Should I Stay or Should I Go?
The Response of Labor Migration to Economic Shocks

Andrea Foschi, Bank of Italy

Christopher L. House, University of Michigan and NBER

Christian Proebsting, KU Leuven

Linda L. Tesar, University of Michigan, NBER and CEPR

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Blanchard and Katz : “Regional Evolutions” (*BPEA* 1992)

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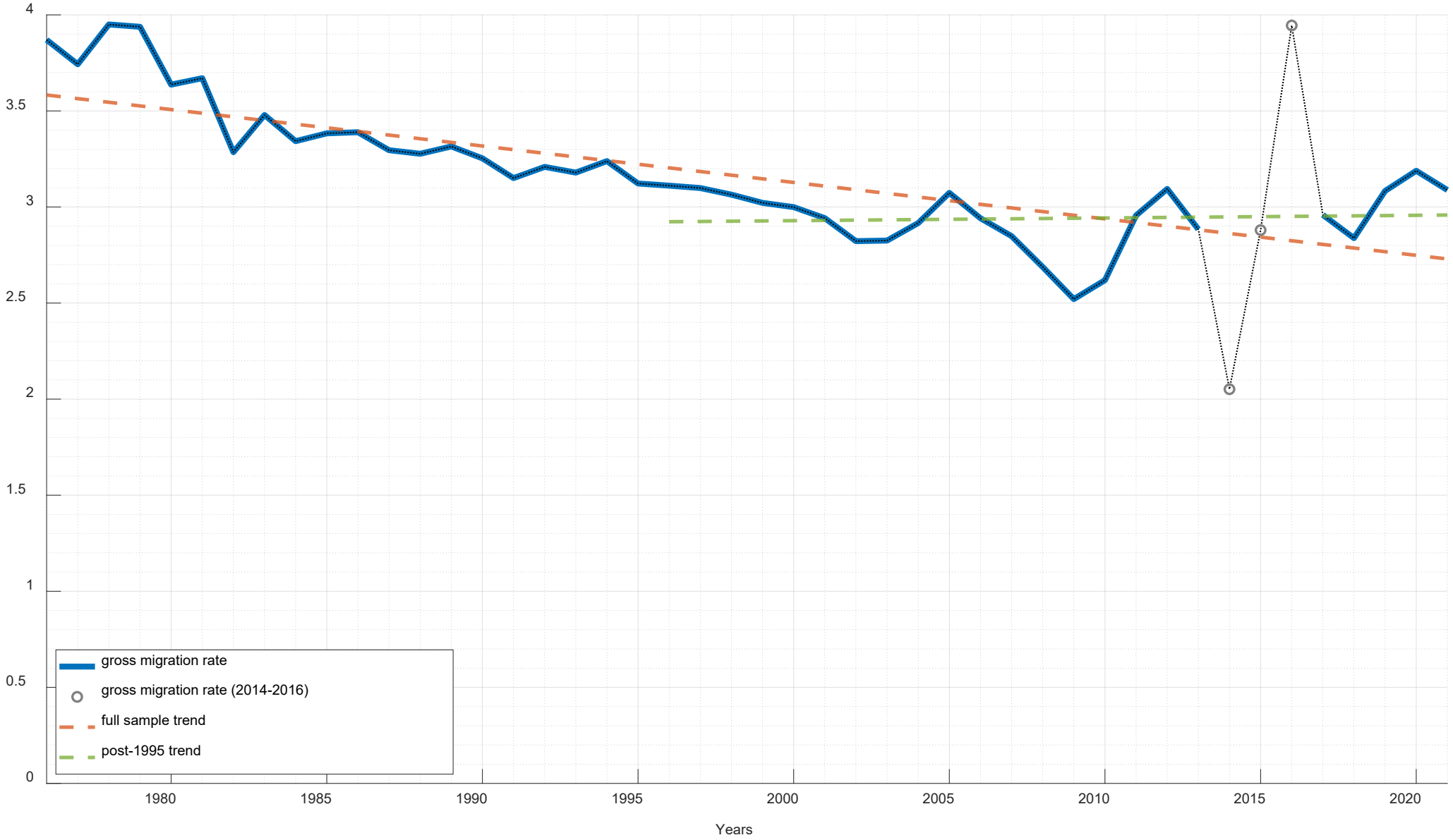
New View

1. U.S. migration rates have fallen (Molloy, Smith, and Wozniak, 2011)
2. Limited evidence of mobility during/following the Great Recession (Yagan 2019; Beraja et al. 2019; Mian and Sufi 2014)
3. Not much migration following the "China Shock" (Autor, Dorn and Hanson 2013, 2021)

Declining Cross-State Gross Migration Rate



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Research Design

Use four “off the shelf” instruments for labor demand shocks

- Bartik industry-composition shock
- Fiscal shock
- China shock
- Great recession shock

How does labor migration respond to these shocks?

Is there a change in the elasticity over time?

Are there differences across demographic groups?

Decomposition of Employment Growth

$$\Delta \ln E_{i,t} = \Delta \ln\left(1 - ur_{i,t}\right) + \Delta \ln LFP_{i,t} + \Delta \ln POP_{i,t}$$

Basic Econometric Specification

$$Y_{i,t+h} = \alpha_{i,h}^{Y} + \alpha_{t,h}^{Y} + \beta_{h}^{Y} Z_{i,t} + \Gamma_{h}^{Y} X_{i,t} + \varepsilon_{i,t+h}^{Y}$$

- $Y_{i,t}$: log change in $E_{i,t}$, $1 - ur_{i,t}$, $LFP_{i,t}$ or $POP_{i,t}$
- $Z_{i,t}$: regional labor demand instrument
- Region and time fixed effects
- Control variables (depending on context and instrument)

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Response of *Y* to a shift in the instrument at horizon *h* – i.e., *h* years after the demand shock.

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$$\gamma_{h}^{Y} = \beta_{h}^{Y} / \beta_{h}^{E}$$

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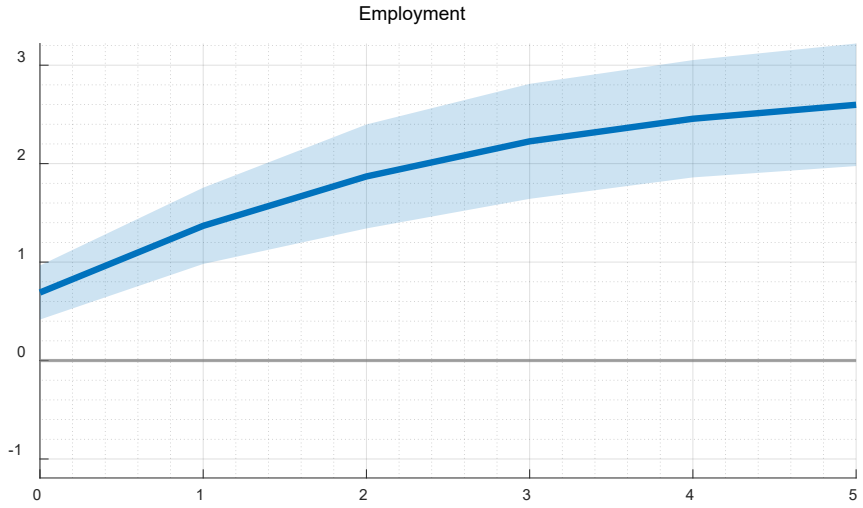
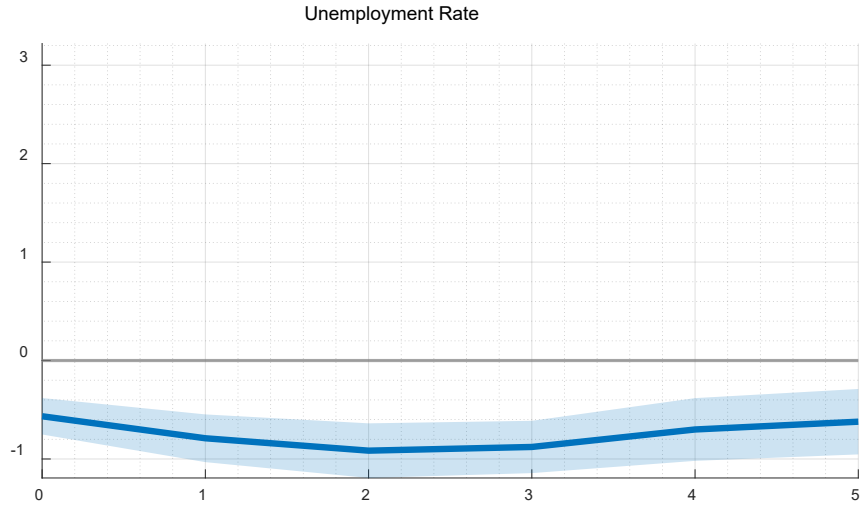
Fraction of the change in employment attributed to change in *Y* at horizon *h*

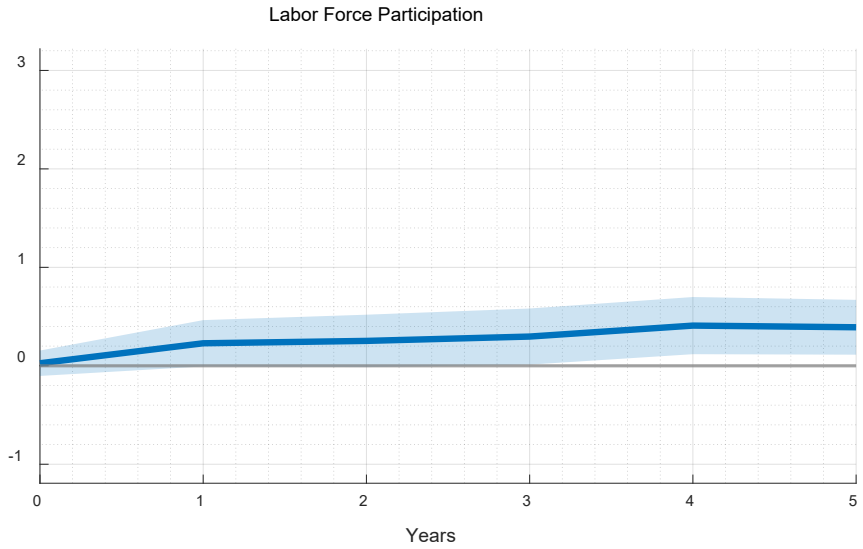
Instrument: Bartik – Industry Composition

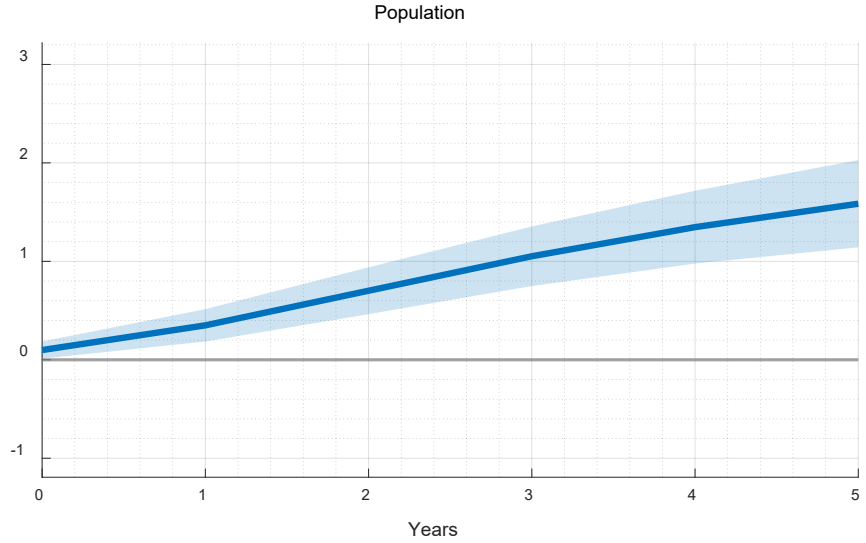
Bartik (1993), Dao et al. (2017)

Instrument: Bartik – Industry Composition









U.S. states. Shaded regions are 95 pct. confidence intervals.

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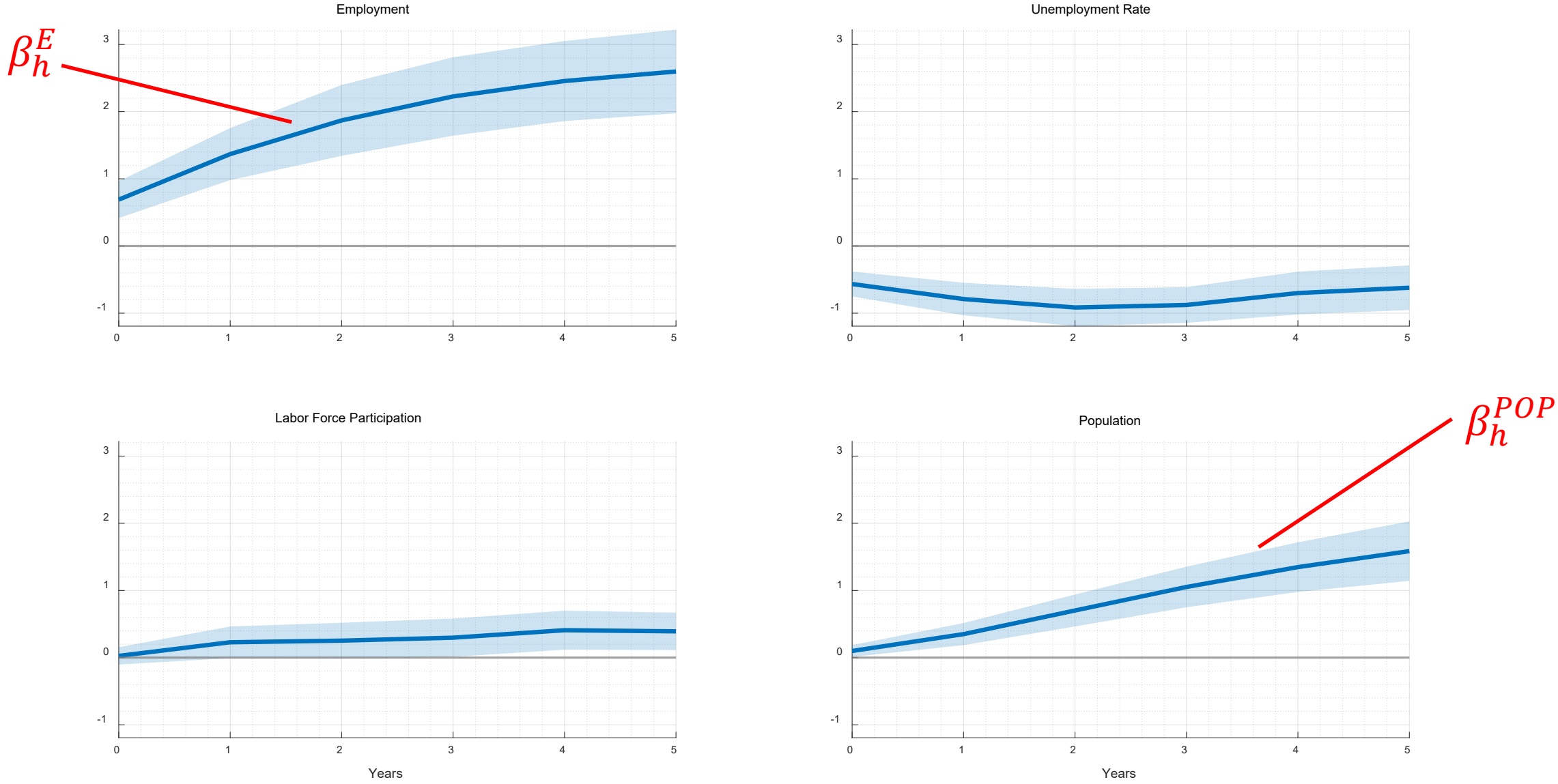

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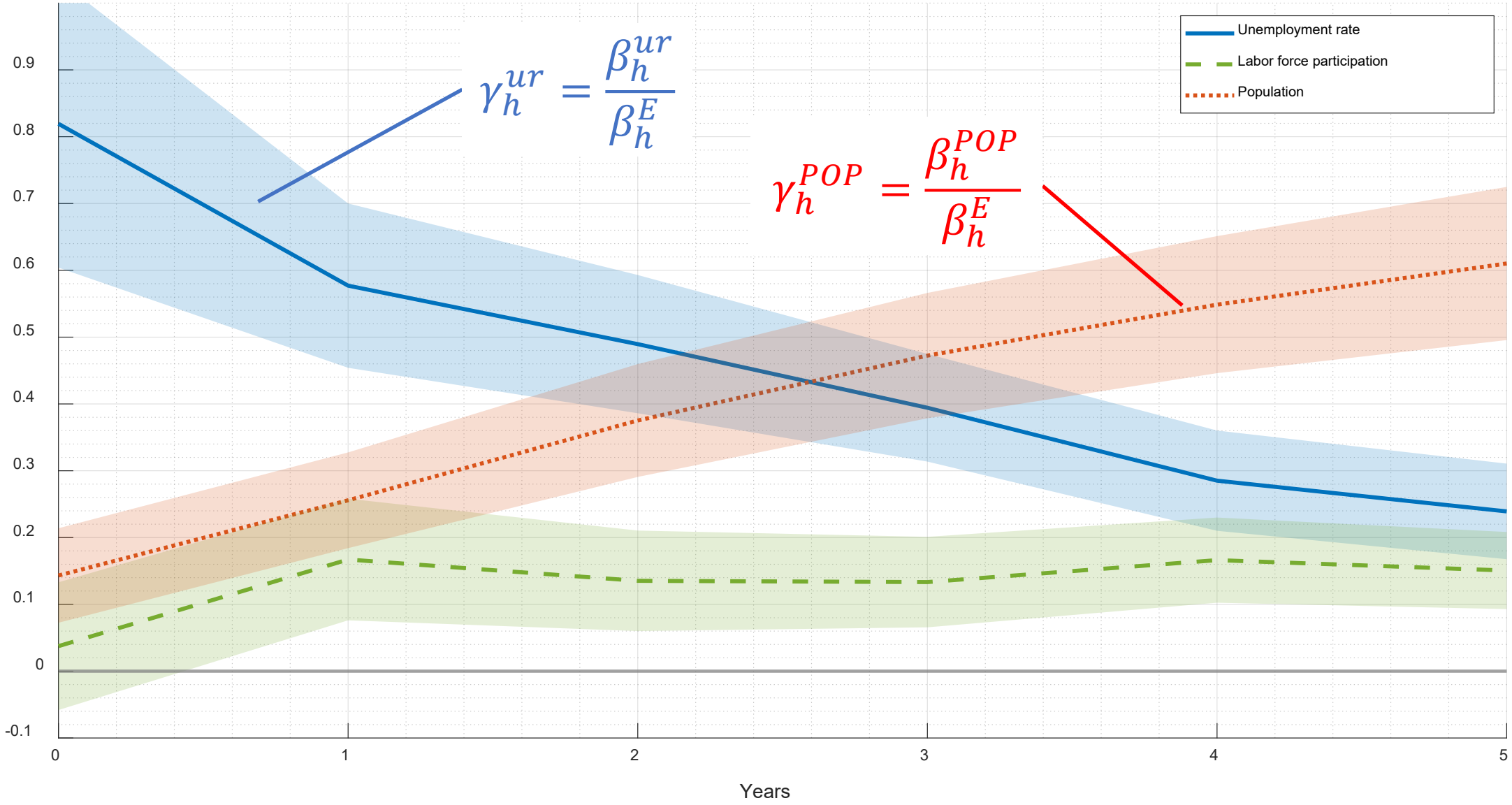

U.S. states. Shaded regions are 1 standard deviation.

Instrument: Bartik – Industry Composition

Rolling Regressions: 10-year windows (centered), h = 5 years

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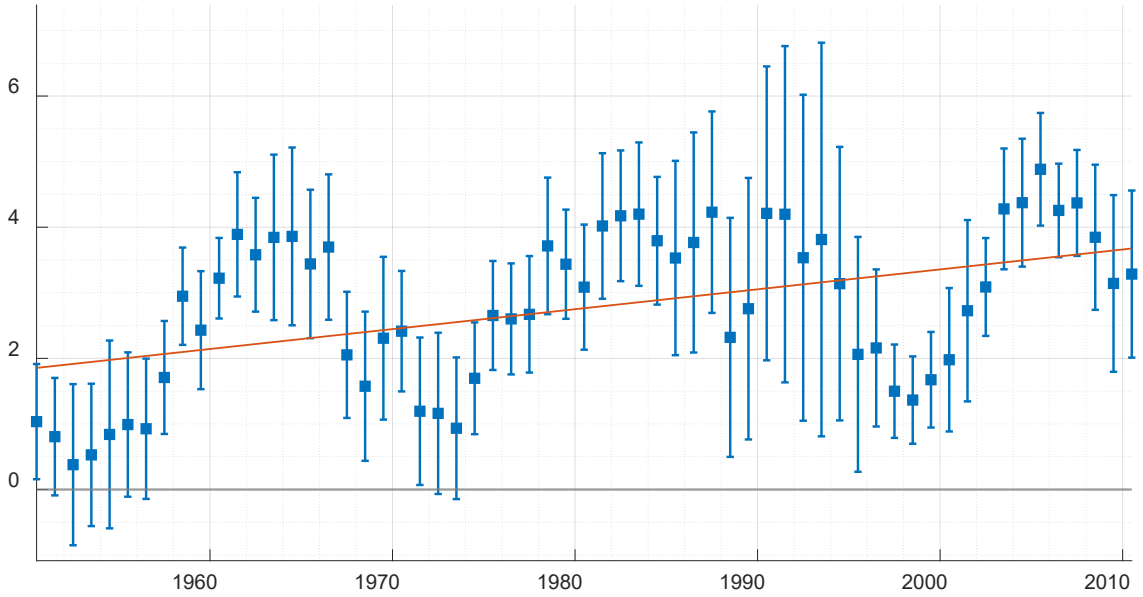
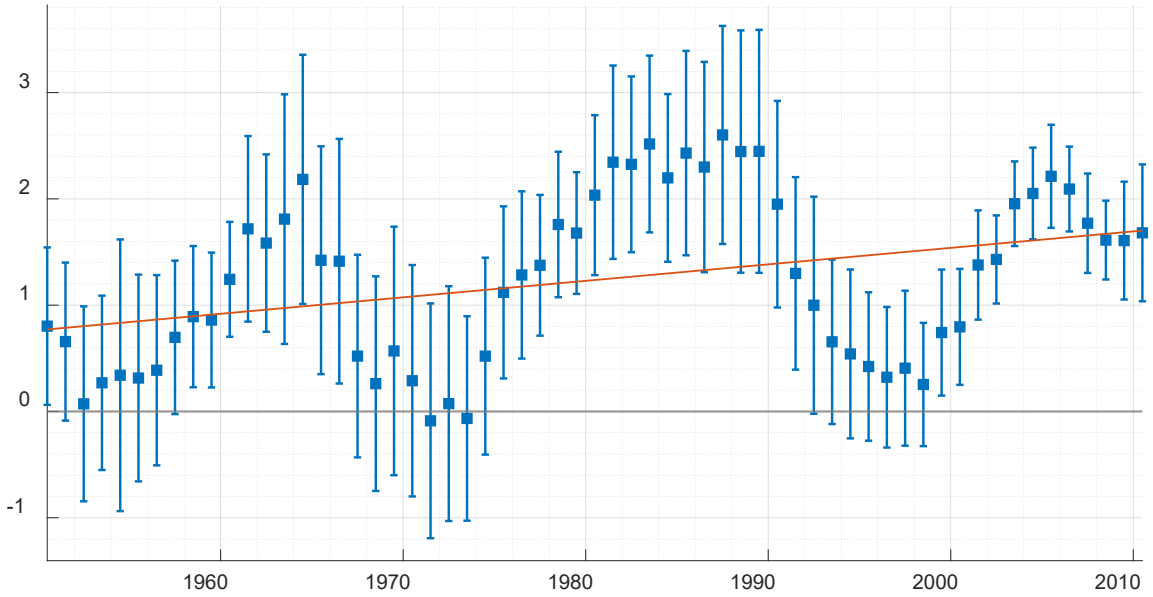
Rolling Regressions: 10-year windows (centered), *h* = 5 years

Jobs response (β_h^{Jobs}), *h* = 5 yrs.



Pop response (β_h^{POP}), *h* = 5 yrs.



U.S. states. Lines reflect 90 pct. confidence intervals.

Instrument: Bartik – Industry Composition

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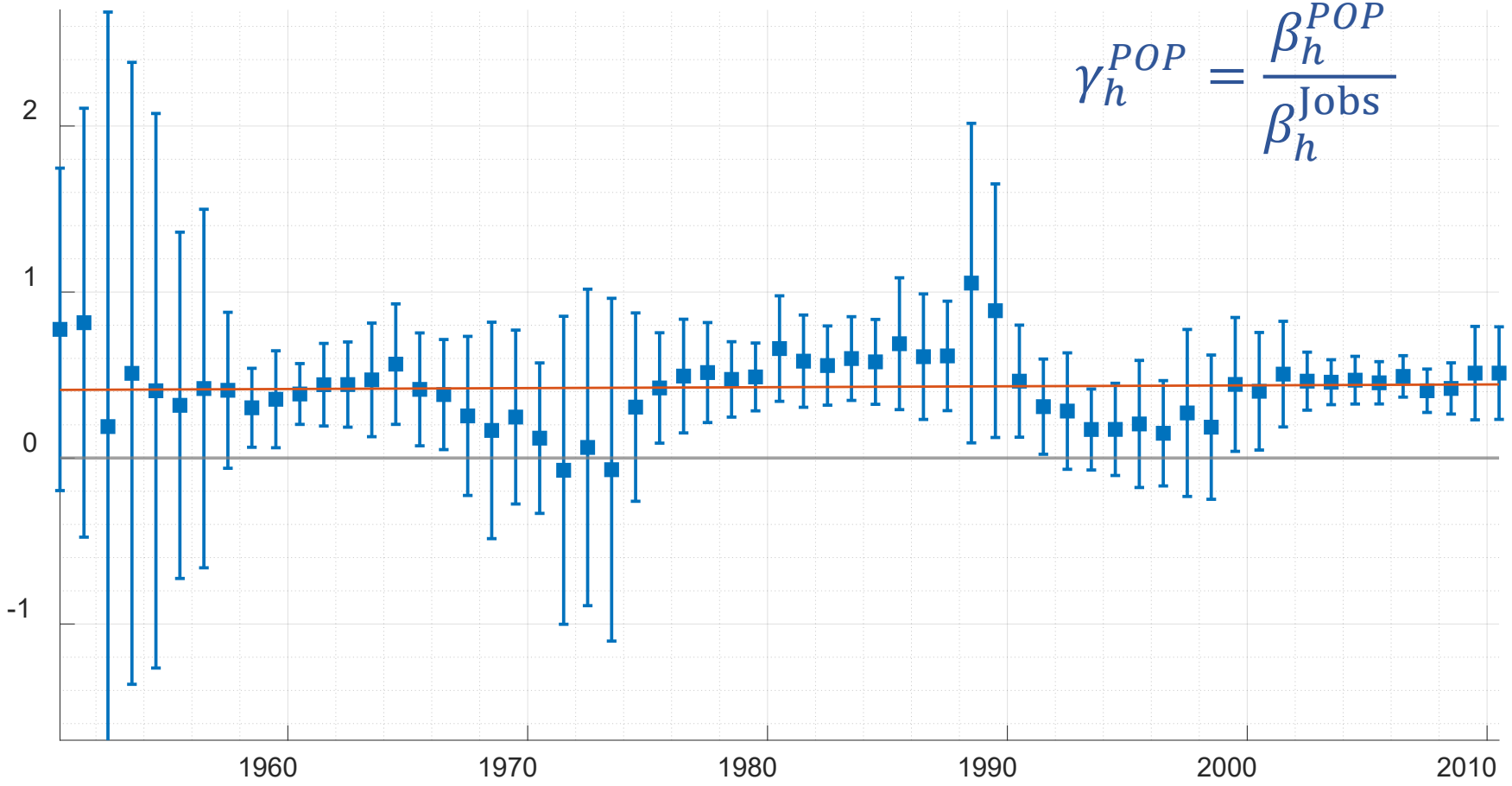

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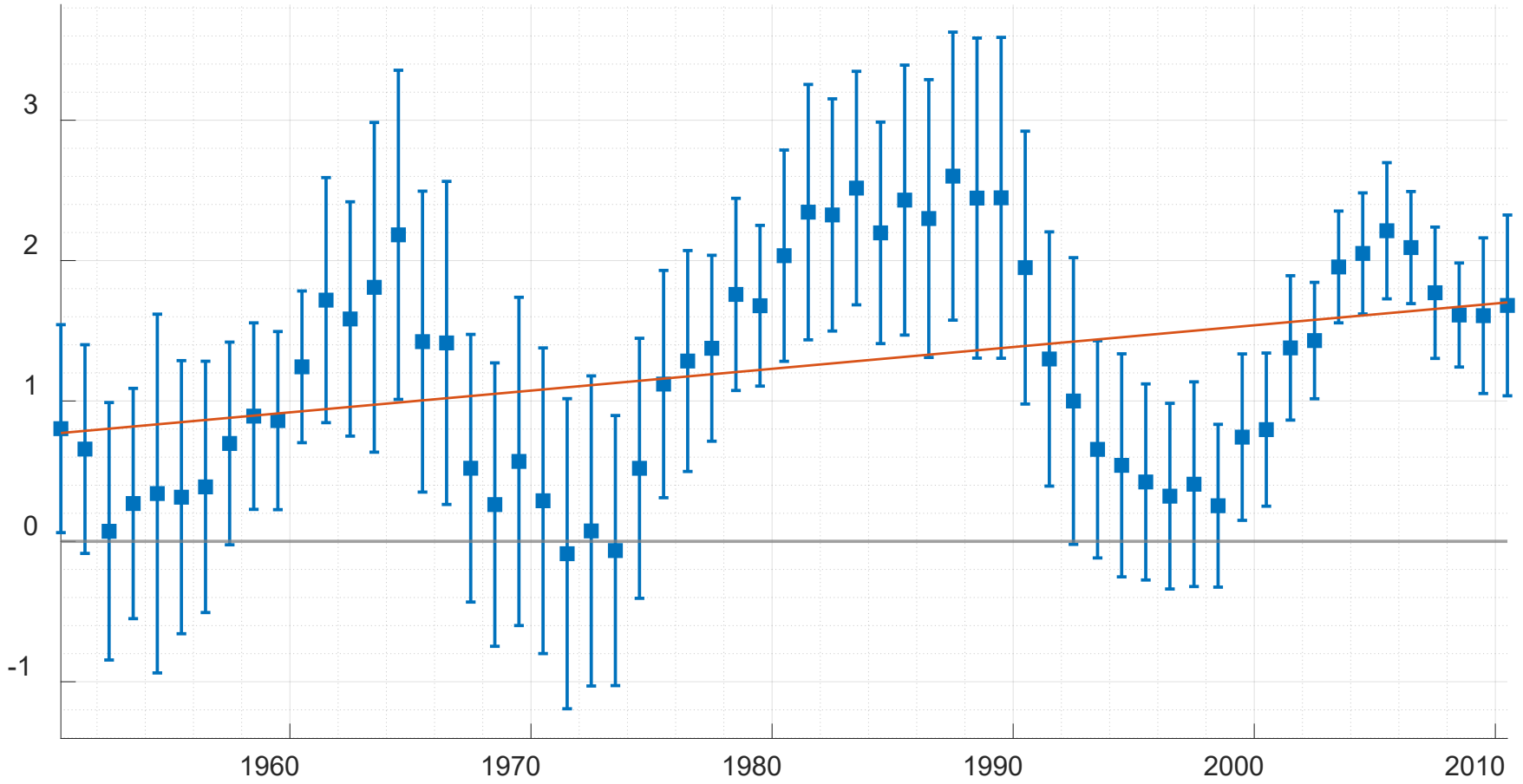
β_5^{POP}



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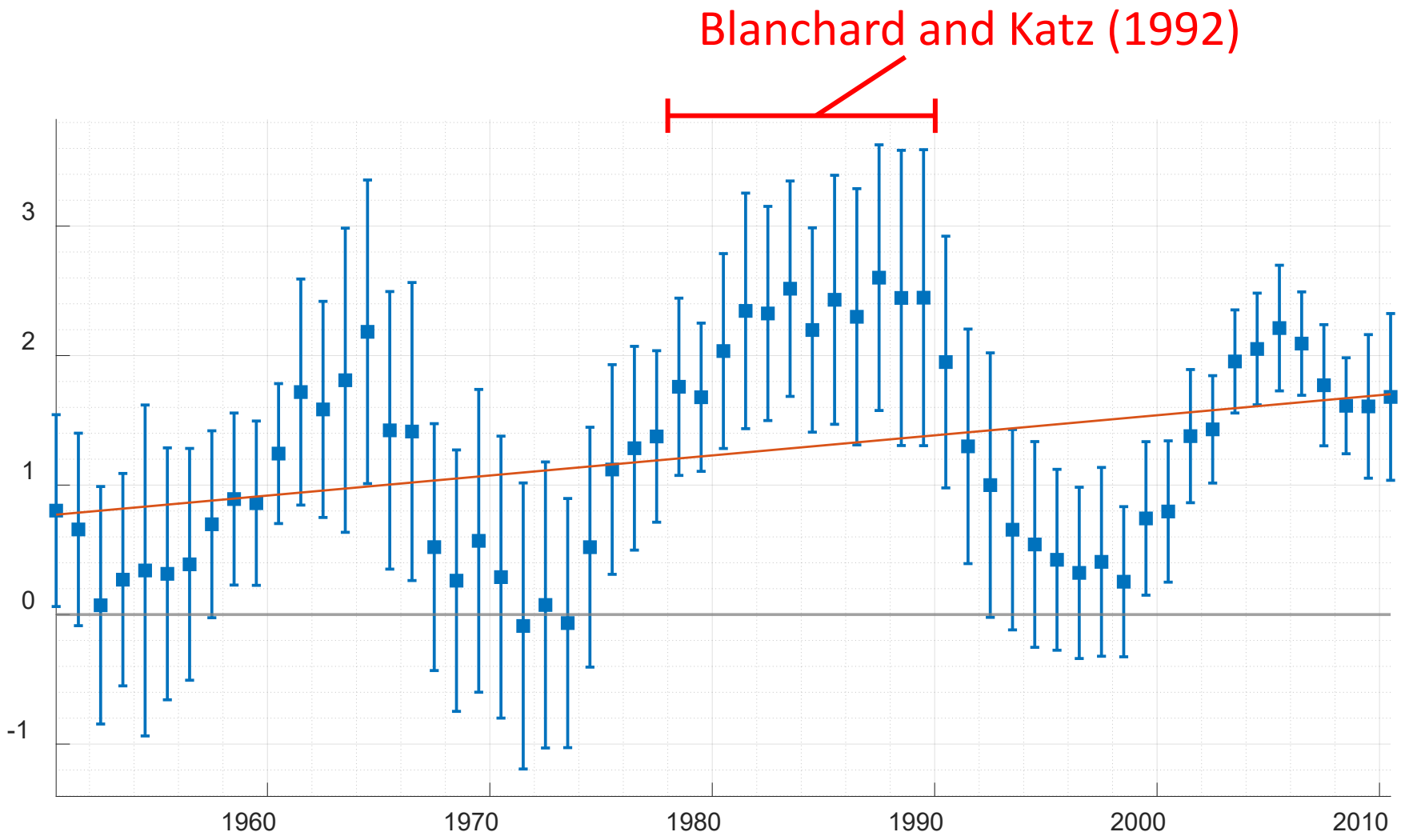

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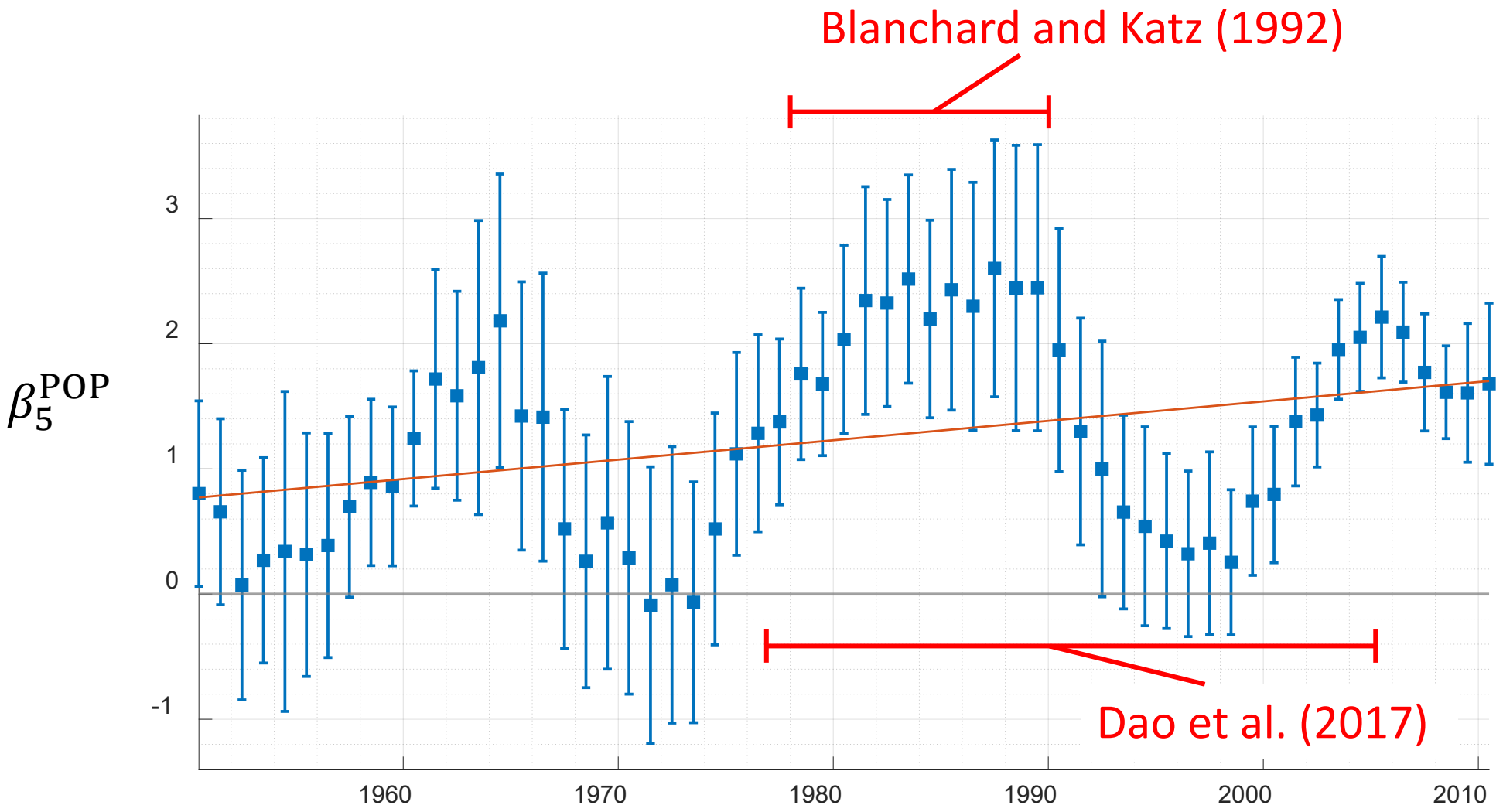

Instrument: Bartik – Industry Composition

	Short run (h=0)					Long run (h=5)			
	Emp	ur	LFP	POP		Emp	ur	LFP	POP
β_h									
State	0.69	−0.57	0.03	0.1		2.6	−0.62	0.39	1.59
	0.14	0.09	0.07	0.04		0.32	0.17	0.14	0.23
CZ	0.95	−0.53	0.31	0.11		1.73	−0.15	0.58	0.99
	0.06	0.04	0.04	0.02		0.17	0.07	0.09	0.09
County	0.63	−0.34	0.22	0.07		1.15	−0.07	0.47	0.62
	0.03	0.02	0.03	0.01		0.08	0.03	0.06	0.05
γ_h									
State		−0.82	0.04	0.14			−0.24	0.15	0.61
		0.22	0.10	0.07			0.07	0.06	0.11
CZ		−0.56	0.33	0.11			−0.09	0.34	0.57
		0.06	0.05	0.02			0.04	0.06	0.08
County		−0.54	0.35	0.11			−0.06	0.40	0.54
		0.04	0.04	0.01			0.03	0.06	0.06

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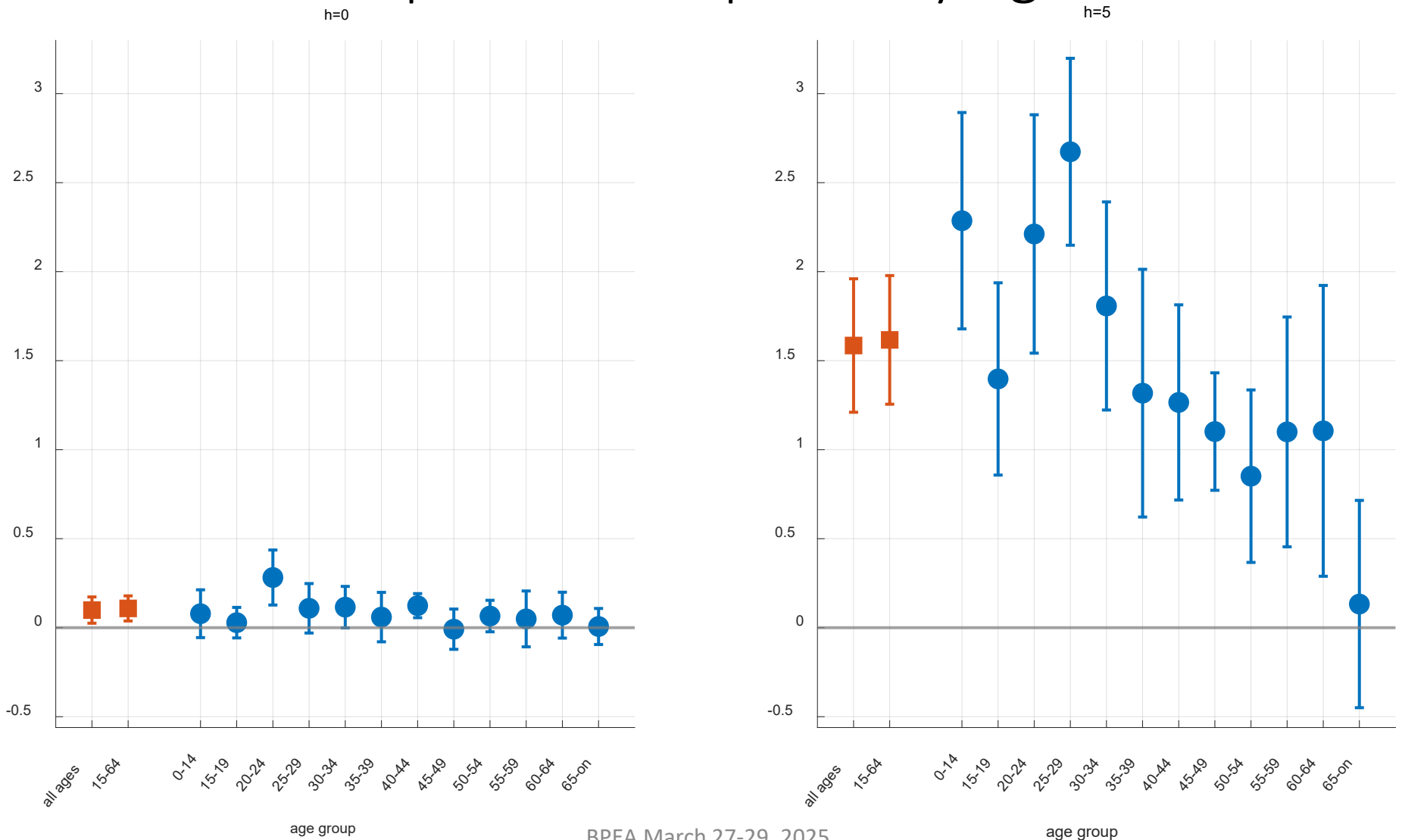
		0.04	0.04	0.01			0.03	0.06	0.06

Table 2: LABOR MARKET RESPONSES BY COUNTY CHARACTERISTICS

	Short-run ($h = 0$)				Long-run ($h = 5$)			
	Empl	ur	Lfp	Pop	Empl	ur	Lfp	Pop
Urban	0.69 (0.03)	−0.34 (0.02)	0.23 (0.03)	0.07 (0.01)	1.15 (0.08)	−0.06 (0.03)	0.46 (0.06)	0.63 (0.05)
Rural	0.45 (0.03)	−0.29 (0.01)	0.12 (0.03)	0.05 (0.01)	1.10 (0.08)	−0.15 (0.03)	0.48 (0.06)	0.46 (0.03)
Higher income	0.66 (0.04)	−0.31 (0.02)	0.26 (0.03)	0.09 (0.01)	1.06 (0.10)	−0.00 (0.03)	0.37 (0.06)	0.68 (0.06)
Lower income	0.61 (0.03)	−0.37 (0.02)	0.19 (0.02)	0.05 (0.01)	1.24 (0.08)	−0.13 (0.03)	0.56 (0.05)	0.56 (0.04)
Higher education	0.64 (0.04)	−0.29 (0.02)	0.26 (0.03)	0.09 (0.01)	1.18 (0.11)	−0.06 (0.03)	0.40 (0.08)	0.73 (0.07)
Lower education	0.63 (0.03)	−0.38 (0.02)	0.20 (0.02)	0.06 (0.01)	1.13 (0.07)	−0.07 (0.03)	0.51 (0.05)	0.55 (0.04)

Instrument: Bartik – Industry Composition

Population Response by Age



Instrument: Military Spending

Nakamura and Steinsson (2014), Auerbach *et al*. (2020)

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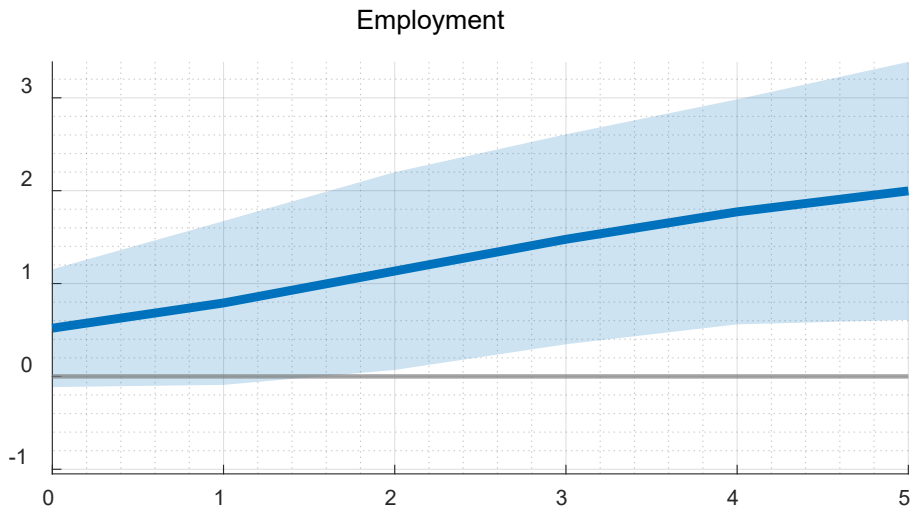
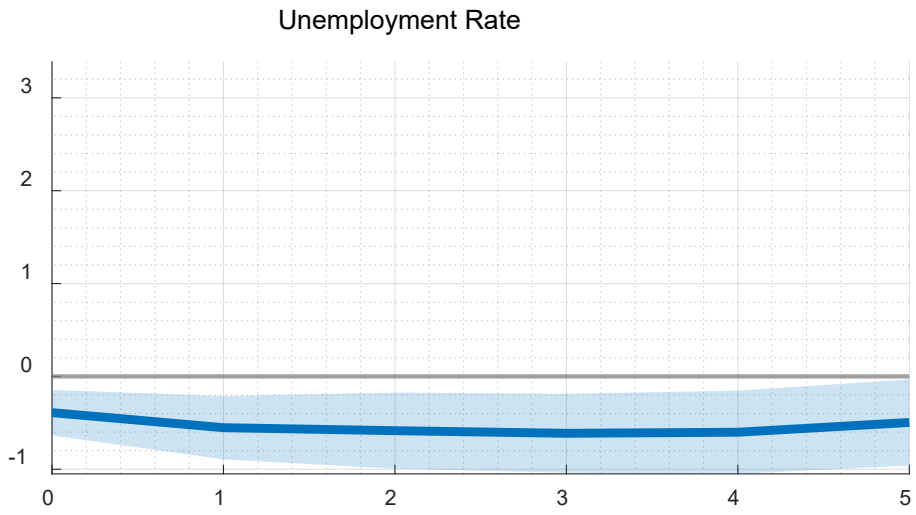
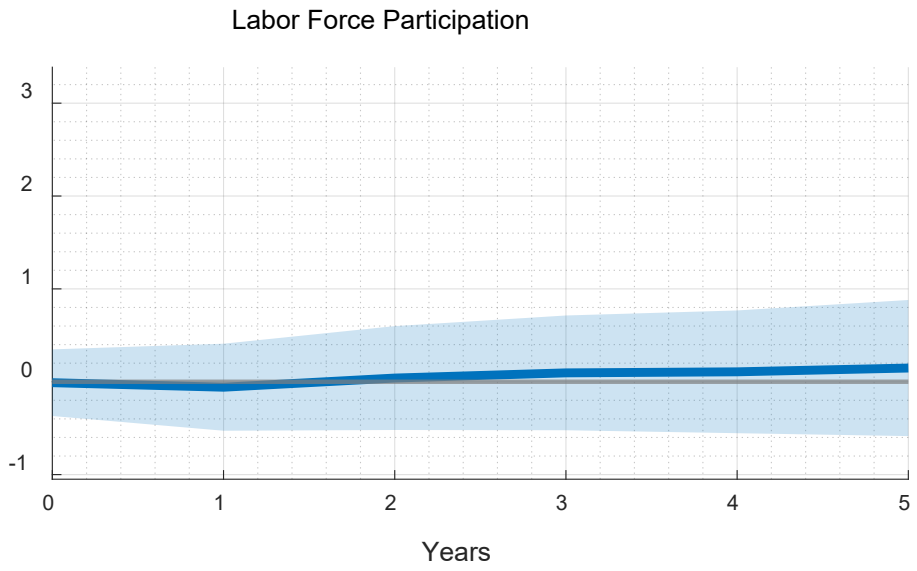
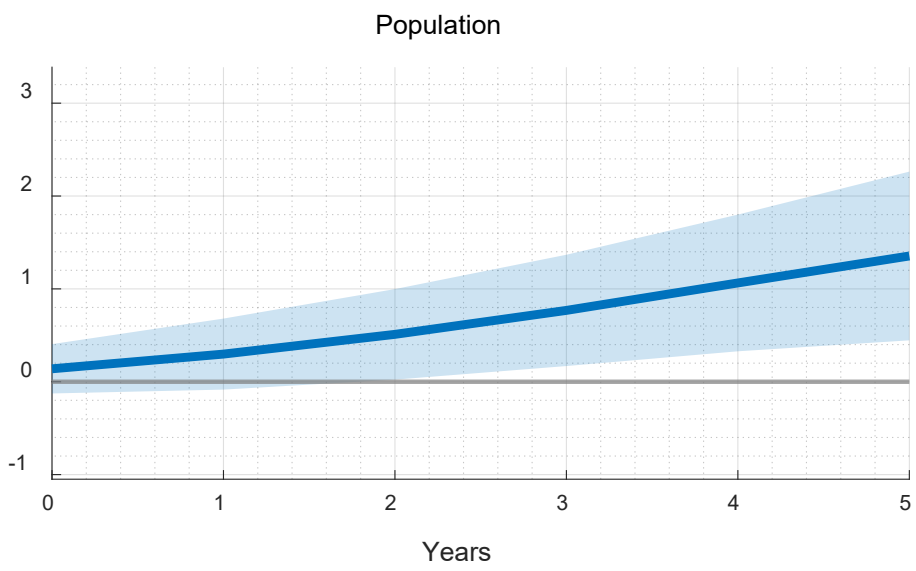




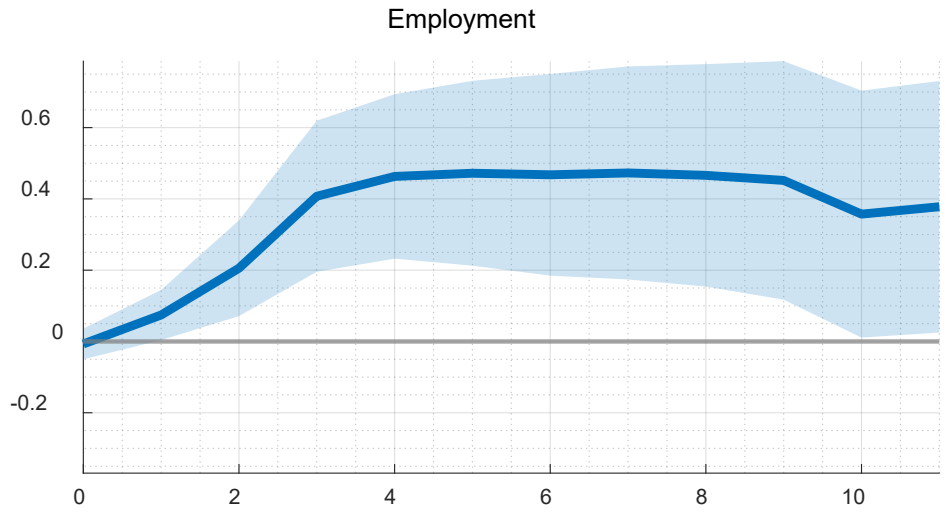


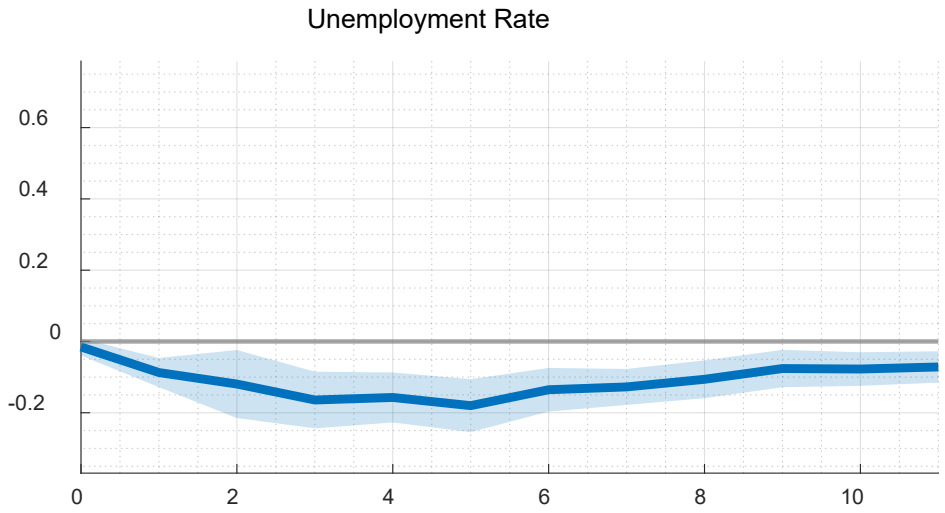


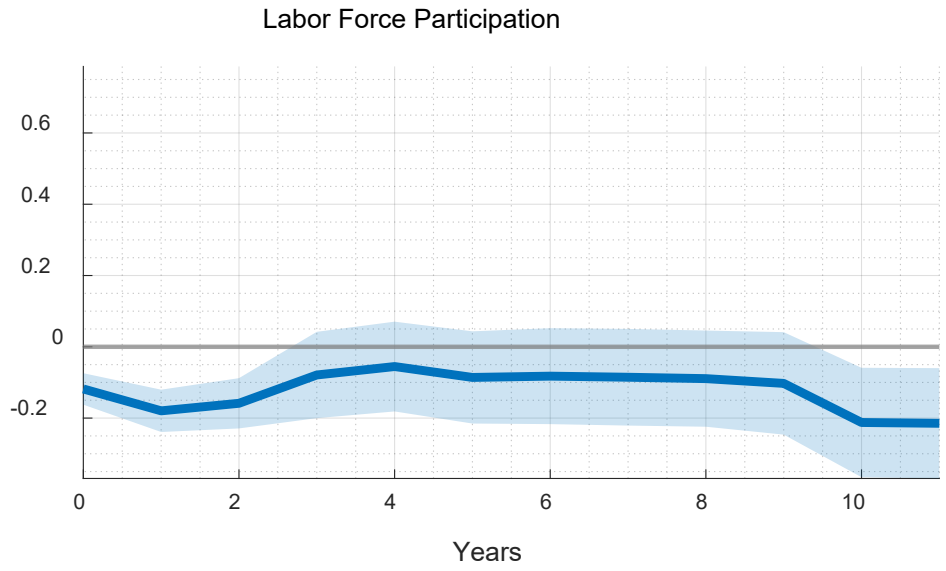
Instrument: Housing Net Worth

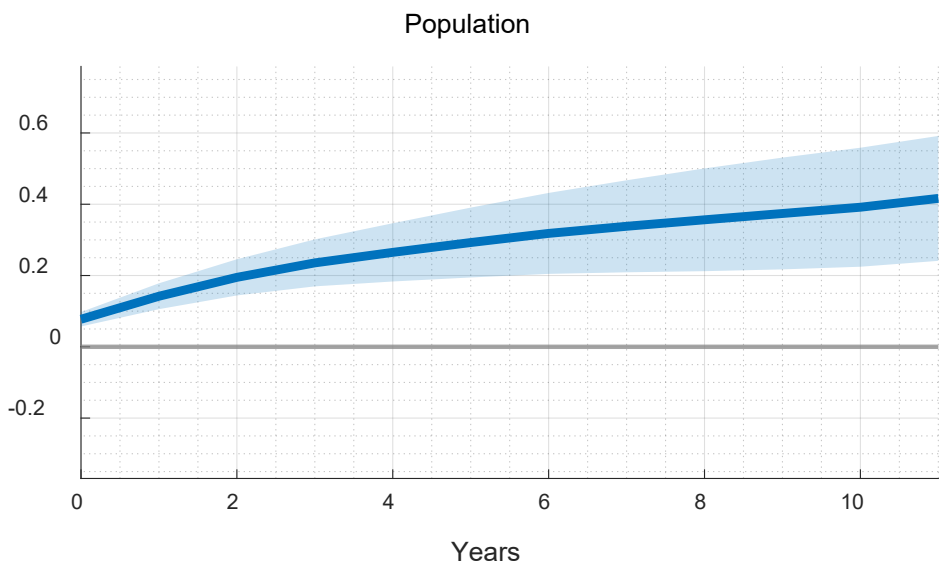
Mian and Sufi (2014), Bhattarai *et al*. (2021)

Instrument: Housing Net Worth





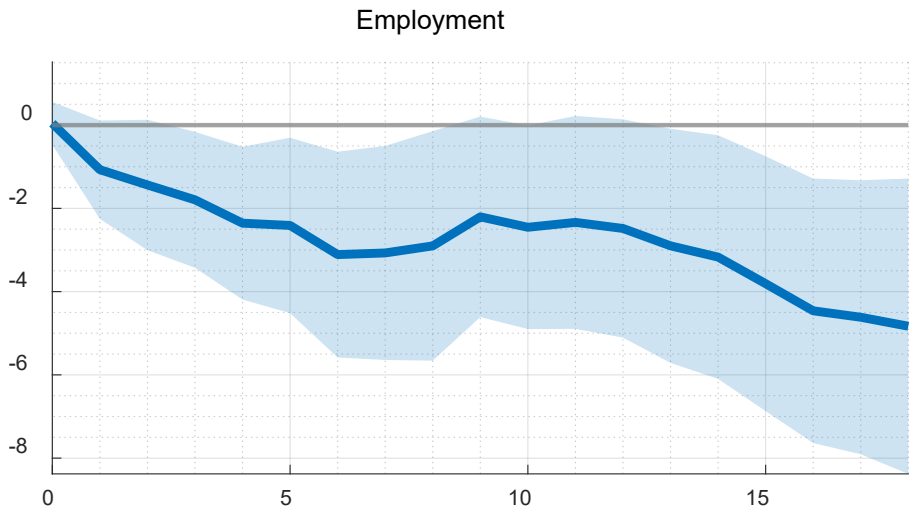


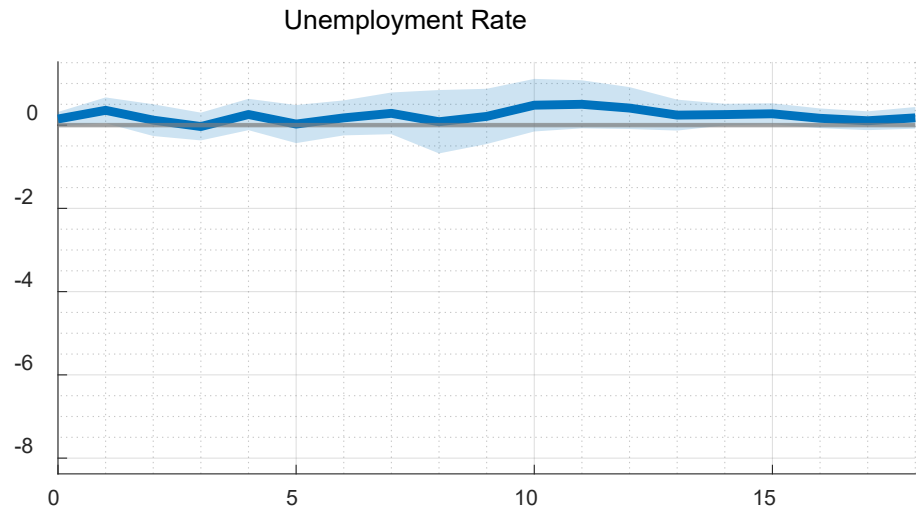


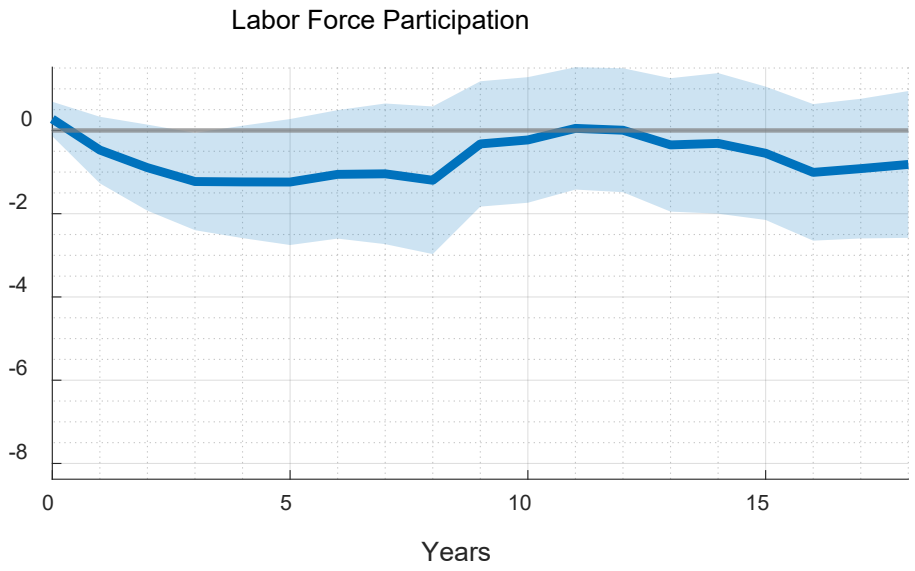
Instrument: Import Competition (aka the “China Shock”)

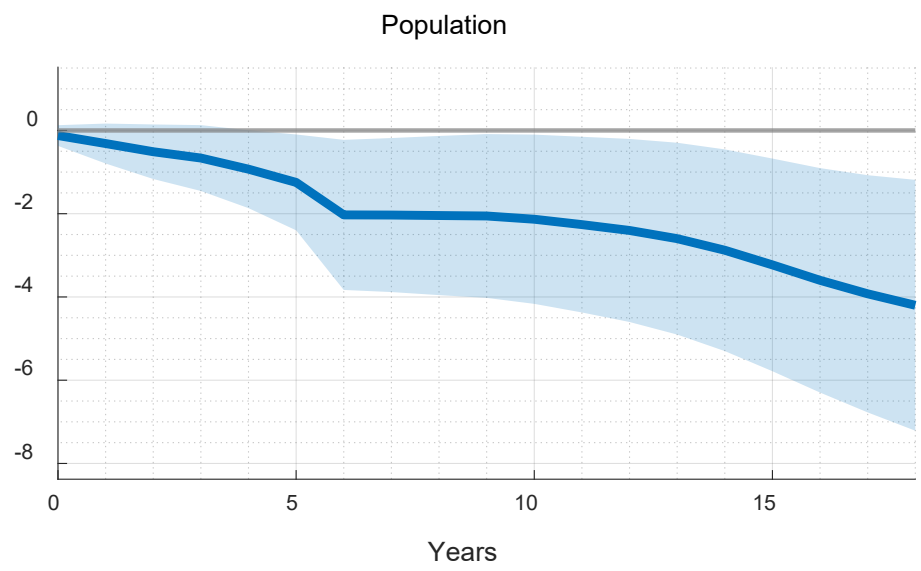
Autor et al. (2013) and Autor et al. (2021)

Instrument: Import Competition (aka the "China Shock")









Comparison

		Long run (h=5)			
		Emp	ur	LFP	POP
β_5	Industry Bartik (State)	2.6	−0.62	0.39	1.59
		0.32	0.17	0.14	0.23
	Defense Spending (State)	2.00	−0.50	0.15	1.35
		0.71	0.24	0.37	0.46
	Housing Net Worth (County)	0.47	−0.11	−0.09	0.35
		0.16	0.03	0.07	0.07
	Import Competition (CZ)	−4.10	0.12	−1.48	−2.64
		1.84	0.13	0.95	1.49
γ_5	Industry Bartik (State)		−0.24	0.15	0.61
			0.07	0.06	0.11
	Defense Spending (State)		−0.25	0.07	0.68
			0.15	0.19	0.33
	Housing Net Worth (County)		−0.23	−0.19	0.76
			0.10	0.16	0.31
	Import Competition (CZ)		−0.03	0.36	0.64
			0.04	0.29	0.47

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		0.16	0.03	0.07	0.07
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Summary

- Most regional labor demand instruments predict an increase in in-migration which is economically significant and usually statistically significant.
- After 5 years, roughly 2/3 of the predicted increase in employment is accounted for by labor migration.
- Smaller regions (e.g., counties rather than states) seem to have a smaller migration response (?)
- People aged between 25-40 are more responsive.
- There is no evidence that the migration elasticity is falling over time.