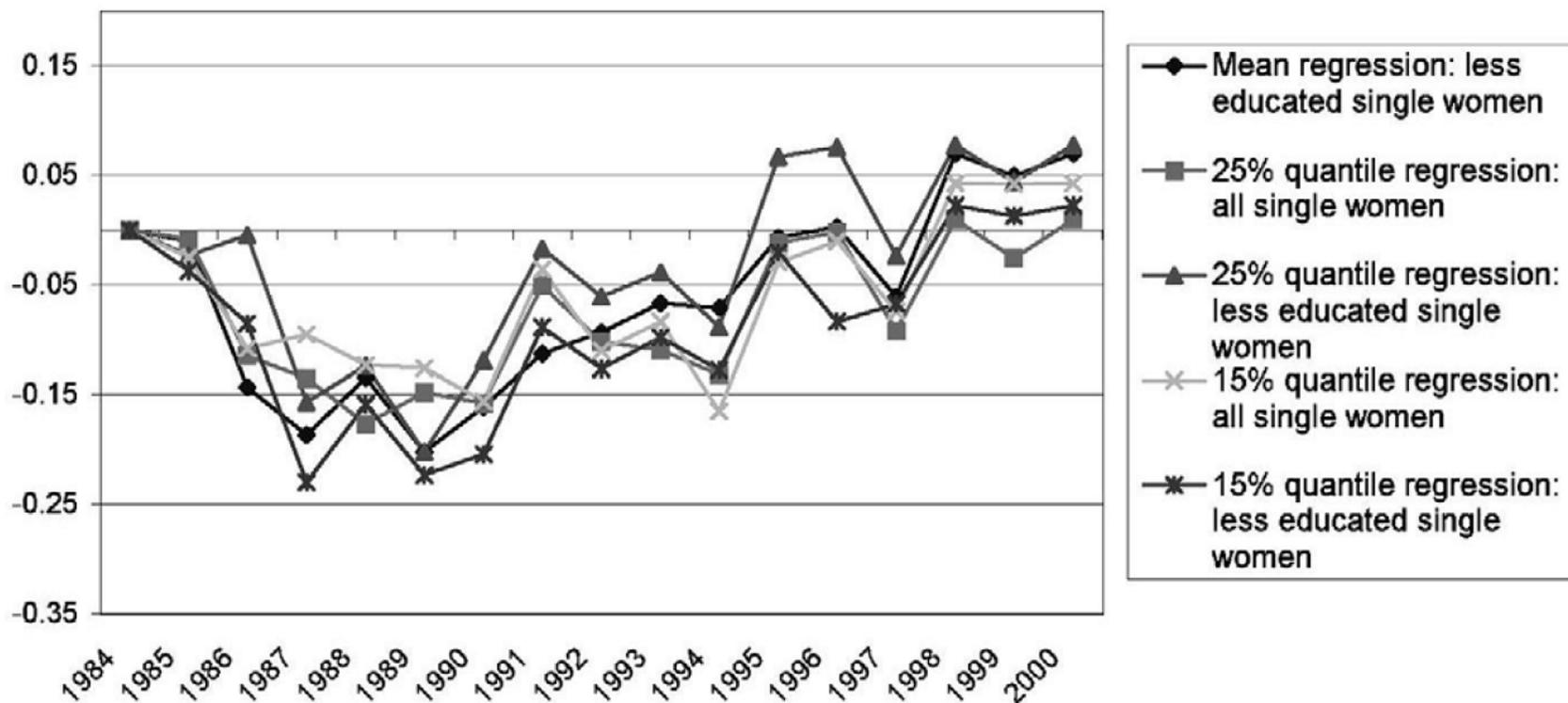
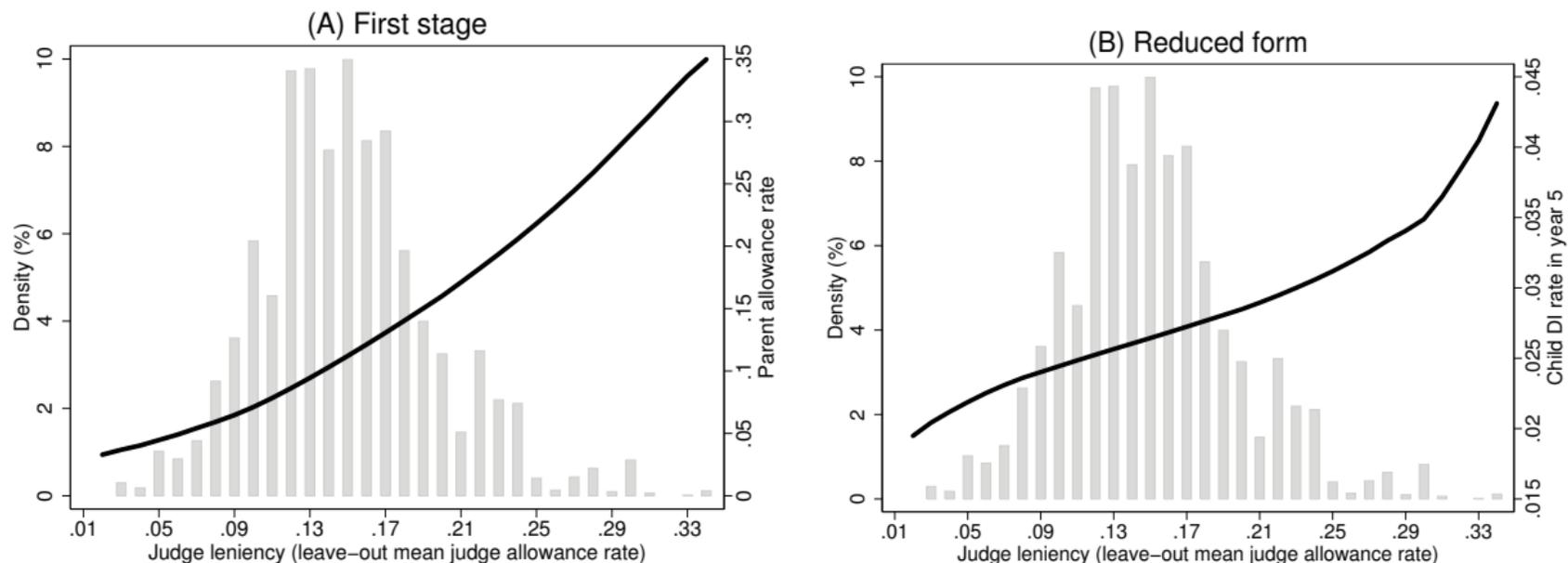


Fig. 3. Relative total consumption: single mothers vs. single women without children, 1984–2000.

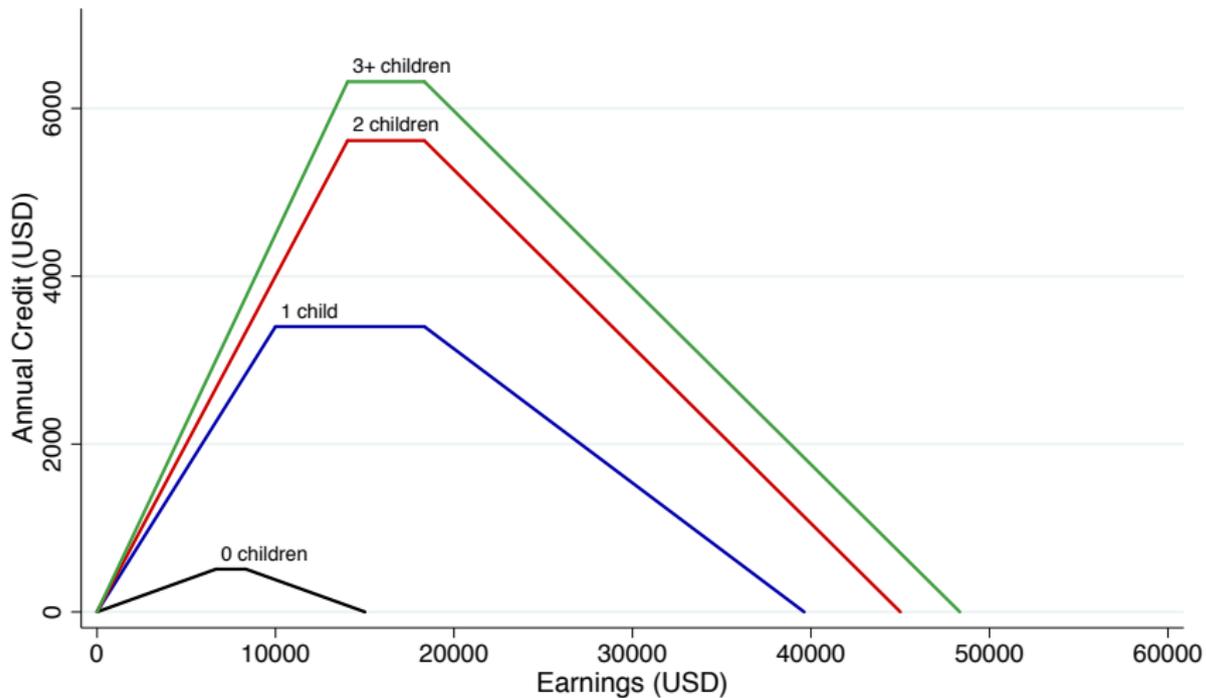
**Figure 3: Effect of Judge Leniency on Parents (First Stage) and Children (Reduced Form).**



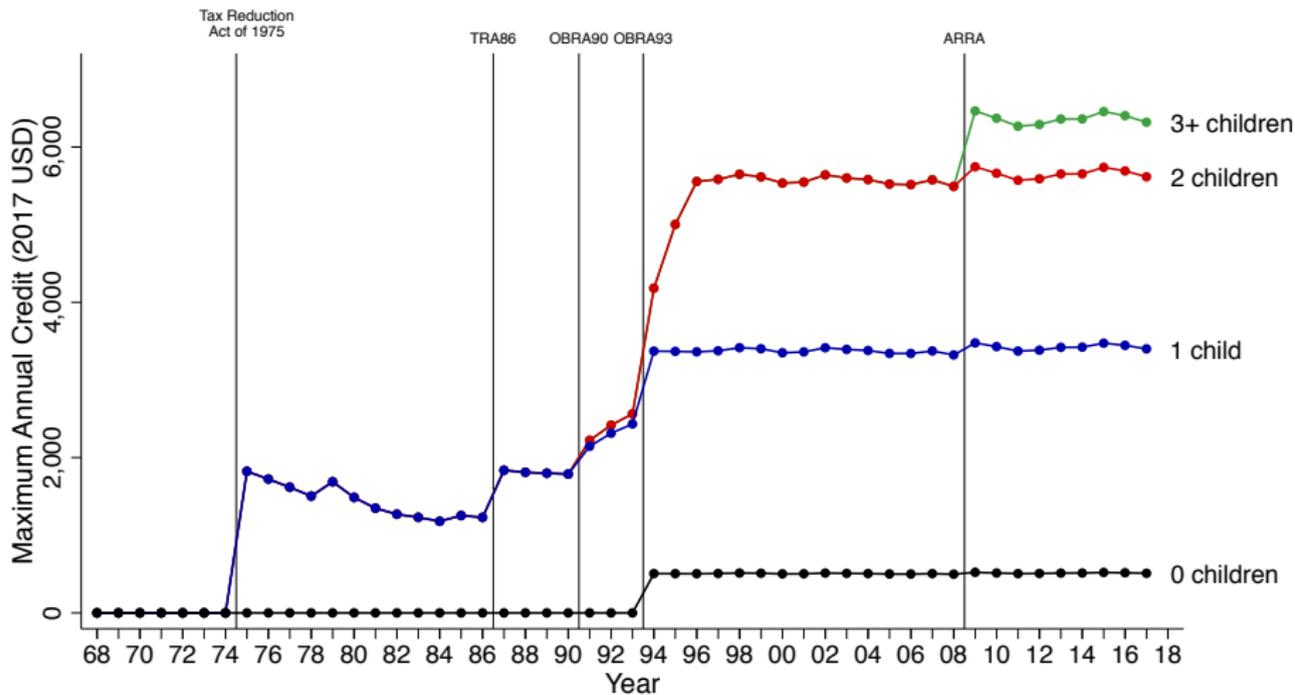
*Notes:* Baseline sample, consisting of parents who appeal an initially denied DI claim during the period 1989-2005 (see Section 3 for further details). There are 14,893 individual observations and 79 different judges. Panel (A): Solid line is a local linear regression of parental DI allowance on judge leniency. Panel (B): Solid line is a local linear regression of child DI receipt on their parent's judge leniency measure. All regressions include fully interacted year and department dummies. The histogram of judge leniency is shown in the background of both figures (top and bottom 0.5% excluded from the graph).

Source: Dahl, Kostol, Mogstad (2013)

# EITC Schedule in 2017



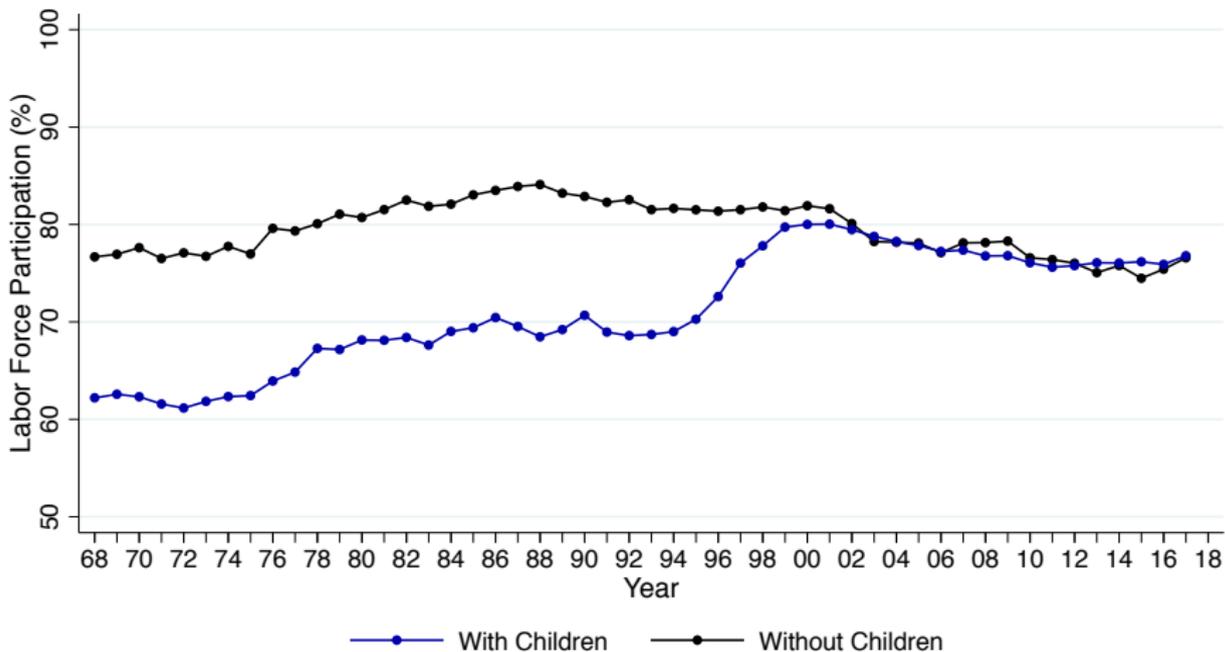
# EITC Maximum Credit Over Time



Source: Kleven (2018)

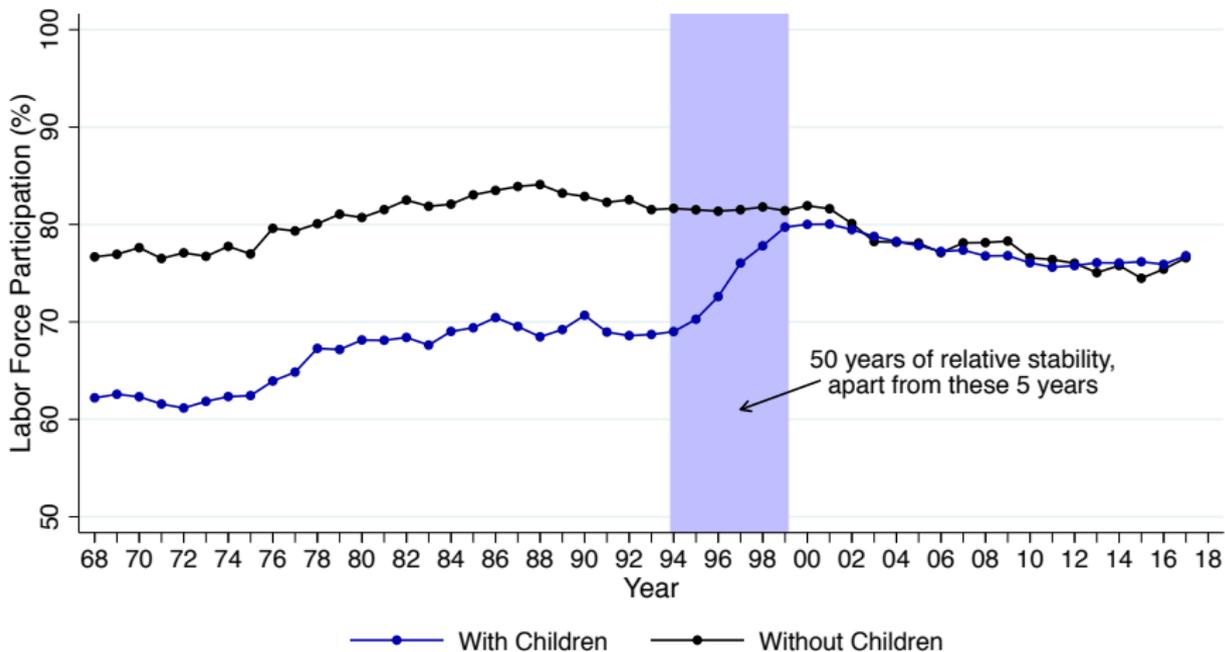
# Labor Force Participation of Single Women

With and Without Children



# Labor Force Participation of Single Women

With and Without Children



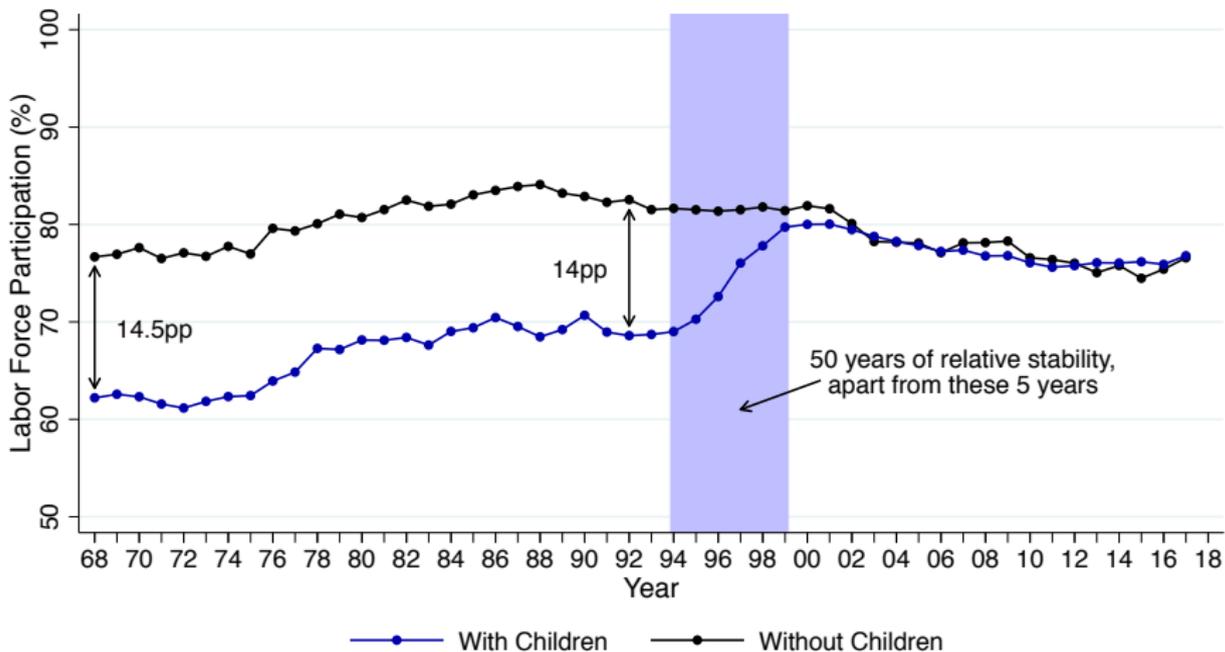
Annual Employment

Low Education

Source: Kleven (2018)

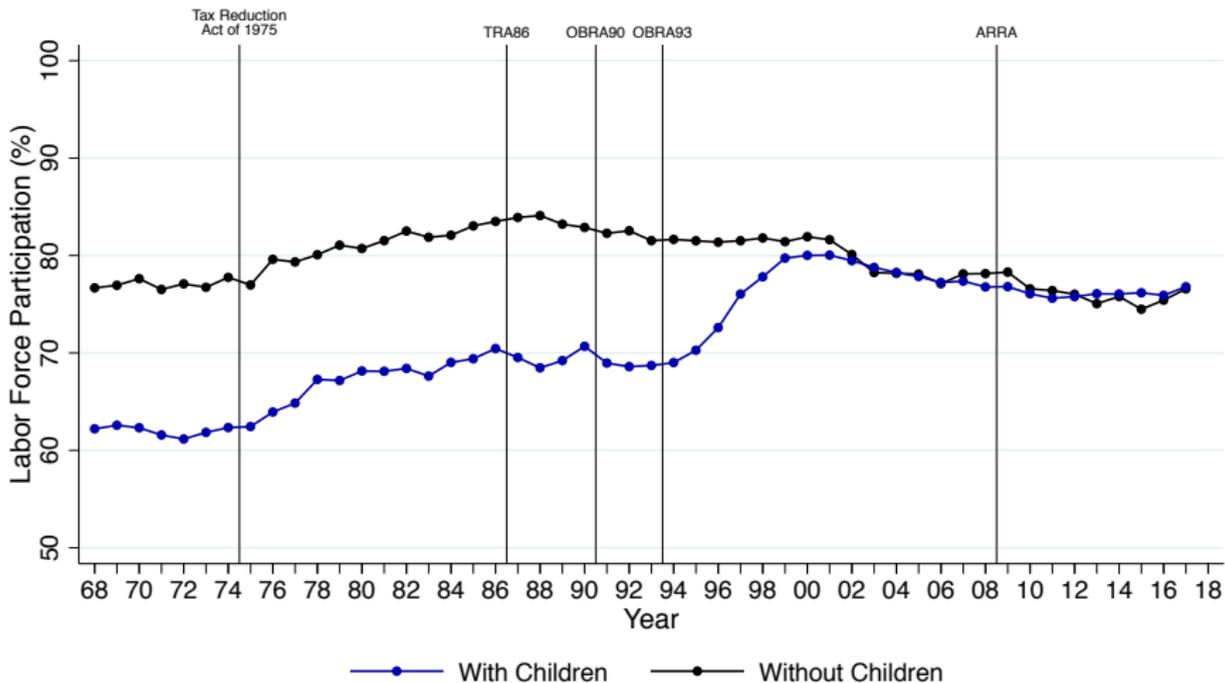
# Labor Force Participation of Single Women

With and Without Children



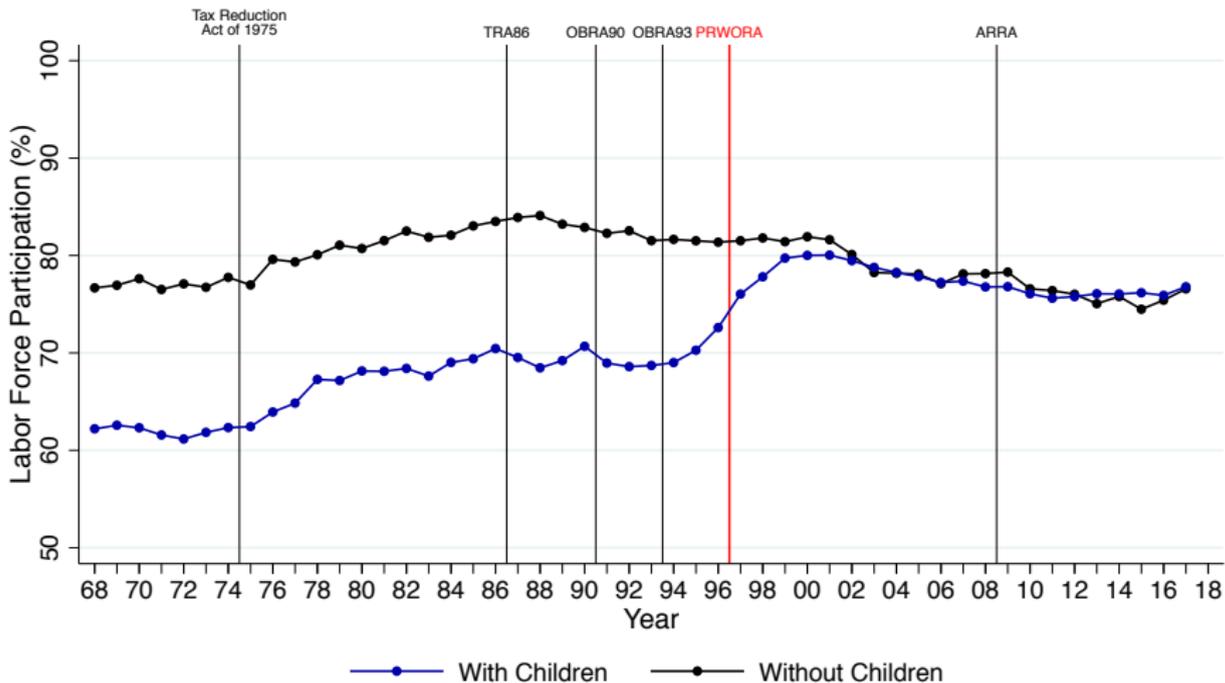
# Labor Force Participation of Single Women

With and Without Children



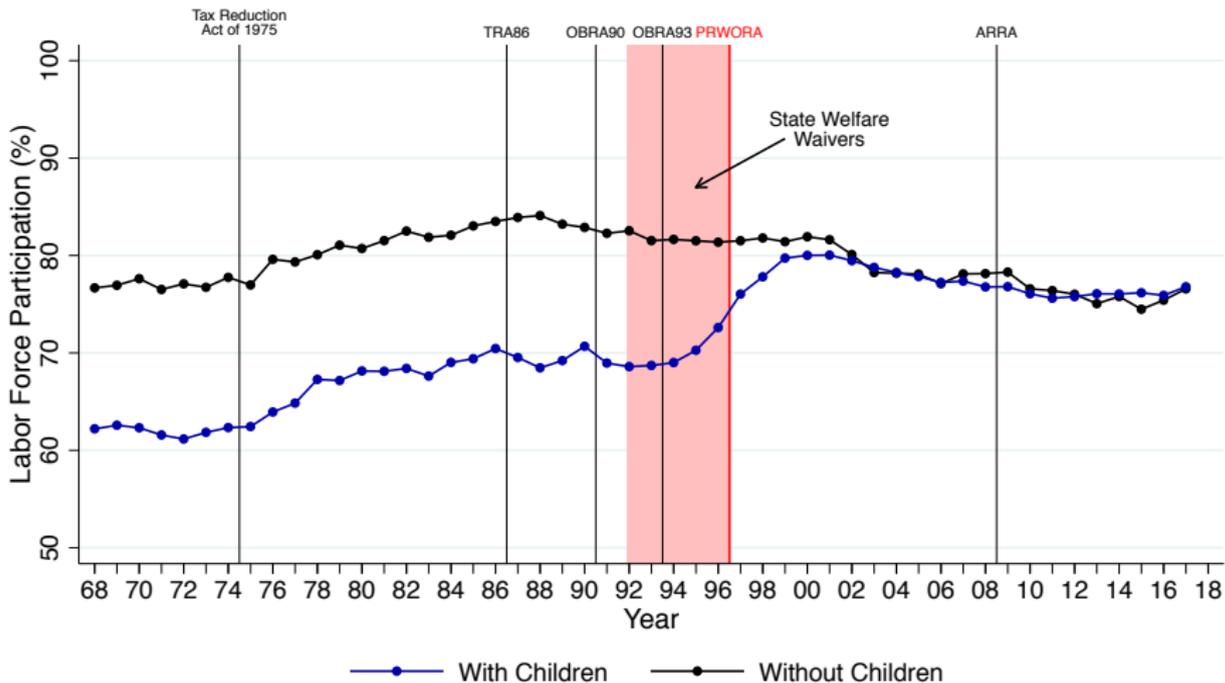
# Labor Force Participation of Single Women

## With and Without Children



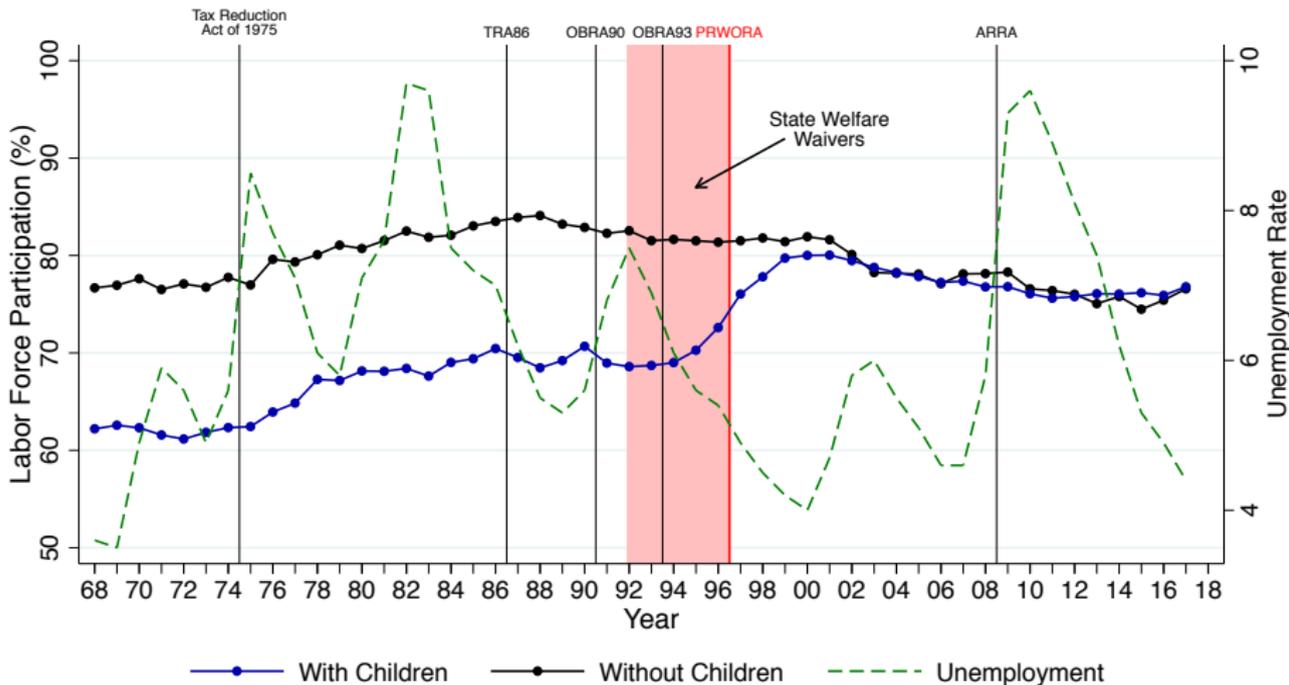
# Labor Force Participation of Single Women

## With and Without Children



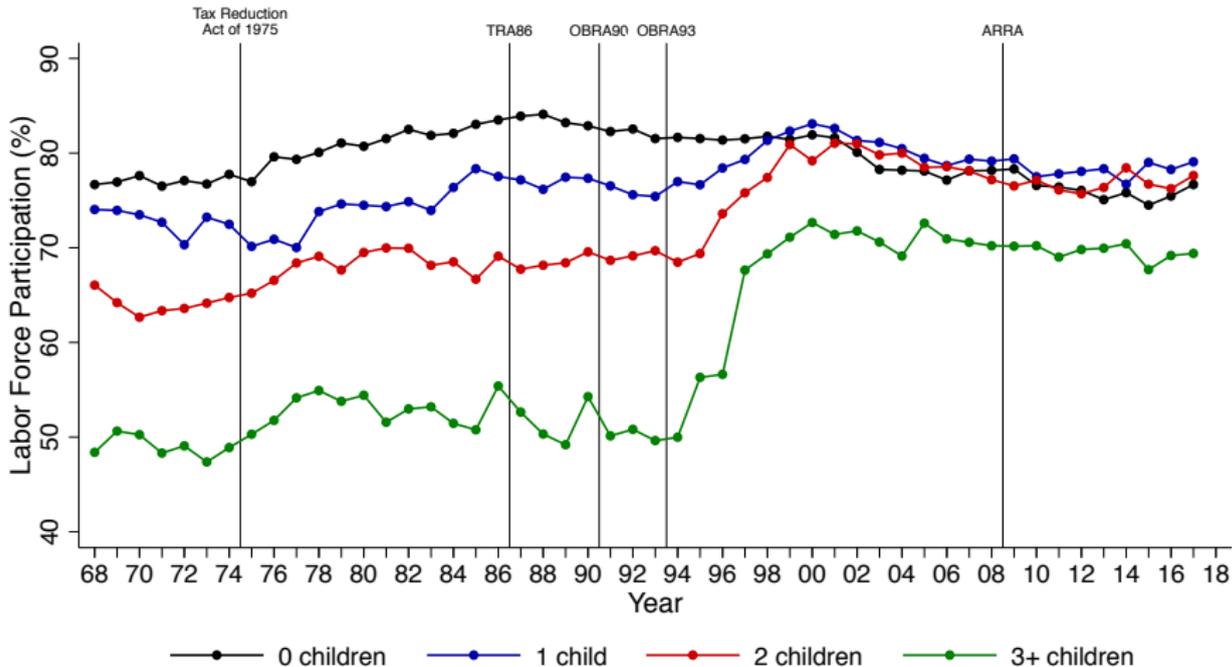
# Labor Force Participation of Single Women

## With and Without Children



# Labor Force Participation of Single Women

By Number of Children



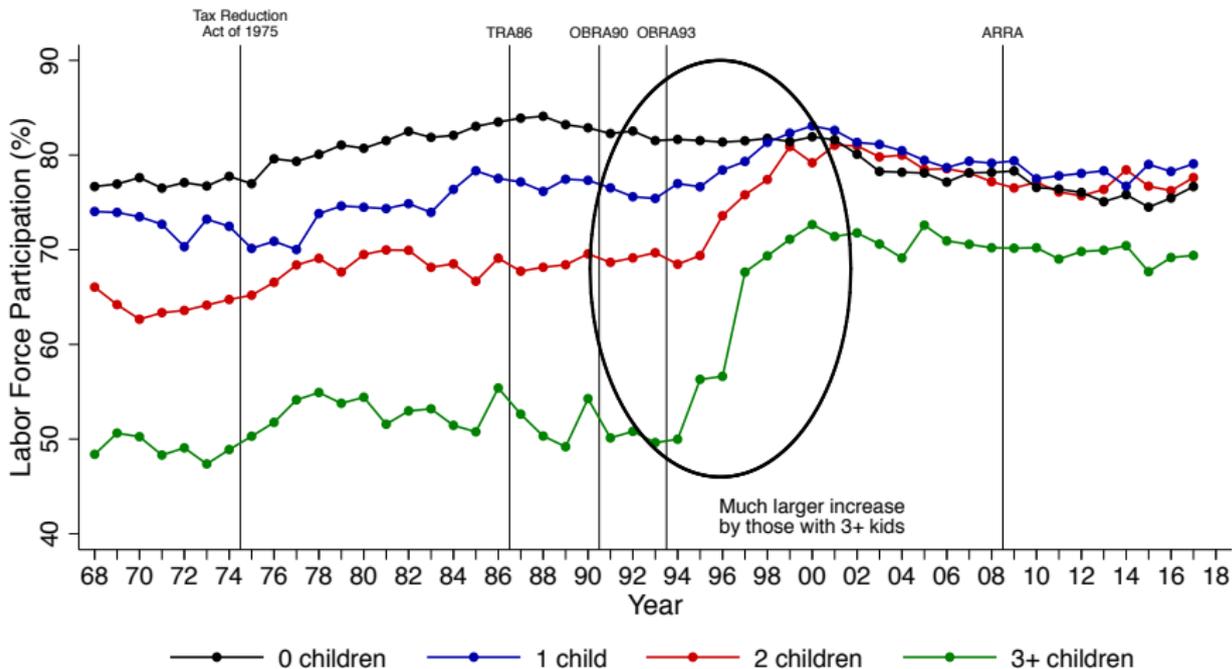
Annual Employment

Low Education

Source: Kleven (2018)

# Labor Force Participation of Single Women

By Number of Children



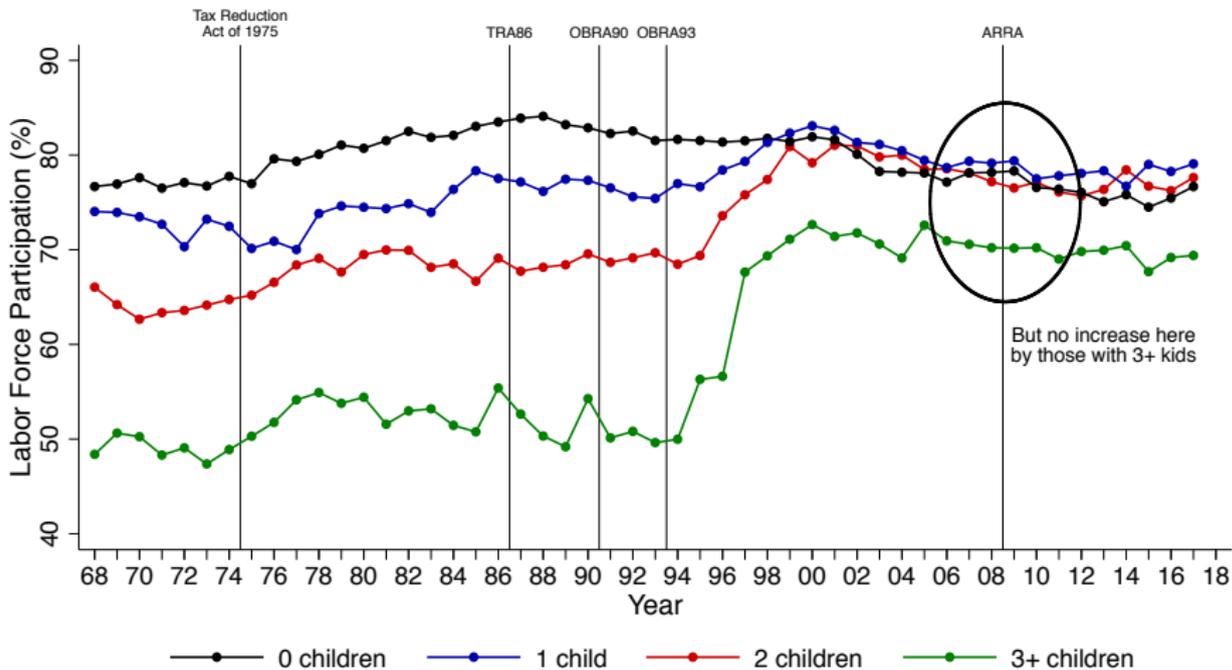
Annual Employment

Low Education

Source: Kleven (2018)

# Labor Force Participation of Single Women

By Number of Children



Annual Employment

Low Education

Source: Kleven (2018)

Source: Kleven et al. AEA-PP 2019

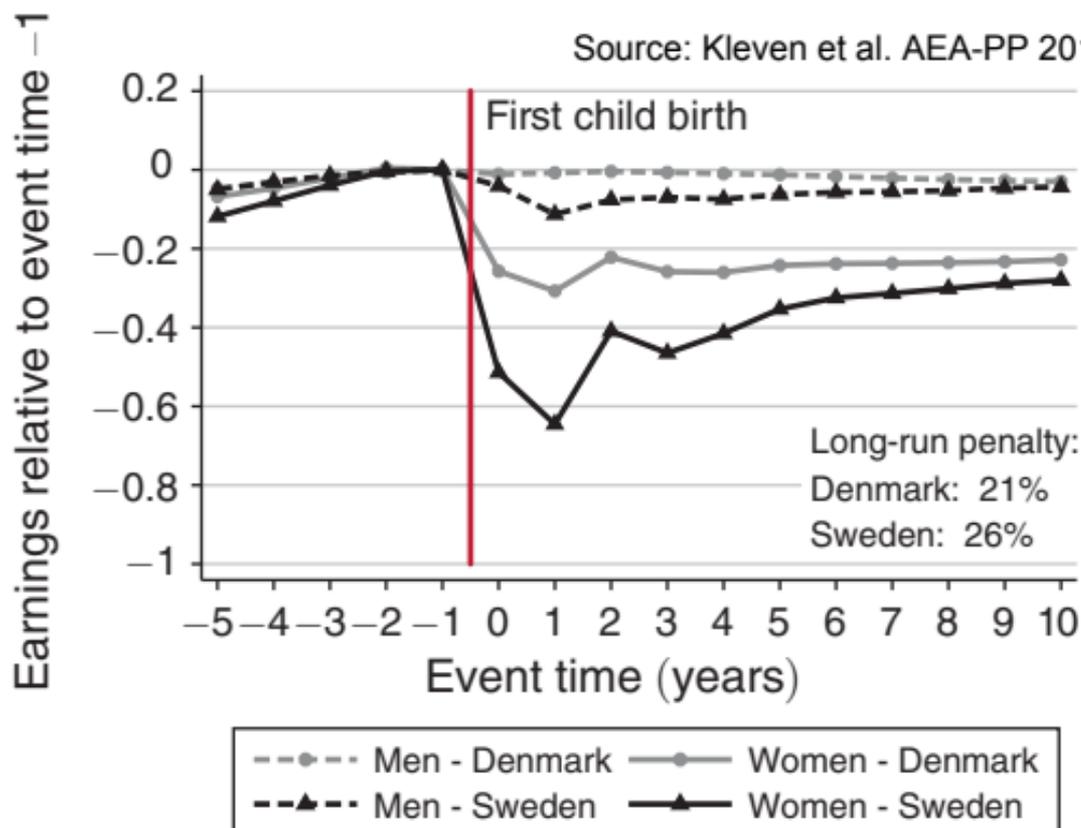


FIGURE 1. CHILD PENALTIES IN EARNINGS IN SCANDINAVIAN COUNTRIES

Source: Kleven et al. AEA-PP 2019

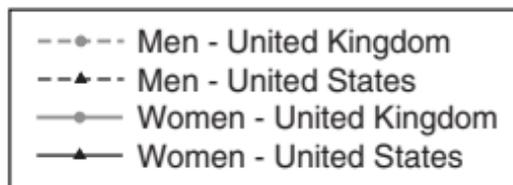
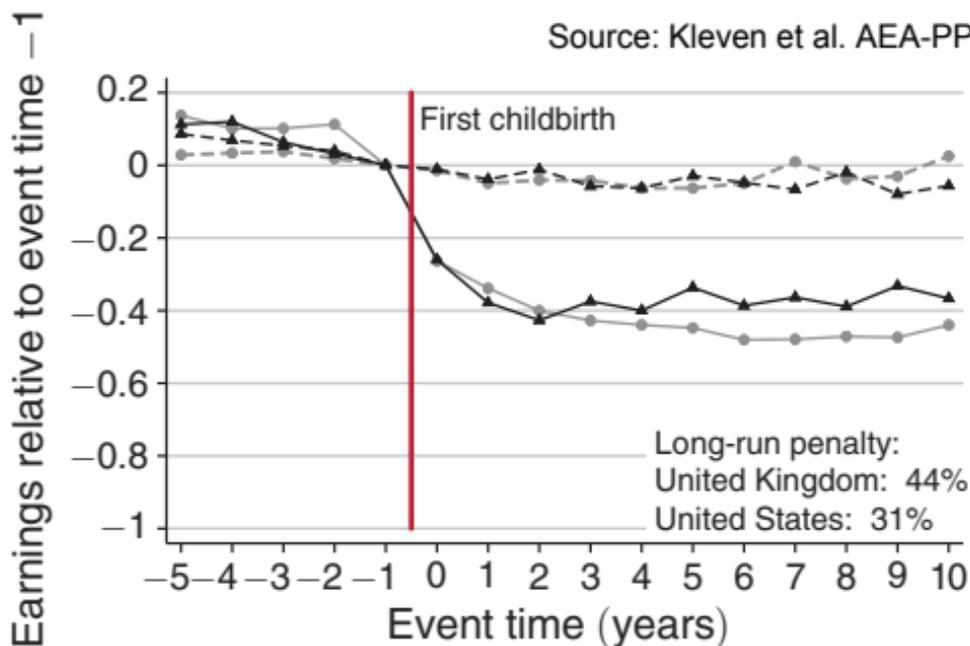


FIGURE 2. CHILD PENALTIES IN EARNINGS IN ENGLISH-SPEAKING COUNTRIES

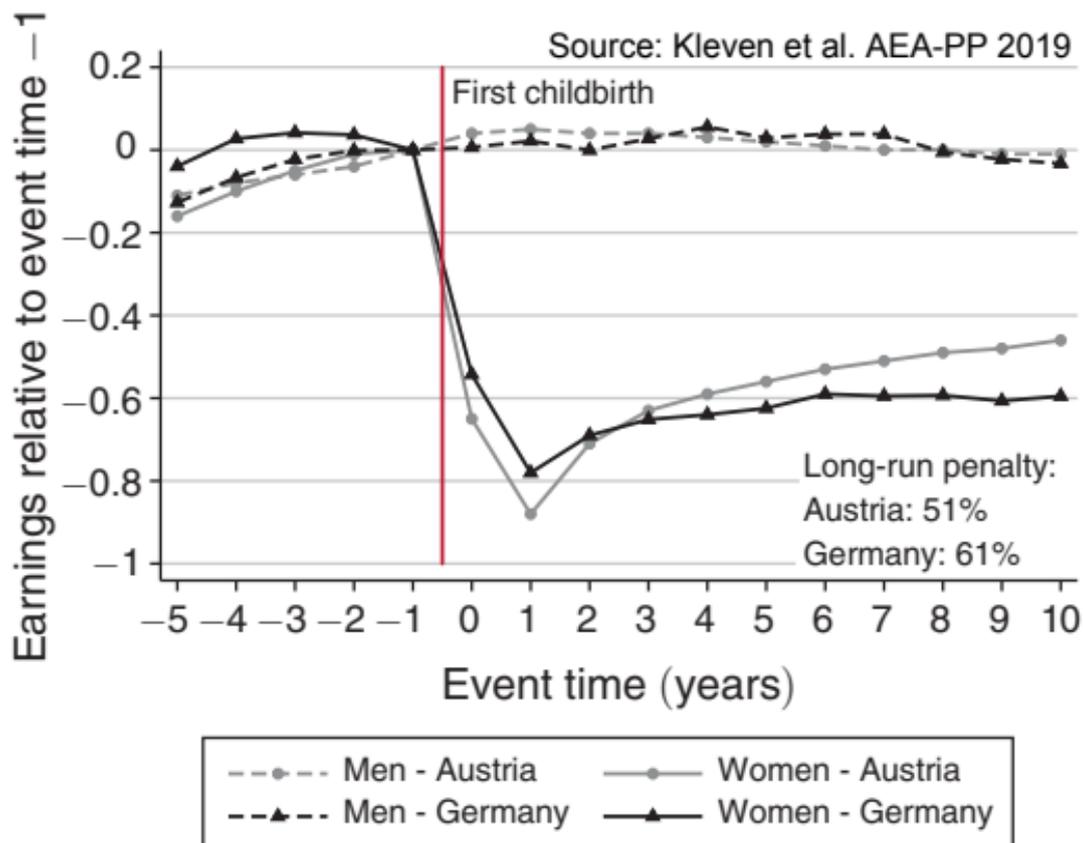
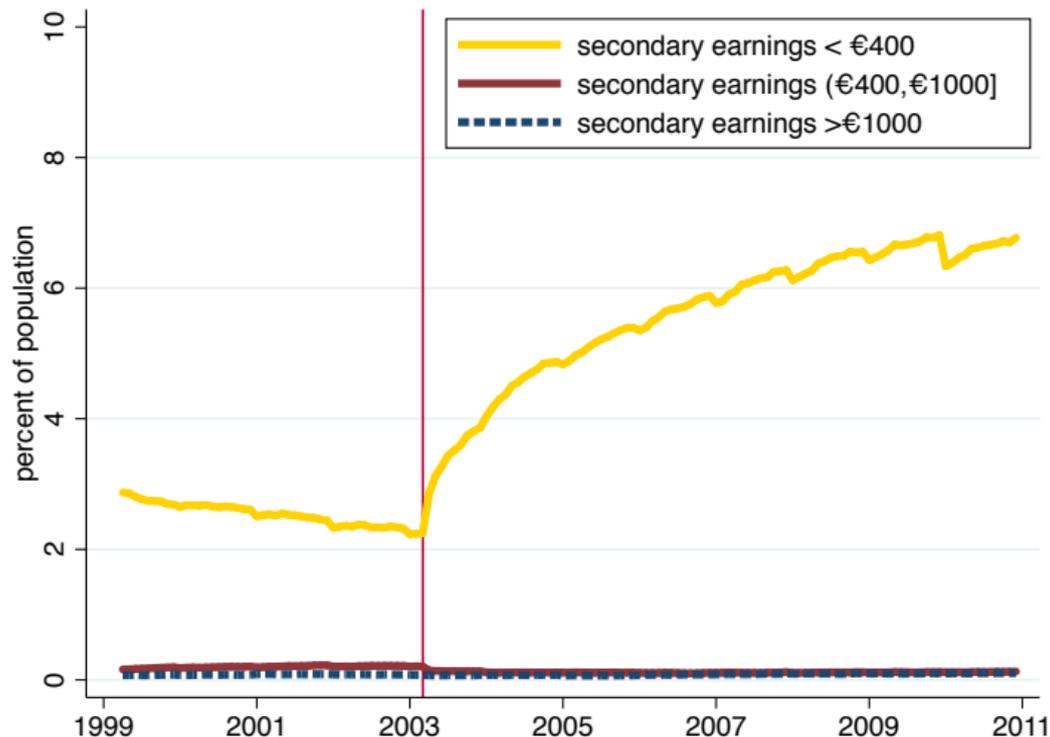


FIGURE 3. CHILD PENALTIES IN EARNINGS IN GERMAN-SPEAKING COUNTRIES

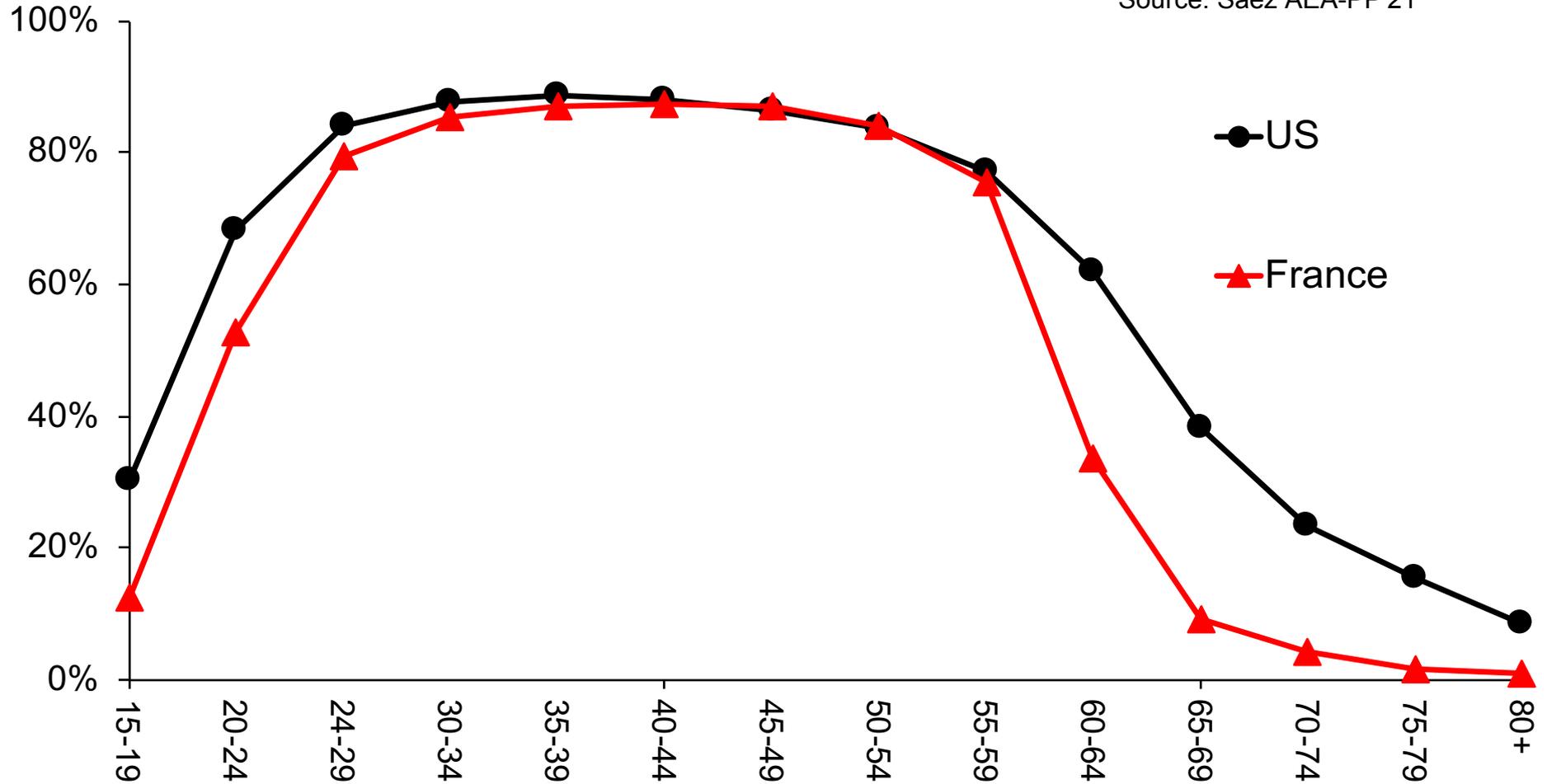
Figure 4: Secondary Job Holding Rates by Secondary Earnings Level  
Source: Tazhitdinova (2019)

(a) same axis



# Employment Rates of Men by Age, 2019

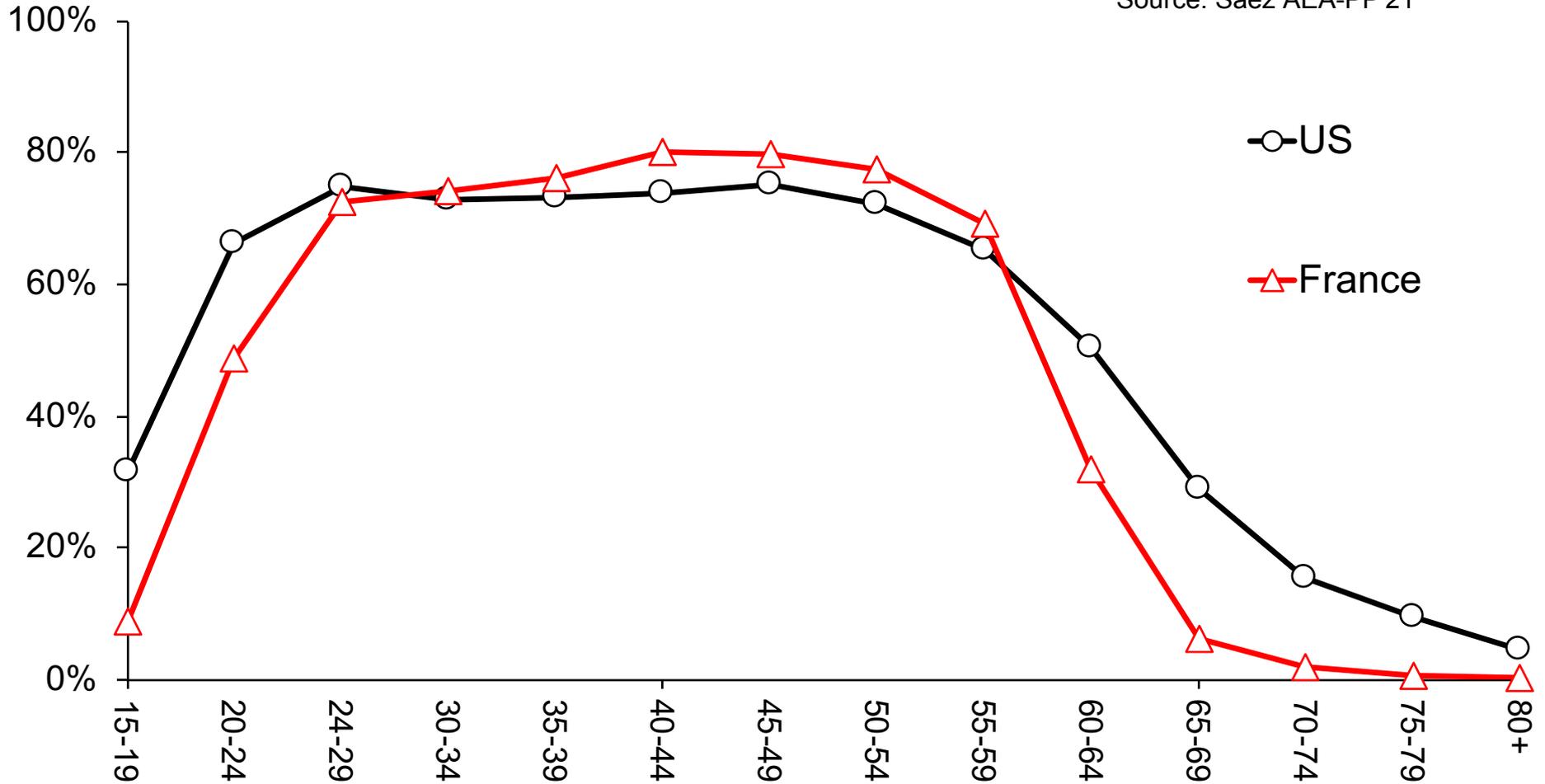
Source: Saez AEA-PP'21



Source: OECD database online. Employment to population ratios.

# Employment Rates of Women by Age, 2019

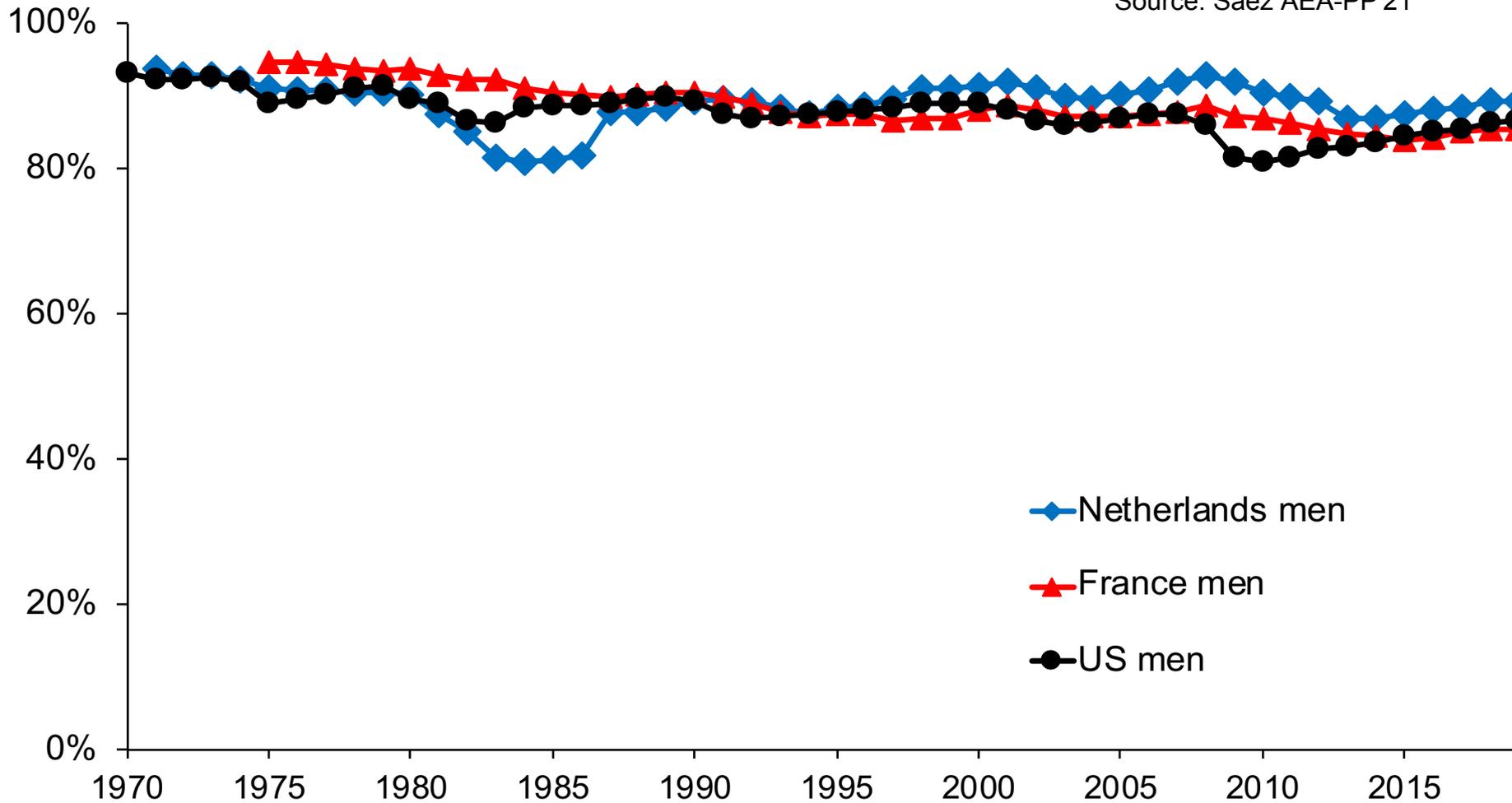
Source: Saez AEA-PP'21



Source: OECD database online. Employment to population ratios.

# Employment Rates of Men and Women, aged 25-54

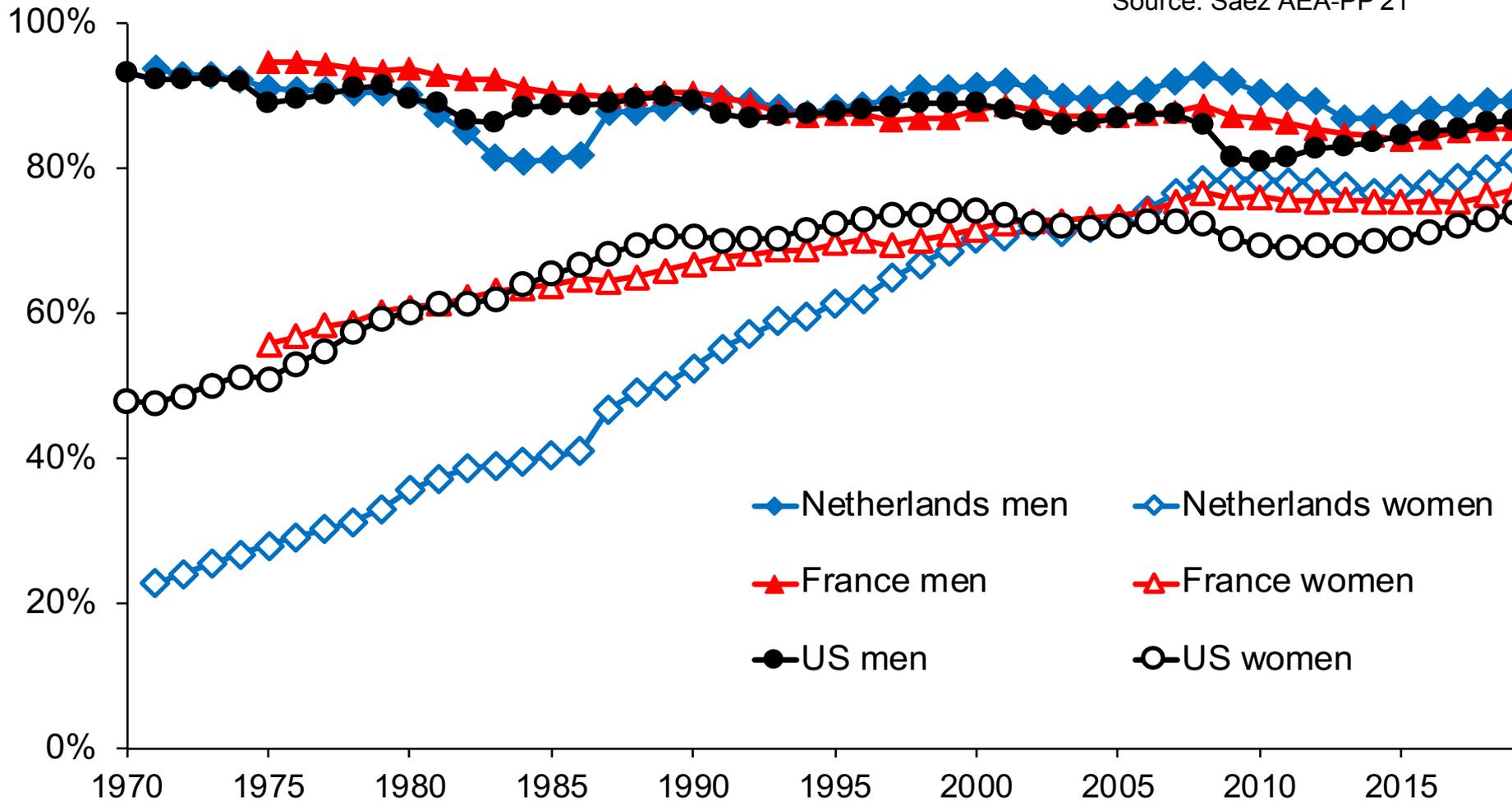
Source: Saez AEA-PP'21



Source: OECD database online.

# Employment Rates of Men and Women, aged 25-54

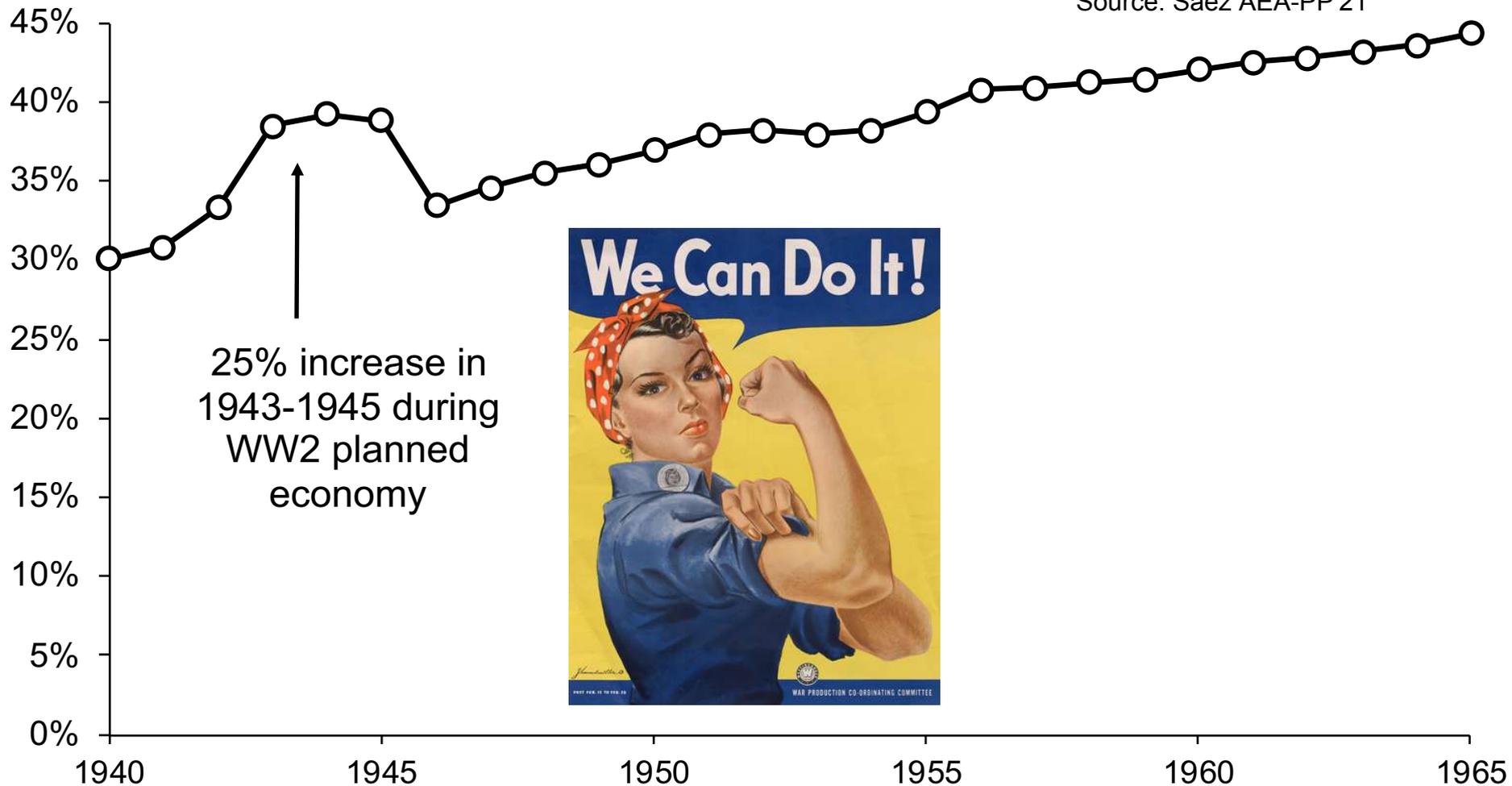
Source: Saez AEA-PP'21



Source: OECD database online.

# US female labor force participation, age 16-64

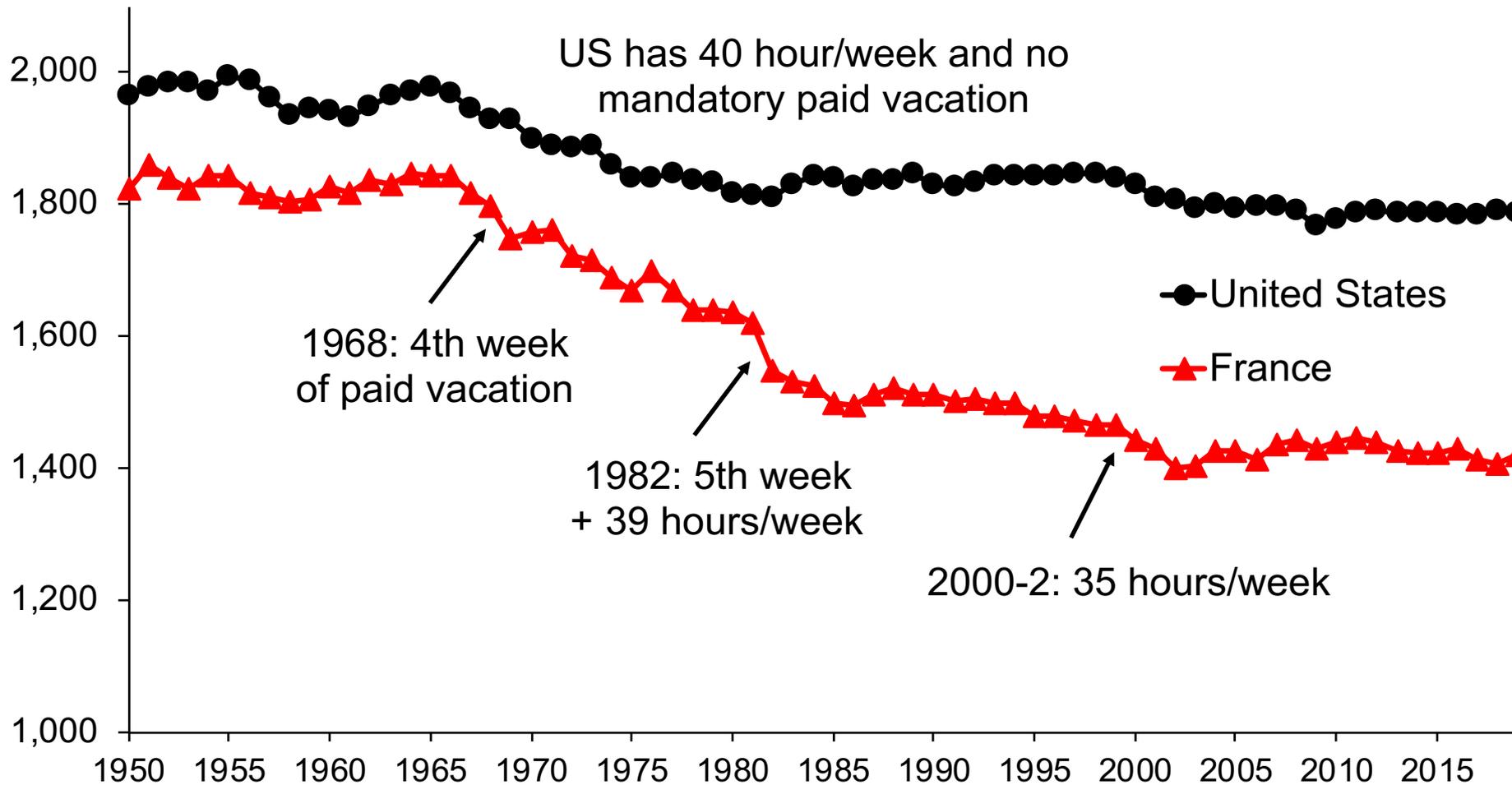
Source: Saez AEA-PP'21



Source: Historical Statistics of the United States (Current Population Reports).

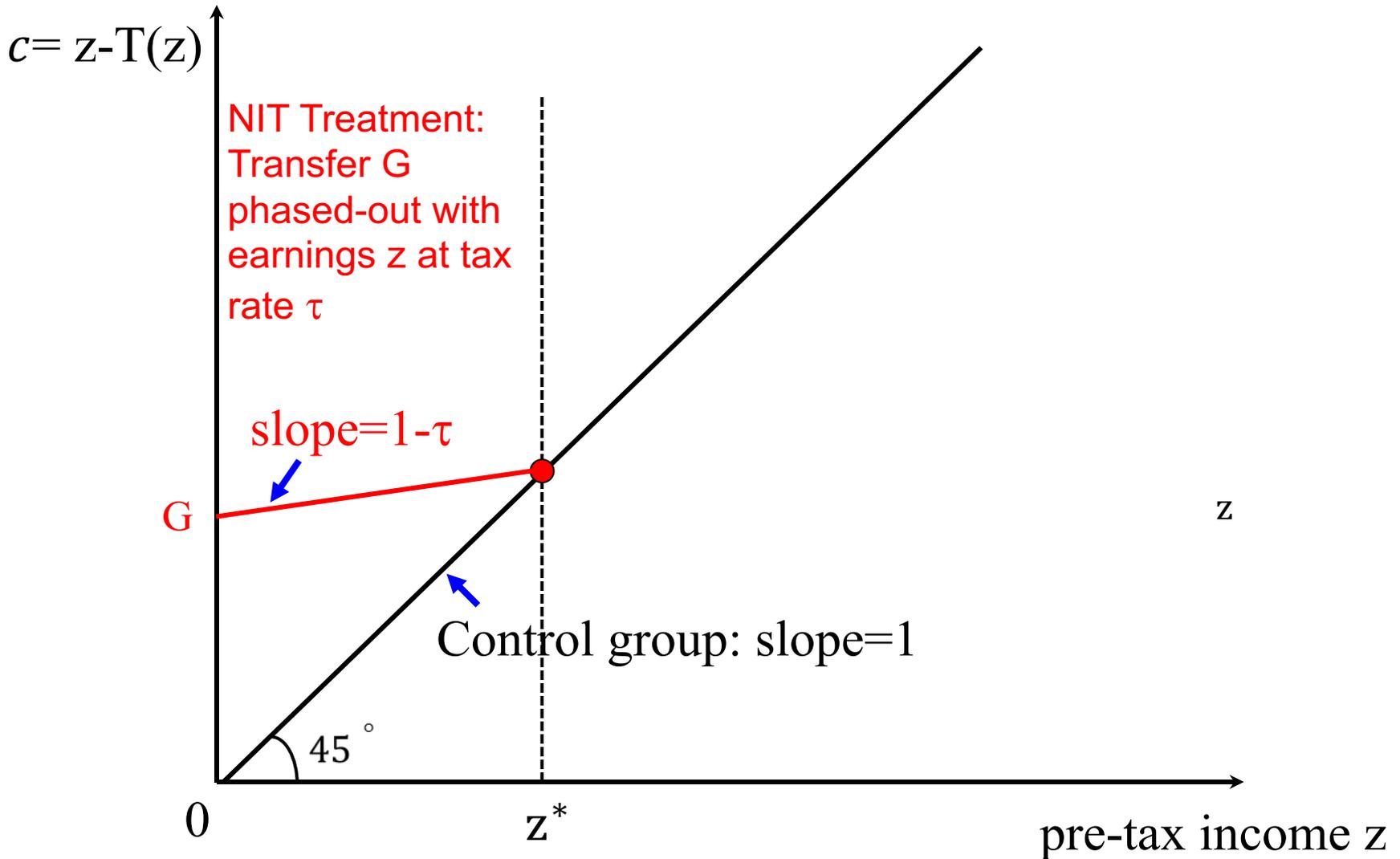
# Average Annual Hours of Work of Employees

Source: Saez AEA-PP'21

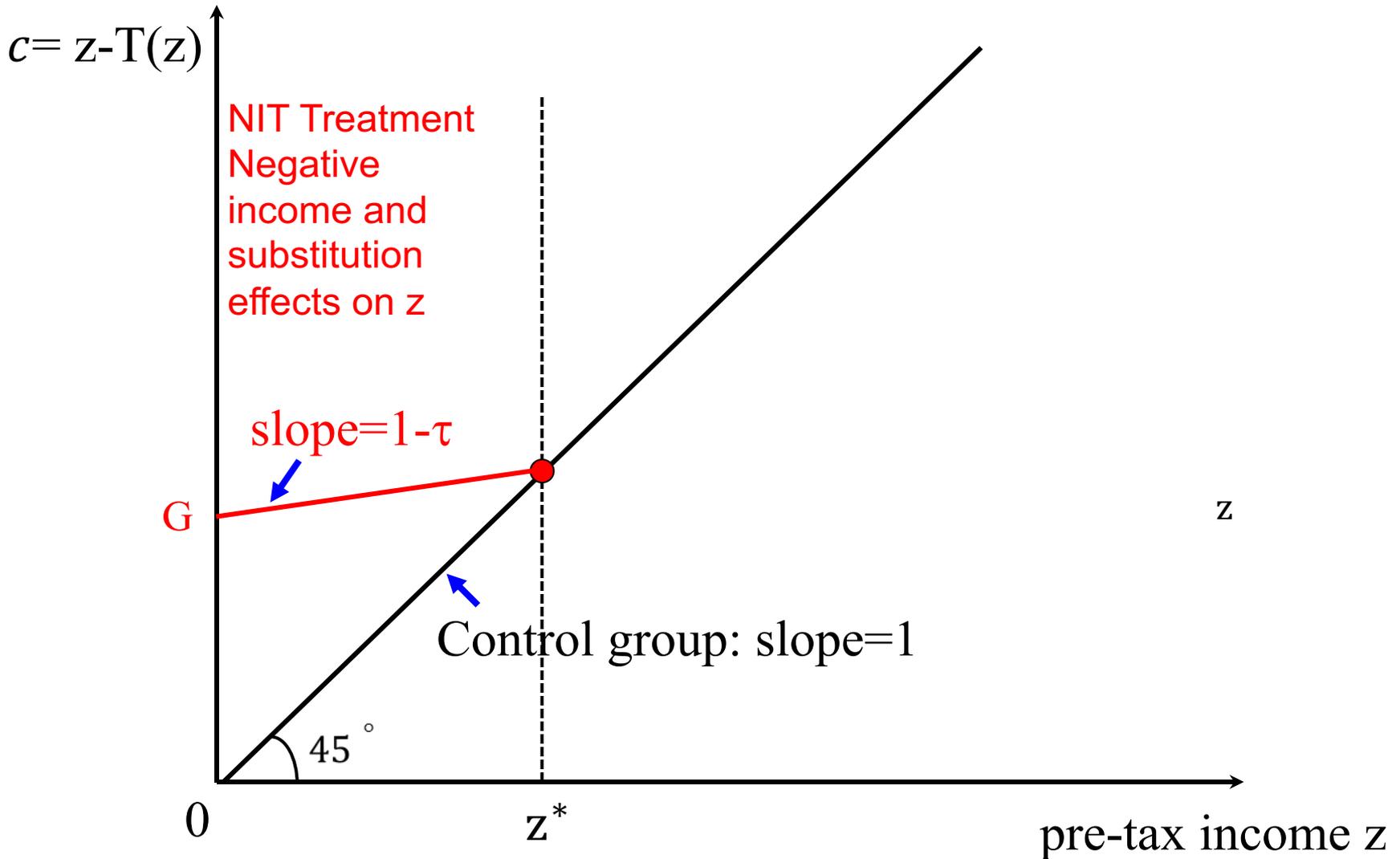


**Source:** OECD database online. Includes all ages, genders, and part-time, full-time, overtime.

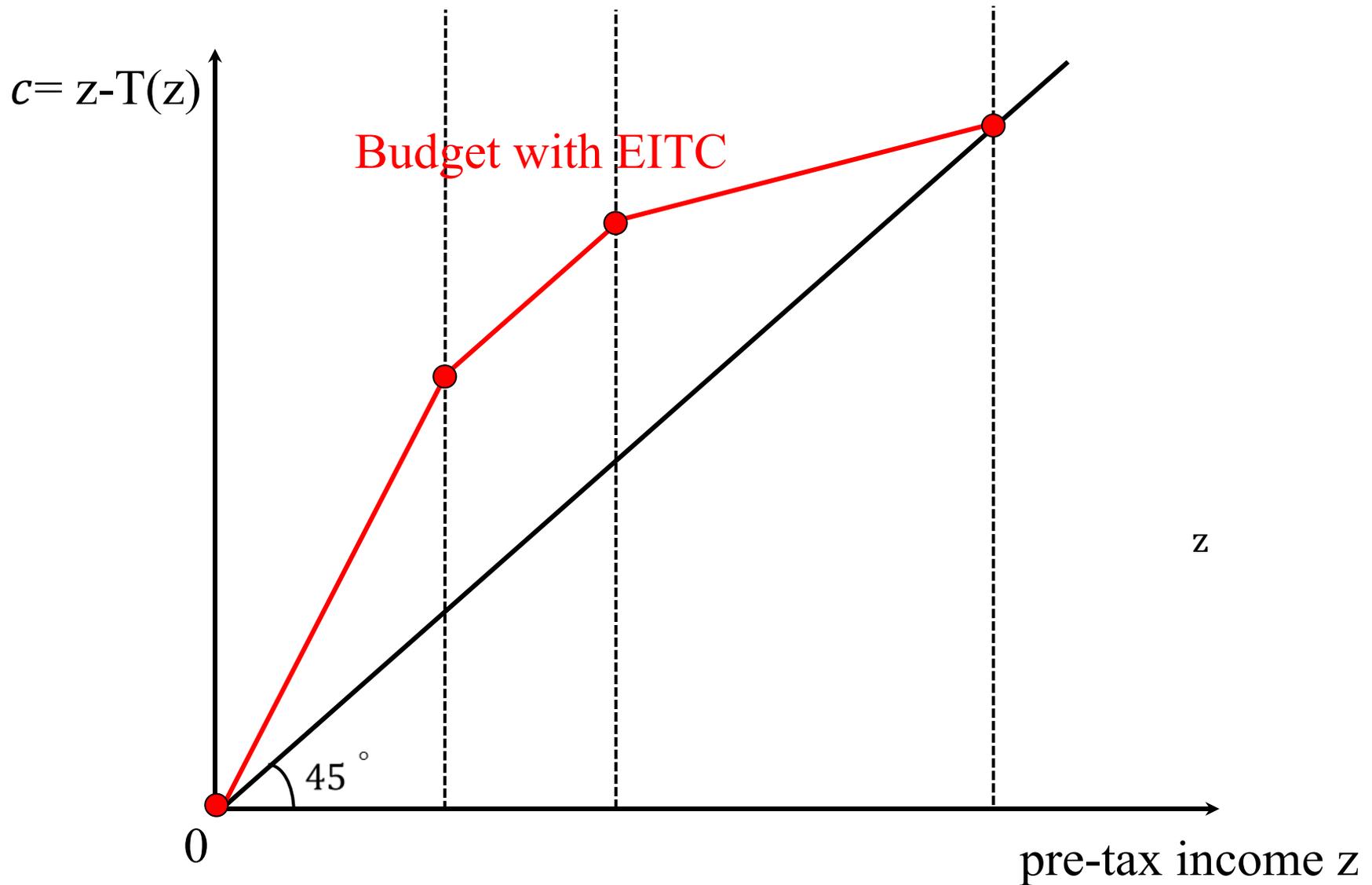
# Negative Income Tax Experiment



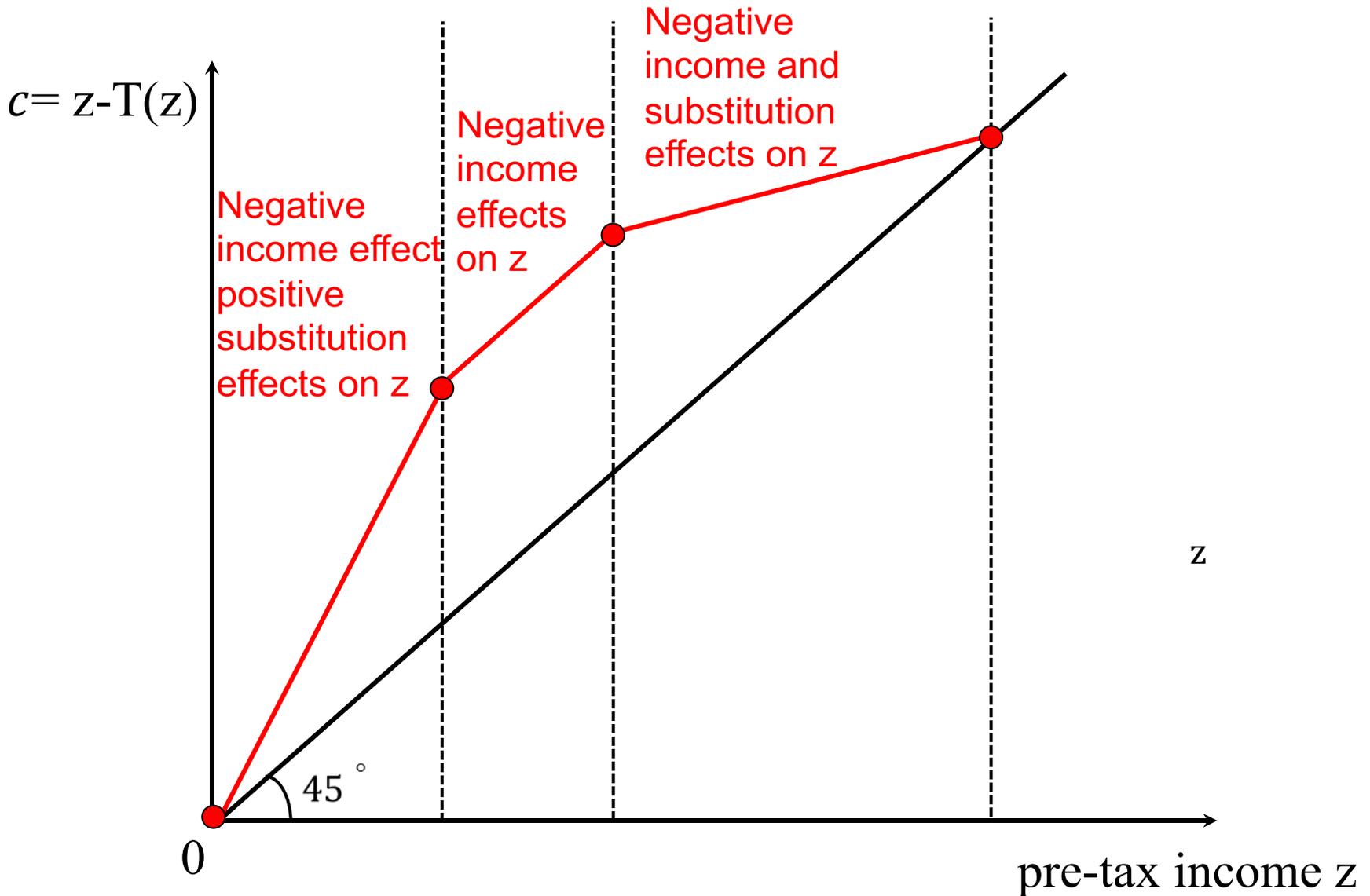
# Negative Income Tax Experiment



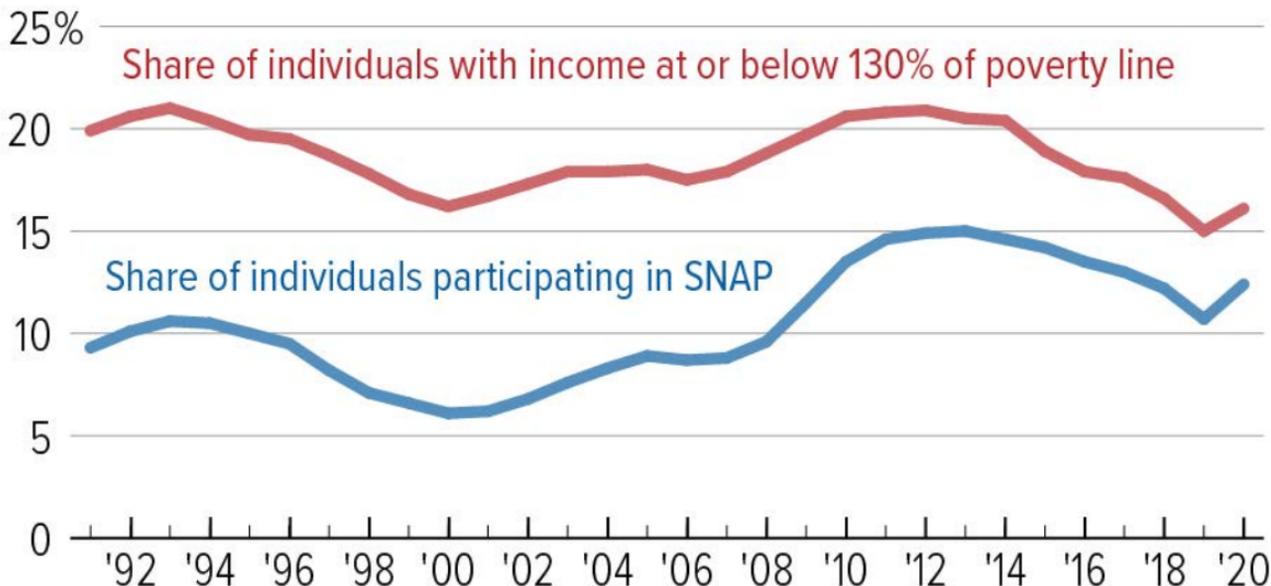
# EITC and intensive labor supply



# EITC and intensive labor supply



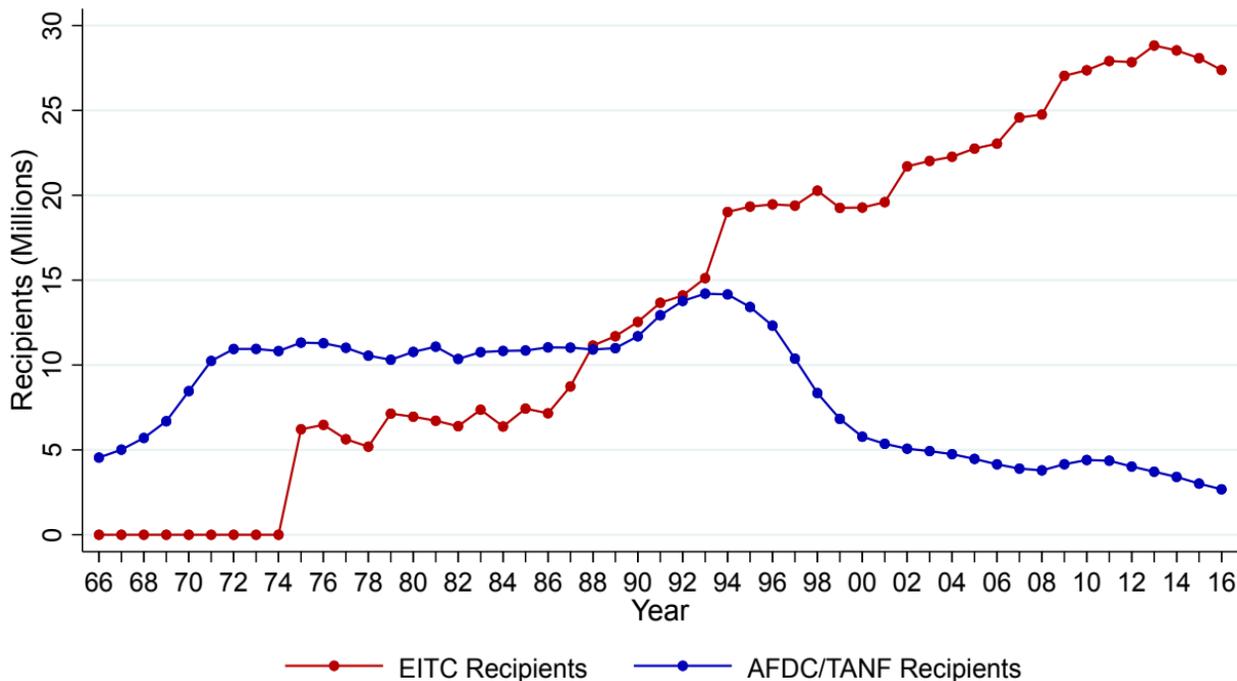
# SNAP Tracks Changes in Share of Population Near or Below the Poverty Line



Note: Poverty estimates are annual estimates. SNAP shares of resident population are calendar year averages.

Sources: U.S. Census Bureau, U.S. Department of Agriculture

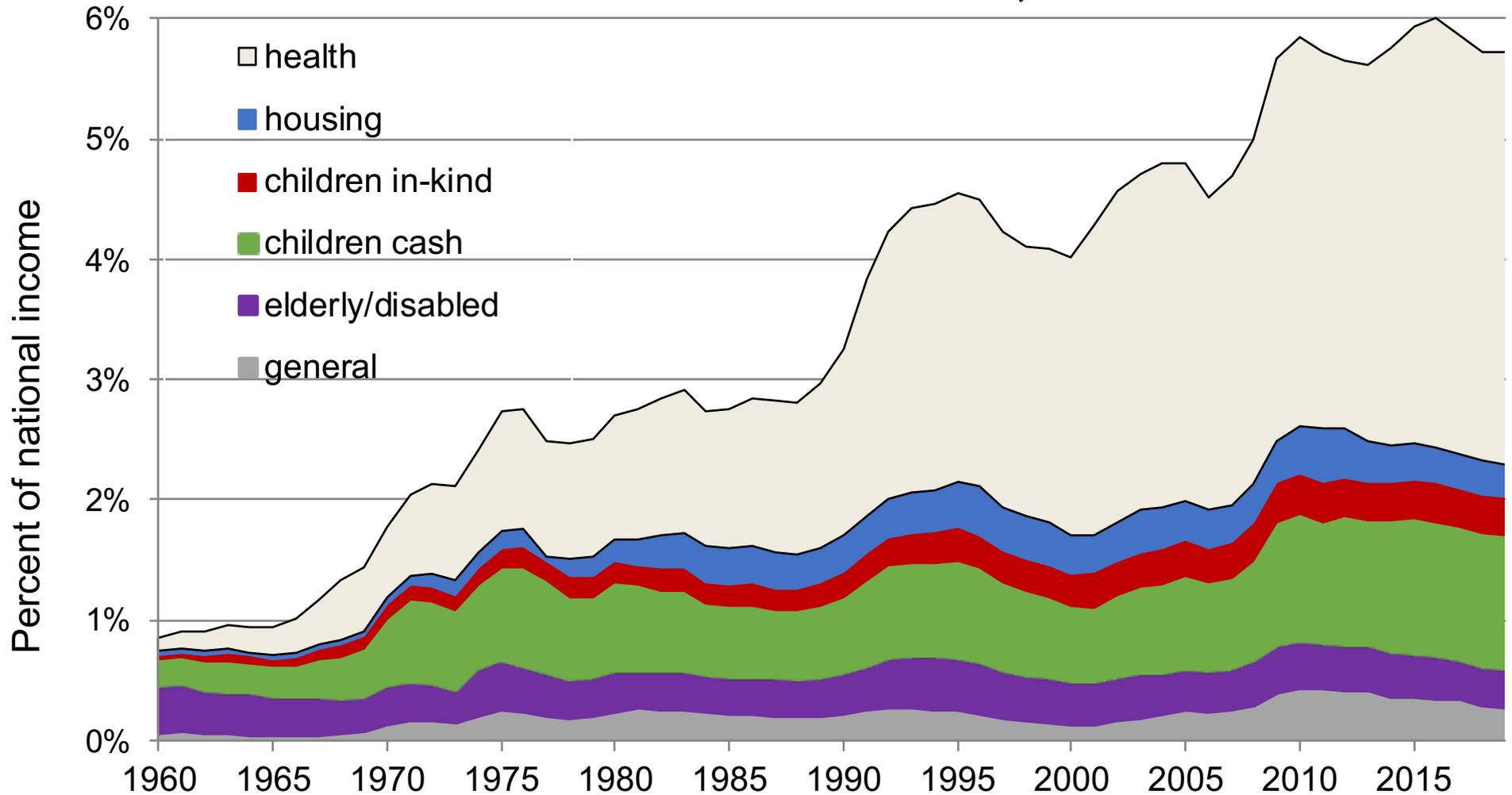
FIGURE 1: LONG-RUN EVOLUTION OF EITC AND CASH WELFARE



Source: Internal Revenue Service (EITC) and Department of Health and Human Services (AFDC/TANF).

Notes: The red series show the annual number of federal EITC recipients between 1966-2016. The blue series show the average monthly number of Aid to Families with Dependent Children (AFDC) recipients between 1966-1996, and the average monthly number of Temporary Assistance for Needy Families (TANF) recipients between 1997-2016.

# Means-tested Transfers in the US, 1960-2019



**Source.** National Accounts. Includes all individualized and means-tested transfers. General is untargetted (SNAP and general assistance for adults). Children cash includes refundable tax credits (EITC+CTC), TANF, and SNAP for children. Health is mostly Medicaid.

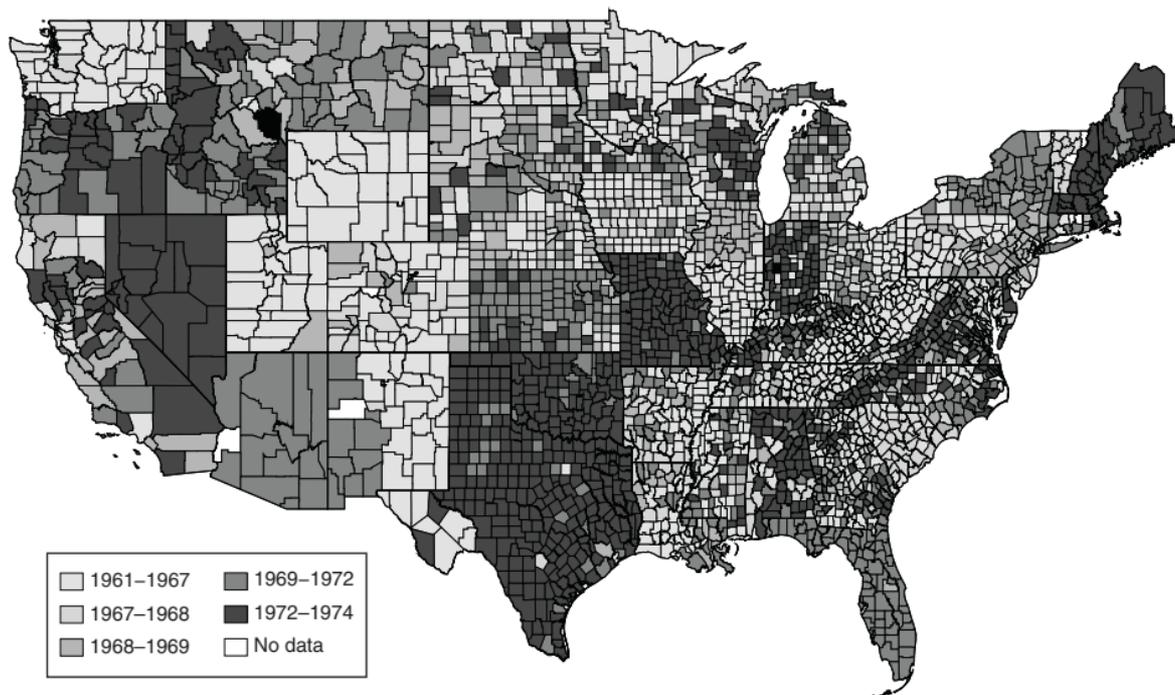


FIGURE 2. FOOD STAMP PROGRAM START DATE, BY COUNTY, 1961–1974

*Notes:* Authors' tabulations of food stamp administrative data (US Department of Agriculture, various years). The shading corresponds to the county FSP start date, where darker shading indicates later county implementation.

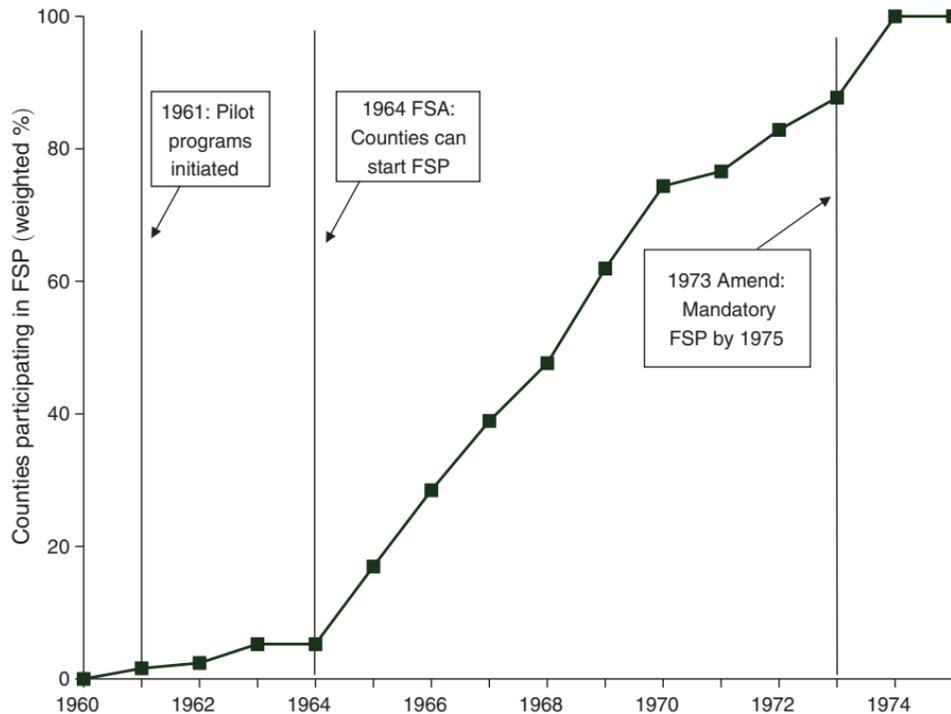


FIGURE 1. WEIGHTED PERCENT OF COUNTIES WITH FOOD STAMP PROGRAM, 1960–1975

Source: Authors' tabulations of food stamp administrative data (US Department of Agriculture, various years). Counties are weighted by their 1960 population.

Source: Hoynes, Schanzenbach, and Almond AER'16

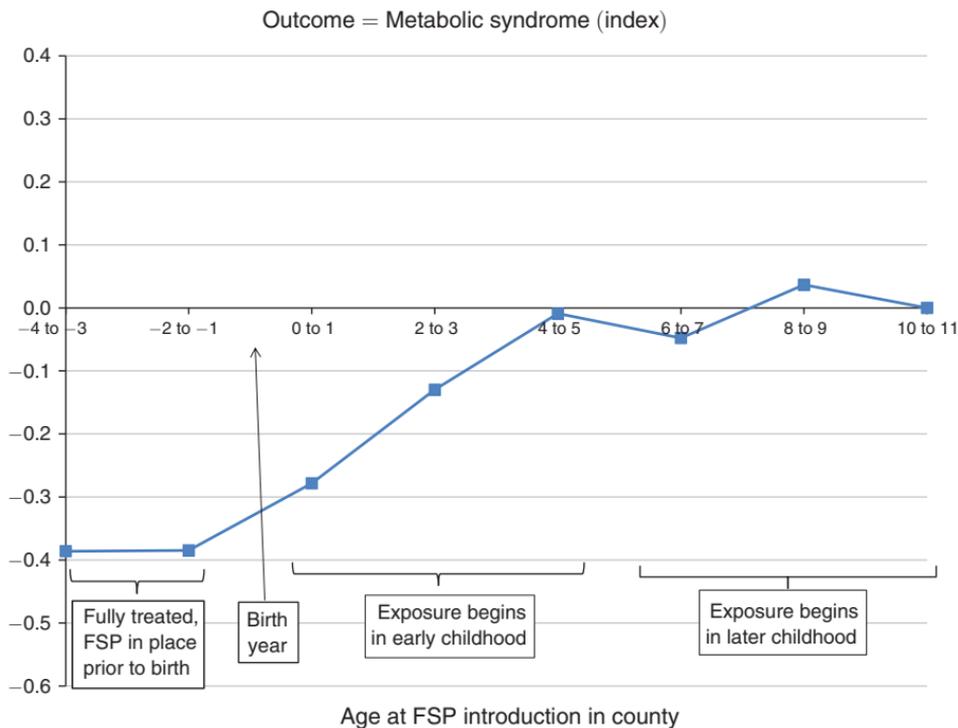


FIGURE 3. EVENT STUDY ESTIMATES OF THE IMPACT OF FSP EXPOSURE ON METABOLIC SYNDROME INDEX  
(*High Participation Sample*)

*Notes:* The figure plots coefficients from an event-study analysis. Event time is defined as age when FSP is implemented in the birth county. The models are estimated for the sample of individuals born into families where the head has less than a high school education. Age 10–11 is the omitted year so estimates are relative to that point. See the text for a description of the model.

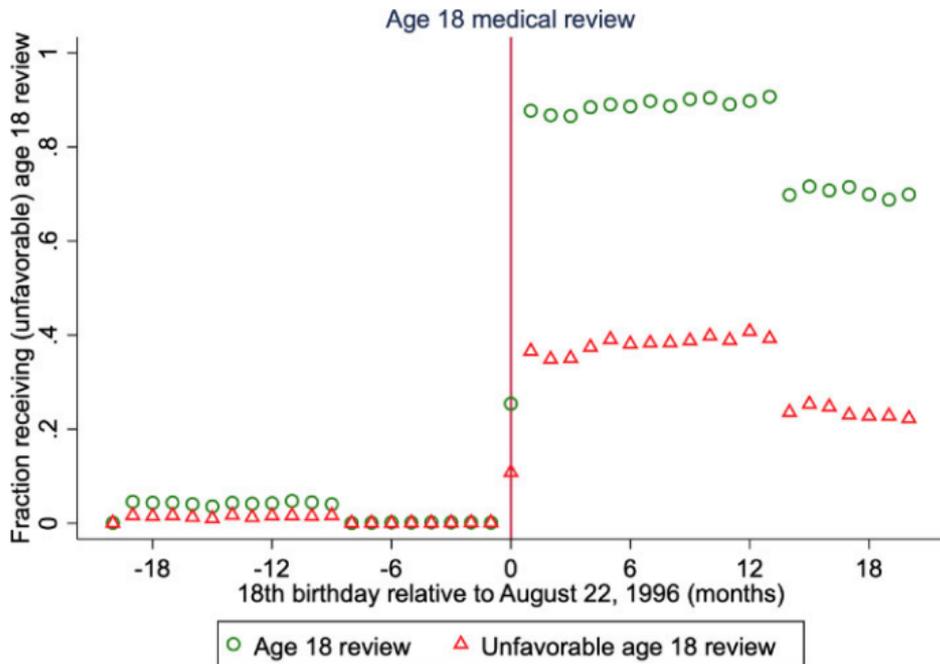


FIGURE II

First Stage: Likelihood of Age 18 Medical Review across Cutoff

Figure plots the likelihood of receiving an age 18 medical review and the likelihood of receiving an unfavorable age 18 review (i.e., being removed from SSI at age 18). The sample is SSI children with an 18th birthday within 18 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage. [Table I](#) reports point estimates and standard errors.

Source: Deshpande and Mueller-Smith QJE 2023

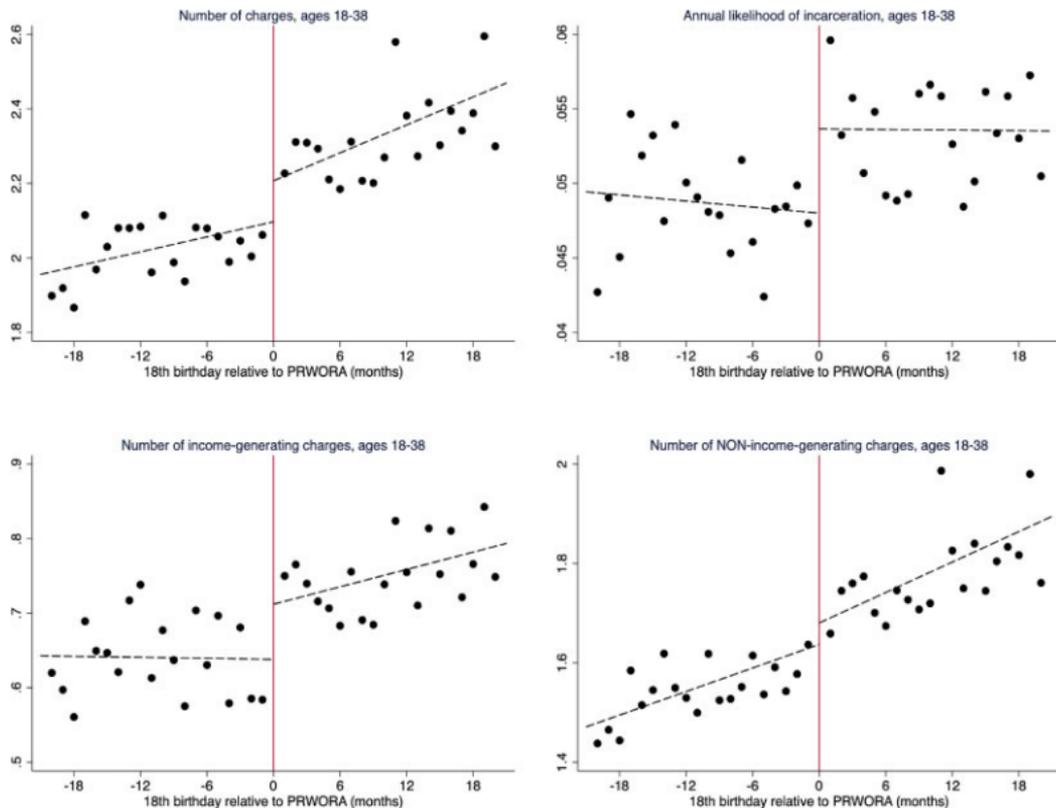


FIGURE III

Reduced Form: Criminal Justice Outcomes across Cutoff