Insurance and Welfare: Causal Effects of the Affordable Care Act

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Outline

1. Introduction
2. Literature
3. Data
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Introduction I

Motivations:

- Expansion of Medicaid $\Rightarrow$ insurance for low-income population. It increases pooling of healthcare spending burdens among people.
- 25 states expanded Medicaid under the Affordable Care Act i.e 14.5 million people enrolled by 2016. End of 2024, 41 states. ▶ Staggered DiD

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- Several attempts to repeal and replace Obamacare ⇒ concerns about failing to hit enrollment targets.
- Policy implication on the effectiveness of the expansion.

Introduction II

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Medicaid expansion:

- Extends eligibility to adults up to age 64 with incomes up to 138% of the federal poverty level.
- Benefits: Medicaid expansion provides comprehensive benefits (preventive services, doctor visits, hospital stays, and prescription medications).
- Cost: The federal government pays 90% of the cost of Medicaid expansion, while the state pays 10%..

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- **Main Takeaways**
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- Reduction in the probability of being below the poverty line $\Rightarrow$ especially for African Americans.
- Self-reported health better.

Literature Review

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- Substitution effect leading to a decline in private insurance but no consensus (Guth et al. 2020)
- Regardless of actual health clinical improvement, health perception is improved (Baicker and Finkelstein 2011)
- Populations are unequally affected by this reform $\rightarrow$ African Americans (Donohue et al. 2022)

Data

- Microdata : Current Population Survey ASEC 2012 and 2016
- Number of variables from CPS $\Rightarrow$ 37
- Number of observations $\Rightarrow$ 386,885 before cleaning
- We end up with $\approx 180,000$
- We restrict the sample to 27-64 years old.

Data

Choice of variables :

- Unchanged : COVERGH → Covered by group health insurance, last year
- Decrease : COVERPI → Covered by private health insurance, last year
- Health Outcome improved : HEALTH → Health status
- Subgroup: RACE → African American
- Control : demographic controls → AGE, SEX, EDUC, MARST, STATEFIP, and economic controls → ln INC

Difference in Means I

	All Units	Treatment	Control	Difference
Black	0.12	0.15	0.10	0.05***
	(0.33)	(0.36)	(0.30)	(32.96)
Female	0.52	0.52	0.52	0.00
	(0.50)	(0.50)	(0.50)	(0.72)
Employment	0.95	0.95	0.94	0.01***
	(0.23)	(0.22)	(0.23)	(7.33)
Education	13.21	13.08	13.30	-0.21***
	(3.11)	(2.96)	(3.20)	(-14.39)
Health Status	3.72	3.69	3.74	-0.05***
	(1.06)	(1.08)	(1.05)	(-10.65)
Marital Status	2.44	2.35	2.50	-0.14***
	(2.02)	(1.96)	(2.07)	(-15.09)
Medicare	0.04	0.05	0.04	0.00***
	(0.20)	(0.21)	(0.20)	(4.69)
Medicaid	0.12	0.09	0.14	-0.05***
	(0.32)	(0.28)	(0.35)	(-35.37)
Observations	180303	73831	106472	180303

Difference in Means II

	All Units	Treatment	Control	Difference
Private	0.71	0.70	0.72	-0.02***
	(0.45)	(0.46)	(0.45)	(-10.34)
Group	0.63	0.62	0.64	-0.03***
	(0.48)	(0.49)	(0.48)	(-11.33)
ln Income	10.20	10.16	10.24	-0.08***
	(1.55)	(1.55)	(1.55)	(-10.19)
ln Wage	10.47	10.42	10.50	-0.08***
	(1.00)	(0.99)	(1.01)	(-14.86)
ln MOOP	7.57	7.63	7.53	0.10***
	(1.59)	(1.58)	(1.60)	(13.37)
ln CS Due	8.37	8.37	8.37	-0.01
	(0.89)	(0.86)	(0.92)	(-0.24)
ln CS Recieved	7.98	7.99	7.97	0.02
	(1.21)	(1.21)	(1.22)	(0.38)
Observations	180303	73831	106472	180303

DiD on Effects of Medicaid Expansion

- We estimate a TWFE Difference-in-Differences

$$\mathbb{P}[\text{Poor}_{ijst} = 1] = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijst}^T\beta + \psi_j + \psi_t + \psi_s + \varepsilon_{ijst}$$

- $\mathbb{P}[\text{Poor}_{ijst} = 1]$ probability of individual i, in industry j, in state s in period t being below the poverty line.
- Where t is a binary variable for either 2012 or 2016.
- ACA_{st} is the Medicaid expansion that varies in state s and time t.
- δ measures the ATE of the DiD.
- $\mathbb{X}_{ijst}$ is a vector of controls: gender, years of schooling, age, age squared, marital status and the natural log of yearly income.
- ψ_j, ψ_t, and ψ_s are industry, time and state fixed effects.

Effect on Medicaid

- $\mathbb{P}[\text{Medicaid}_{ijsct} = 1] = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijsct}^T\beta + \psi_j + \psi_t + \psi_s + \psi_c + \varepsilon_{ijsct}$

	All Sample		White		African American	
	(1)	(2)	(1)	(2)	(1)	(2)
ACA × 2012-2016	0.042***	0.037***	0.046***	0.040***	0.024***	0.019**
	(0.005)	(0.004)	(0.006)	(0.004)	(0.009)	(0.008)
Observations	164,987	164,987	145,251	145,251	19,736	19,729
Controls	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
State FE	N	Y	N	Y	N	Y
County FE	N	Y	N	Y	N	Y
Industry FE	N	Y	N	Y	N	Y

- $\rightarrow$ AEE increase of $\approx$ 4 percentage points in the probability of being enrolled in Medicaid. Half of this for African Americans.

Effect on Insurance

- $\mathbb{P}[\text{Ins}_{ijst} = 1] = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijst}^T\beta + \psi_j + \psi_t + \psi_s + \varepsilon_{ijst}$

	Private			Group		
	(1)	(2)	(3)	(1)	(2)	(3)
ACA × 2012-2016	-0.010***	-0.008**	-0.008**	-0.007*	-0.006	-0.007*
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Observations	164,987	164,987	164,987	180,303	180,303	180,303
Controls	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
State FE	N	Y	Y	N	Y	Y
Industry FE	N	N	Y	N	N	Y

- $\rightarrow$ AEE decrease of $\approx$ 1 percentage points in the probability of being privately insured and 0.7 percentage points of being group insured.

	All Sample		Non AA		African American	
	(1)	(2)	(1)	(2)	(1)	(2)
ACA × 2012-2016						
Poverty	-0.005**	-0.006**	-0.002	-0.004*	-0.018***	-0.021***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.006)	(0.007)
Health Perception	-0.029***	-0.027***	-0.030***	-0.022**	-0.033	-0.046**
	(0.010)	(0.009)	(0.011)	(0.011)	(0.022)	(0.022)
Payments	-0.052***	-0.047***	-0.048***	-0.038**	-0.107**	-0.089*
	(0.014)	(0.016)	(0.015)	(0.016)	(0.049)	(0.053)
Child Support	0.209*	0.234**				
	(0.114)	(0.114)				
Baseline	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
State FE	N	Y	N	Y	N	Y
Industry FE	N	Y	N	Y	N	Y

Effect on Welfare

- Probability of being below the Poverty Line ≈ 1 p.p $\downarrow$ for AA.

$$\mathbb{P}[\text{Poor}_{ijst} = 1] = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijst}^{T}\beta + \psi_j + \psi_t + \psi_s + \varepsilon_{ijst}$$

- Health Perception ≈ 0.03 units $\downarrow$ for everyone.

$$\text{Health}_{ijst} = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijst}^{T}\beta + \psi_j + \psi_t + \psi_s + \varepsilon_{ijst}$$

- $\ln$ Out of Pocket Insurance Payments ≈ 9 log points $\downarrow$ for AA.

$$\ln \text{moop}_{ijst} = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijst}^{T}\beta + \psi_j + \psi_t + \psi_s + \varepsilon_{ijst}$$

- $\ln$ Child Support Received ≈ 20 log points $\uparrow$ for Sample.

$$\ln \text{csrec}_{ijst} = \alpha_i + \text{ACA}_{st}\delta + \mathbb{X}_{ijst}^{T}\beta + \psi_j + \psi_t + \psi_s + \varepsilon_{ijst}$$

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- We account for this in a Multiple-Period setting with the same treatment ▶ Mult DiD This is also robust for 2-Way Clustering.
- Analysis does not take into account the progressiveness of the expansion. We do a staggered DiD ▶ Staggered
- Another problem is $\Rightarrow$ health status is self-reported.
- This can lead to measurement error.

Policy Implications

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- The results tend to support the expansion of Medicaid $\Rightarrow$
- Somewhat unequal access to Medicaid
- Strong effect on African Americans regarding MOOP and poverty.
- Weak effect on other types of insurance.
- May benefit those who were previously uninsured.
- However, we find a negative effect on self-reported health status.

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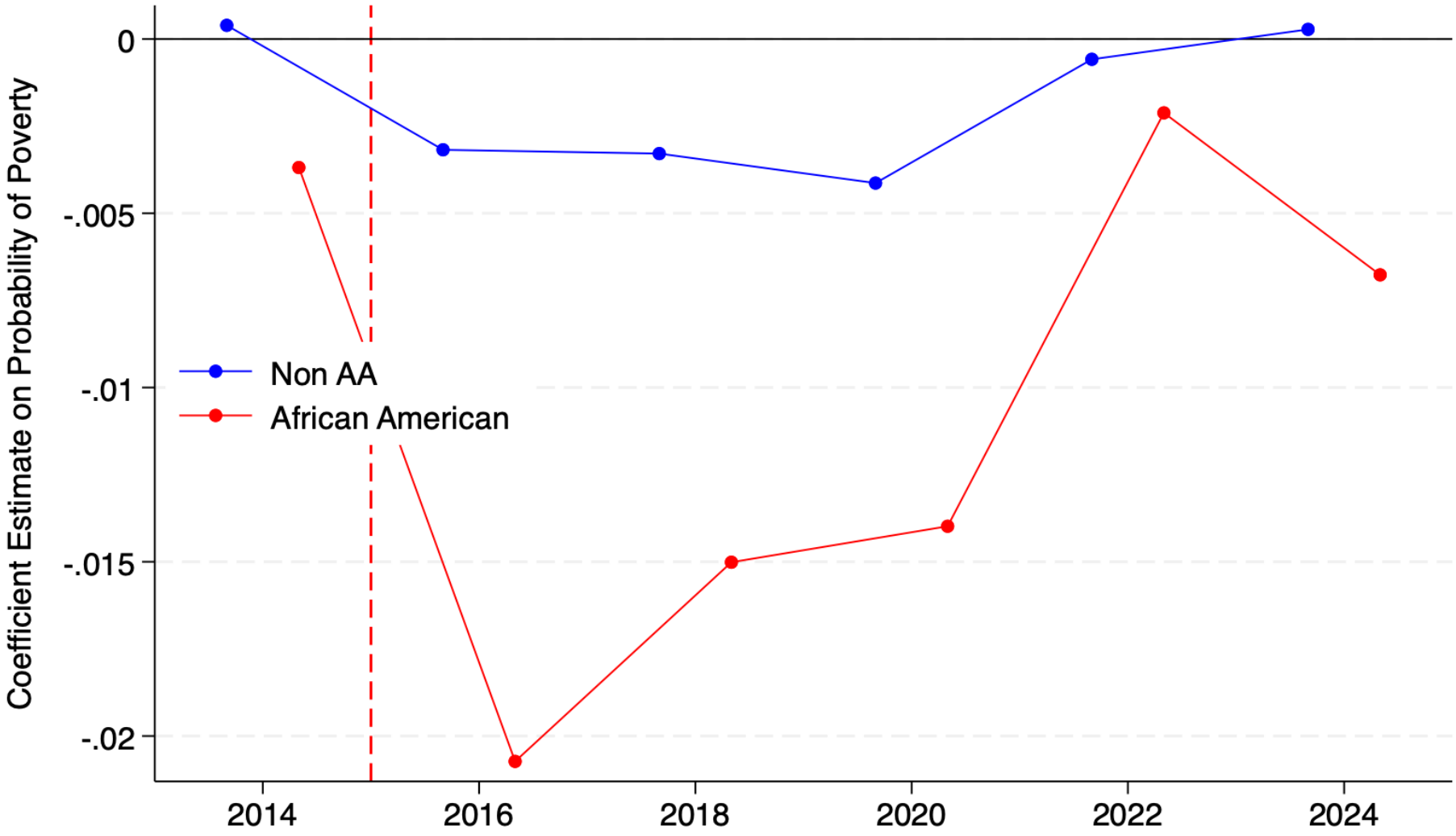
Effect on Poverty: Multiple Time Periods

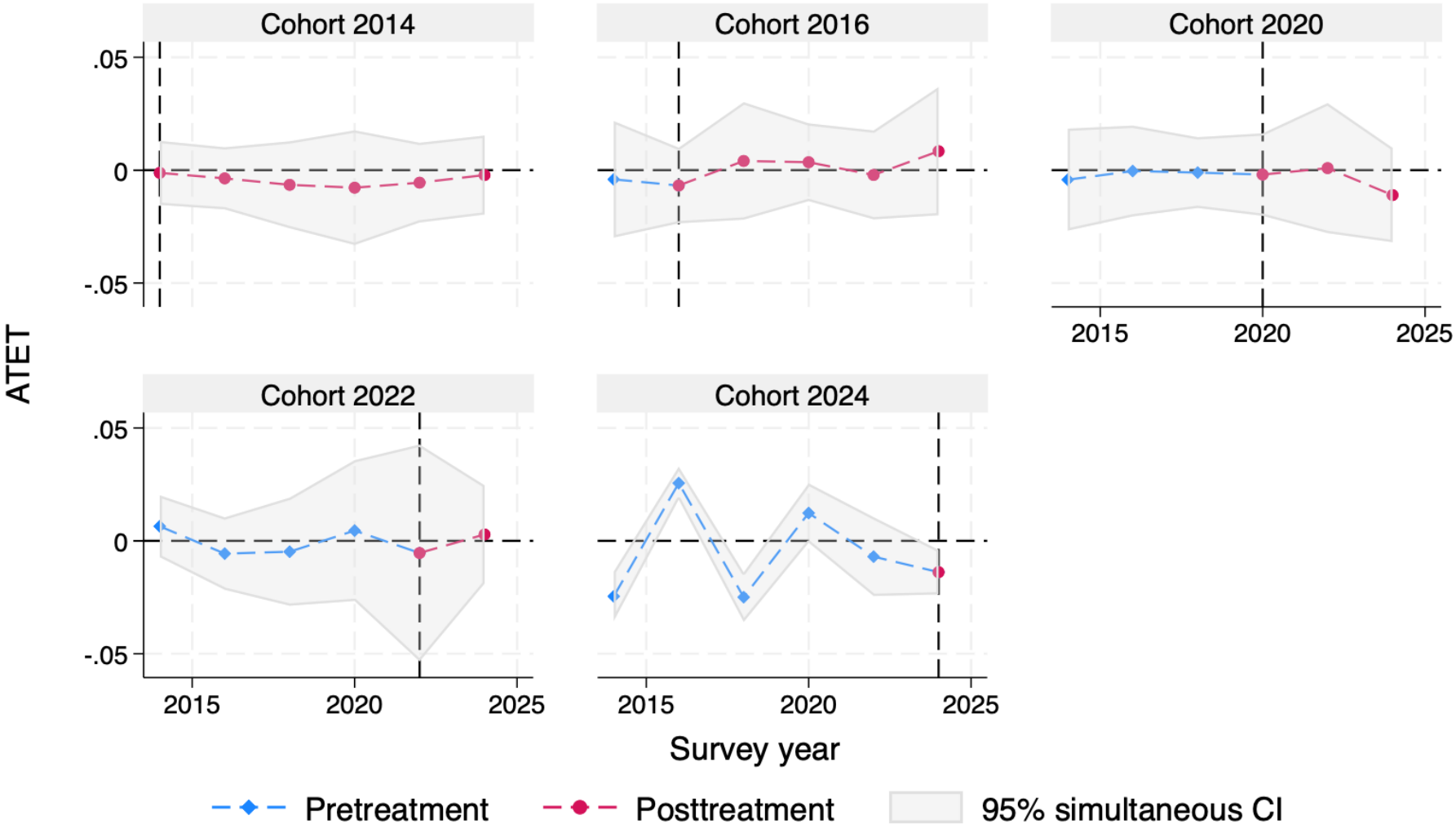
- Heavy short run effect on poverty for African Americans ▶ Back



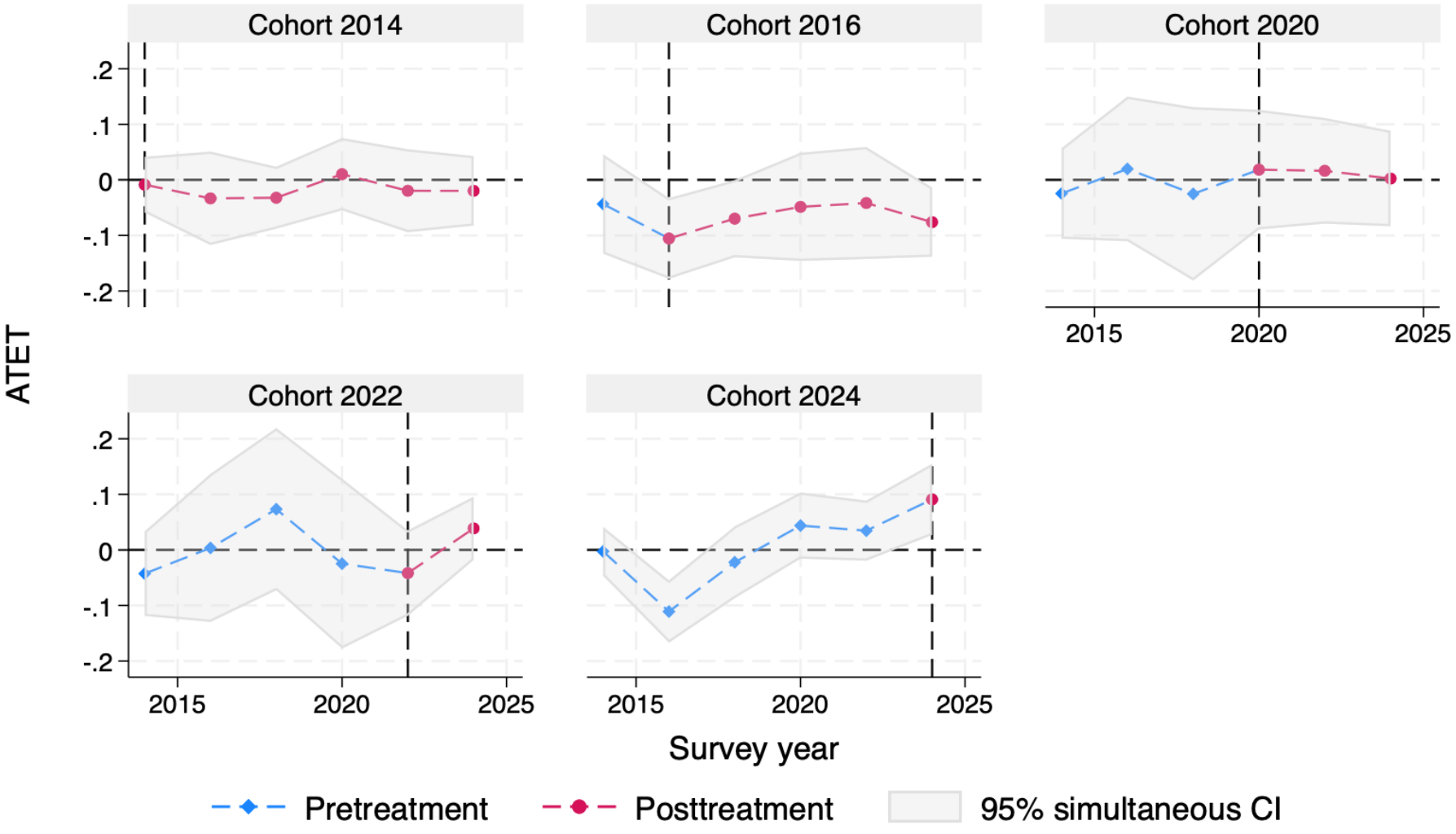
	All Sample		Non AA		African American	
	(1)	(2)	(1)	(2)	(1)	(2)
ACA × 2012-2024						
Poverty	-0.002	-0.002	-0.002	-0.001	-0.011**	-0.010**
	(0.002)	(0.003)	(0.002)	(0.003)	(0.005)	(0.004)
N	518,070	518,070	456,445	456,445	61,621	61,621
Health Perception	-0.019***	-0.022	-0.014*	-0.020	-0.039**	-0.033
	(0.007)	(0.013)	(0.008)	(0.016)	(0.019)	(0.024)
N	518,070	518,070	456,445	456,445	61,621	61,621
Payments	-0.004	-0.007	-0.007	-0.014	0.030	0.033
	(0.011)	(0.027)	(0.011)	(0.026)	(0.037)	(0.062)
N	495,180	495,180	438,104	438,104	57,072	57,072
Baseline	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
State FE	Y	N	Y	N	Y	N
Industry FE	Y	Y	Y	Y	Y	Y
2-Way Clusters	Y	Y	Y	Y	Y	Y

Staggered Treatment: Poverty

- With a staggered treatment we find little effect on poverty ▶ Back



Staggered Treatment: MOOP



Staggered Treatment: Time Aggregation

	All Sample			African American		
	(1)	(2)	(3)	(1)	(2)	(3)
2014	-0.001	-0.008	-0.034	-0.007*	-0.006	-0.007*
	(0.003)	(0.017)	(0.029)	(0.004)	(0.004)	(0.004)
2016	-0.003*	-0.036	-0.023	-0.007*	-0.006	-0.007*
	(0.003)	(0.028)	(0.028)	(0.004)	(0.004)	(0.004)
2018	-0.006	-0.033*	0.040	-0.007*	-0.006	-0.007*
	(0.004)	(0.018)	(0.051)	(0.004)	(0.004)	(0.004)
2020	-0.006	0.008	-0.033	-0.007*	-0.006	-0.007*
	(0.005)	(0.022)	(0.037)	(0.004)	(0.004)	(0.004)
2022	-0.004	-0.019	-0.013	-0.007*	-0.006	-0.007*
	(0.003)	(0.022)	(0.041)	(0.004)	(0.004)	(0.004)
2024	-0.002	-0.016	-0.048	-0.007*	-0.006	-0.007*
	(0.003)	(0.019)	(0.035)	(0.004)	(0.004)	(0.004)