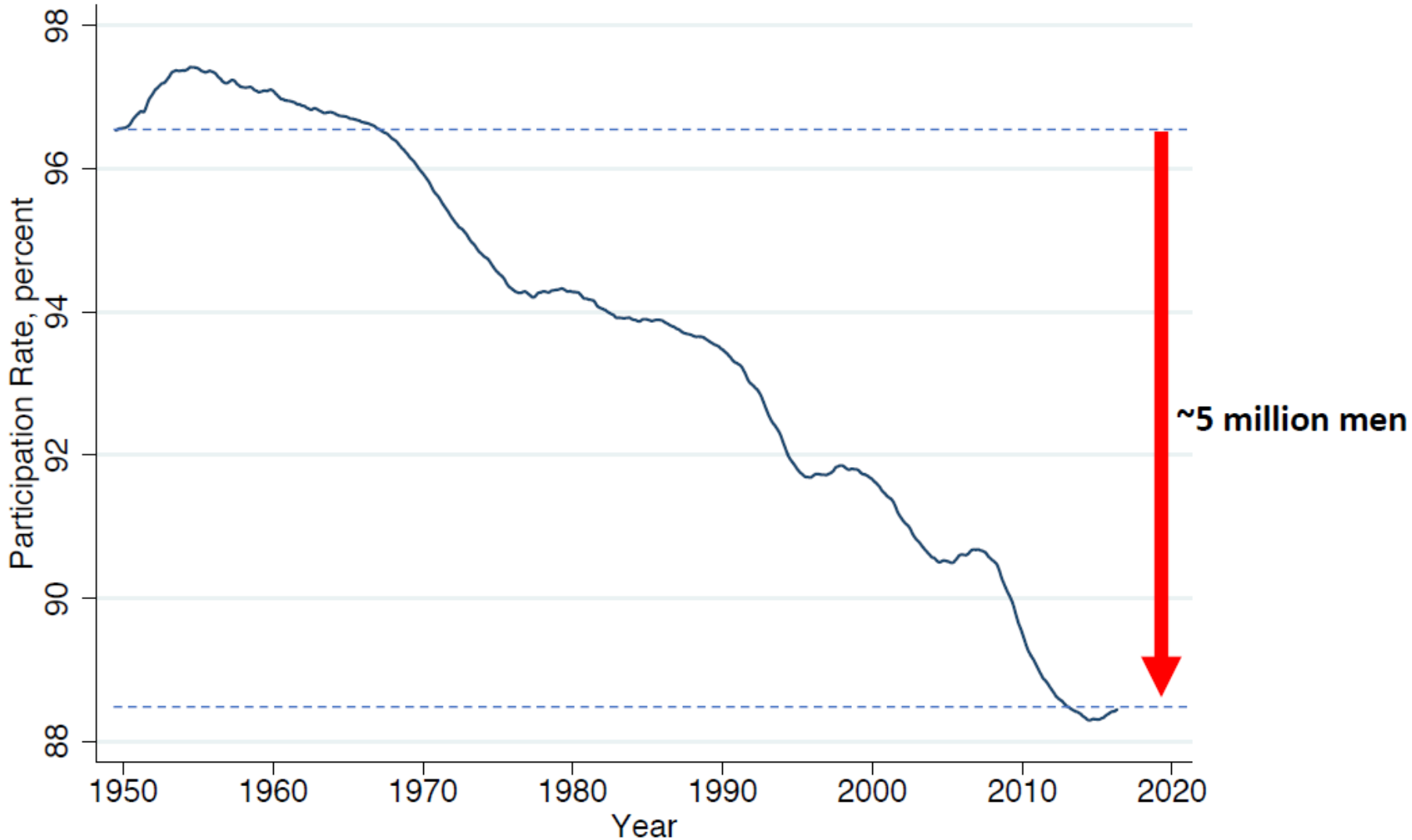
The Geography of Joblessness

Ben Austin, Edward Glaeser, Lawrence Summers

Harvard University

Prime male labor force participation has declined over the past 40 years

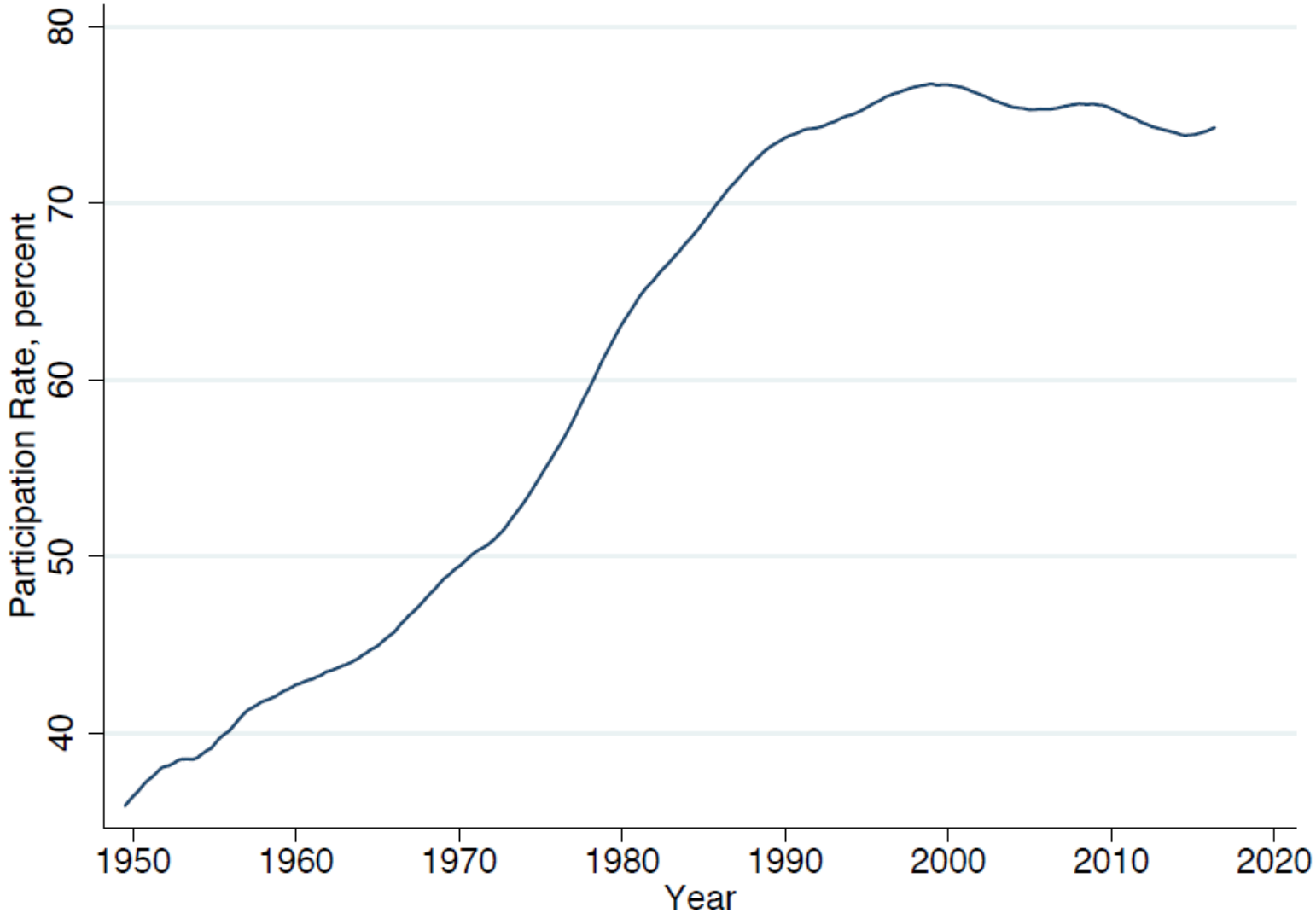
Prime age male labor force participation



Source: Bureau of Labor Statistics

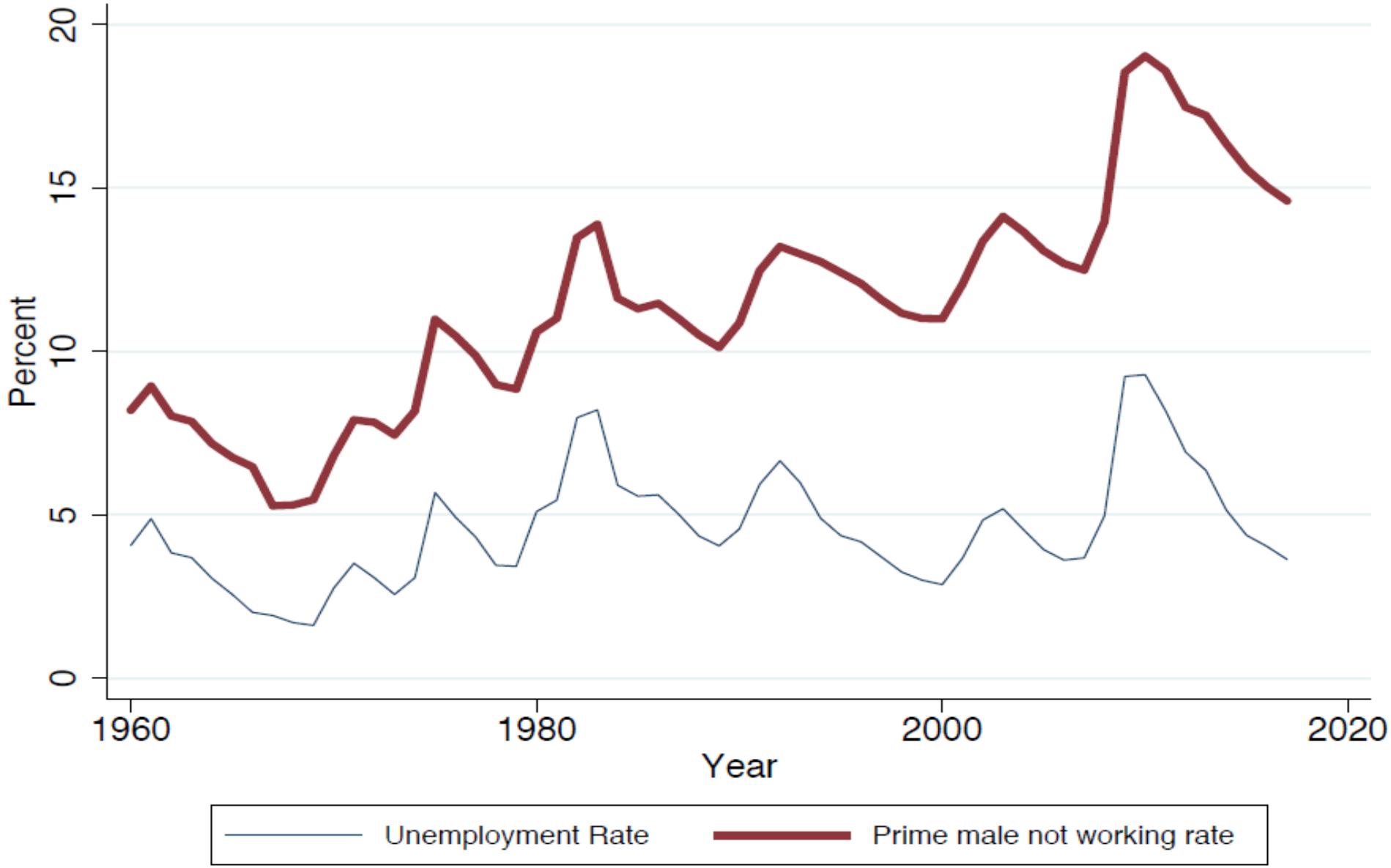
While prime female participation increased until 2000

Prime age female labor force participation



Source: Bureau of Labor Statistics

Prime age male not working rates vs. national unemployment rate

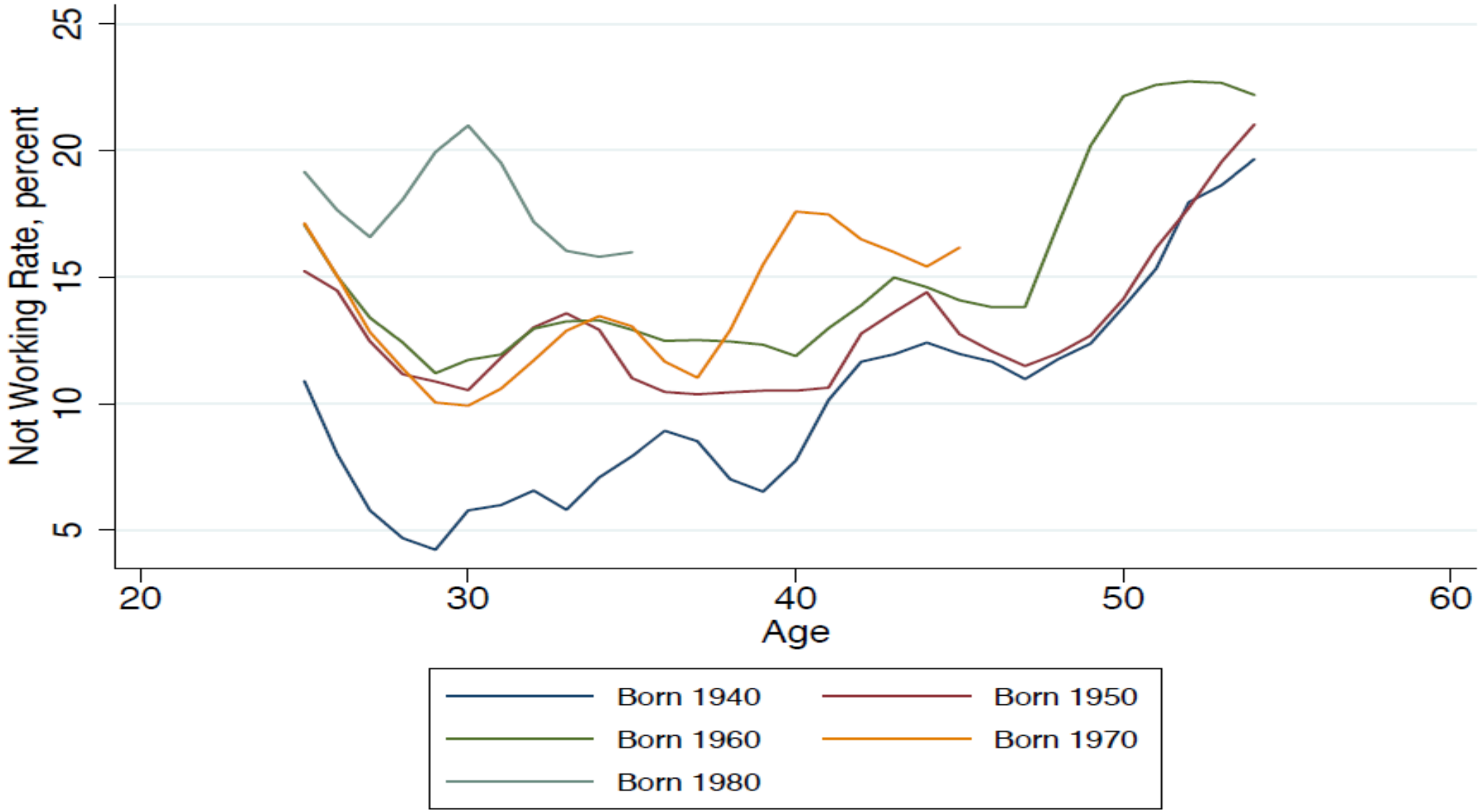


Source: OECD Statistics, authors' calculations


Not Working rate, percent
5
10
15
20
1980
1990
2000
2010
2020
Year
Total Not Working Rate
>12 months Not Working Rate

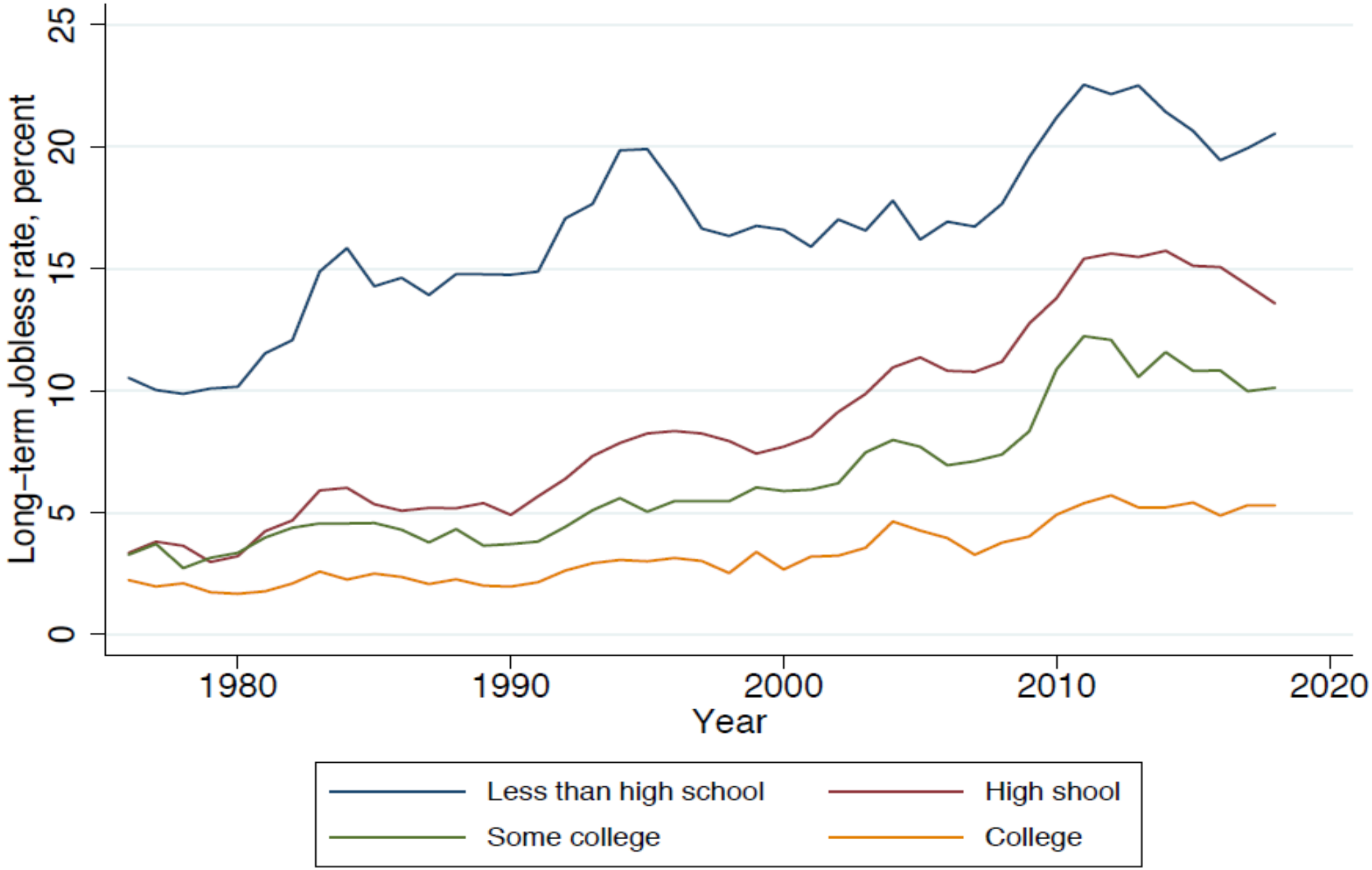
Recent cohorts of men show higher joblessness rates at the same age

Prime age men



Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement; IPUMS; authors' calculations

Prime age men

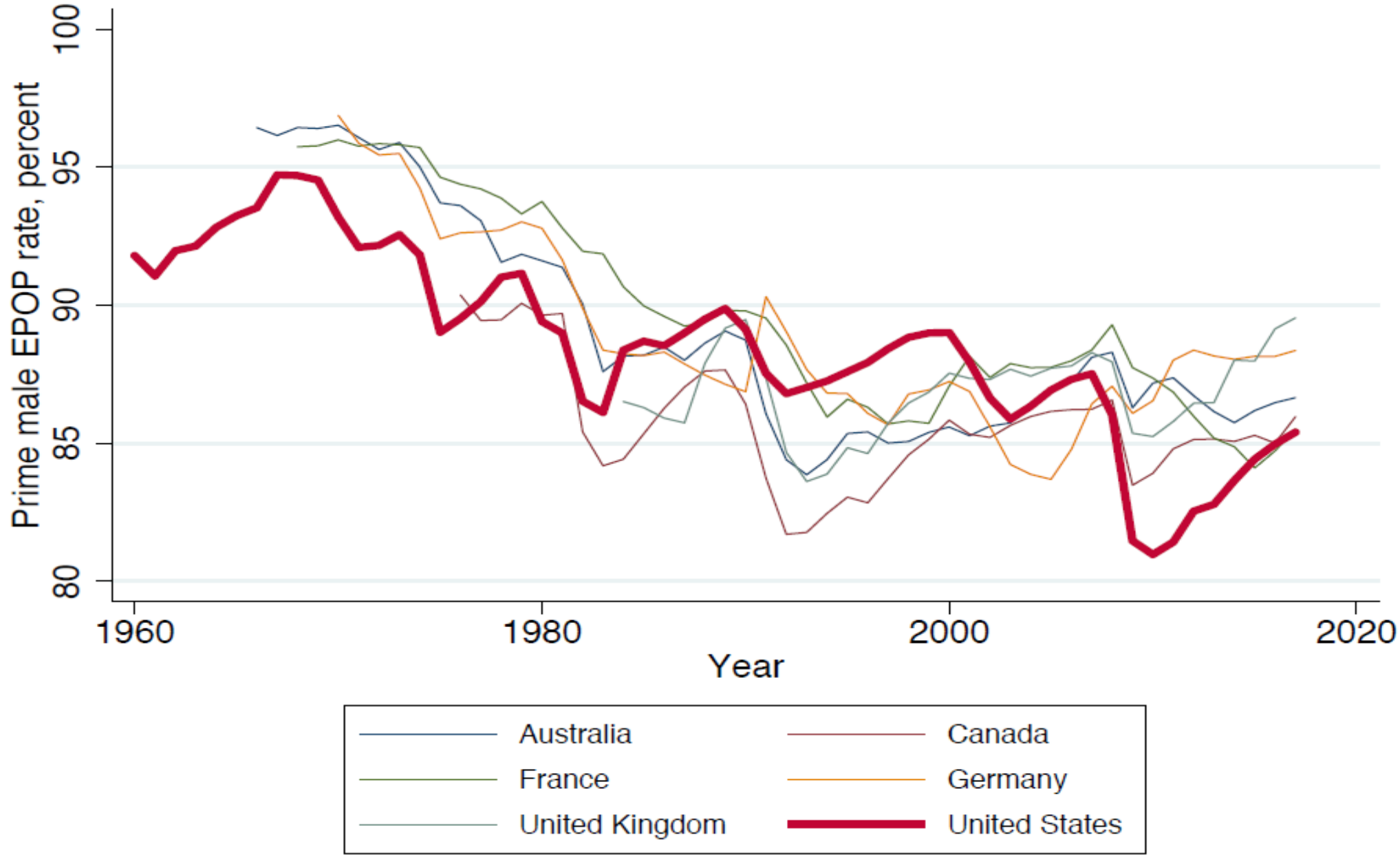


Disability cannot explain the full growth in long-term jobless rates

Long-term jobless rate, 1988-2018

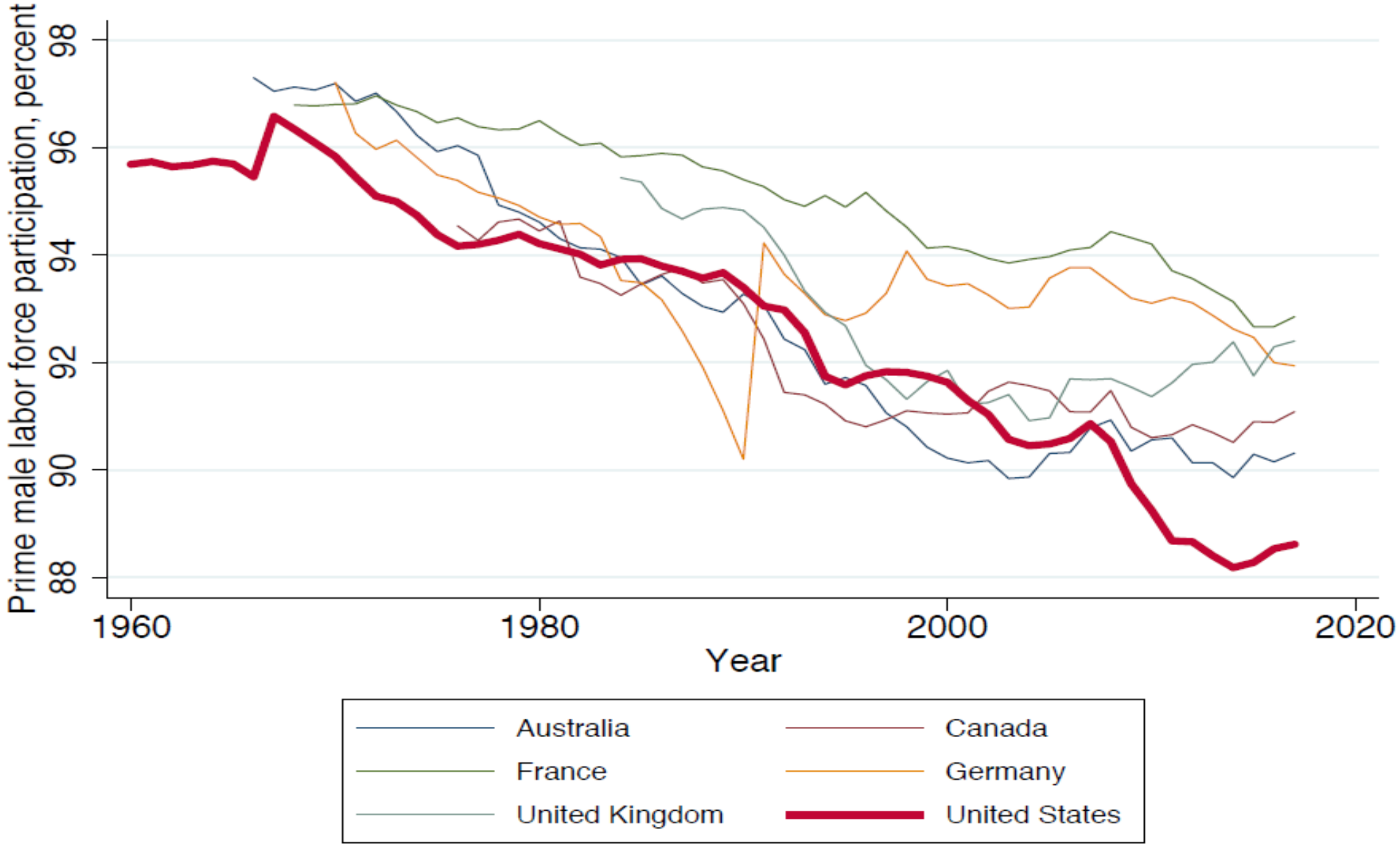
Prime male EPOP levels are slightly below comparable OECD countries

Prime age men



However, labor force participation rates are significantly lower than the OECD

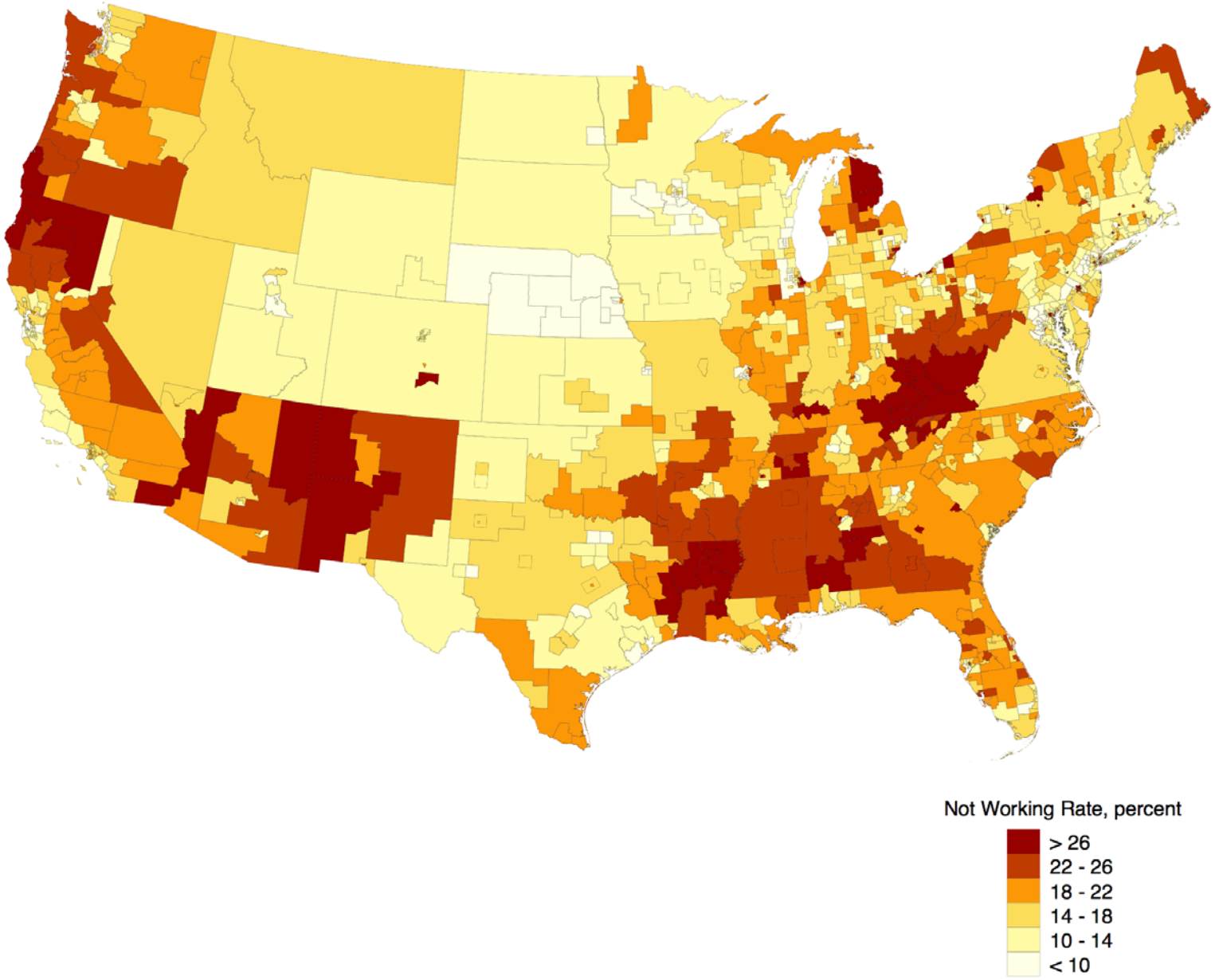
Prime age men



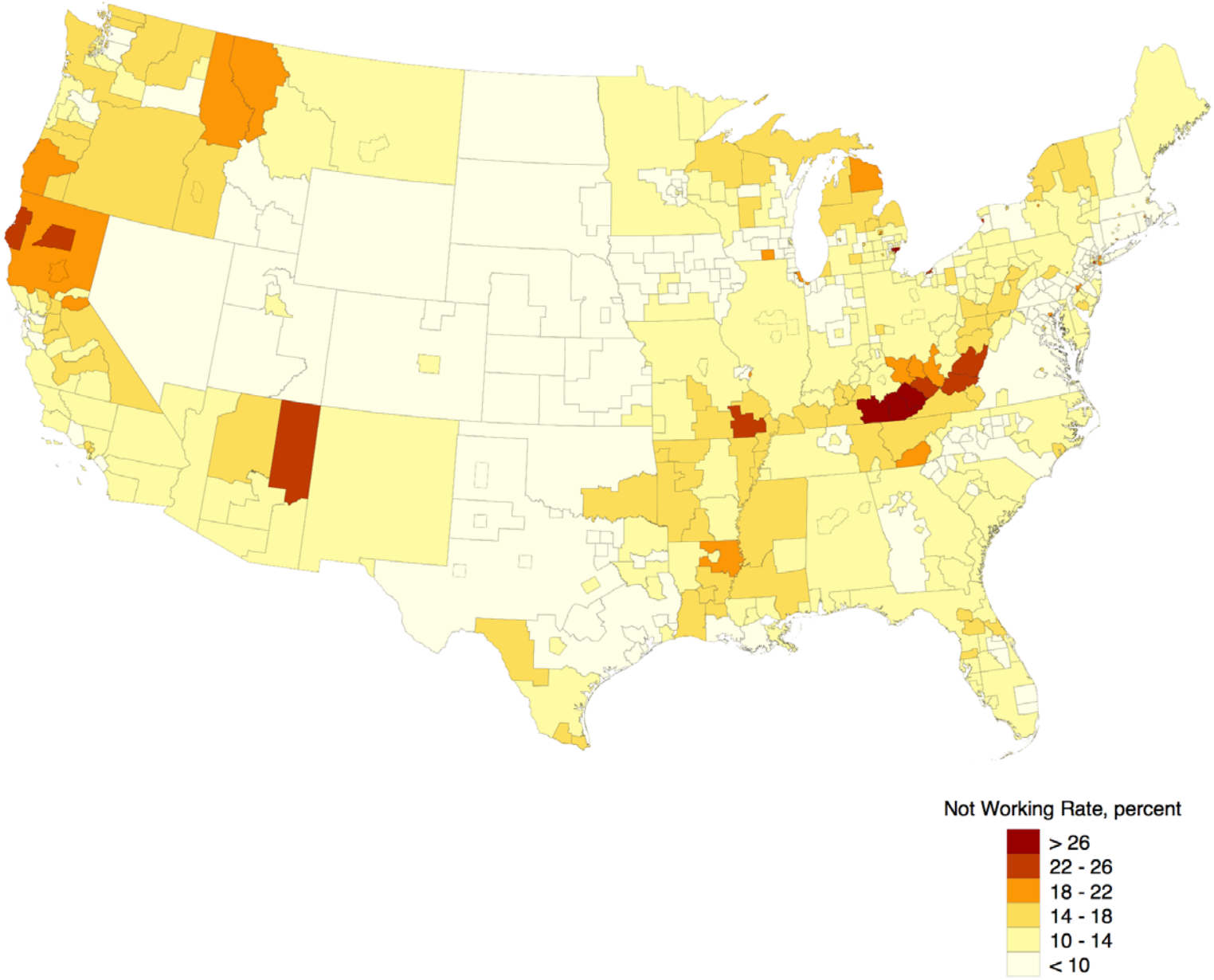
Source: OECD Statistics, authors' calculations


Employment rate by location
Employment Rate, percent
88
84
80
1980
1990
2000
2010
Year
Key
Major Metro Area
Other Metro Area
Non-Metro Area

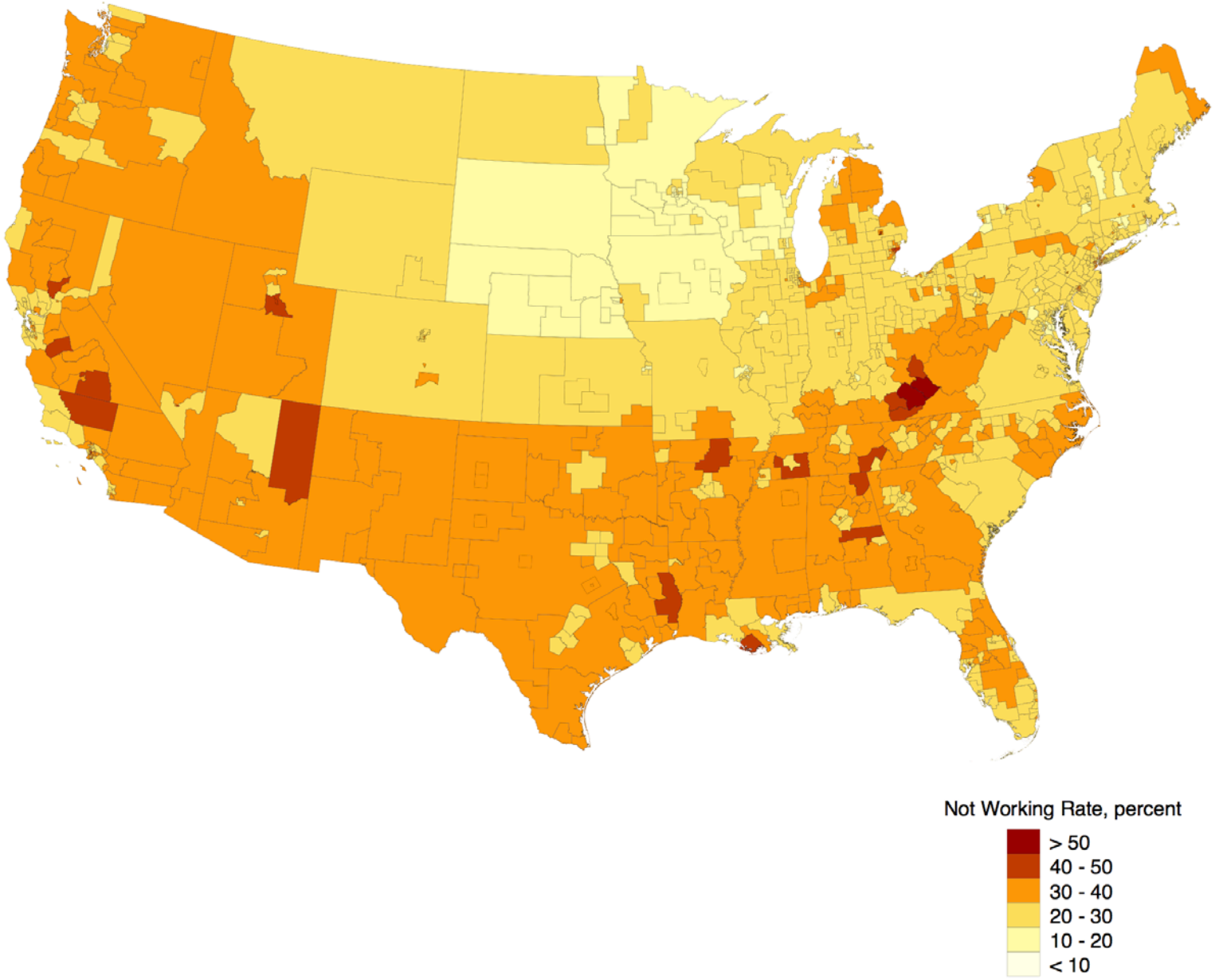
Geography of not working: Prime men 2015



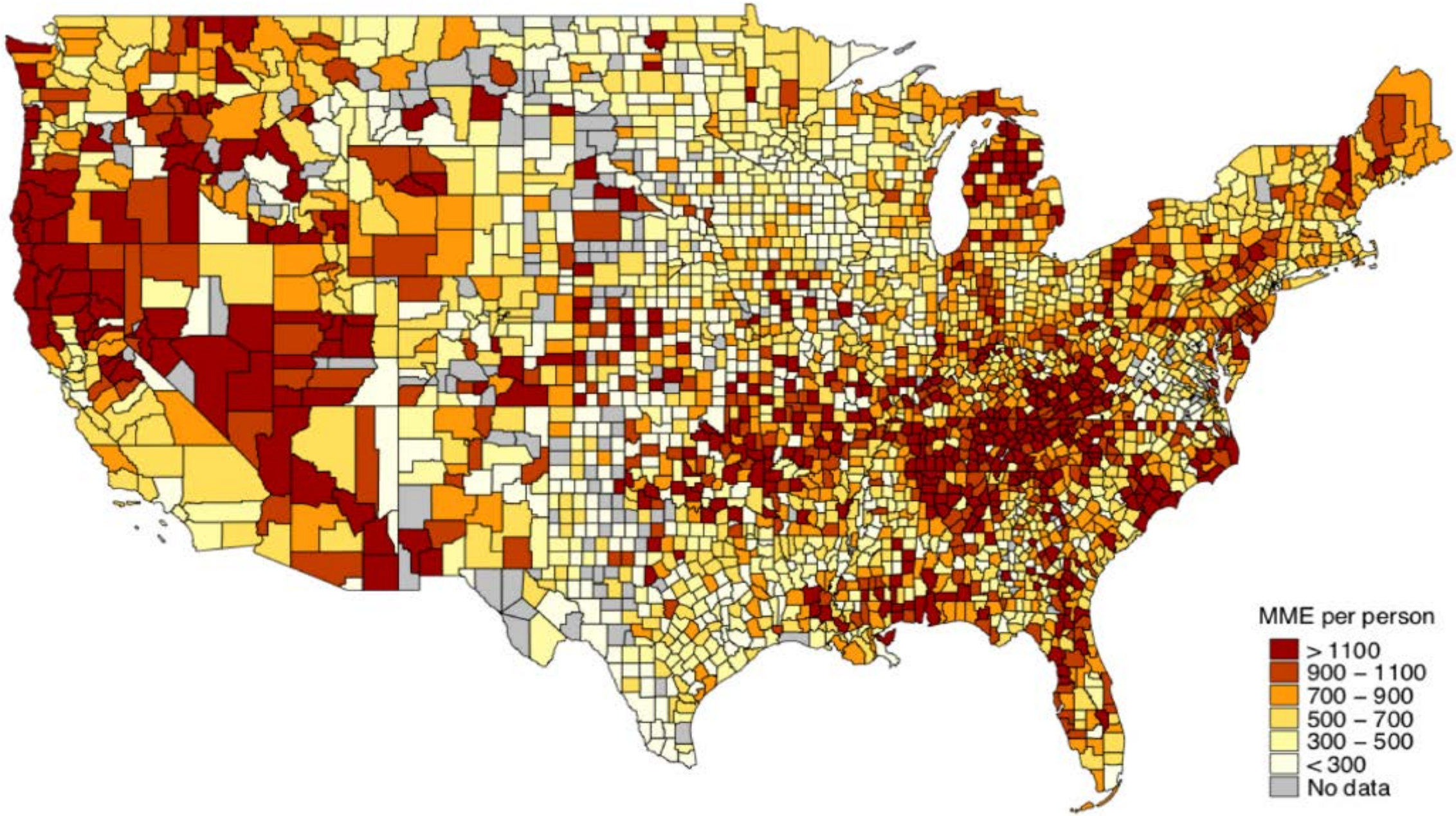
Geography of not working: Prime aged men 1980



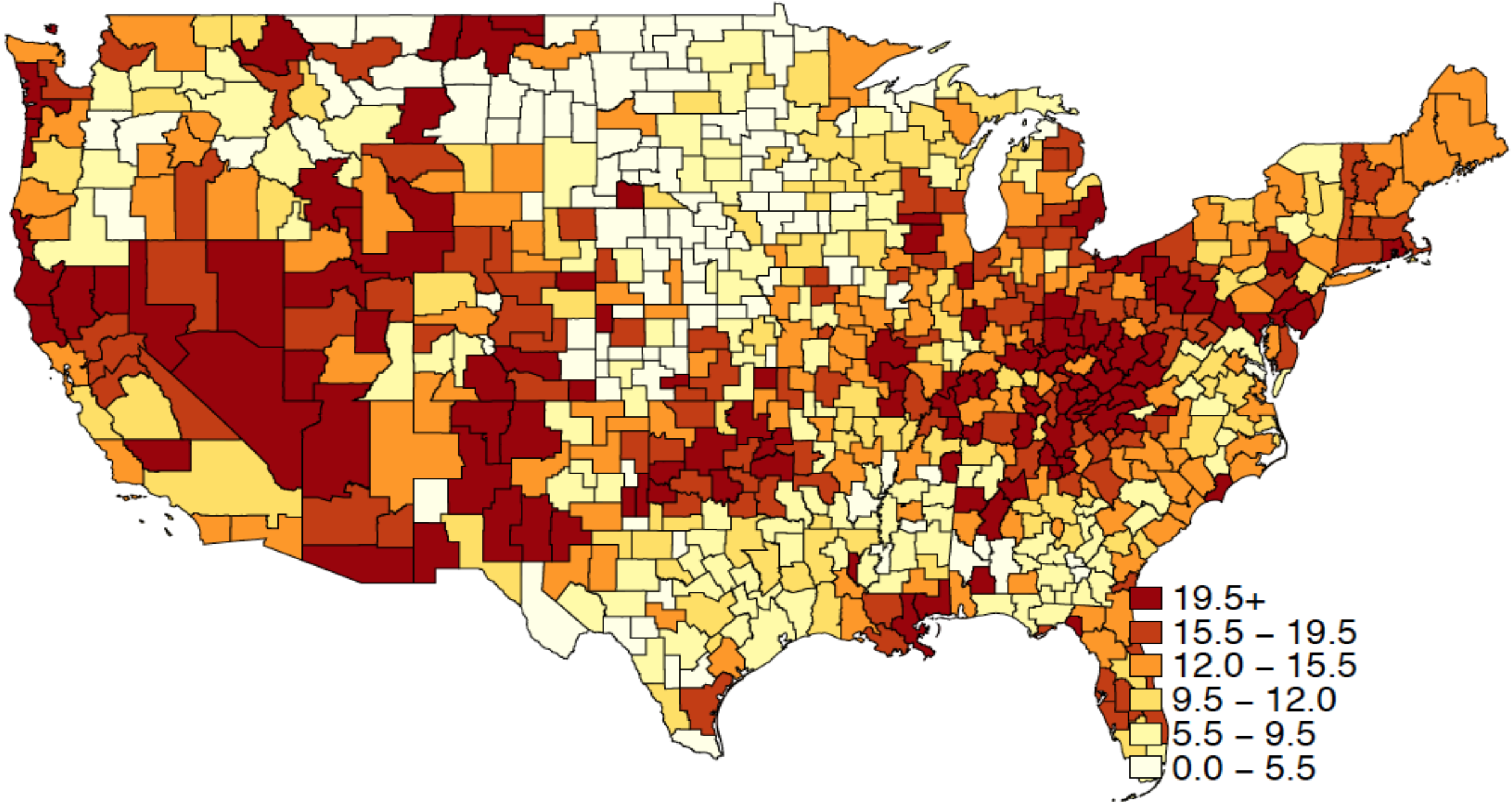
Geography of not working: Prime aged women 2015



Opioid consumption, 2015

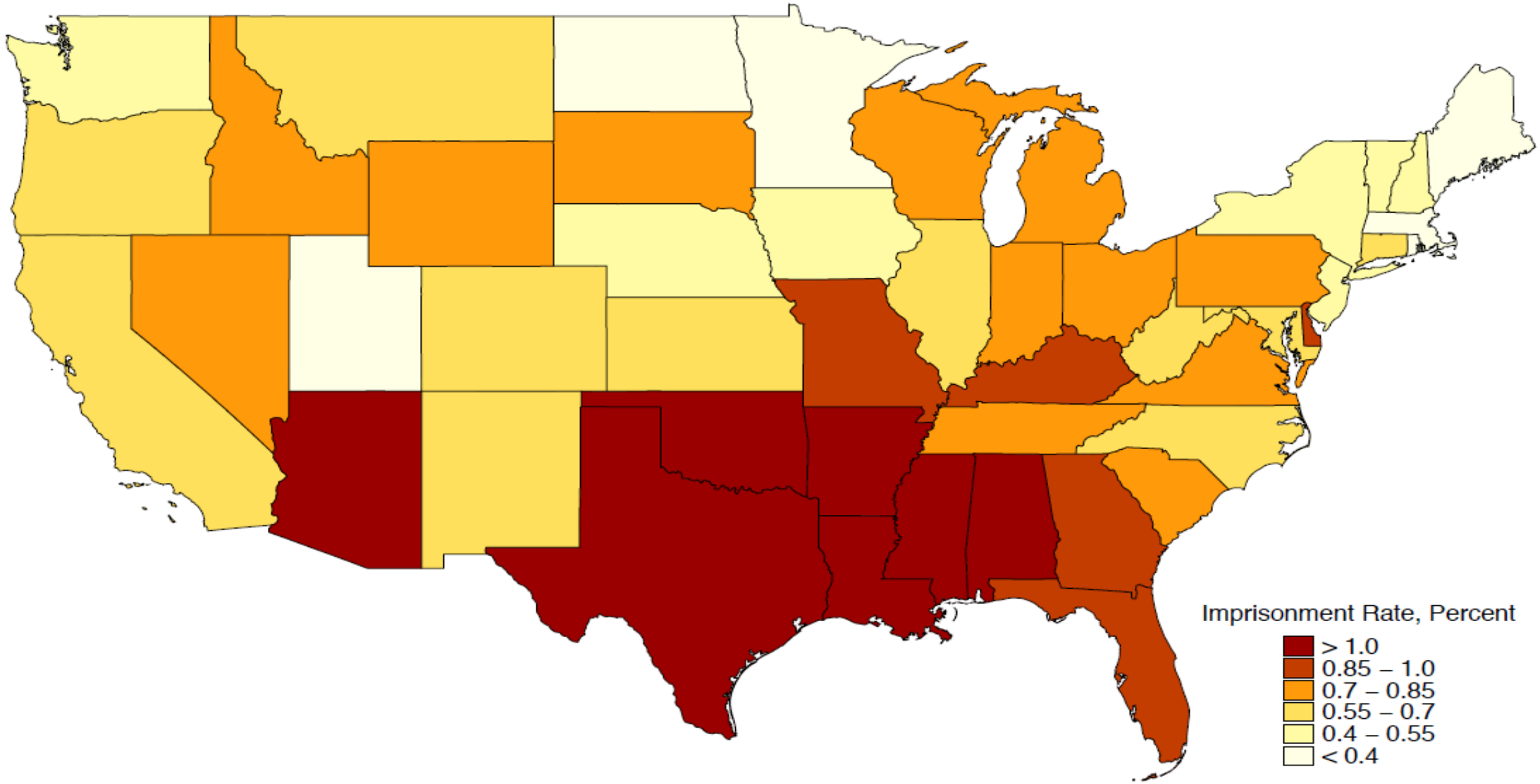


Drug Poisoning Fatalities per 100,000
2013



Incarceration rates are higher in the south and eastern heartland

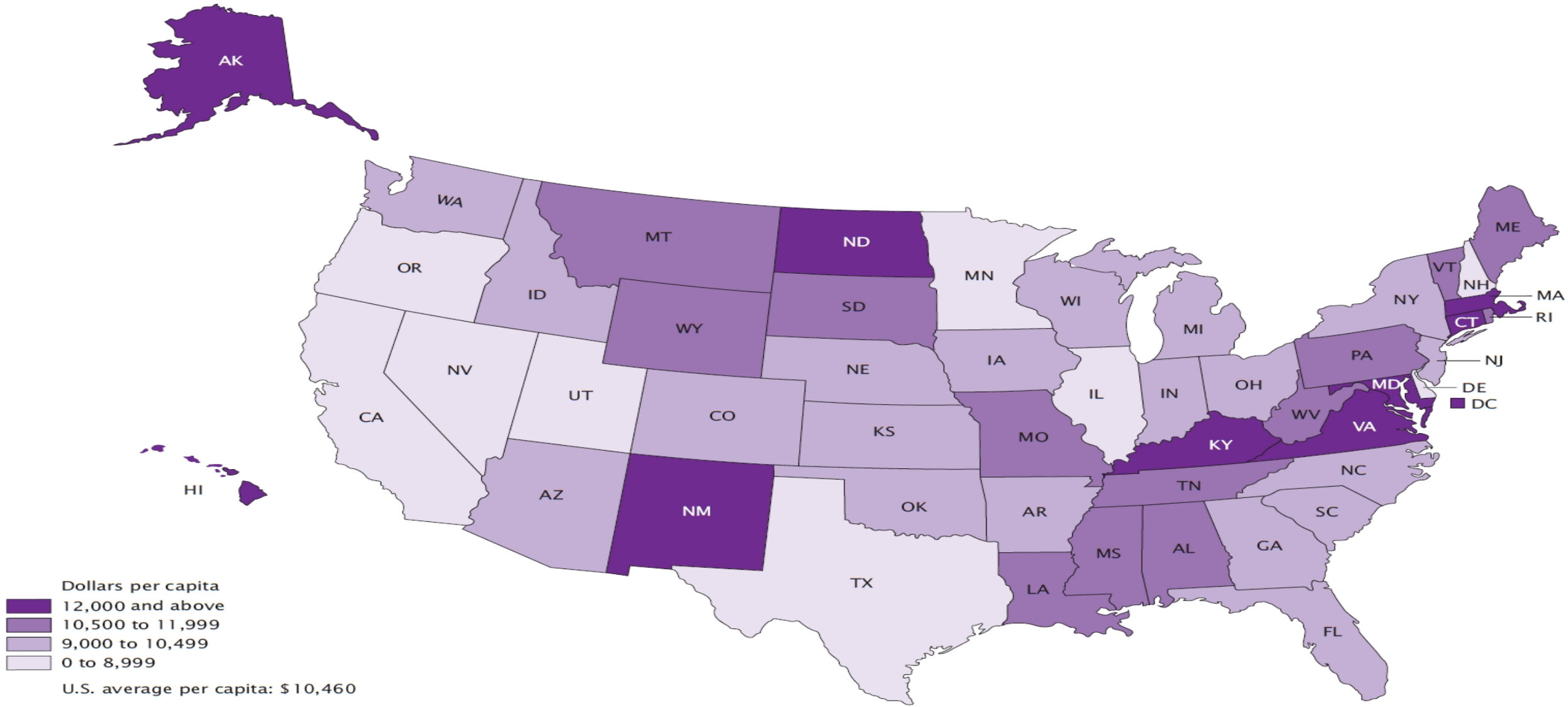
Incarceration rate, 2014



Source: Bureau of Justice Statistics; Current Population Survey, Annual Social and Economic Supplement; IPUMS; authors' calculations

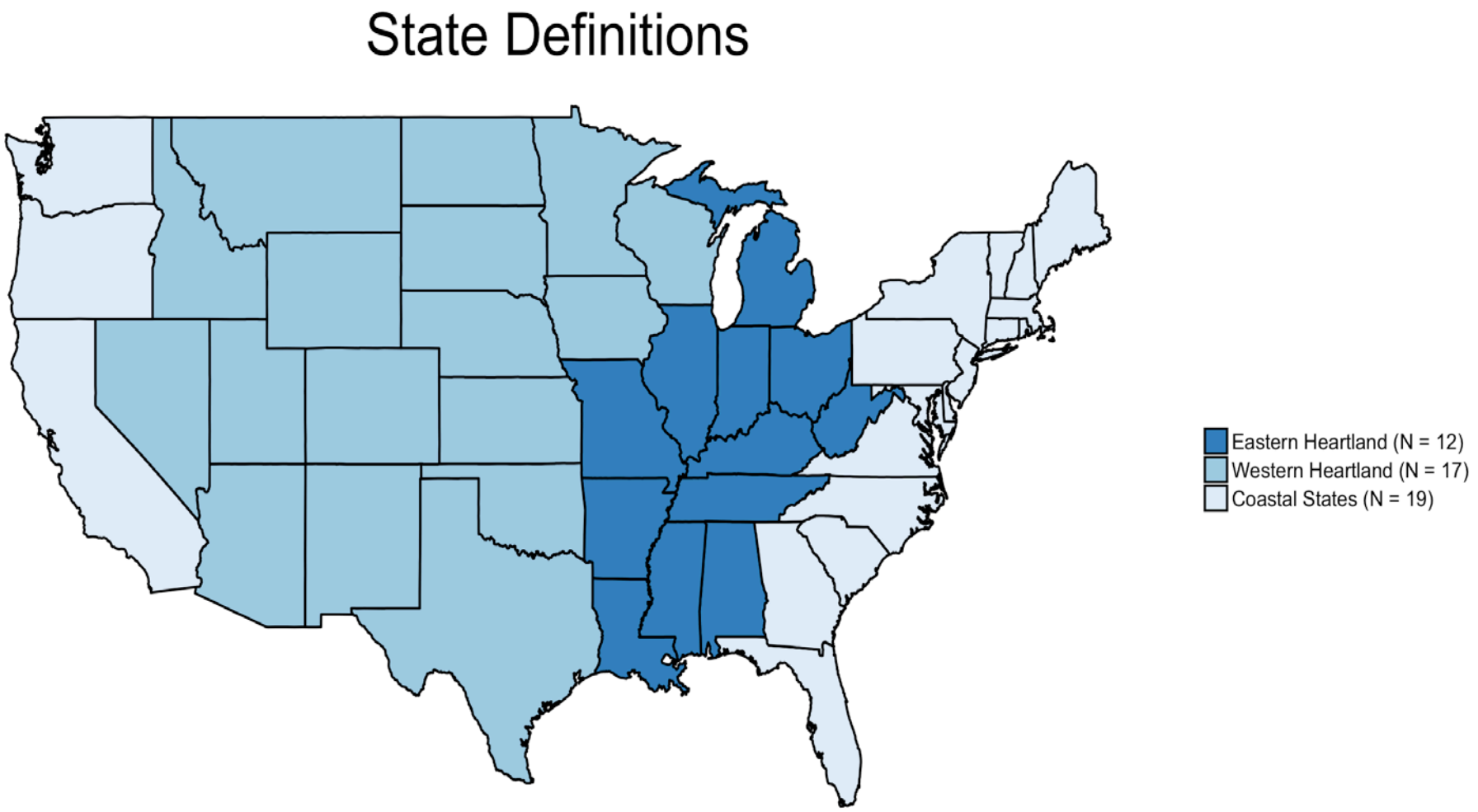
Figure 1.

Federal Government Expenditure, Per Capita Ranges by State: Fiscal Year 2010

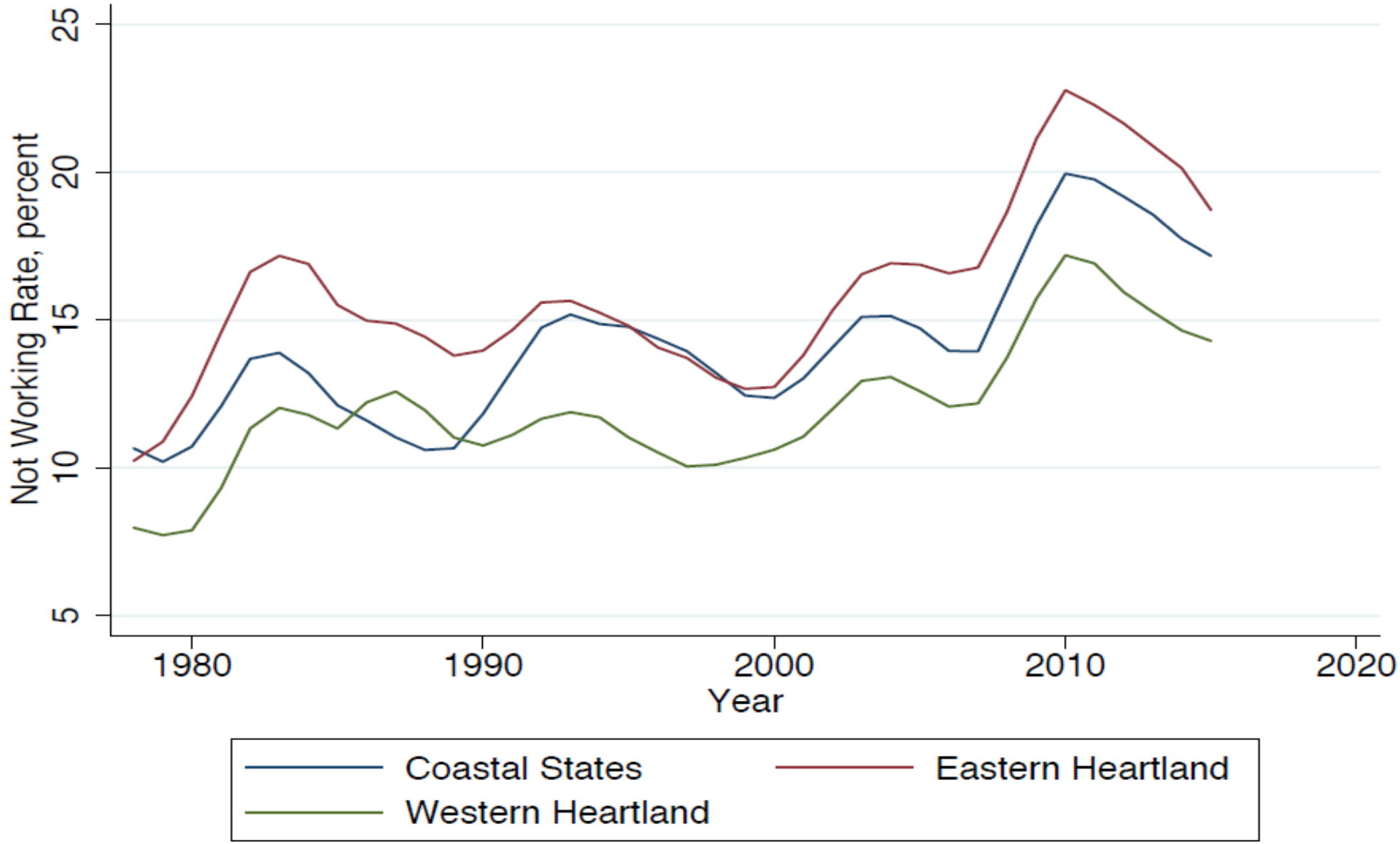


Note: For additional information, see the Summary of Methodology in this report.
Source: U.S. Census Bureau, *Consolidated Federal Funds Report for Fiscal Year 2010*. Data are not subject to sampling error, but for information on processing and response error, see the Reliability of Data section in the Introduction.

A Tale of Three Heartlands

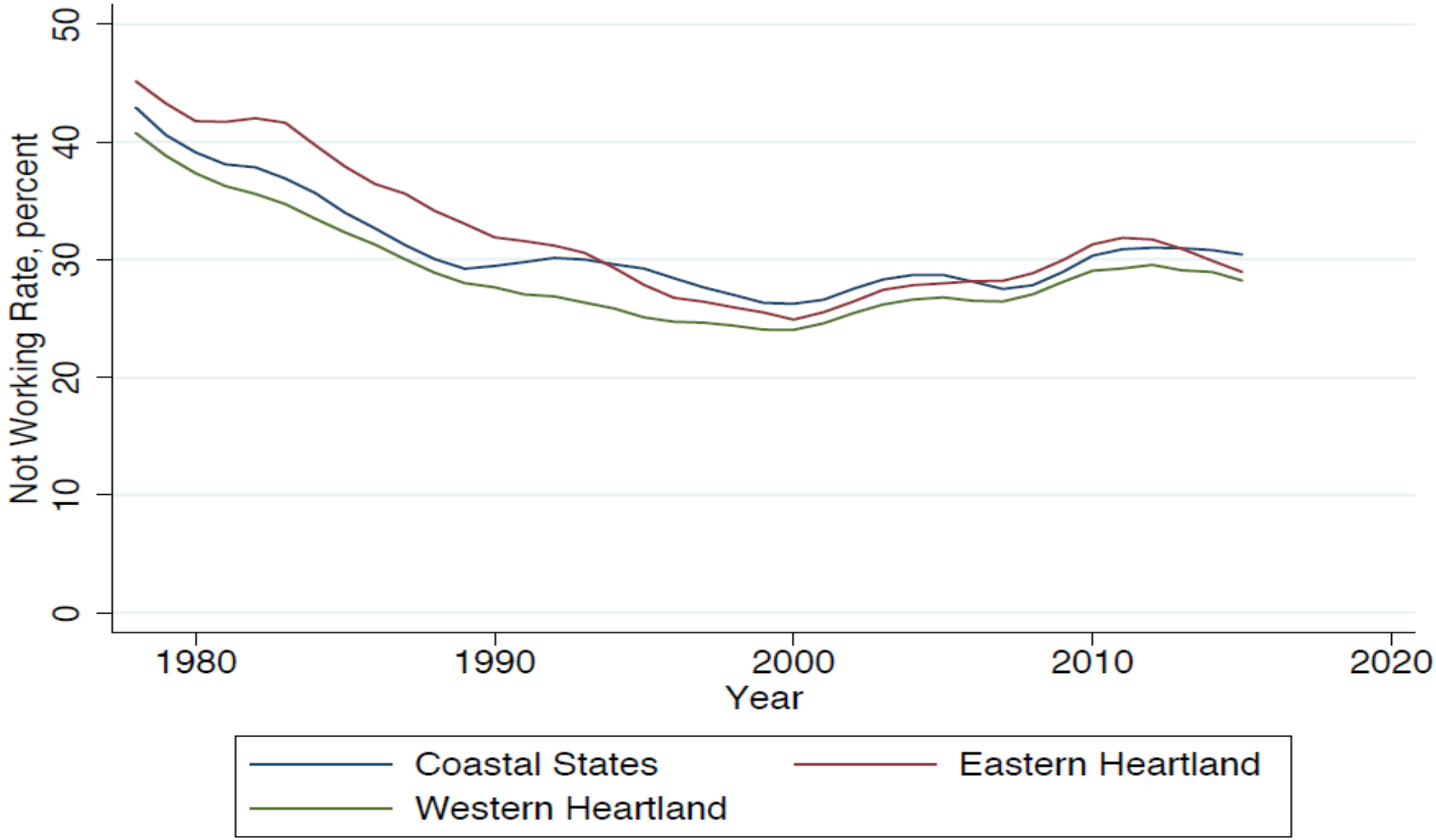


Prime age men



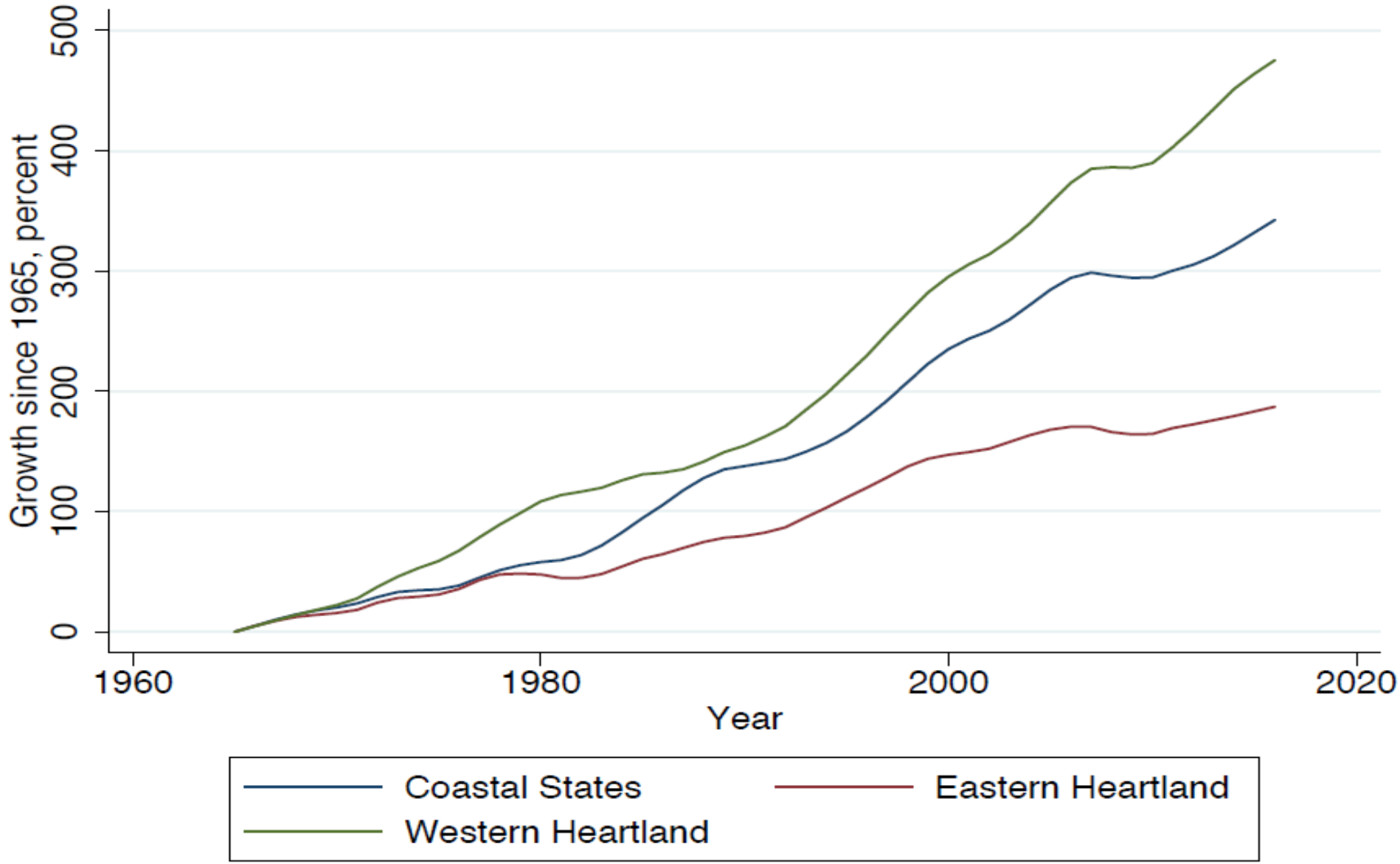
Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement; IPUMS; authors' calculations

Prime age female employment



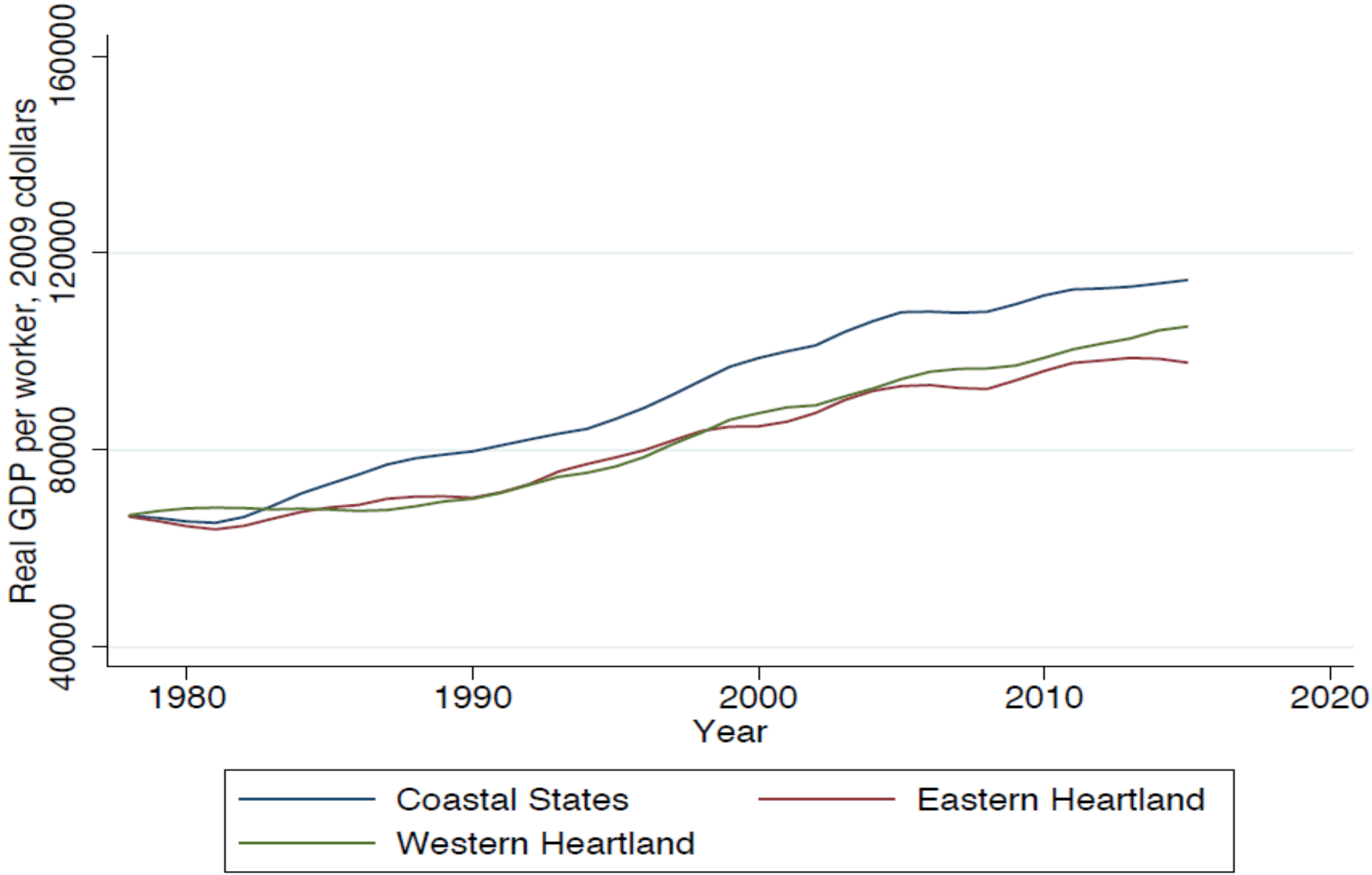
Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement; IPUMS; authors' calculations

GDP Growth, 1965-2016

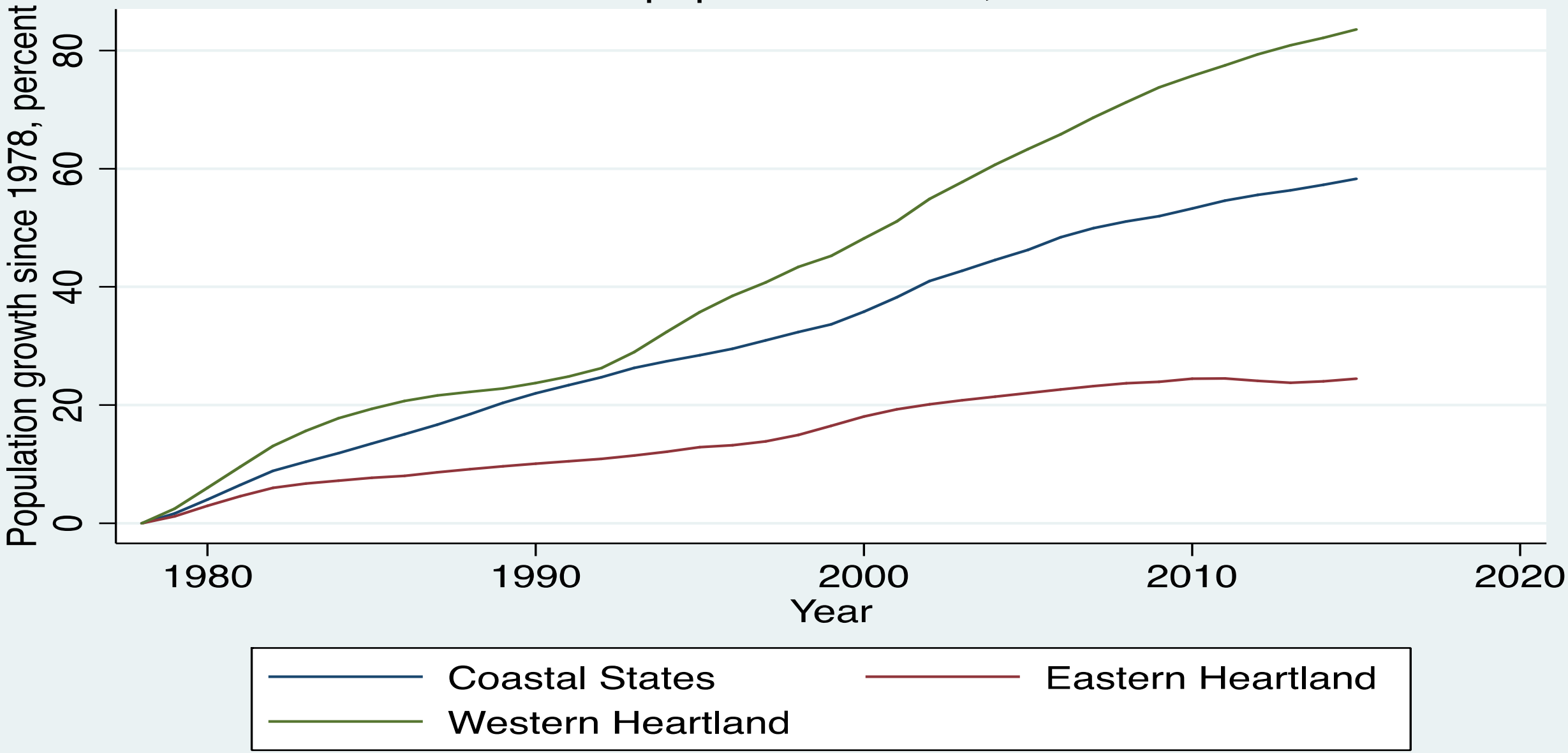


Source: U.S. Bureau of Economic Analysis; authors' calculations

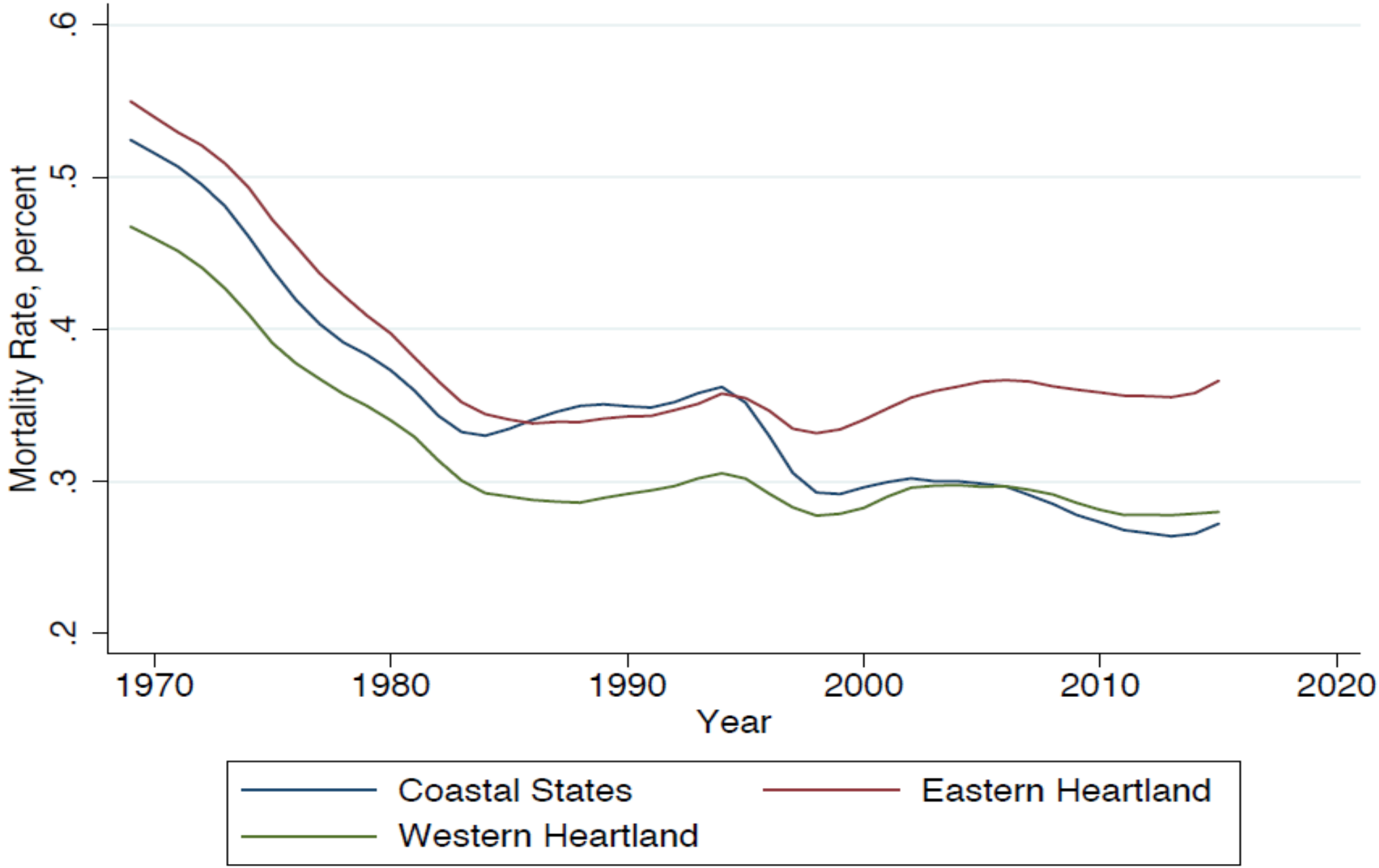
GDP per worker, 1978-2016



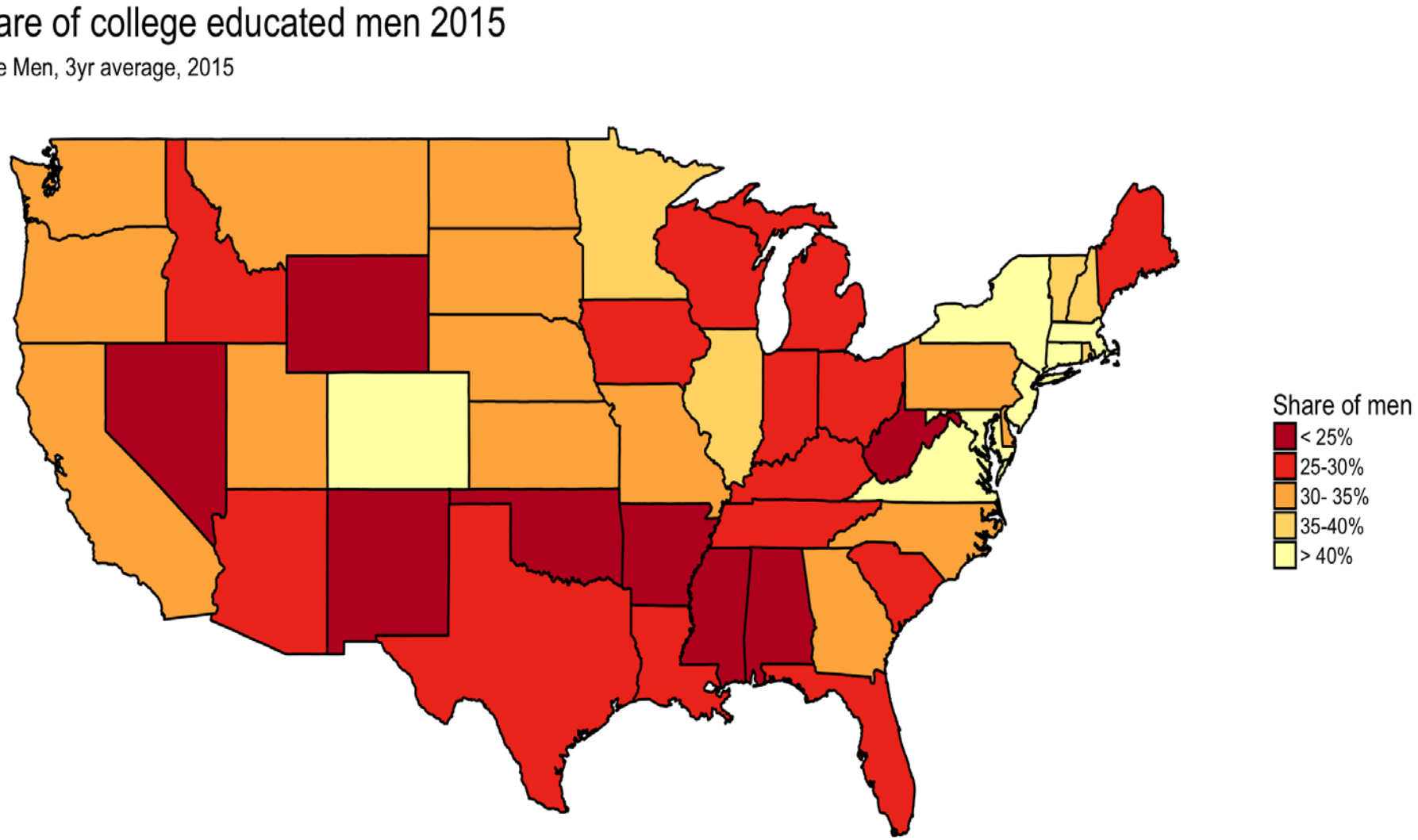
Working population growth



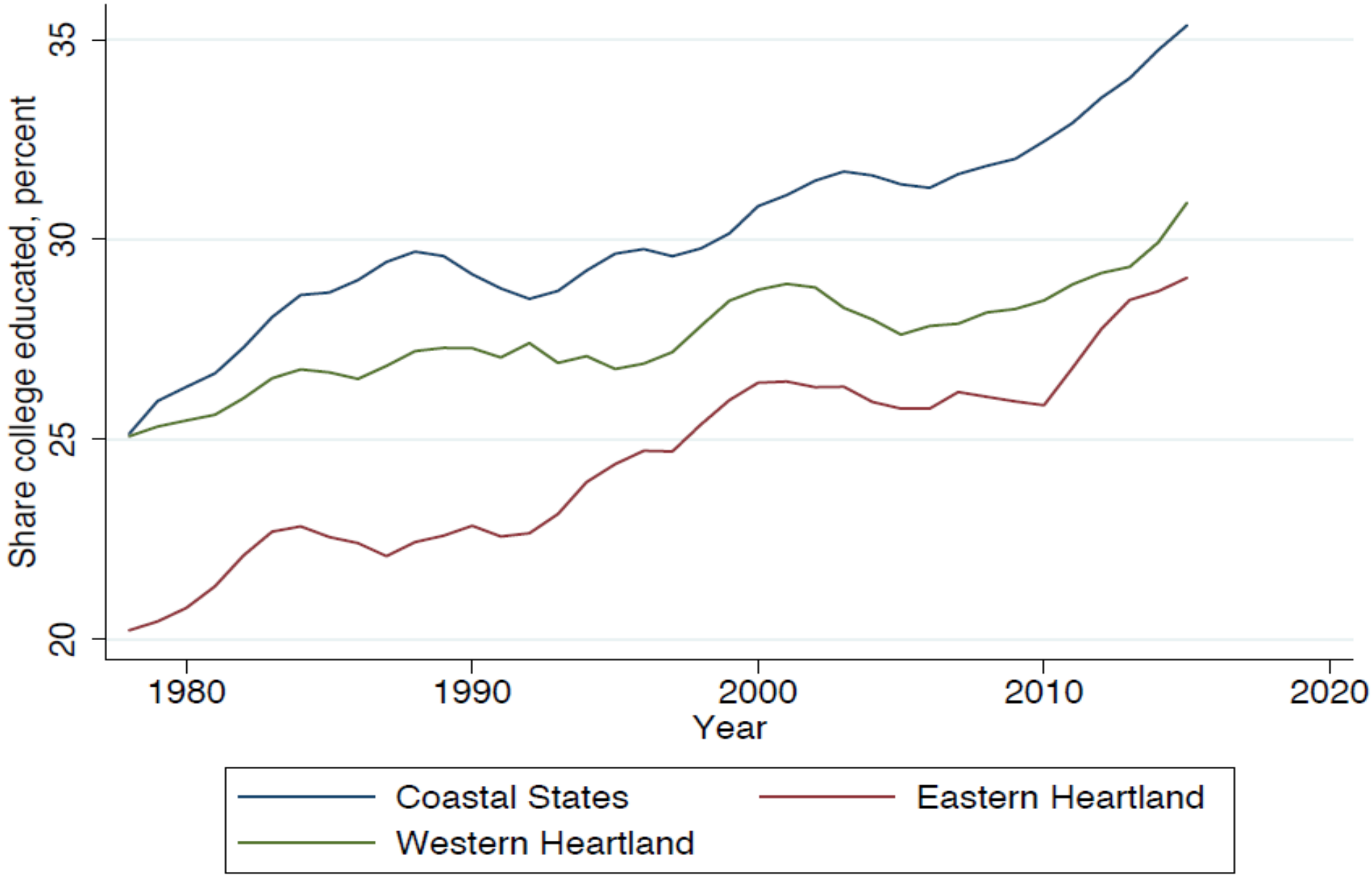
Prime male mortality rate, 1970-2015



Institutions and Human Capital



Prime age men



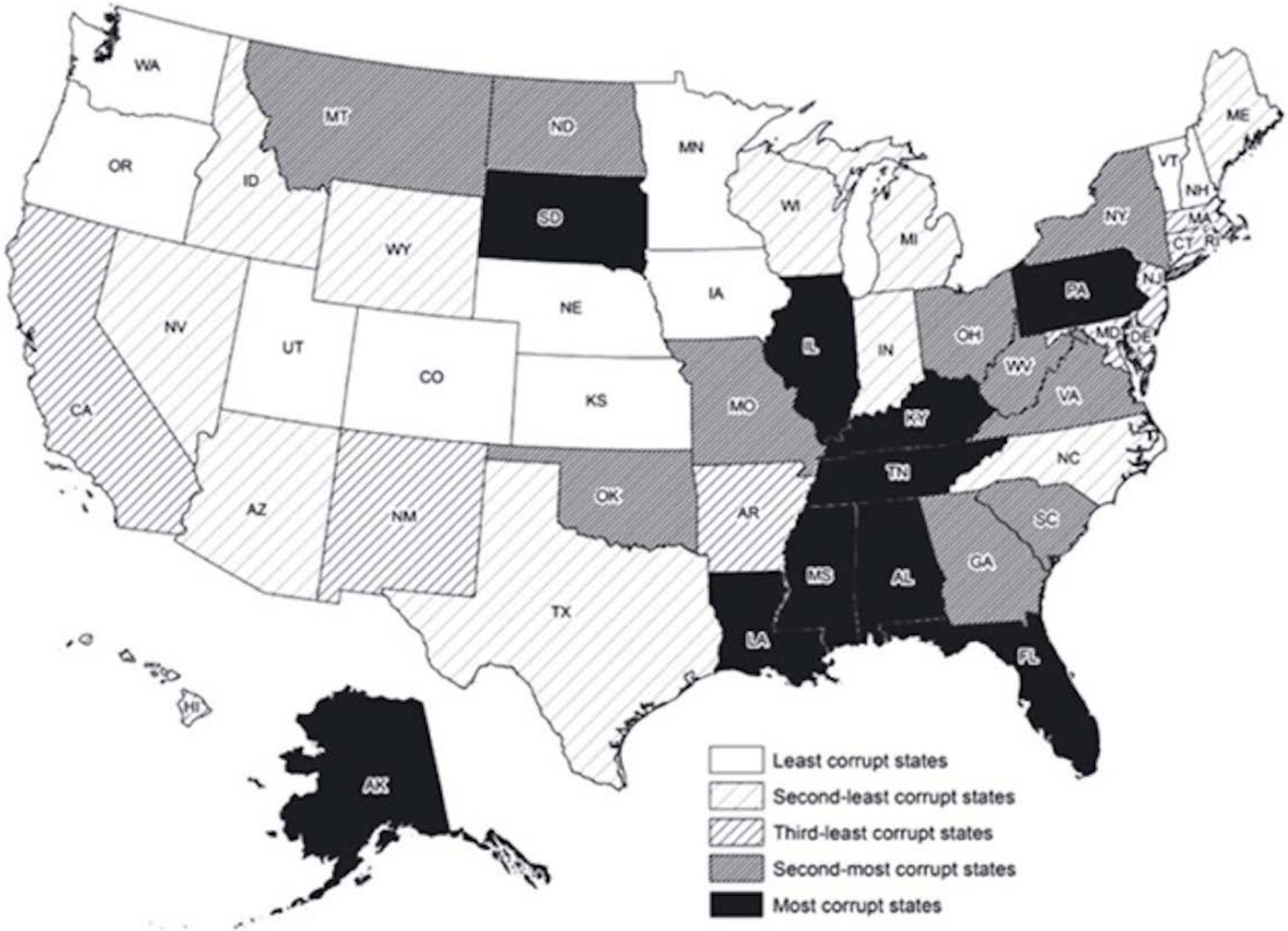
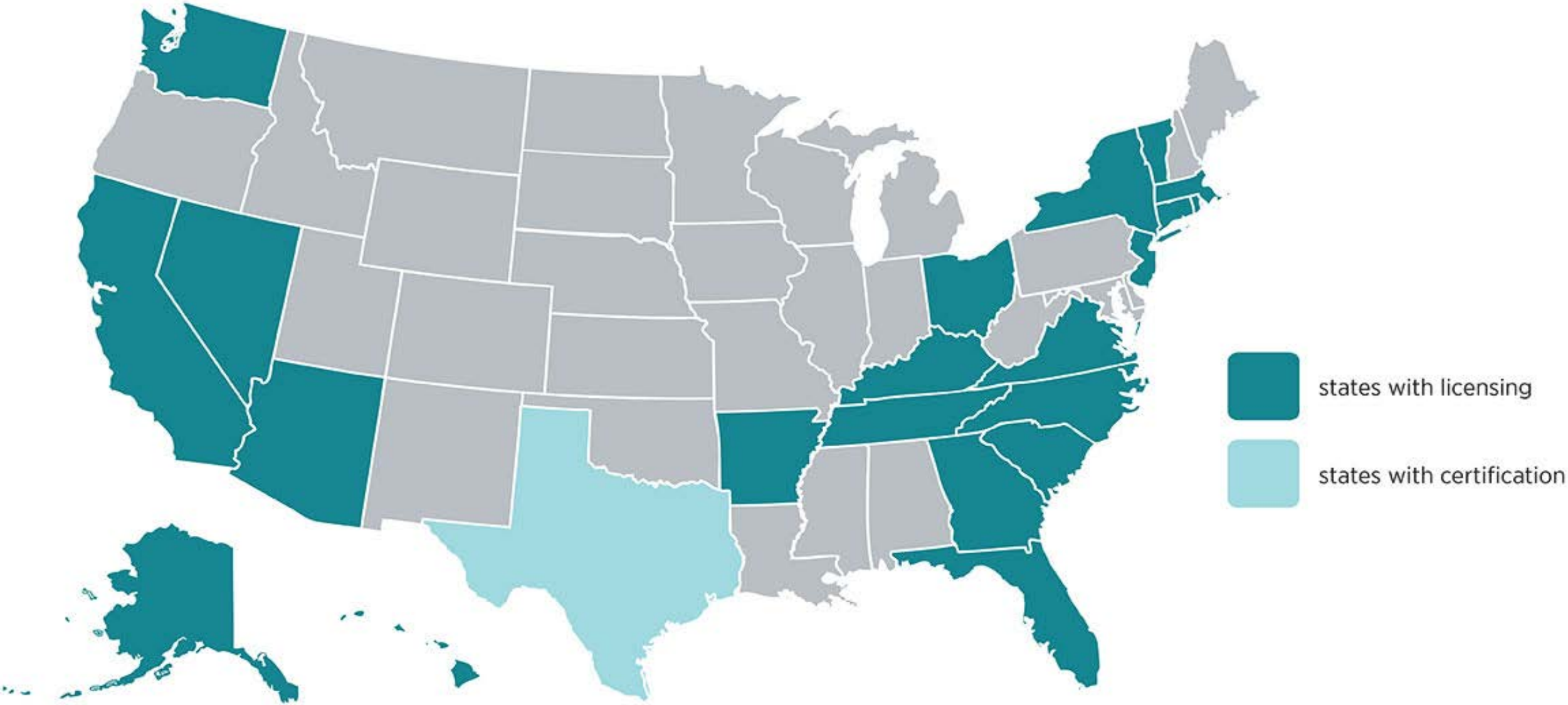


Figure is from Liu and Mikesell(2014) *Public Administration Review*

STATE REGULATION OF OPTICIANS



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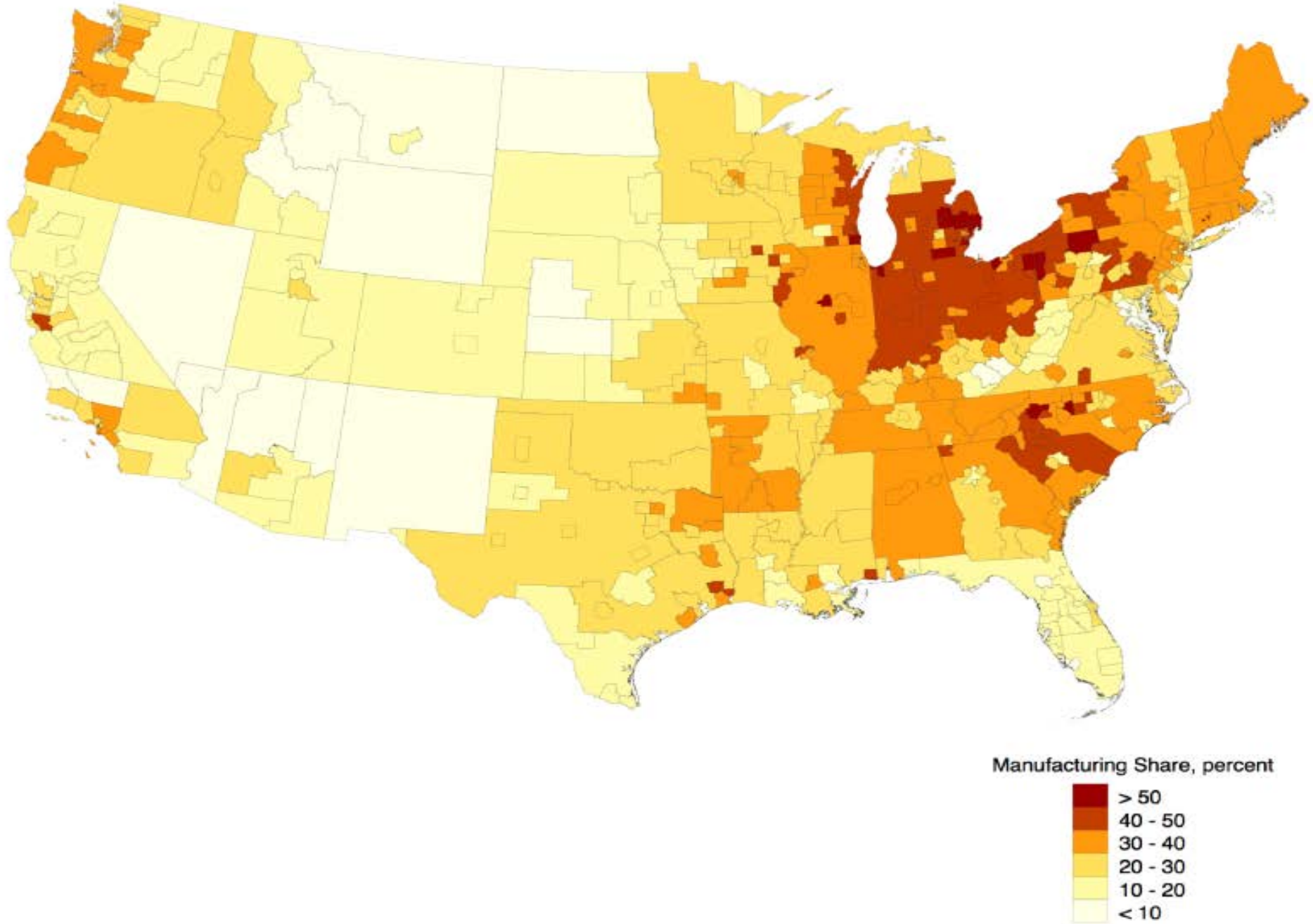
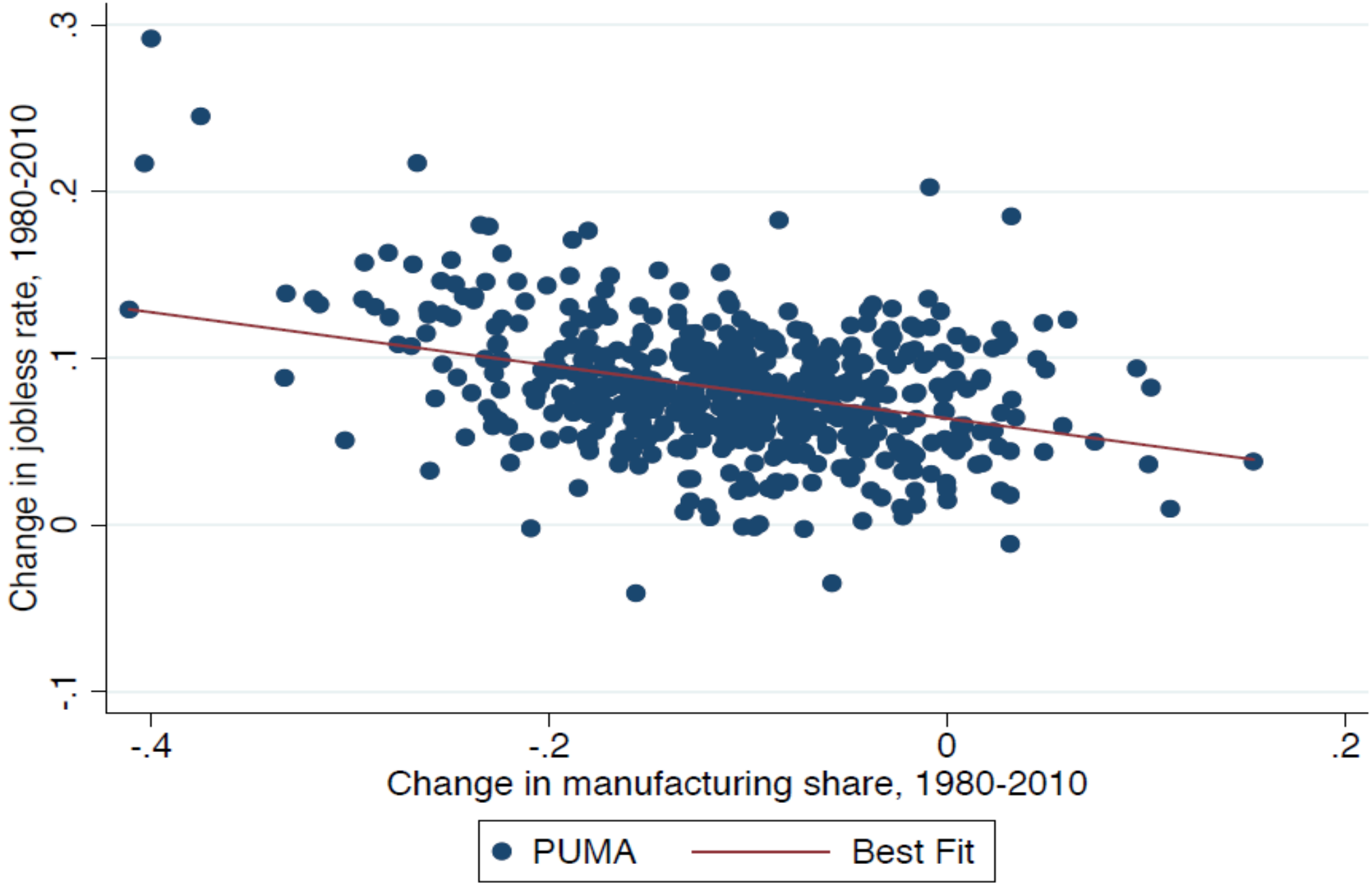
Sources: Dick M. Carpenter II et al., License to Work: A National Study of Burdens from Occupational Licensing (Arlington, VA: Institute for Justice, May 2012), http://www.ij.org/LicenseToWork; each state's licensing board and licensing statutes.

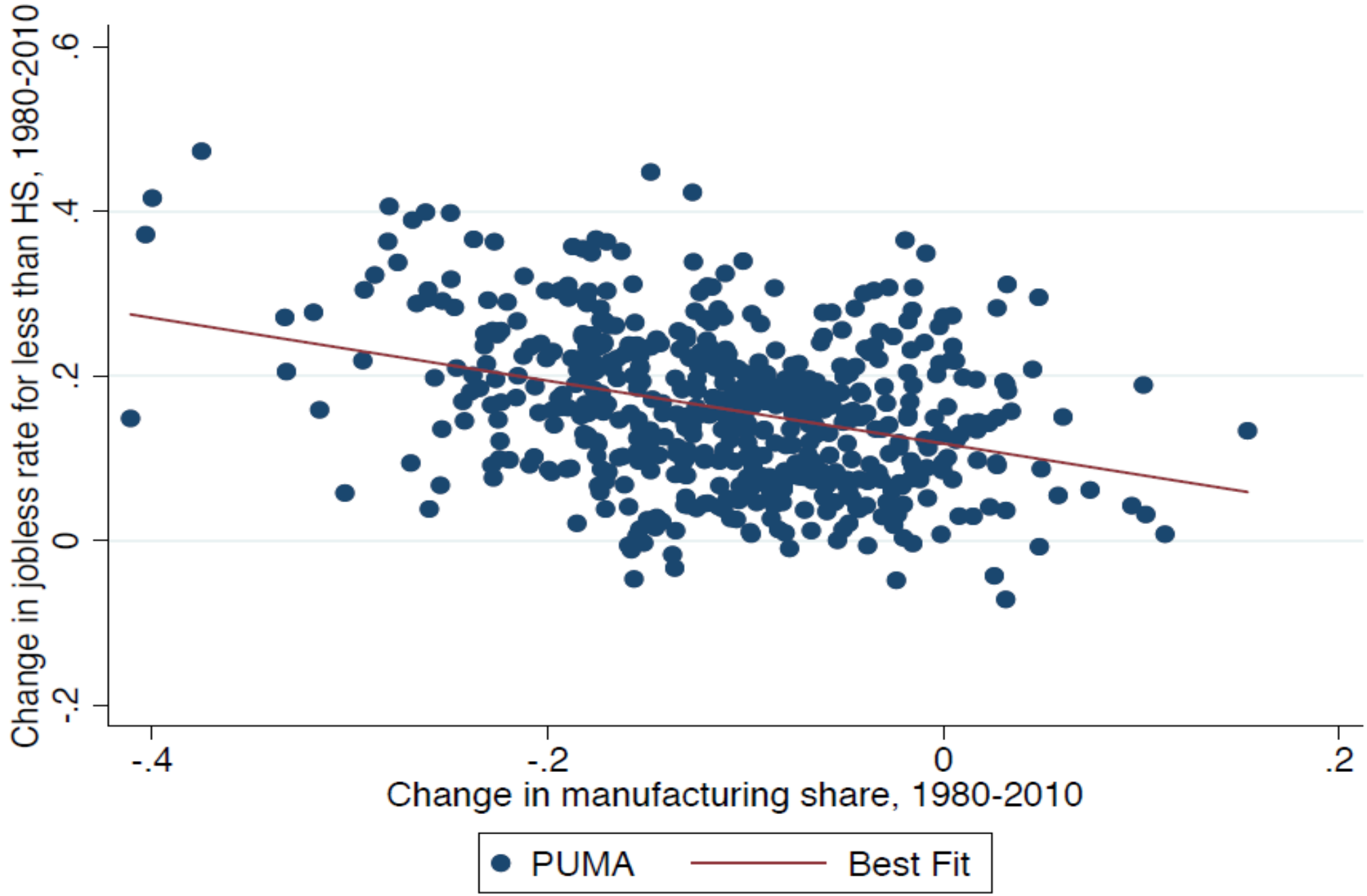
Prime age men manufacturing share of employment, 1980



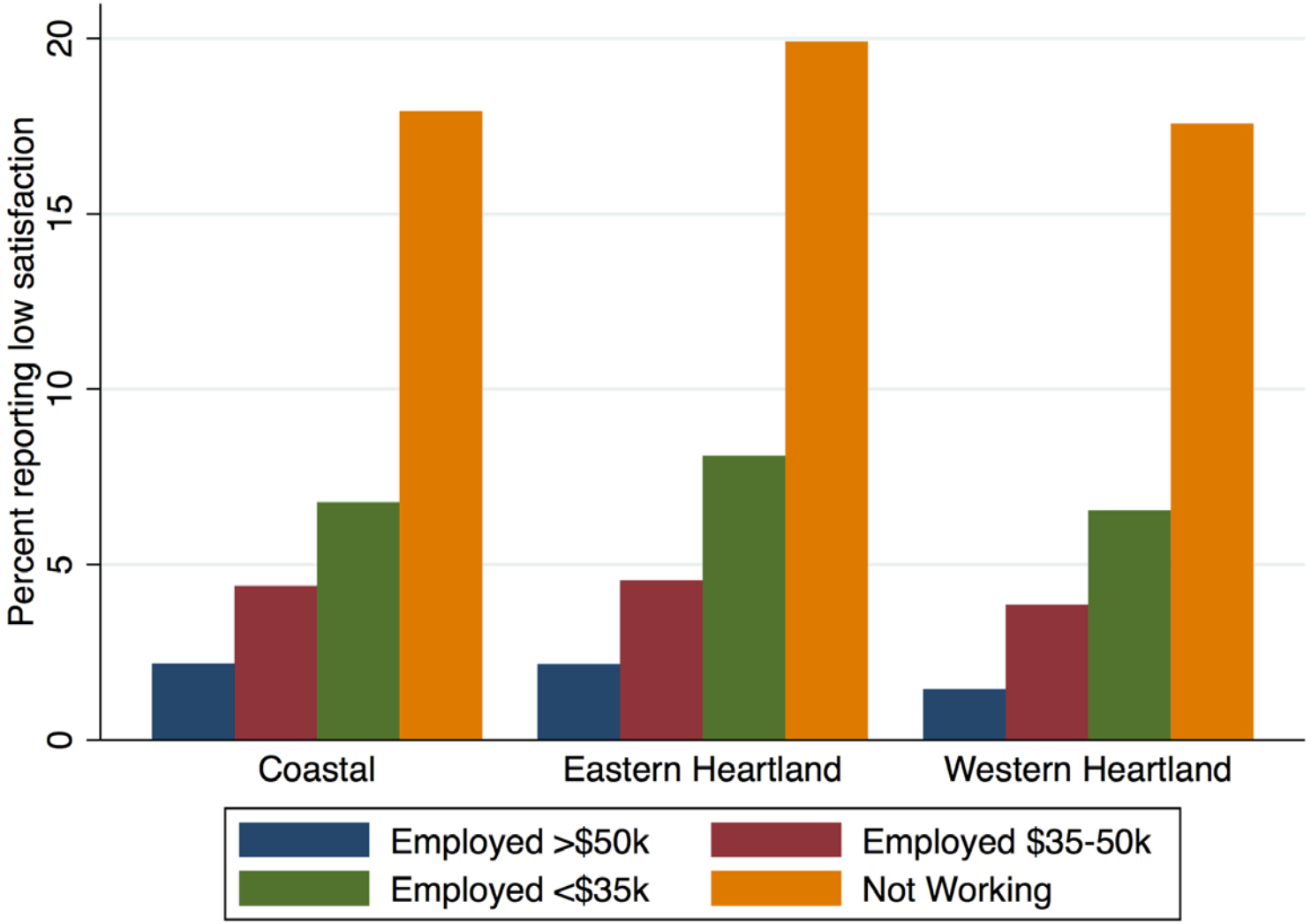
Prime age men, 1980-2010



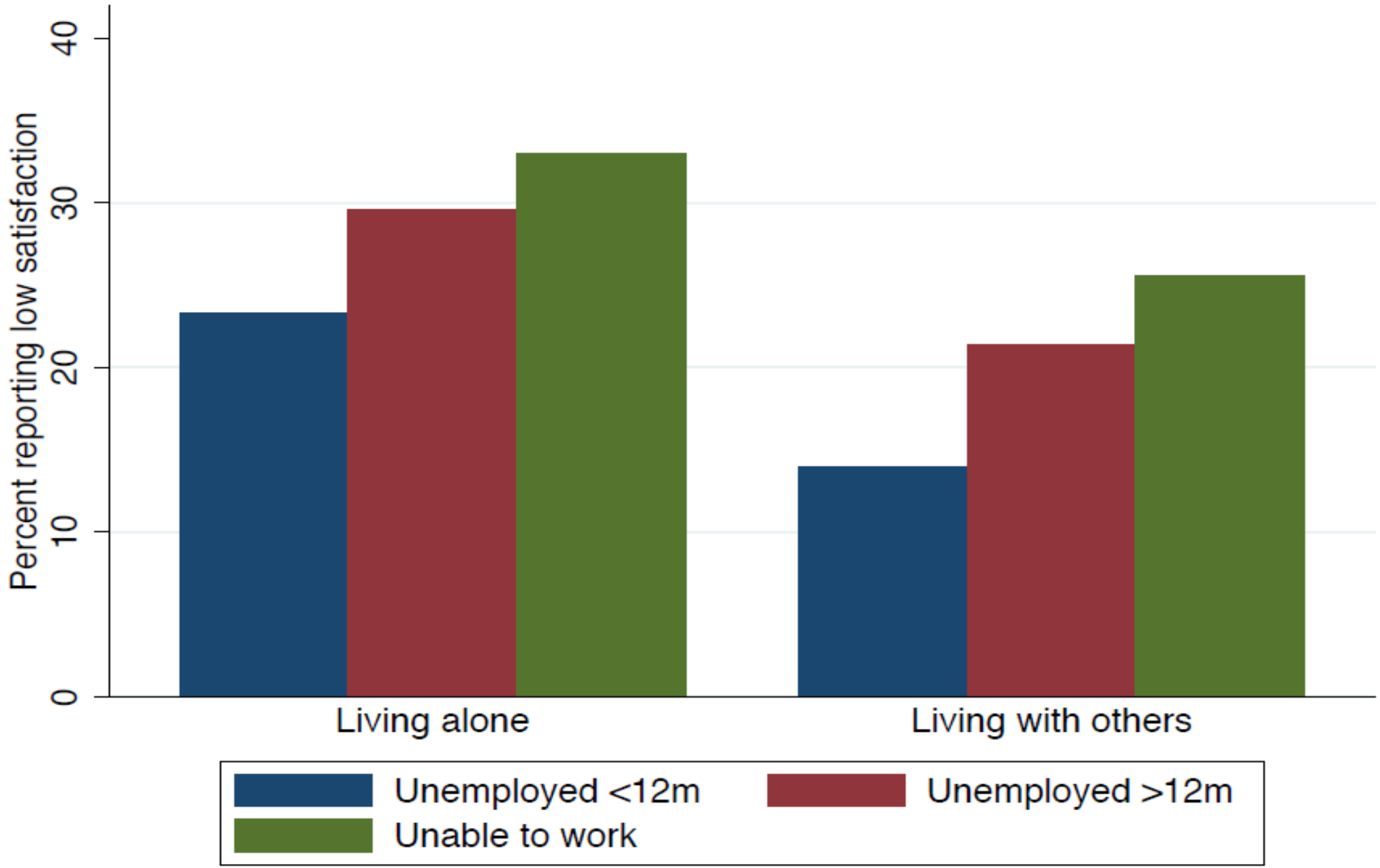
Prime age men with less than high school education, 1980-2010



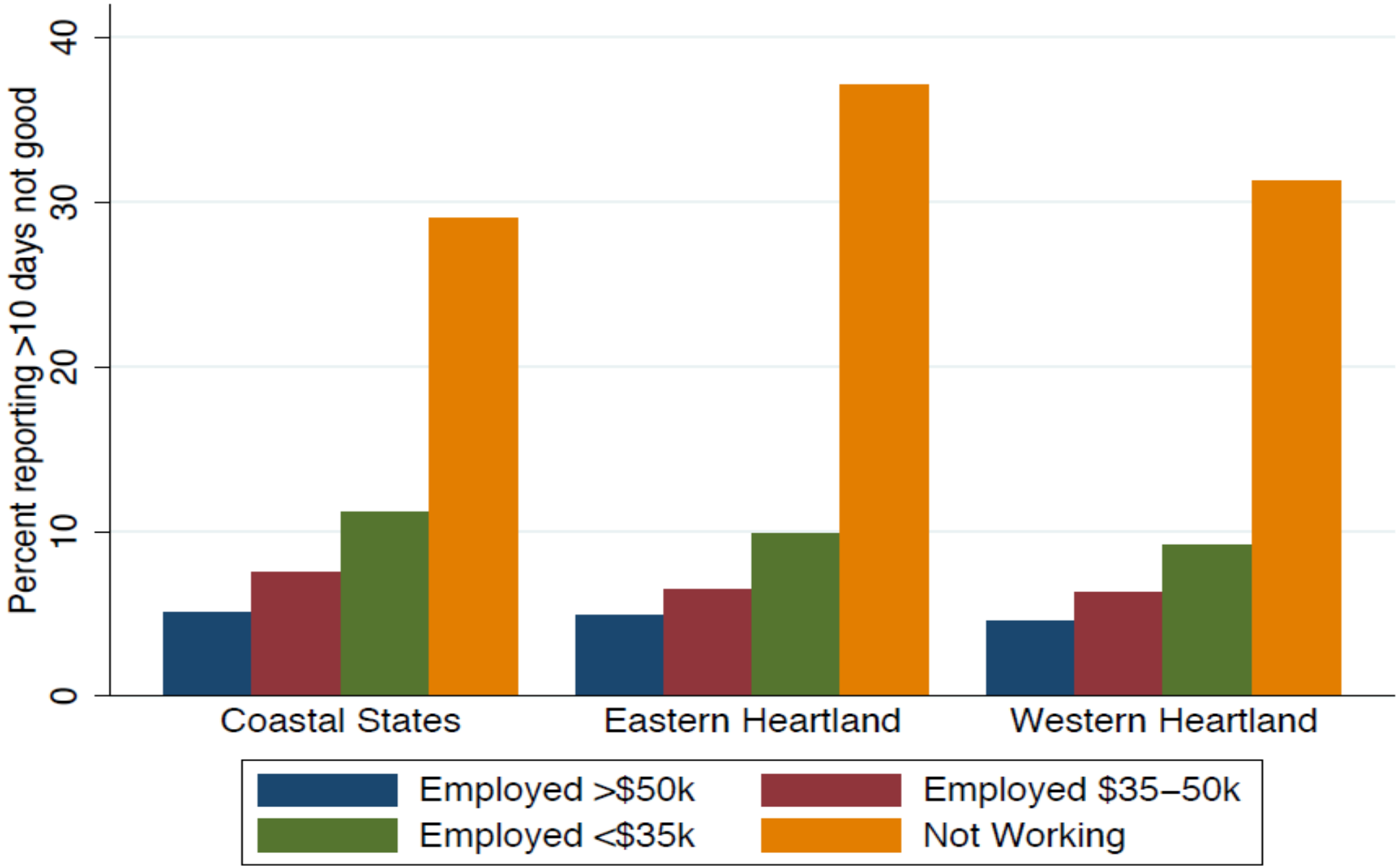
Low life satisfaction of not working men



Prime men, 2005-2010



Prime male physical health, 2005-2010



Improvements in leisure (TV, video games) may be linked to decreasing employment

Prime age men reported disability rates, 2015

Table 9. Time Use by Prime Age Men, 2003–16[a]

	Employed			*Not working*		
Activity	*Coasts*	*Eastern heartland*	*Western heartland*	*Coasts*	*Eastern heartland*	*Western heartland*
Personal care	530	529	529	598	604	587
Household activities	74	83	75	115	114	122
Food preparation	76	73	76	67	62	62
Caring for others	41	42	41	56	51	53
Working	392	382	401	33	28	32
Searching for work	1	1	1	21	16	21
Education	6	5	6	35	22	38
Leisure	257	262	248	450	481	449
Socializing	36	37	34	51	57	56
Watching TV	137	142	133	258	303	269
Computer use[b]	17	17	17	41	34	37
No. of observations	19,213	9,738	10,258	2,590	1,480	1,068

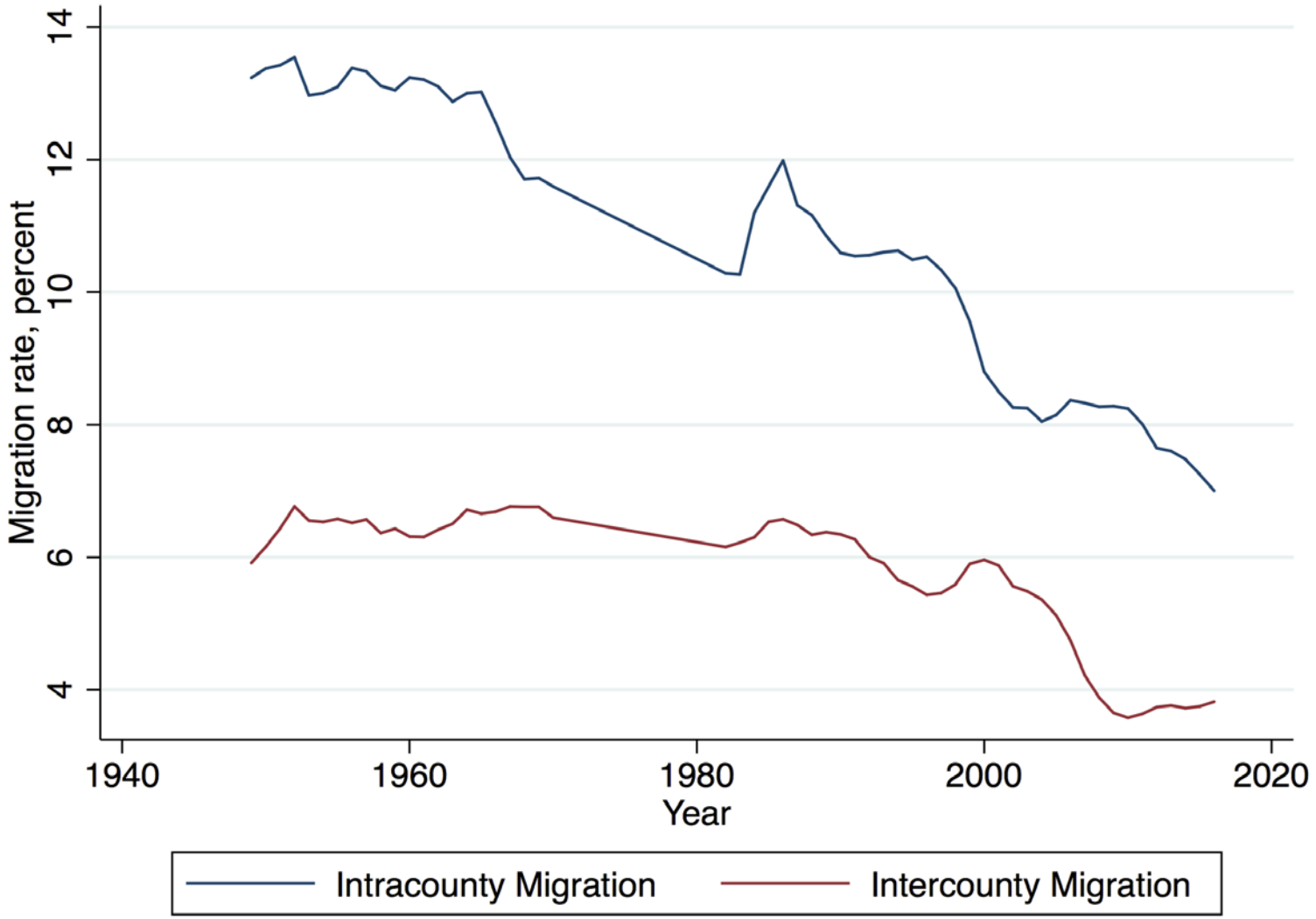
A Changing Regional Landscape

- Regional Heterogeneity in the US is Not New

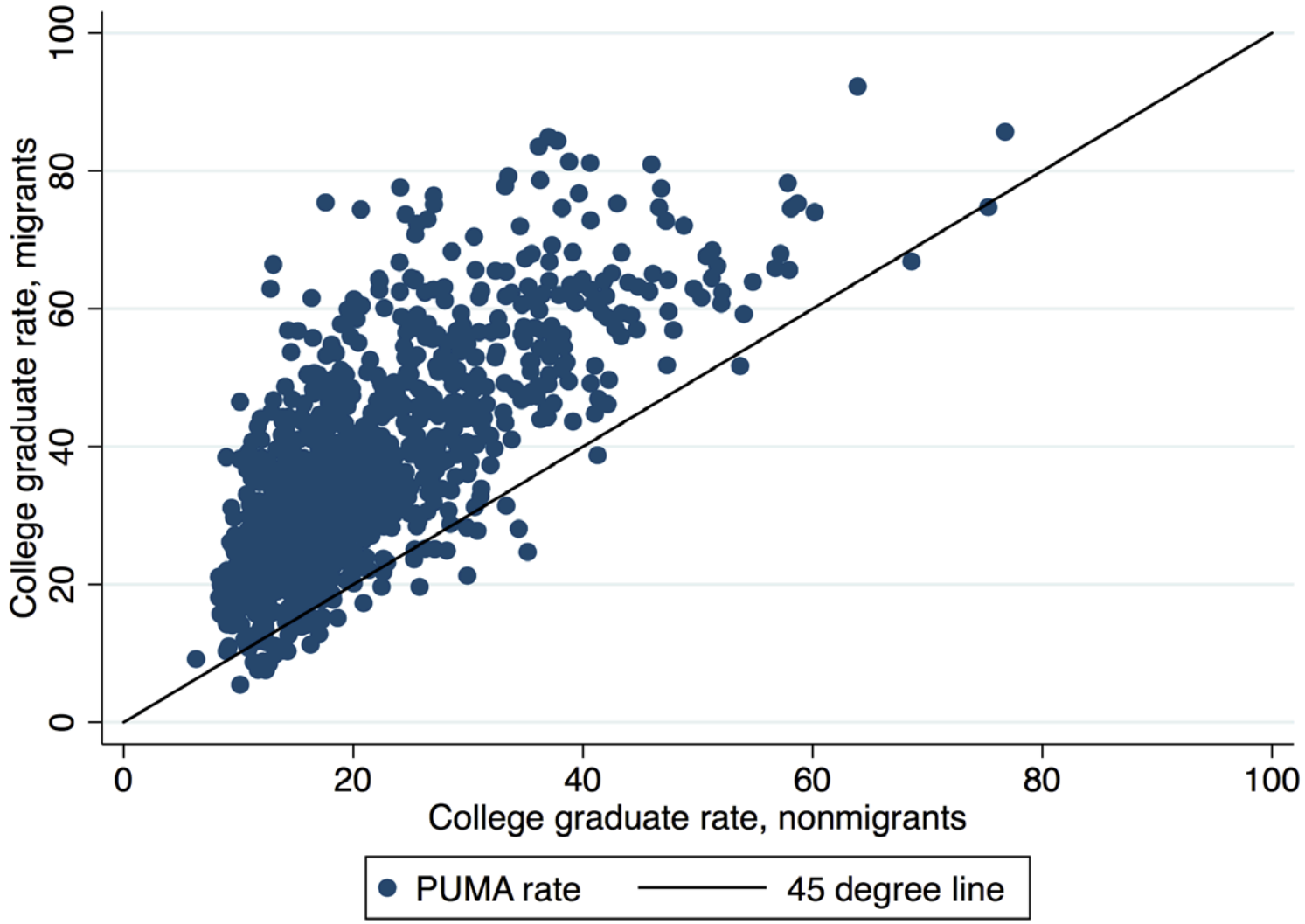
- But joblessness is a new twist → and if it involves market failures (either Pigouvian externalities or Keynesian stuff) then this should lead us to look at regional policies again.
  - Regional redistribution vs. regional targeting of social policy.

- Moreover, there are good reasons to think that America is becoming less fluid geographically and more European.

The decline in migration and geographic sclerosis



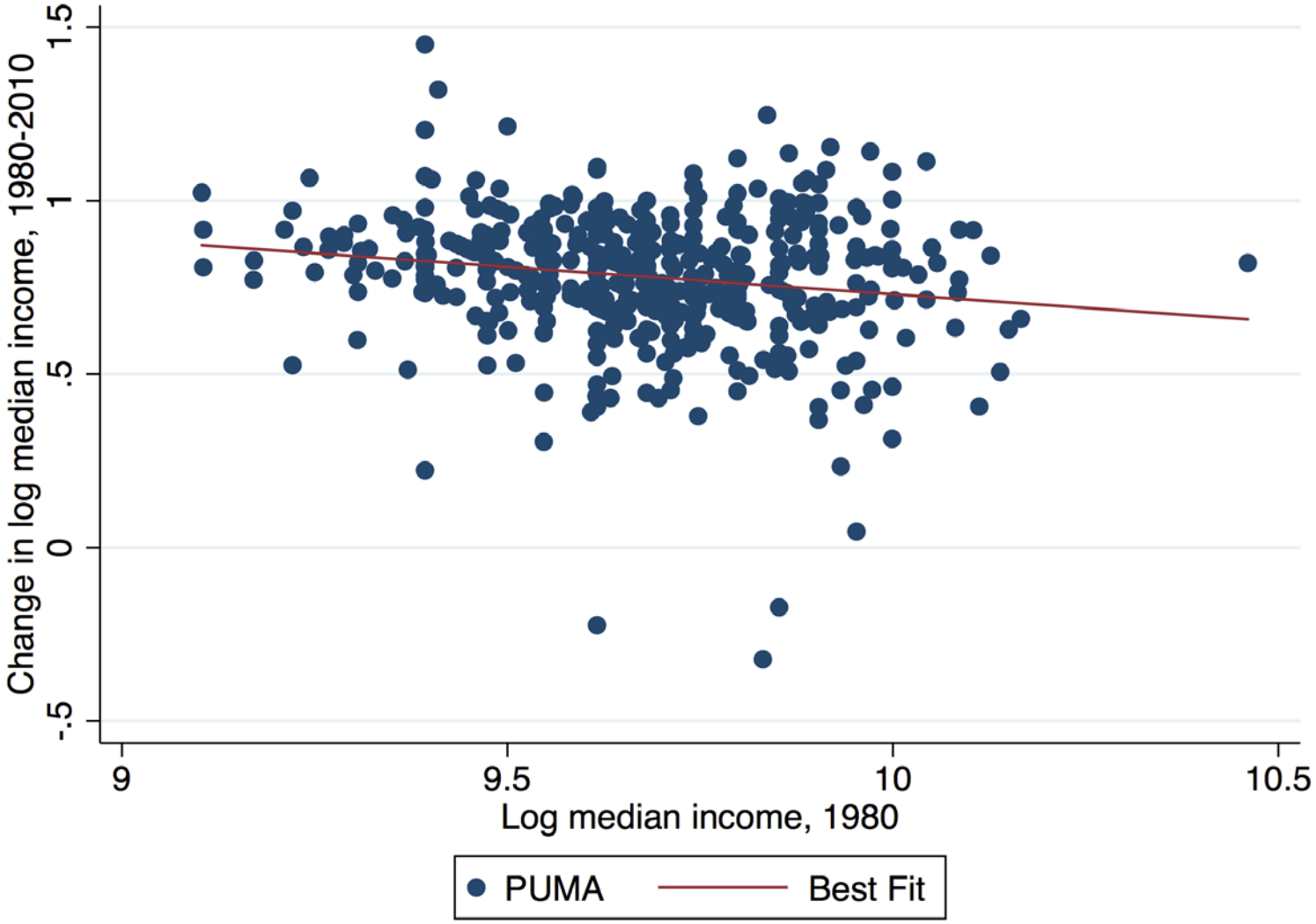
Skilled migration



Added Changes

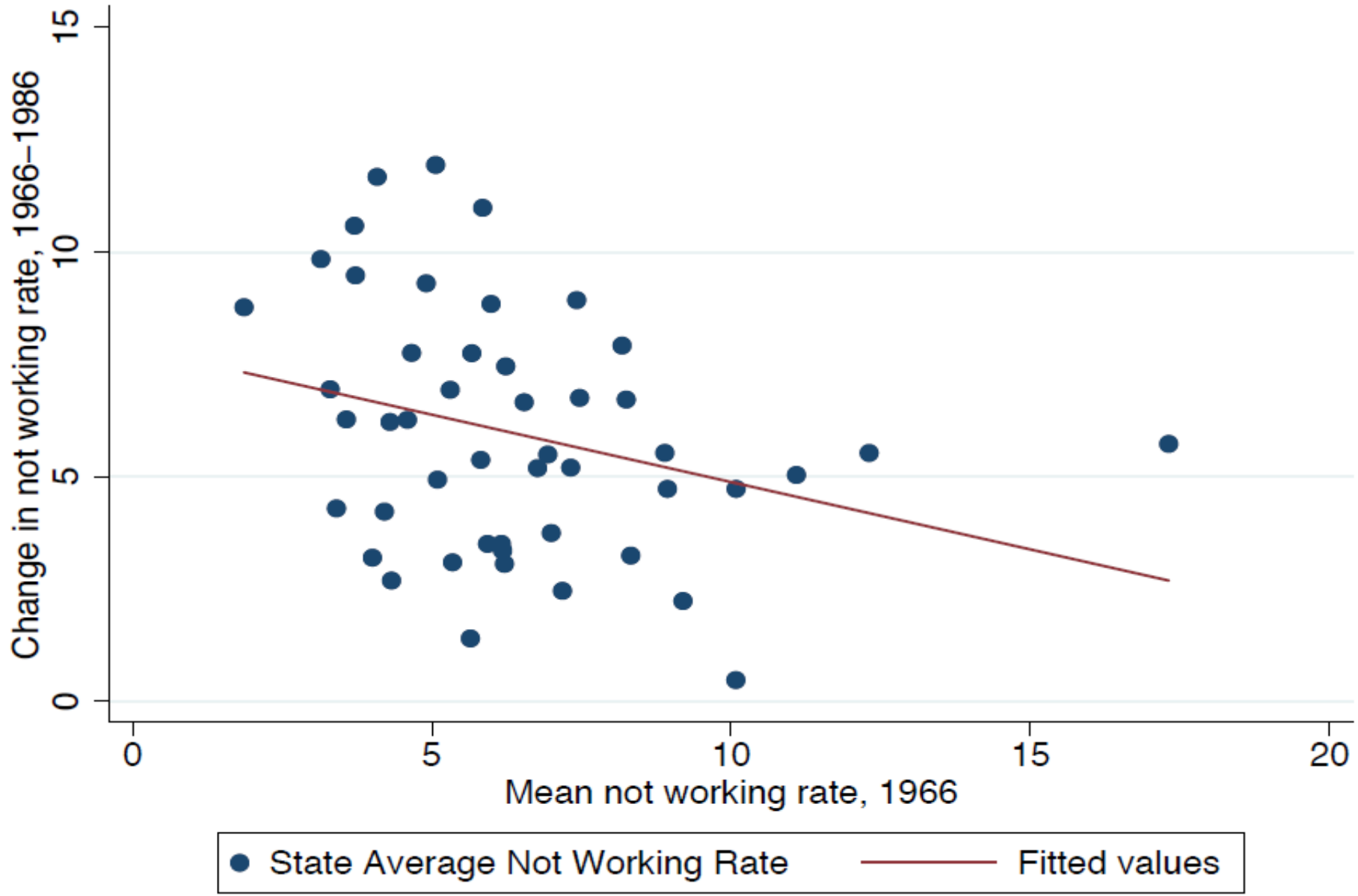
- Migration (especially migration of the less skilled) is not directed towards high wage areas (Ganong and Shoag, 2017)
- Successful areas make it increasingly difficult to build low cost housing (Glaeser, Gyourko, Saks, 2005), leading to spatial mismatch (Hsieh and Moretti, 2016).
- Change in share with college degrees positively correlated with initial share of population with college degrees (Moretti, 2004).
- Income convergence across metropolitan areas or PUMAs has slowed or disappeared entirely (Berry and Glaeser, 2006)
  - $\text{Log}(Y_{2010}/Y_{1980})=.02*\ \text{Log}(Y_{1980})$ (IV with 90^{th} and 10^{th} percentile in 1980).

Income convergence has declined

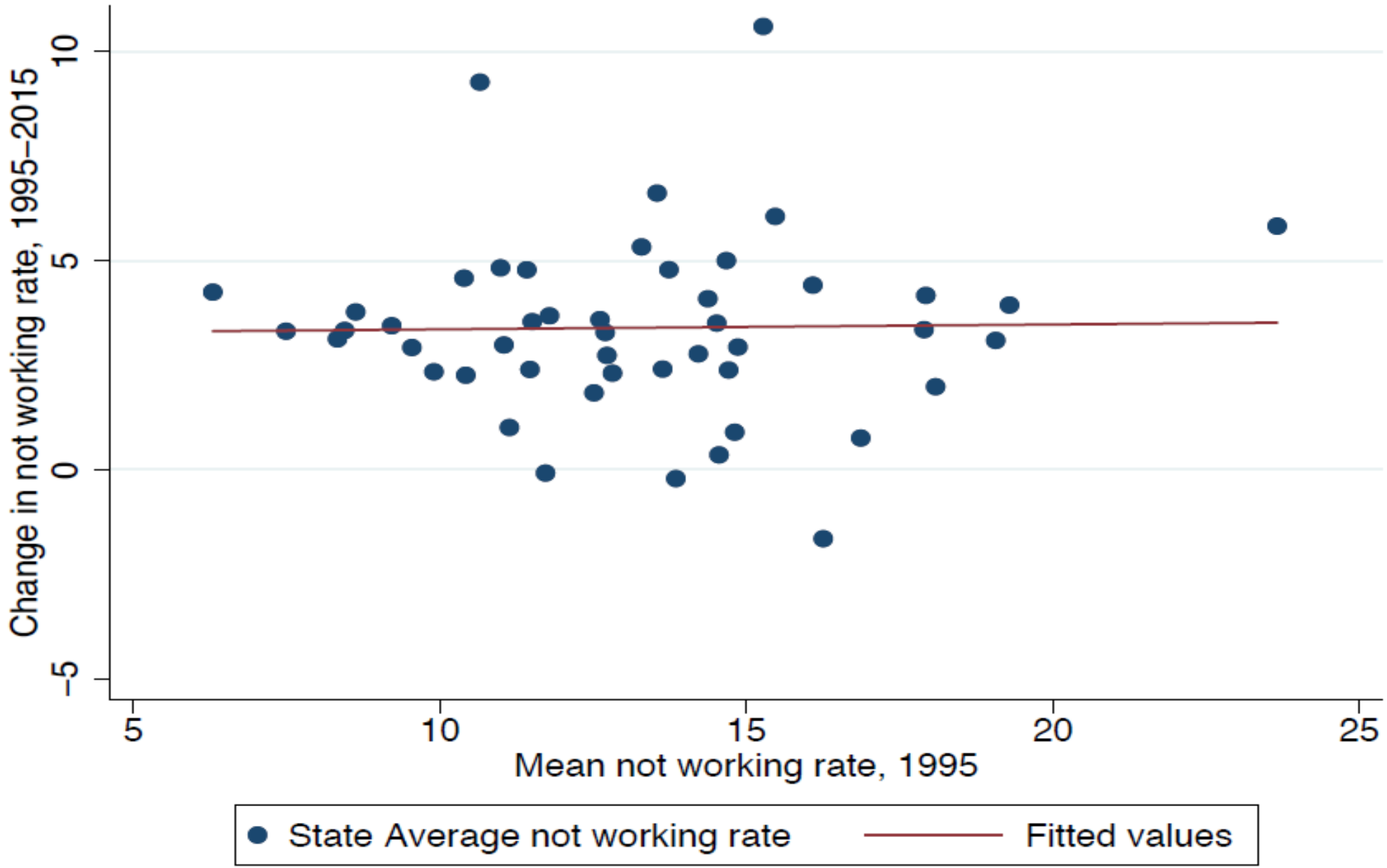


Regional differences in joblessness were declining between 1966 and 1986

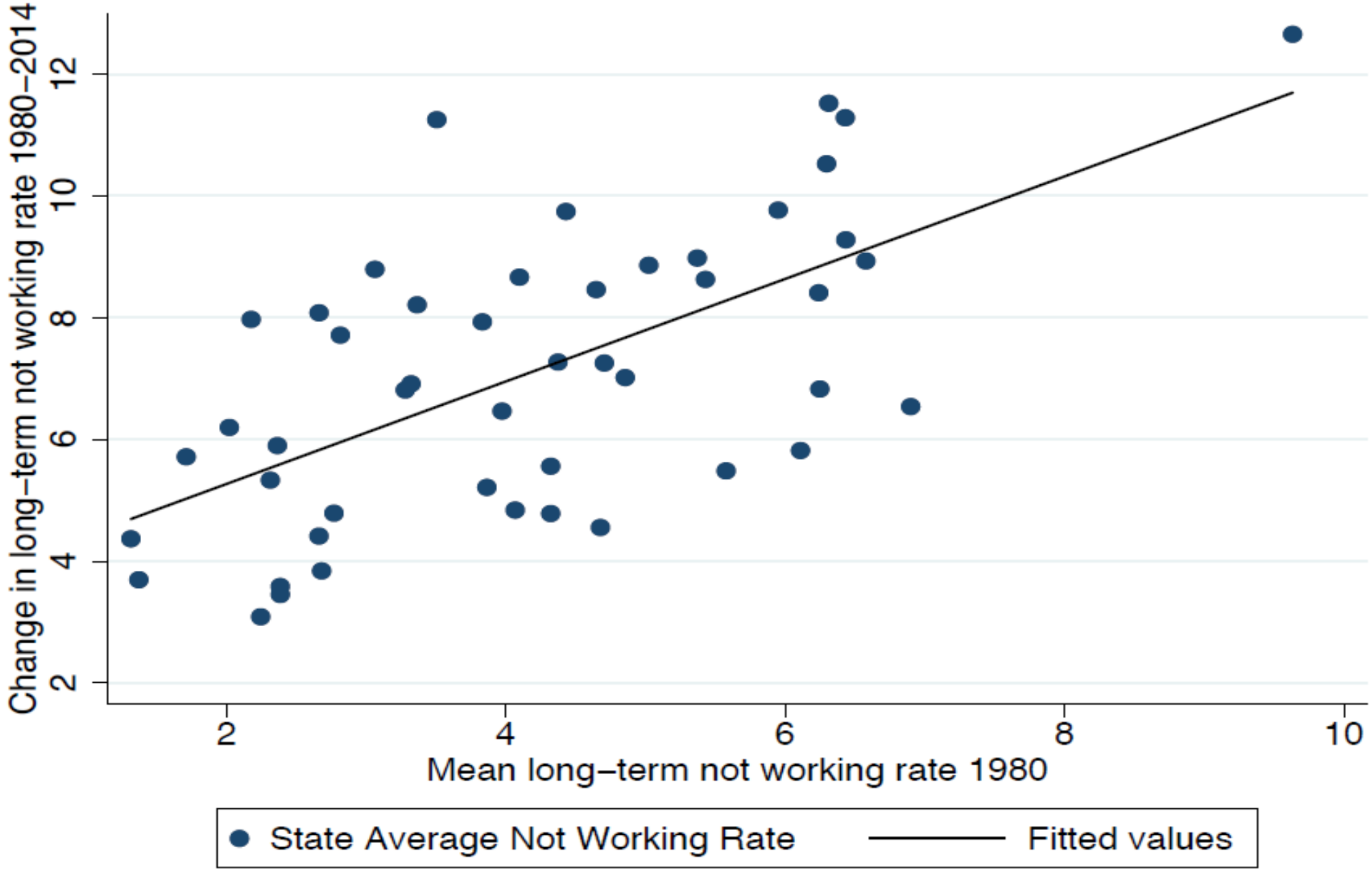
Prime age men



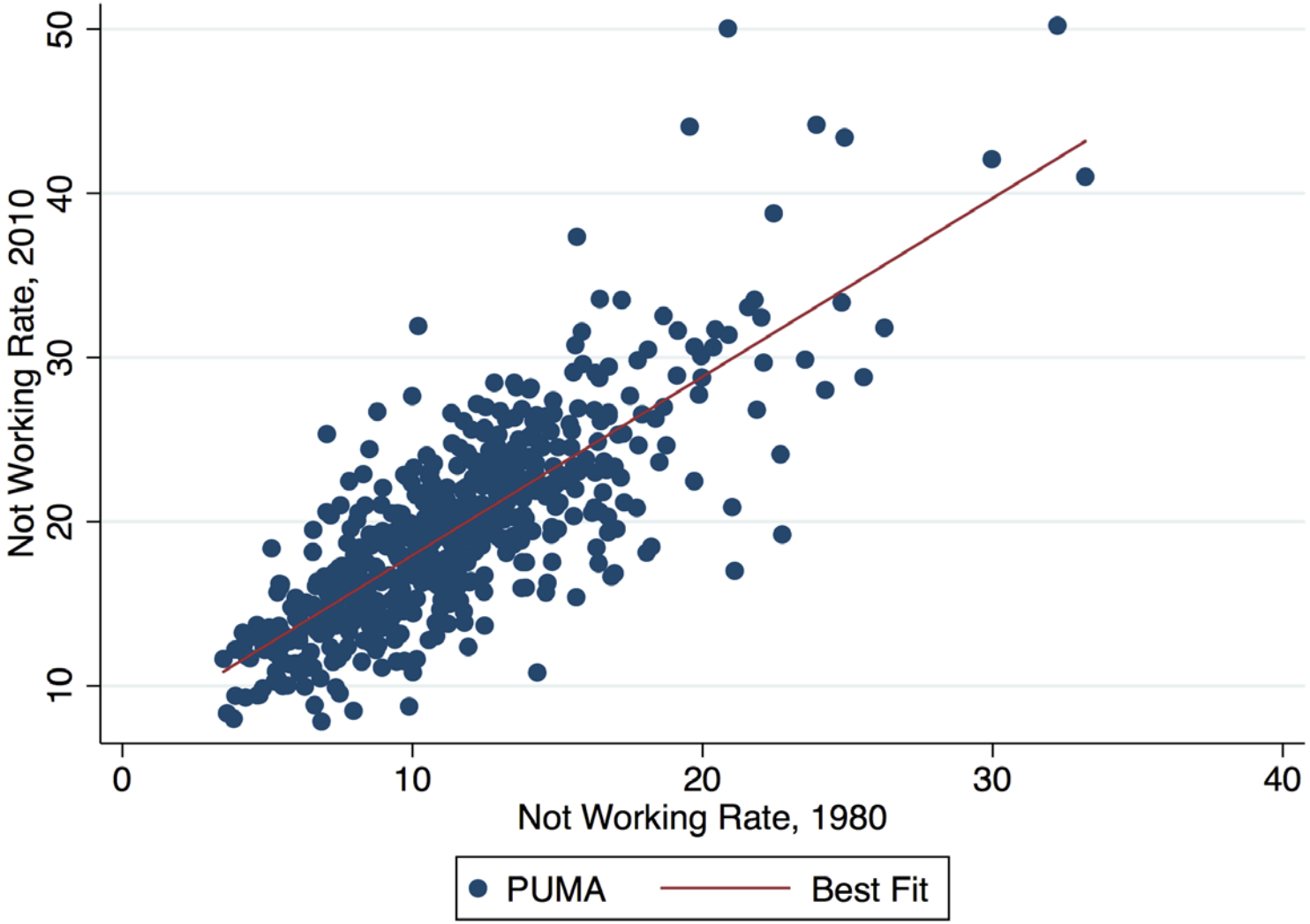
Prime age men



Prime age men not working rates, 1980-2014



Persistence of not working rates



Is Geographic Sclerosis an Excuse for Revisiting Place-Based Policies?

- Counter-argument # 1: Subsidizing declining places keeps people in dysfunctional local economies.
  - Less important with lower migration rate.
- Counter-argument # 2: Subsidizing any places leads to capitalization in rents. The poor tenant who doesn't like contemporary art may well hurt by the Bilbao Guggenheim.
  - Again, as people are less mobile this may be less important.
- The relative importance of capitalization vs. distorted migration depends on housing supply elasticity.
  - Some declining places (Detroit) have fixed housing supplies.
- Counter-argument # 3: Some place based policies can create pockets of high unemployment and low human capital.
- Counter-argument # 4: Infratructure place-based policies can lead to monumental waste.

Well the last one is certainly still true

Detroit tried to reverse its decline with foolish investments like its People Mover, which here glides over essentially empty streets.

Dennis MacDonald/ World of Stock

Place-Based Argument # 1: Externalities

- Agglomeration economies are now generally accepted by urbanists (dlog(wage)/dlog(density)=.06 or so).
- Congestion externalities are also quite real (pollution, traffic, etc.).
- Human capital externalities may be more contentious, but also appear big.
- These externalities mean that a decentralized spatial equilibrium is unlikely to be a social optimum.
- But we don't know– and are unlikely ever to know– enough about their shape to know the direction that we are off.
  - Should we move New Yorkers to West Virginia or vice-versa?
- The best identification strategies (Soil attributes, Million Dollar plants) seem unlikely to nail the full set of functional forms needed to implement.

Place-Based Argument #2: Insurance (Equity)

- In 1969, Detroit was slightly richer than Boston, today Boston incomes are 40 percent higher.
- Surely insuring individuals against shocks to the local economy would be welfare improving.
  - Pretty non-distortionary if based on place-of-birth, but place-of-birth is pretty inconceivable as a policy.
- A related argument is that place may be a marker for low income and less distortionary than low income itself.
- The big limitation is that states explain only 1.2 percent of income variability. Consequently, the upside is limited.
  - PUMAs explain 7.1 percent but PUMA based subsidies would distort far more.

Place-Based Argument # 3: Different Elasticities Should Mean Different Policies

- Example # 1: Federal Construction Subsidies. Perhaps appropriate in MA and CA, but madness in places where housing is elastic like TX or where housing is priced below construction costs (Detroit).
- Example # 2: Hot Spots Policing. Police departments throw more resources and places where there is more crime, presumably because the marginal effect of a police officer on the level of crime is higher there.
- Example # 3: Subsidizing Employment (EITC) vs. Non-employment (Disability Insurance, Implicit Taxes from SNAP, Section 8, etc.).
  - In high employment markets, policies that deter employment may not matter.
  - In high non-employment areas, policies that deter employment may have awful consequences.
  - Is the marginal impact of an employment subsidy higher in West Virginia than in Seattle?

Prime male income sources, 2010-2016

Table 7. Income Sources for Long-Term Not-Working Prime Age Men, 2010–16[a]

Source	*Coasts*	*Eastern heartland*	*Western heartland*
Total family income	40,318	34,859	36,897
Total individual income	8,665	9,283	8,964
Wages	0	0	0
Investments or business	400	275	541
Retirement	890	850	1,089
Workers' compensation	358	254	244
Family transfers	211	145	279
Total government support	6,652	7,688	6,711
Unemployment compensation	1,072	756	862
Disability insurance	4,584	5,834	4,661
Veterans' benefits	499	638	751
Other	498	461	438
Other sources	154	69	100

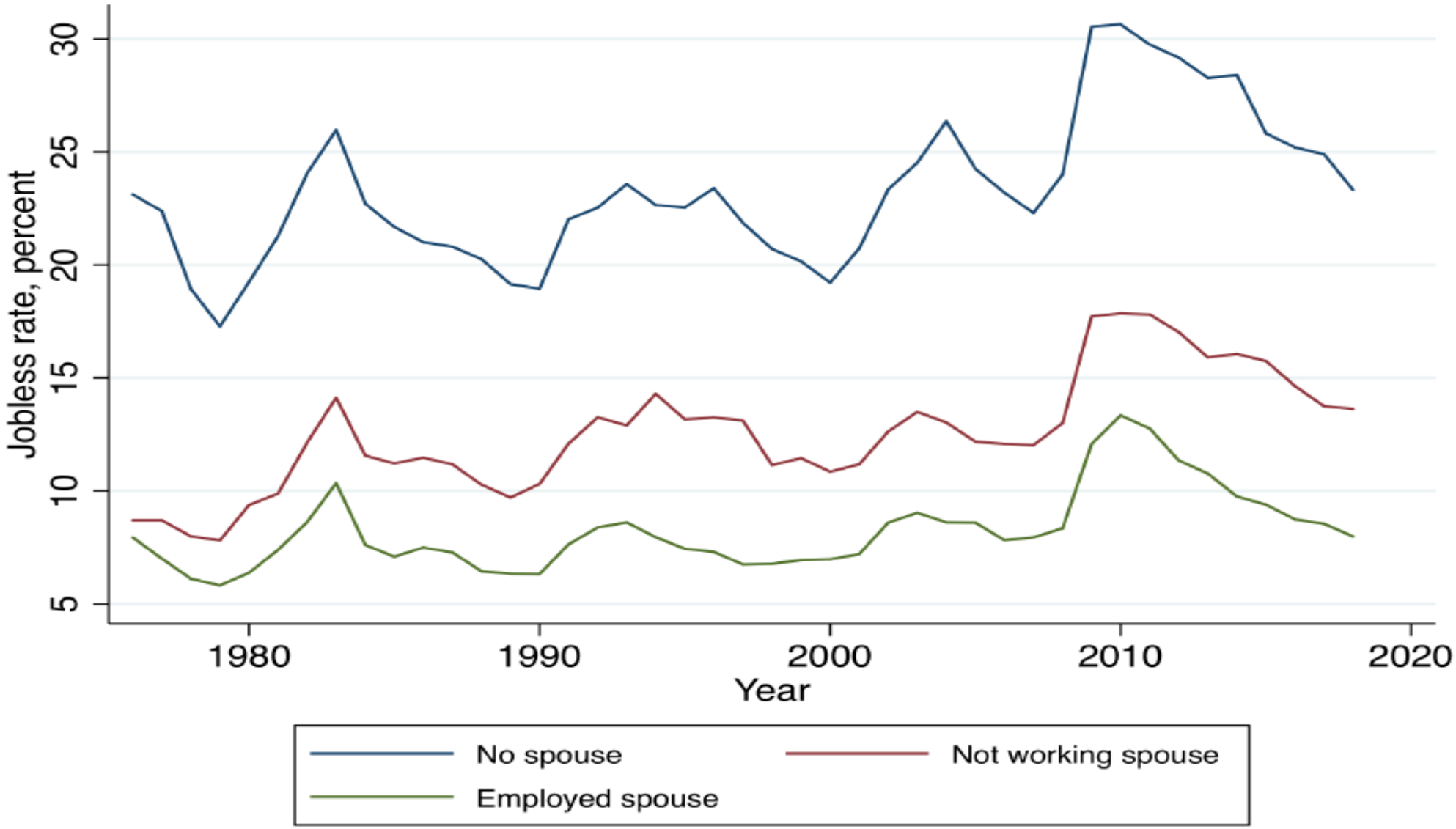
Table 8. Expenditures of Prime Age Men, 2016[a]

Income or expenditure	*Employed, total*	*Employed, living alone*[b]	*Employed, living alone, low income*[b,c]	*Long-term not working, living alone*[b,d]
Pretax household income	98,575	55,898	22,190	12,870
Tax	15,397	9,449	1,326	566
Posttax household income	83,170	46,444	20,861	12,301
Total expenditures	64,694	43,508	28,086	20,686
Food	9,491	6,506	5,091	3,830
Housing	21,250	14,752	10,857	9,221
Apparel and services	1,283	721	452	336
Transportation	10,297	6,935	4,664	2,918
Personal care	349	168	129	55
Health care	3,963	2,099	1,222	1,044
Entertainment	3,024	2,015	1,159	975
Alcohol	722	766	475	179
Tobacco products	325	345	398	459
Other expenditures	13,989	9,200	3,639	1,669

Prime men living with a parent, 1978-2015

Joblessness is concentrated amongst men without a spouse

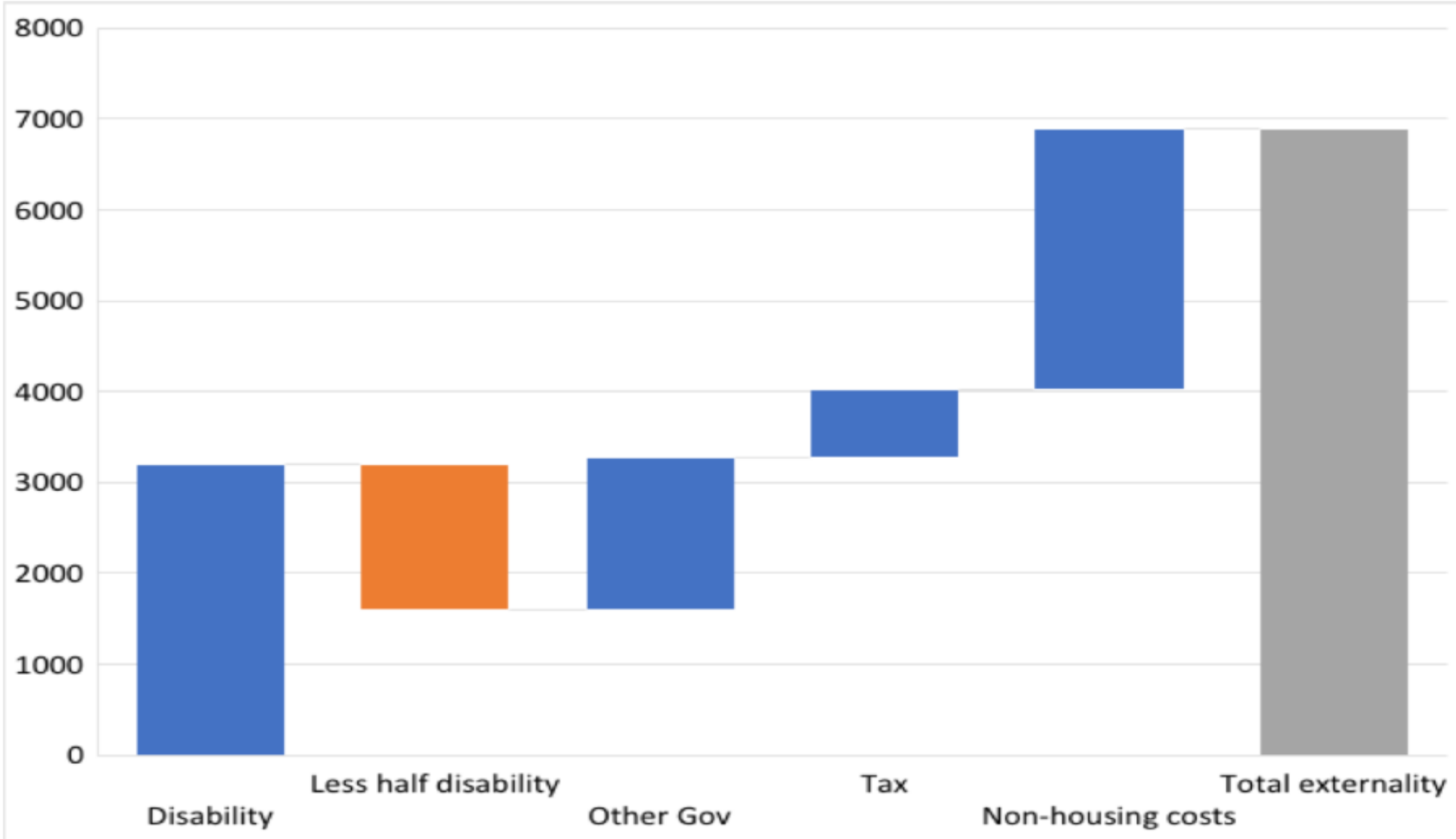
Prime age men



Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement; IPUMS; authors' calculations

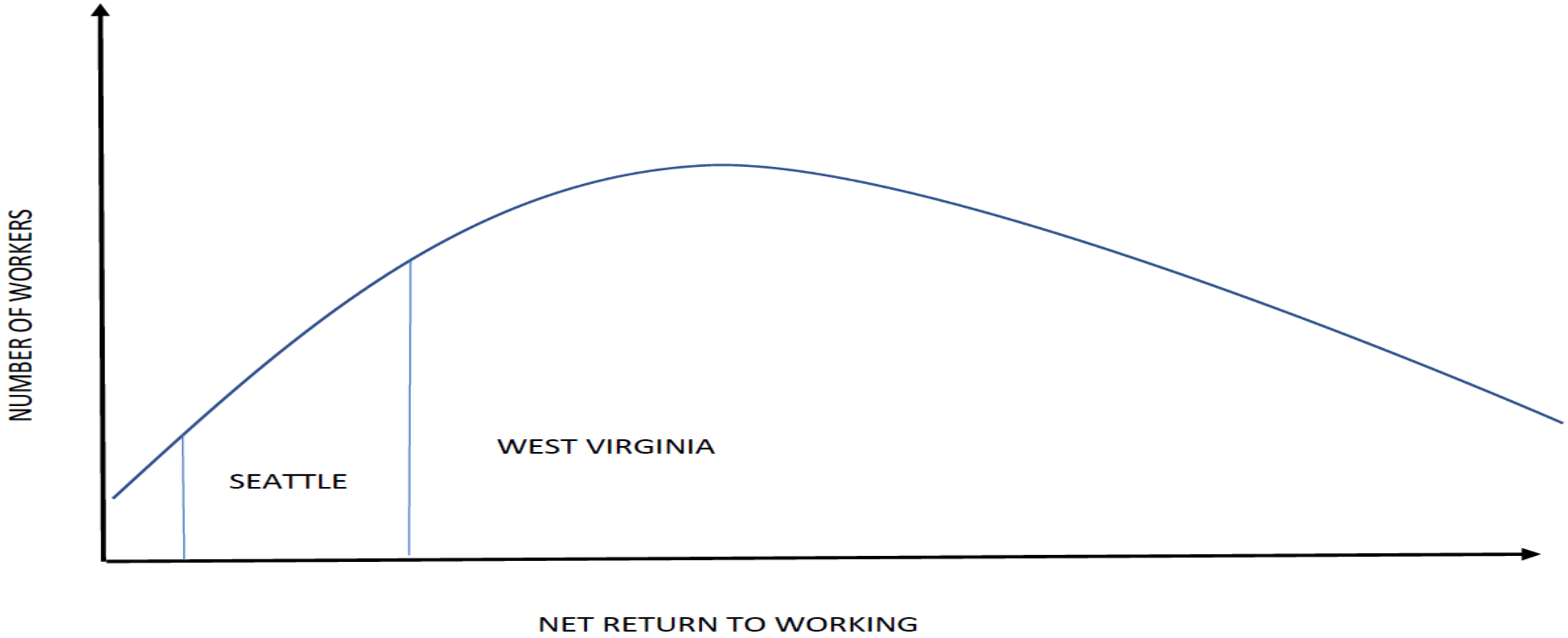
We estimate the direct cost of joblessness is ~36% of low-income wages

Prime men



Source: Current Population Survey, Annual Social and Economic Supplement; IPUMS; authors' calculations

My View of the World: Different Employment means different numbers on the margin



The Nice and Mean Variants of Place-Based Targeting: Spatial Bonus vs. Spatial Tilt

- The Nice Variant (Larry)
  - We have adopted a set of policies for poor people that create positive externalities and internalities from working.
  - Subsidizing working makes sense.
  - But we should use our employment dollars where they will have the largest impact– in West Viriginia, not in Seattle.
  - Also we should open to simpler subsidies paid to firms.
  - And didn't this work with empowerment zones (Busso et al.)
- The Mean Variant (Ed)
  - I agree, but I don't want to incentivize people to move to West Virginia.
  - So let's tilt benefits from not-working to marginal workers in distressed areas– not subsidize distressed areas.
  - Ramp up employment subsidies in West Virginia and cut something else (Medicaid?) back to keep the total bundle constant.
  - This can be done in a way that is revenue neutral and doesn't distort employment.
  - But don't trust the locals to do this.

Evidence on Differential Elasticities Across Space: Bartik

Table 3. State- and PUMA-Level Bartik Analysis[a]

	Growth in state not-working rate[b]				*Growth in the house price index*[c]		*Growth in PUMA not-working rate*[d]	
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Bartik employment growth[e]	–0.665***	–0.447***	0.198	0.440**	0.295	–0.218	–0.859***	–0.523***
	(0.034)	(0.104)	(0.149)	(0.211)	(0.450)	(0.517)	(0.137)	(0.136)
Historical not-working rate[f]							–0.015***	0.011*
							(0.004)	(0.005)
Bartic employment growth × historical not-working rate[e,f]		–2.013**		–2.129**		4.535		–2.341***
		(0.994)		(1.060)		(2.885)		(0.384)
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time trend	Yes	Yes	No	No	No	No	No	No
Year fixed effects	No	No	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	1,872	1,872	1,872	1,872	1,584	1,584	11,693	11,693

Autor, Dorn, Hanson (2013) Heterogeneity

Table 4. The Impact of Chinese Import Shocks on Not Working, 1990–2007[a]

	Change in not-working rate		*Change in long-term not-working rate[b]*	
	(1)	*(2)*	*(3)*	*(4)*
Change in trade exposure	0.831*** (0.172)		0.372*** (0.093)	
Change in trade exposure, baseline zones, β_l		0.823*** (0.173)		0.368*** (0.094)
Change in trade exposure, high not-working rate zones, $\beta_h - \beta_l$[c]		0.597* (0.318)		0.339* (0.191)
Percentage of total employment in manufacturing, $t-1$	–0.068** (0.028)	–0.066** (0.028)	–0.015 (0.014)	–0.013 (0.014)
Percentage of population that is college educated, $t-1$	–0.031 (0.030)	–0.027 (0.029)	–0.010 (0.014)	–0.007 (0.014)
Percentage of population that is foreign born, $t-1$	–0.108*** (0.024)	–0.106*** (0.024)	–0.051*** (0.011)	–0.050*** (0.011)
Percentage of total employment that is female, $t-1$	0.191** (0.090)	0.199** (0.092)	0.002 (0.030)	0.006 (0.031)
Percentage of total employment in routine occupations, $t-1$	0.217** (0.095)	0.226** (0.094)	0.044 (0.050)	0.049 (0.050)
Average offshorability index of occupations, $t-1$	–1.142* (0.660)	–1.204* (0.661)	–0.187 (0.270)	–0.222 (0.270)
Census region fixed effects	Yes	Yes	Yes	Yes
Period fixed effects	Yes	Yes	Yes	Yes
No. of observations	1,444	1,444	1,444	1,444

Nakamura-Steinsson (2014) Heterogeneity

Table 5. The Impact of Government Spending Shocks on Not Working, 1980–2006[a]

	Percentage change in the not-working rate for prime age men					
	1-year change		*2-year change*		*3-year change*	
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Prime military contracts	–6.218		–6.370*		–9.613**	
	(4.587)		(3.578)		(4.153)	
Prime military contracts, baseline states, β_l		–5.725		–6.214*		–9.491**
		(4.464)		(3.587)		(4.168)
Prime military contracts, high not-working rate states, $\beta_h - \beta_l$[b]		–11.051**		–1.553		–3.048
		(4.900)		(5.551)		(5.181)
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	1,377	1,377	1,377	1,377	1,377	1,377

Interpretation

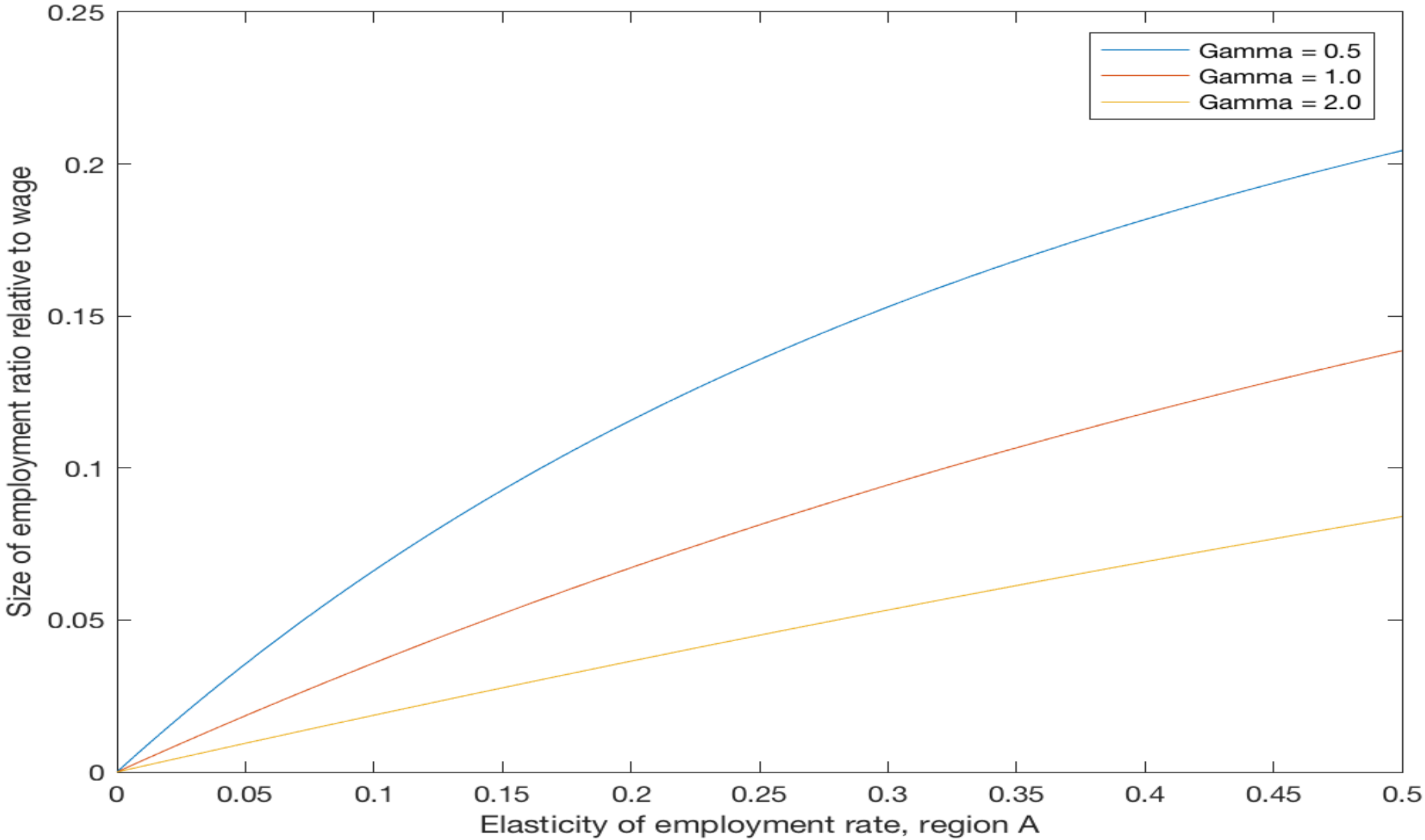
- We are not convinced by any particular number, but heterogeneous treatment effects certainly seem quite plausible.
- In particular, higher jobless areas seem to have higher joblessness responses to various shocks.
- But we see this as an opening to future work, not as anything definitive.
- The larger point is that our view of place-based policies depends on such place based heterogeneity.
- In this spirit, we also perform an illustrative calculation.

Modifying Bailey (1976)– Chetty (2006)

- Government Allocates Benefits to Marginal Workers and the Non-Employed Across Space.
- We can separate the decision across space (that's where Nice and Mean Differ) and the decision within space (where they agree). First order conditions are:
  - Marginal Utility of Cash to the Employed + Increase in Employment*Social Benefit of Employment = Cost of Cash
  - Marginal Utility of Cash to the Unemployed - Decrease in Employment* Social Benefit of Employment = Cost of Cash
- If employment effect of wages to employment effect of U.I. is symmetric then it follows that:
- $$\frac{V'(Y_{Employed})}{V'(Y_{Non-Employed})} = 1 - \frac{1}{1-Emp.Share}\epsilon^{Emp}_{Wage}\frac{(social\ benefit\ of\ working)}{wage}$$

Bailey-Chetty across Space

- We assume a constant benefit of working/wage of .36.
- This comes from .21 in lost taxes and extra benefits (we could .5*disability as a result of not work) and .15 from family.
- No personal cost of not working (highly debatable).
- This could be too high or too low.
- We use Bartik and Bartik interactions to heterogeneity to estimate over space.
- We use CRRA and a range of values for risk aversion.


Gamma = 0.5
Gamma = 1.0
Gamma = 2.0
Size of employment ratio relative to wage
Elasticity of employment rate, region A
0.25
0.2
0.15
0.1
0.05
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5

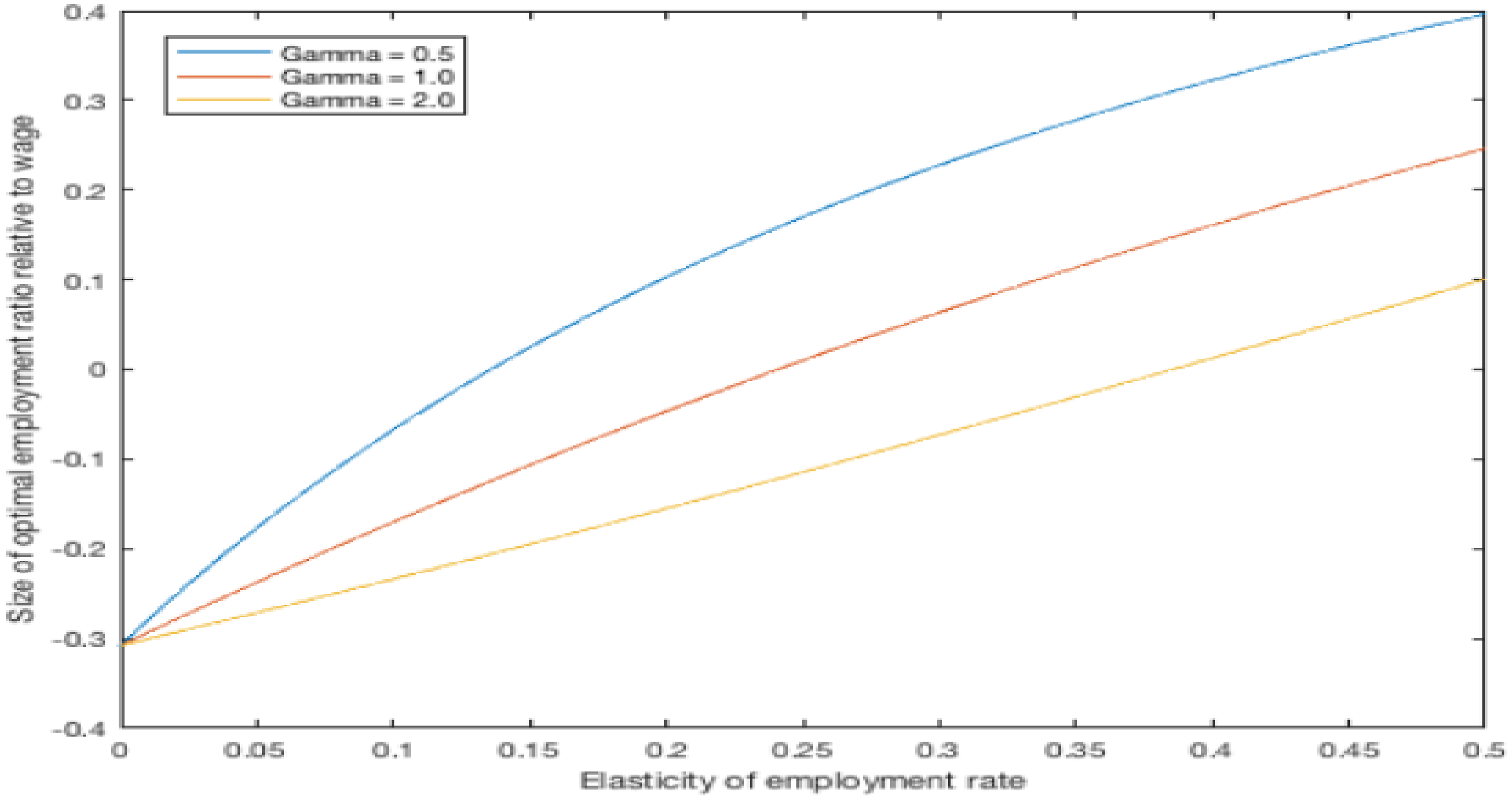


FIGURE 35. MODEL CALIBRATION FOR REVENUE NEUTRAL EMPLOYMENT SUBSIDY

Table 10. Estimating the Elasticity of the Labor Supply[a]

	(1) *OLS*	*(2)* *IV*	*(3)* *OLS*	*(4)* *IV*
Log wage[b]	–0.038	–0.093	–0.008	0.022
	(0.027)	(0.080)	(0.021)	(0.075)
Not-working rate, 1980[c]	–12.248***	–22.633***	–12.611***	–28.768***
	(2.874)	(4.144)	(2.624)	(6.019)
Log wage × not-working rate, 1980[b,c]	1.102***	2.126***	1.152***	2.772***
	(0.277)	(0.404)	(0.256)	(0.599)
College graduation rate, 1980[d]	0.009	0.045	0.028	0.112*
	(0.032)	(0.052)	(0.029)	(0.064)
Share with less than a high school education, 1980[e]	–0.097**	–0.029	–0.107**	0.118
	(0.042)	(0.061)	(0.049)	(0.126)
Period fixed effects	Yes	Yes	Yes	Yes
State fixed effects	No	No	Yes	Yes
Implied elasticity				
Wyoming	0.03	0.05	0.07	0.20
West Virginia	0.14	0.26	0.18	0.48
First-stage *F* statistic				
Log wage		14.6		14.4
Interaction term		8.4		7.3
No. of observations	1,614	1,614	1,614	1,614

Table 11. Estimates of the Optimal Consumption Ratio of Not-Working Individuals to Employed Individuals

Estimate	*Wyoming*	*Massachusetts*	*West Virginia*
At-risk not-working rate (2014–16)	39.5	48.6	61.3
Elasticity of the employment rate	0.05	0.12	0.26
Externality as a percentage of wages	36.3	36.3	36.3
Ratio of consumption			
$\gamma = 0.5$	0.919	0.831	0.718
$\gamma = 1.0$	0.958	0.911	0.848
$\gamma = 2.0$	0.979	0.955	0.921

Towards a Sensible Spatial Policy

- Place-Specific Social Insurance Programs
  - Favor employment more when there are more people on the margin.
- Place-Specific Employment Subsidies
  - Following Pigou– an offset to the fiscal externality of joblessness.
- Place-Specific Educational Interventions
  - Experimental vocational training to supplement existing schools.
- Encouraging Place-Specific Regulatory Reform
  - One stop permitting for example.
- What I'm not encouraging: infrastructure, and wholesale attempt to move economic activity.

How Not To Fix Declining Regions: The Artsy Approach (Bilbao's Unemployment Rate is now 18.7%)

Image by Edwin Poon

At least that museum’s good: Sheffield’s “National Center for Popular Music” closed quickly