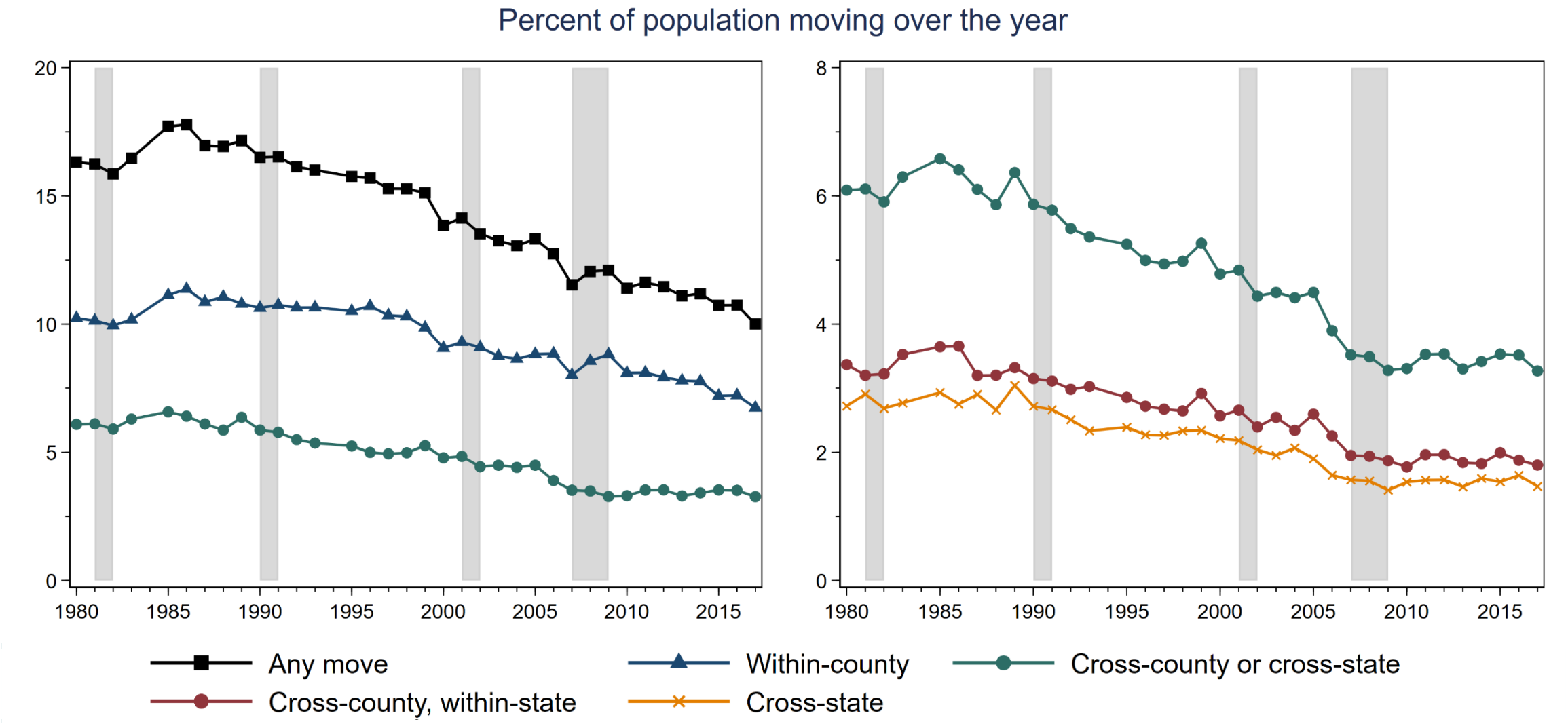
U.S. Internal Migration: Recent Patterns and Outstanding Puzzles

Raven Molloy and Christopher Smith
Federal Reserve Board of Governors

Prepared for "A House Divided: Geographic Disparities in Twenty-First Century America," The Federal Reserve Bank of Boston, October 4 and 5

Americans move less than they used to



Note: Authors' calculations from the ASEC supplement to the CPS, as provided by IPUMS. Estimates are computed for all ages, and respondents with imputed values for migration are excluded from the calculations.

Reasons for interest in declining long-distance migration

- Recent examples of local labor markets adjusting slowly via migration following significant adverse shocks
  - China Shock (Autor et. al. 2013) and Great Recession (Yagan forthcoming)
  - Dao, Furceri, Loungani (2017): migration less responsive to shocks at the state level than decades earlier
- Regional convergence in income/employment has slowed or reversed (e.g. Ganong and Shoag 2017; Austin, Glaeser and Summers 2018)
- Broad decline in measures of labor market dynamism, and declining migration may be one aspect this

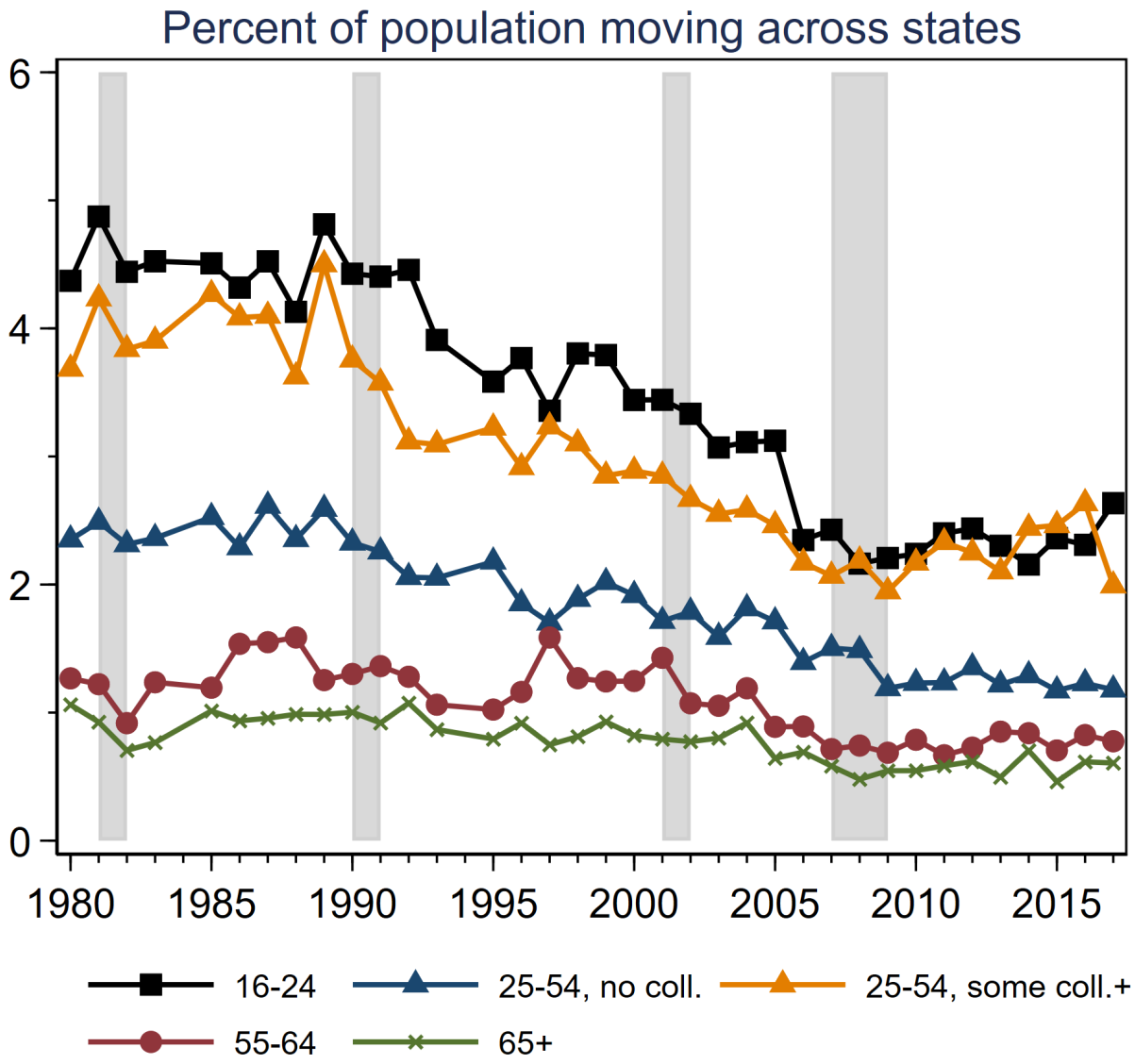
Goals of this paper

- Describe patterns in internal migration since 1980s
  - Longer-distance internal migration flat since 2009, consistent with modest cyclicality + continuation of pre-recession trend
- Summarize evidence for labor-market related explanations for the decline in migration since 1980s
- Focus on a specific issue related to migration and the labor market: migrating from weaker labor markets
  - Rates of in- and out-migration are higher in stronger labor markets
  - Migrants who *do* leave weak labor markets are much more likely to go to other weak labor markets than to strong labor markets
  - Why? This does not appear due to housing constraints in strong labor markets, but rather that weak and strong labor markets are geographically distant.

Measuring internal migration

- Workhorse datasets
  - CPS Annual Social and Economic Supplement (1960s-): mig. across states, counties, within-county over last year; and reasons for move
  - ACS (2001+): overall mobility, cross-state migration over last year
  - IRS public use data (1980s-2016): cross-county migration flows derived from changes in location of tax filing since previous year
    - Change in methodology in tax year 2012, boosting mig. rates relative to earlier years
- Despite some differences in trend (larger decline in the CPS), the overall story is similar across data sources: migration declined over the 1990s, 2000s, and has been flattish since 2009 or so

Similar patterns by demog. characteristics, geog.

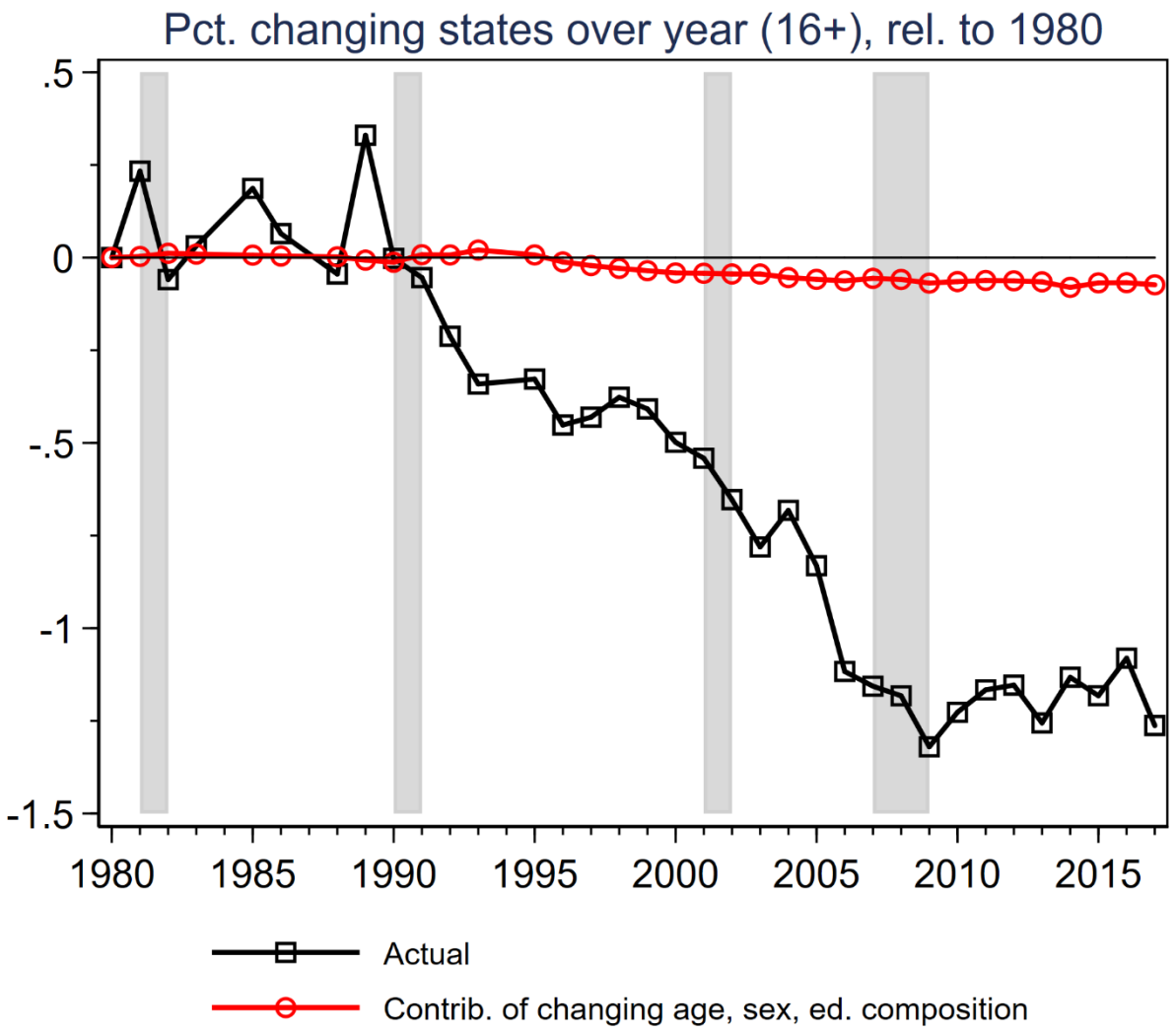


Cross-state and cross-county mig. declined for:

- All ages, educ. groups
- Emp. and non-emp. men, women
- Homeowners and renters
- Married and unmarr. men, women
- Families with and without kids; with sole and dual earners, and dual earners with college degs.
- High, middle, and low income households

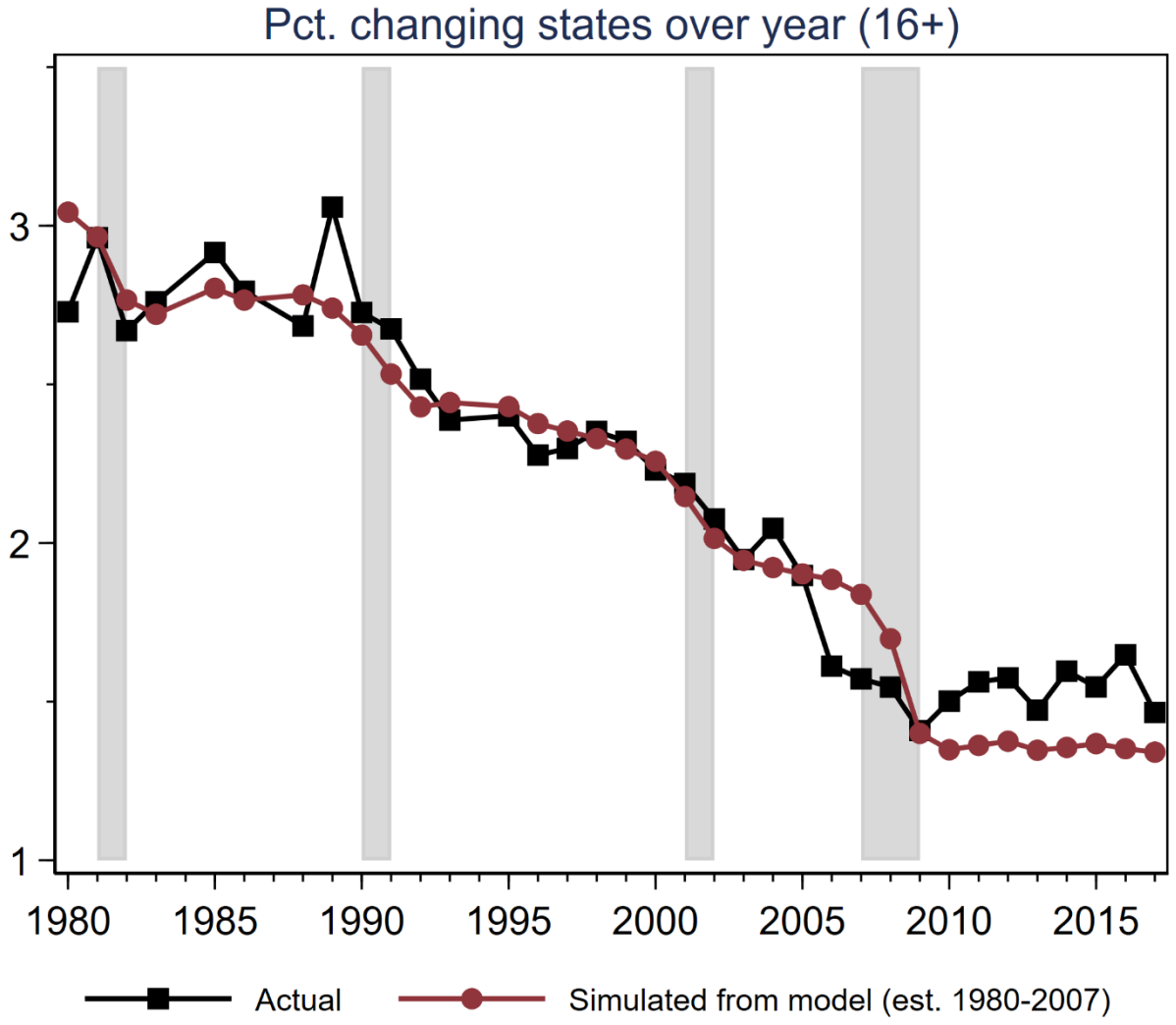
Avg. rates of in- and out-mig. have fallen for states in most Census divisions

Changing demographics explain very little of the decline in longer-distance migration



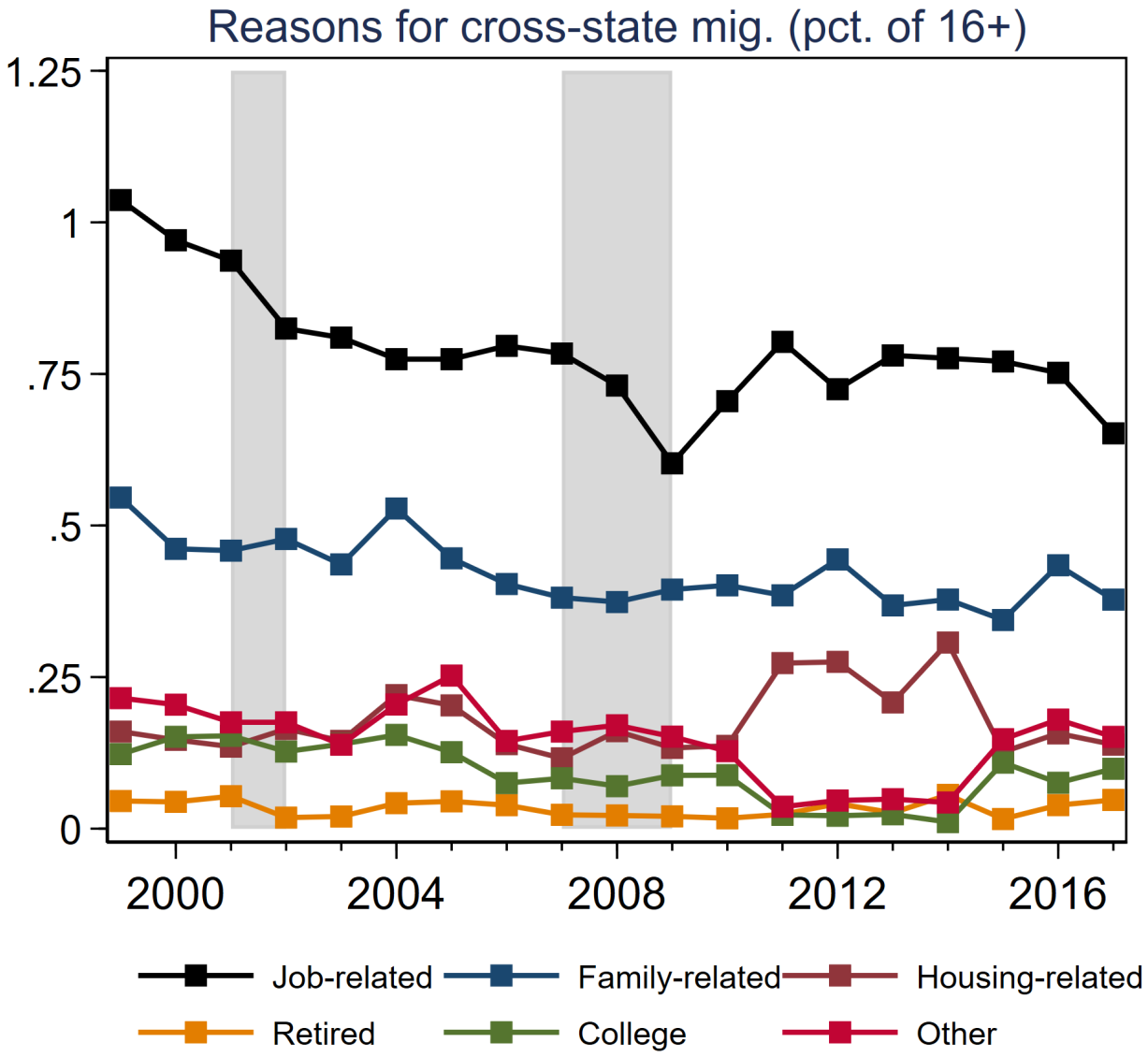
- Actual decline in cross-state migration (rel. to 1980s): 1¼ pp
- Change accounted for by changes in age, sex, education dist.: 0.1pp
  - Red line: year fixed effects (rel. to 1980) from reg. of migration on demog. controls
  - Aging pushes down mig. somewhat, rising ed. pushes up
- Similar story for decline in cross-state + cross-county mig.

The recent flattening in long migration may reflect continued downtrend + procyclicality



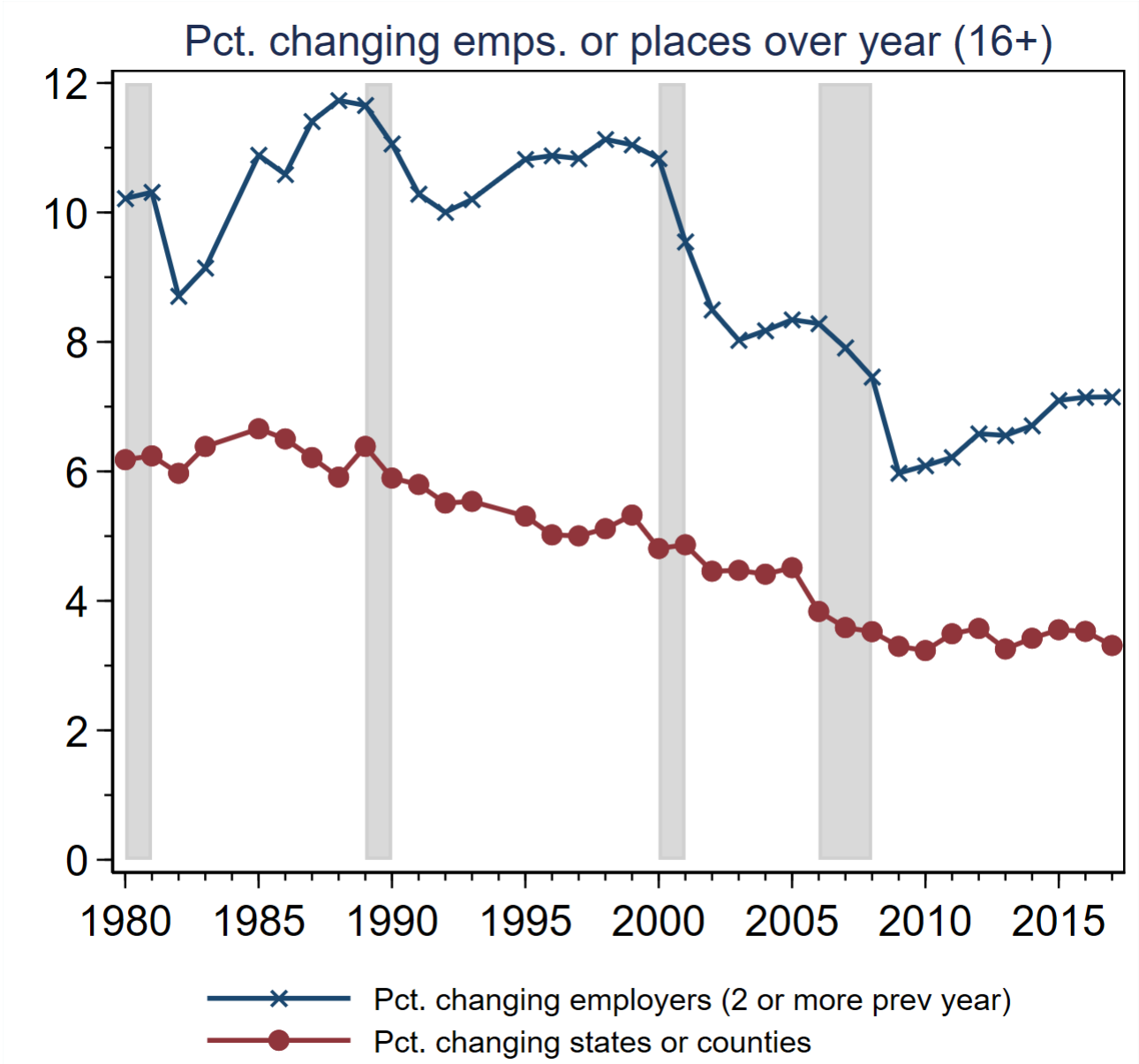
- Simple model. Mig. is a function of:
  - Demographics (age, sex, ed., race/ethnicity)
  - Cycle (CBO unemp. rate gap); cyclicality can vary by demog.
  - Demog.-specific linear time trends
- Model fit from 1980-2007 (red line)
- Predicts large drop in mig. during recession, edging down thereafter
- Roughly consistent with flatness of mig. since 2009
- Implication: factors holding down mig. pre-recession remain, offset by pro-cyclicality

Evidence for labor-market related explanations



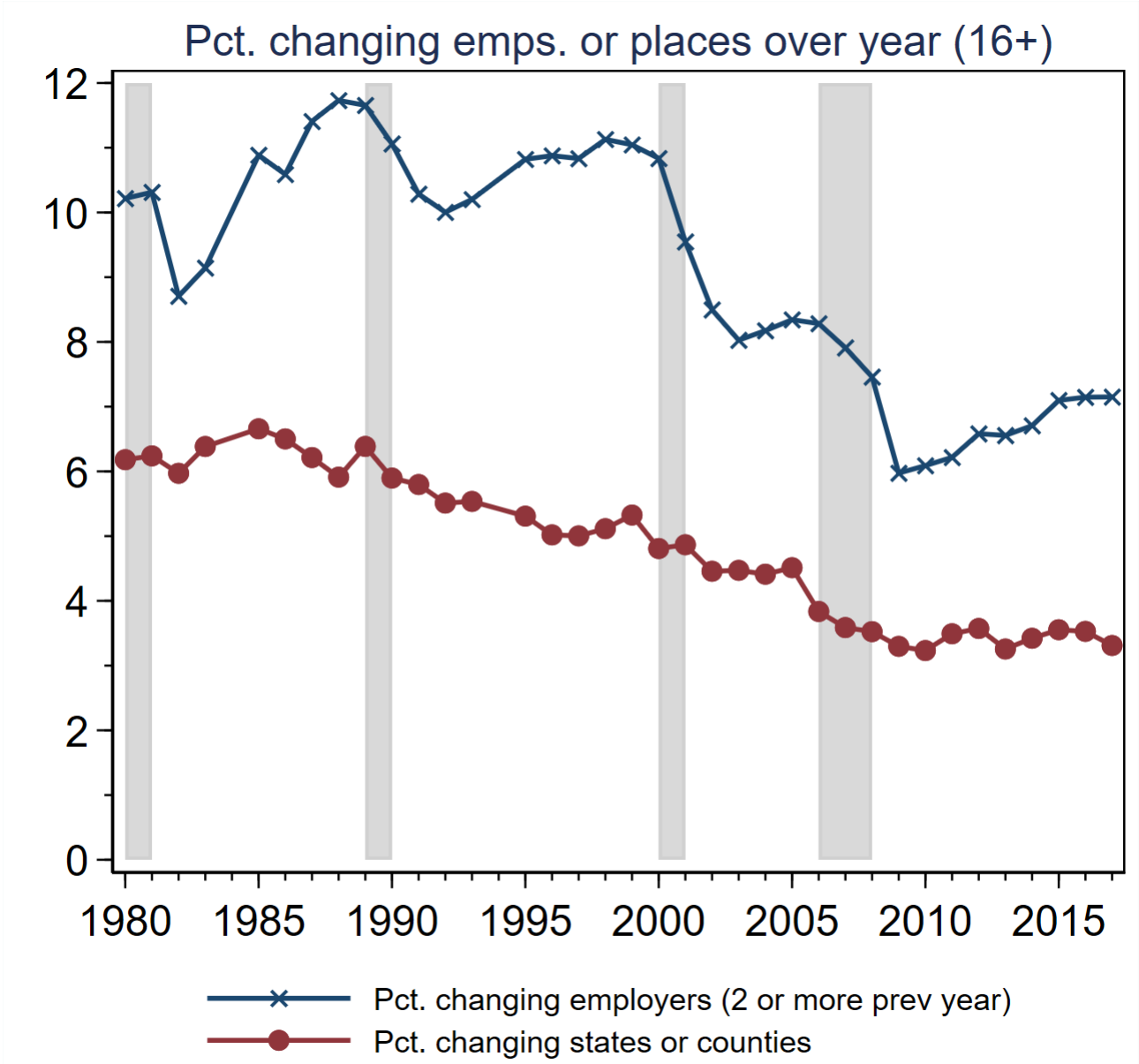
- Longer-distance moves are usually job-related; largest decline in job-related migration

Evidence for labor-market related explanations



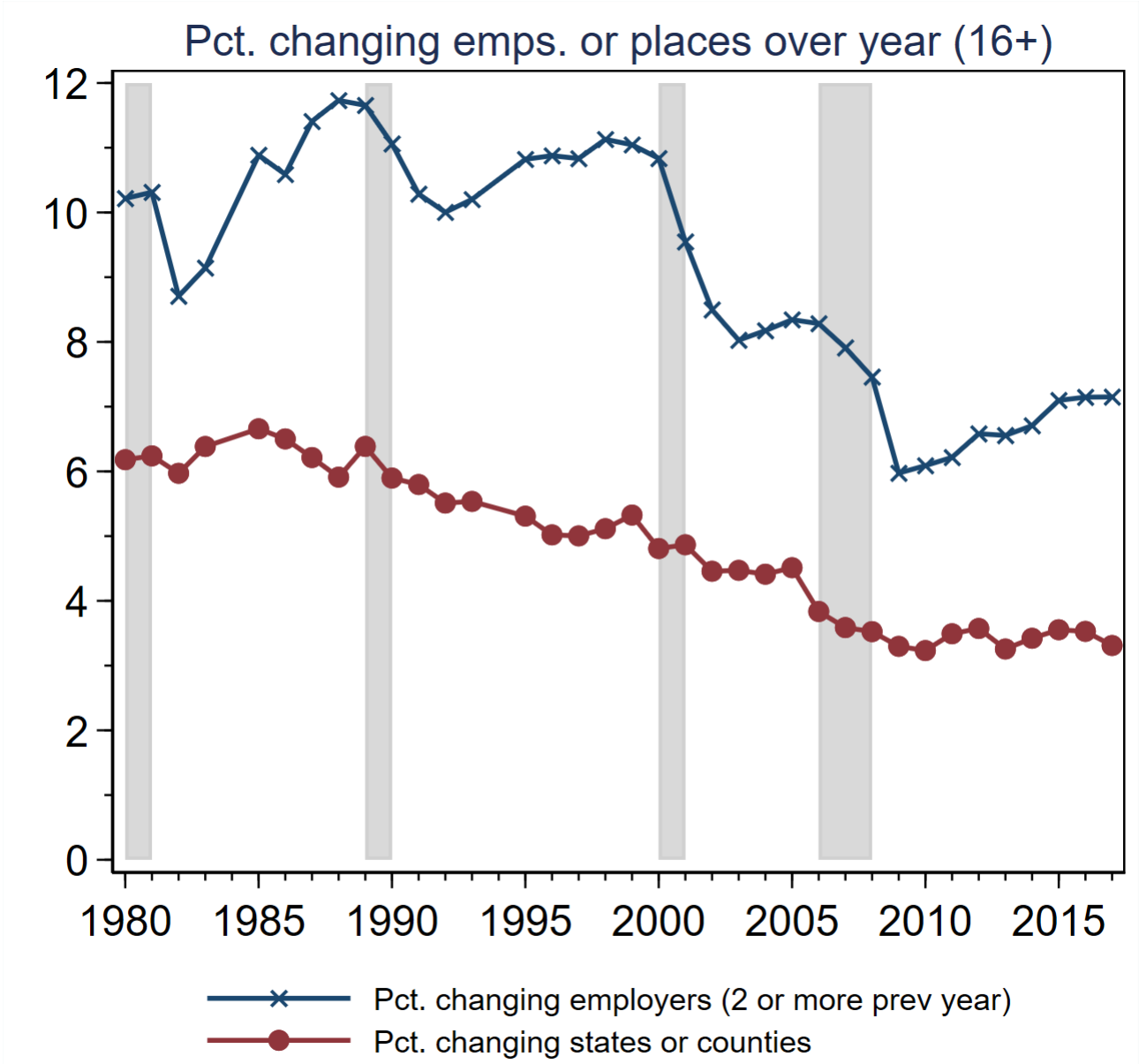
- Longer-distance moves are usually job-related; largest decline in job-related migration
- Job switching has declined, and job switchers are more likely to move
  - Job switching: 2 or more employers in prev. year (CPS ASEC)

Evidence for labor-market related explanations



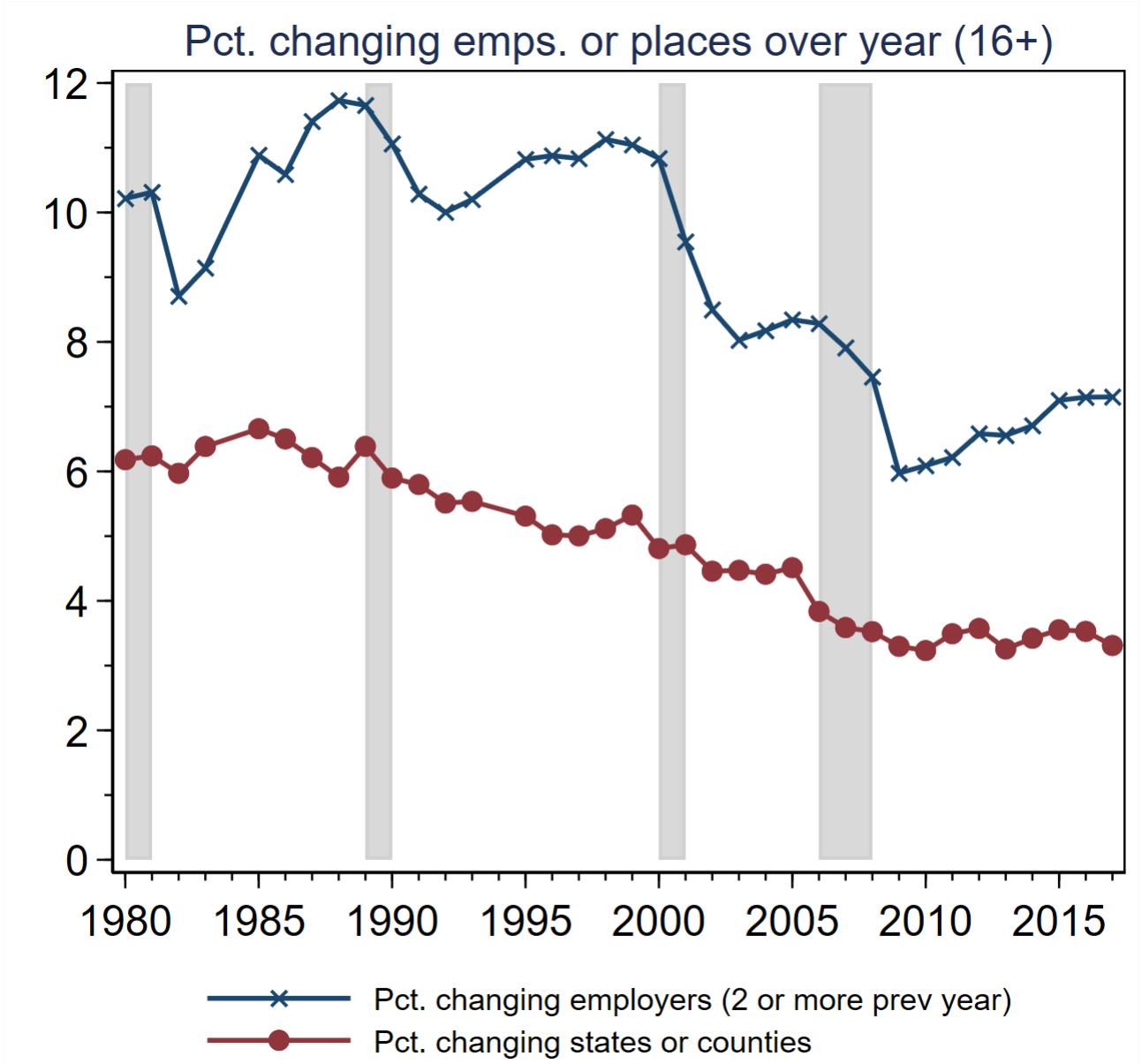
- Longer-distance moves are usually job-related; largest decline in job-related migration
- Job switching has declined, and job switchers are more likely to move
  - Job switching: 2 or more employers in prev. year (CPS ASEC)
- Migration has fallen more in states where job switching has fallen more

Evidence for labor-market related explanations



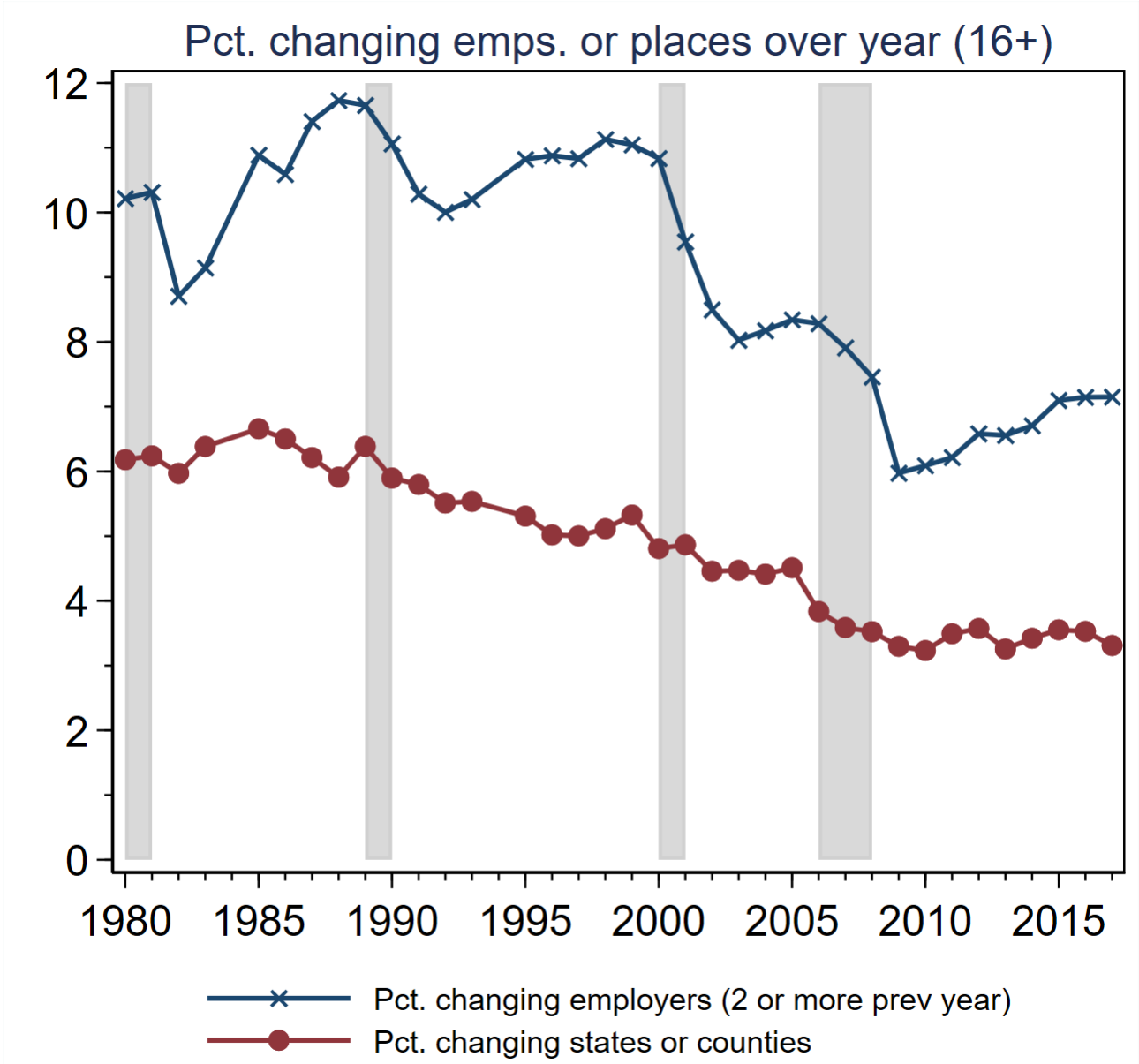
- Decline in job switching likely led to decline in migration rather than the reverse because:
  - Decline in job switching is larger than the decline in long migration

Evidence for labor-market related explanations



- Decline in job switching likely led to decline in migration rather than the reverse because:
  - Decline in job switching is larger than the decline in long migration
  - Large decline in job switching without location change

Evidence for labor-market related explanations



- Decline in job switching likely led to decline in migration rather than the reverse because:
  - Decline in job switching is larger than the decline in long migration
  - Large decline in job switching without location change
- Declining migration is likely reflective of the broader decline in labor market / business dynamism (e.g. Davis and Haltiwanger 2014, Decker et. al. 2016)

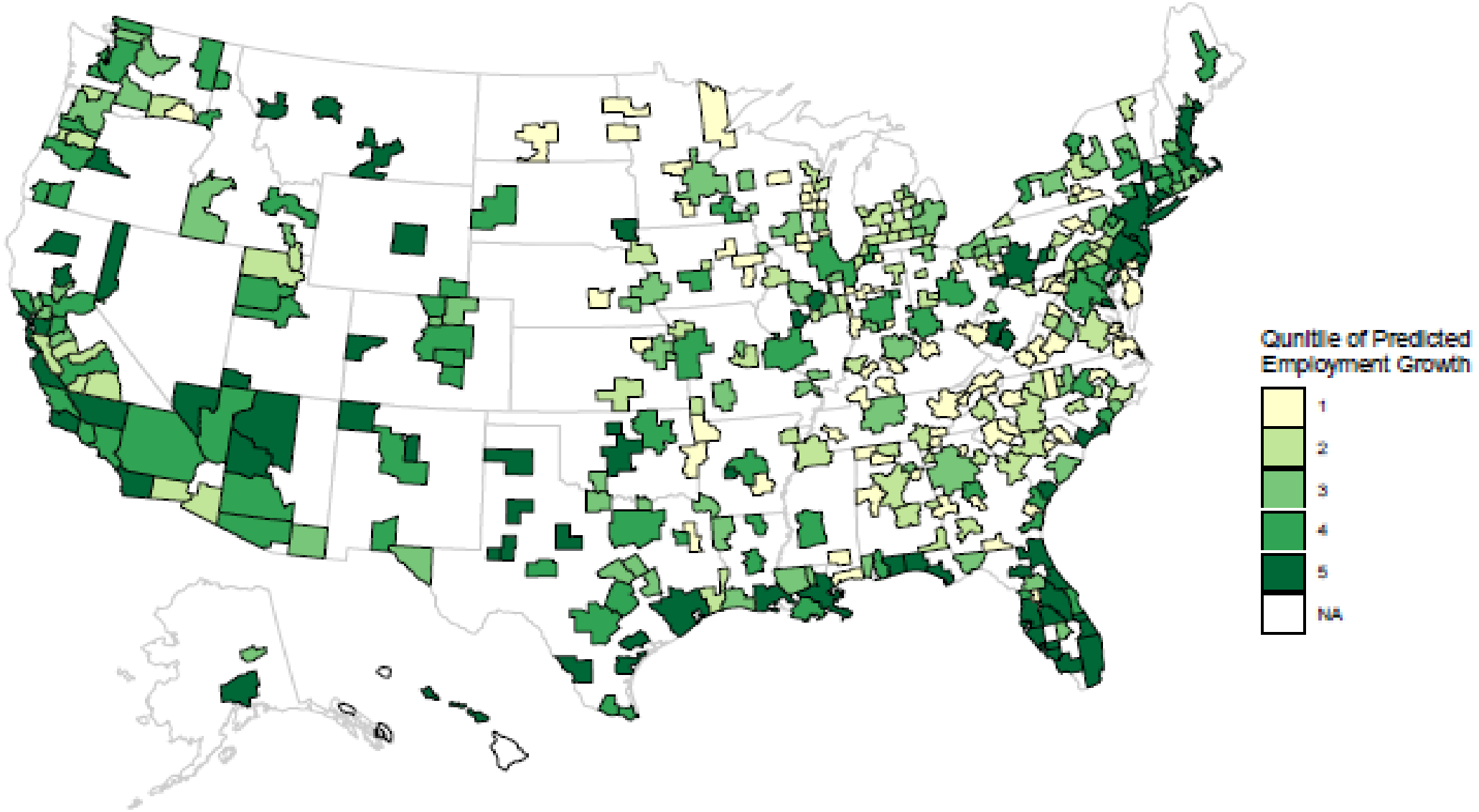
Question related to migration and the labor market: Migration patterns across weak, strong labor markets

- How have low levels of longer-distance migration impacted people's ability to move from weak to strong labor markets?
- To answer this question, we examine migration patterns across metro areas based on city's labor demand strength:
  - Are residents of weak labor markets more likely to move?
  - How has their relative mobility changed?
  - Where do they move if they do choose to migrate?

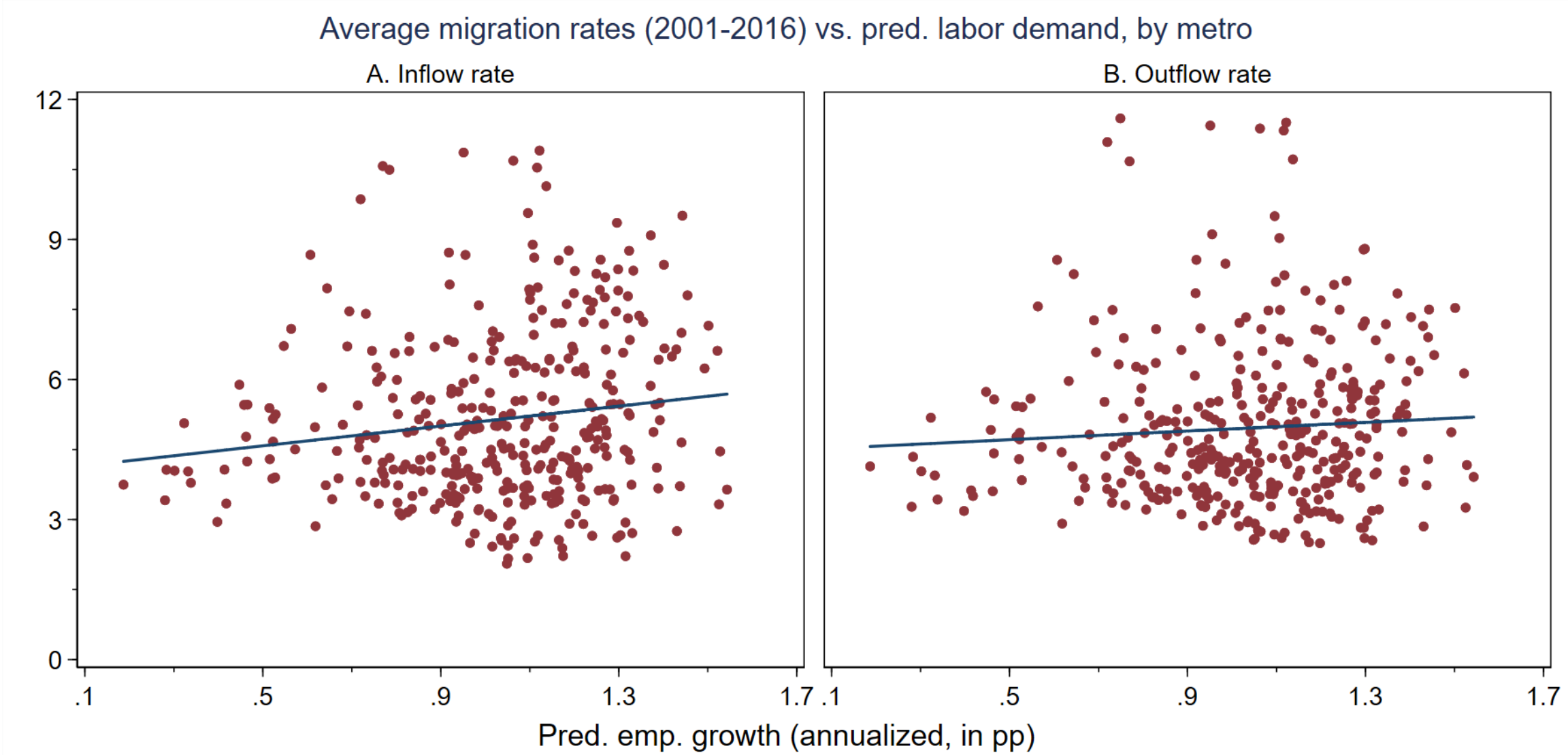
Measuring migration between weak and strong labor markets

- Labor market = city (CBSA, core-based statistical area)
- Labor market strength: Bartik-style measure of labor demand, based on city's industry composition of employment in 2000 and national trends in employment by industry, 2001-2016
  - We rank cities based on this measure
  - "Low demand" = bottom tercile, "high demand" = top tercile
- We estimate migration flows between cities from IRS data

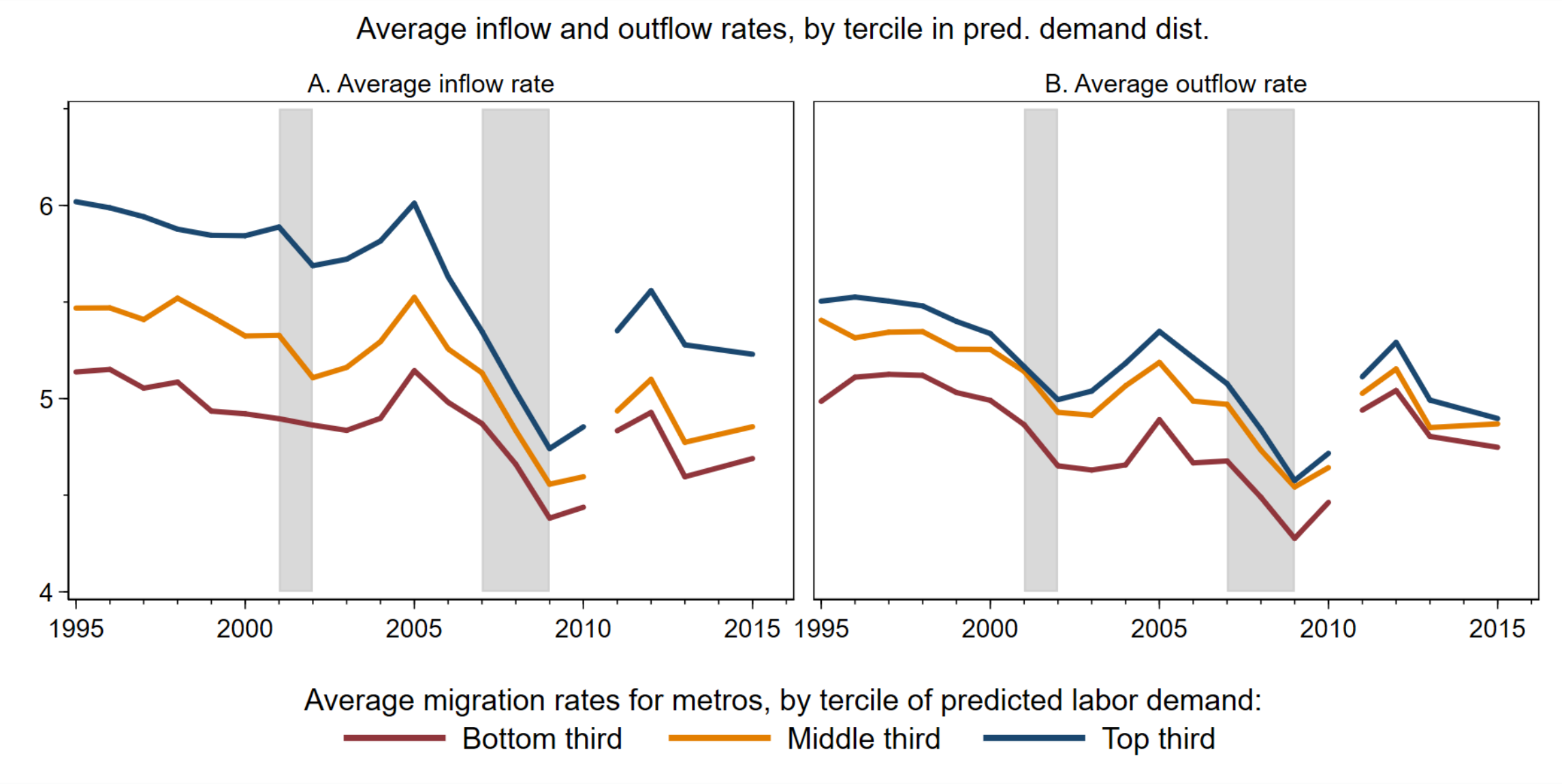
Stronger labor markets are concentrated on the coasts



In- and out-migration rates are somewhat higher in stronger labor markets



In- and out-migration rates have trended down for weaker and stronger labor markets



Migration from weak labor markets is not directed towards strong labor markets

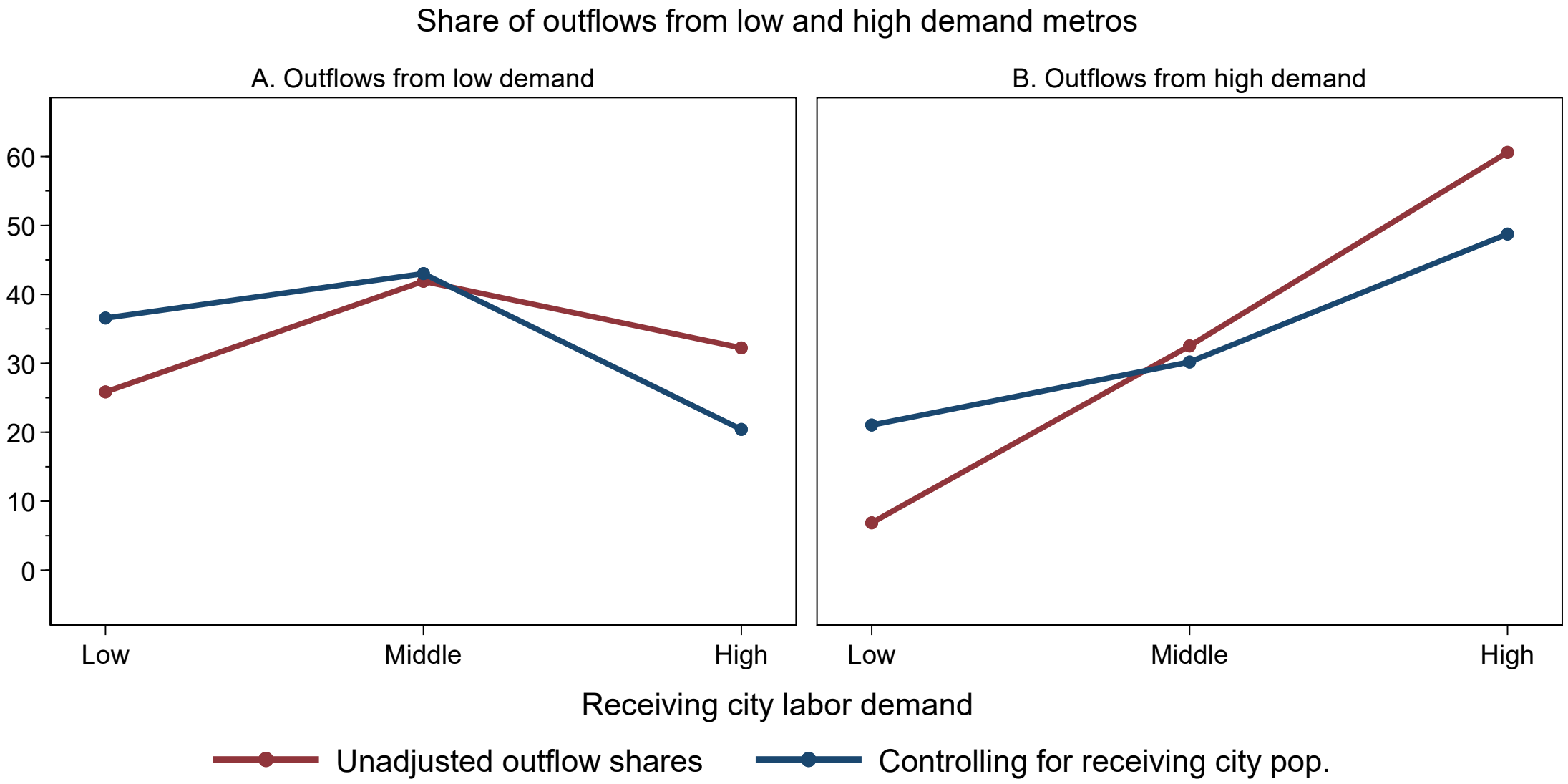
Avg. pct. of outflows from:	Share of outflows going to: Bottom tercile	Middle tercile	Top tercile
Bottom tercile	28	39	33
Middle tercile	12	35	53
Top tercile	7	26	67

- About 1/3 of outflows from bottom tercile metros on average (across bottom tercile metros, years) go to top tercile metros
- In contrast, 2/3 of outflows from top tercile metros on average go to top tercile metros
- Migration patterns haven't changed much since the mid-1990s

Why isn't migration from weak labor markets better directed towards strong labor markets?

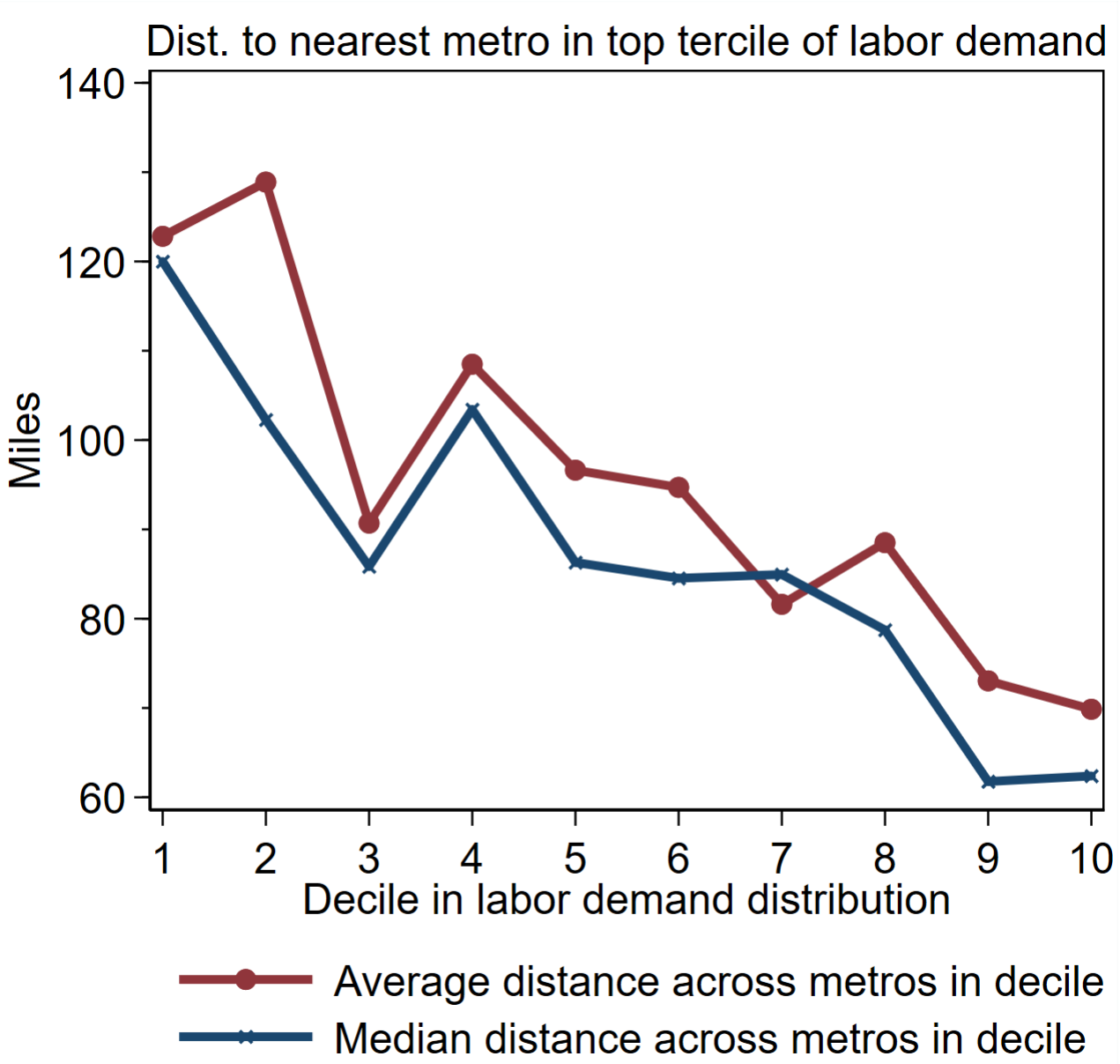
- We use IRS data to estimate the relationship between cross-city migration and city level characteristics:
  - Labor demand in receiving city
  - Population in receiving city
  - Distance between cities
  - Measures of housing constraints in receiving city
    - Regulatory constraints (Wharton Residential Land Use Regulation Index)
    - Geographic constraints (from Saiz 2010)
- Regress average outflow rate (as a share of originating city pop.) from 2001-2016 between each city pair on receiving city characteristics
- Using these estimates, we examine how important these characteristics are for explaining migration patterns

Outflow shares from low and high demand cities, to low/mid/high demand cities

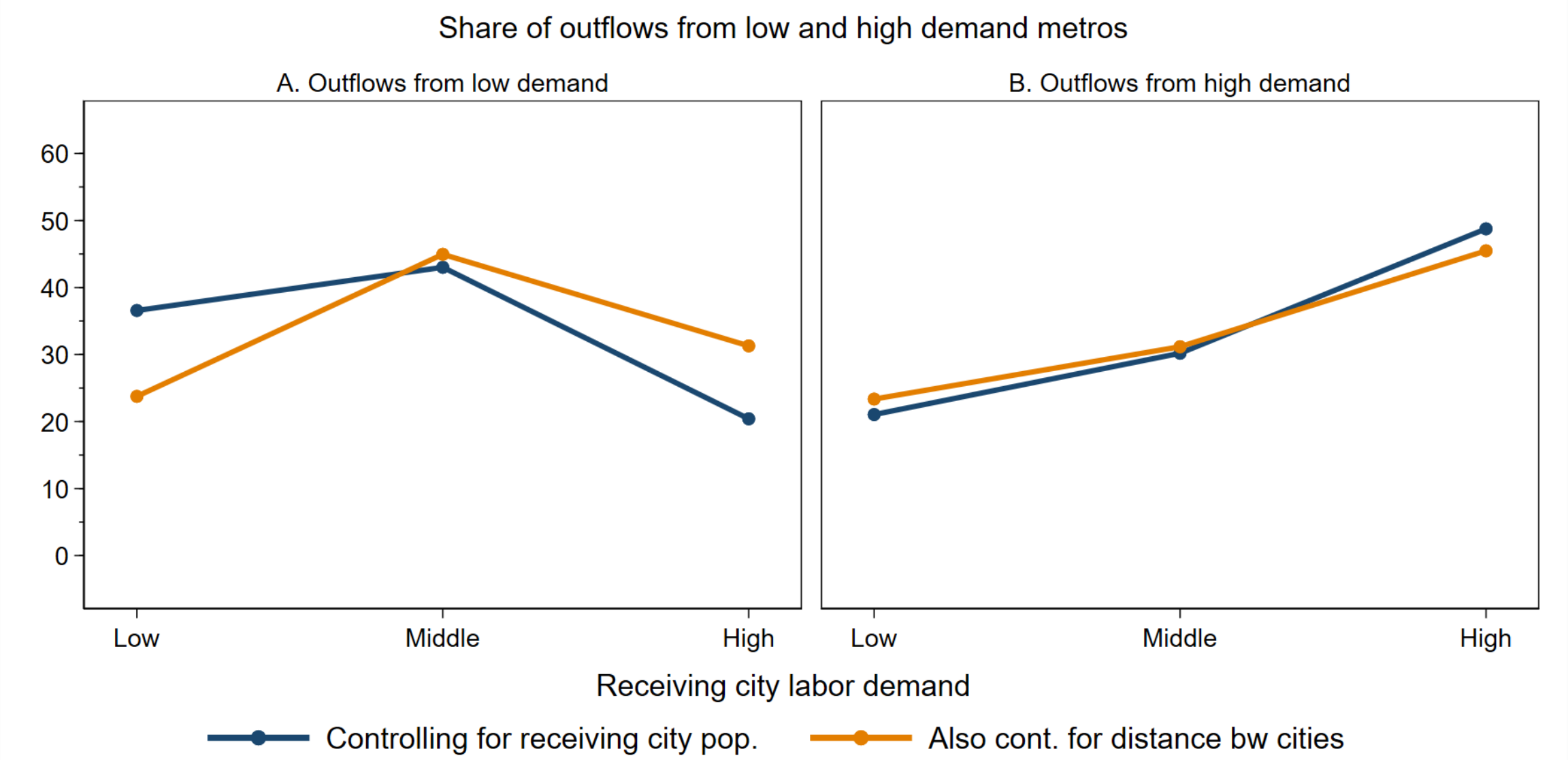


Weak labor markets are farther from strong labor markets

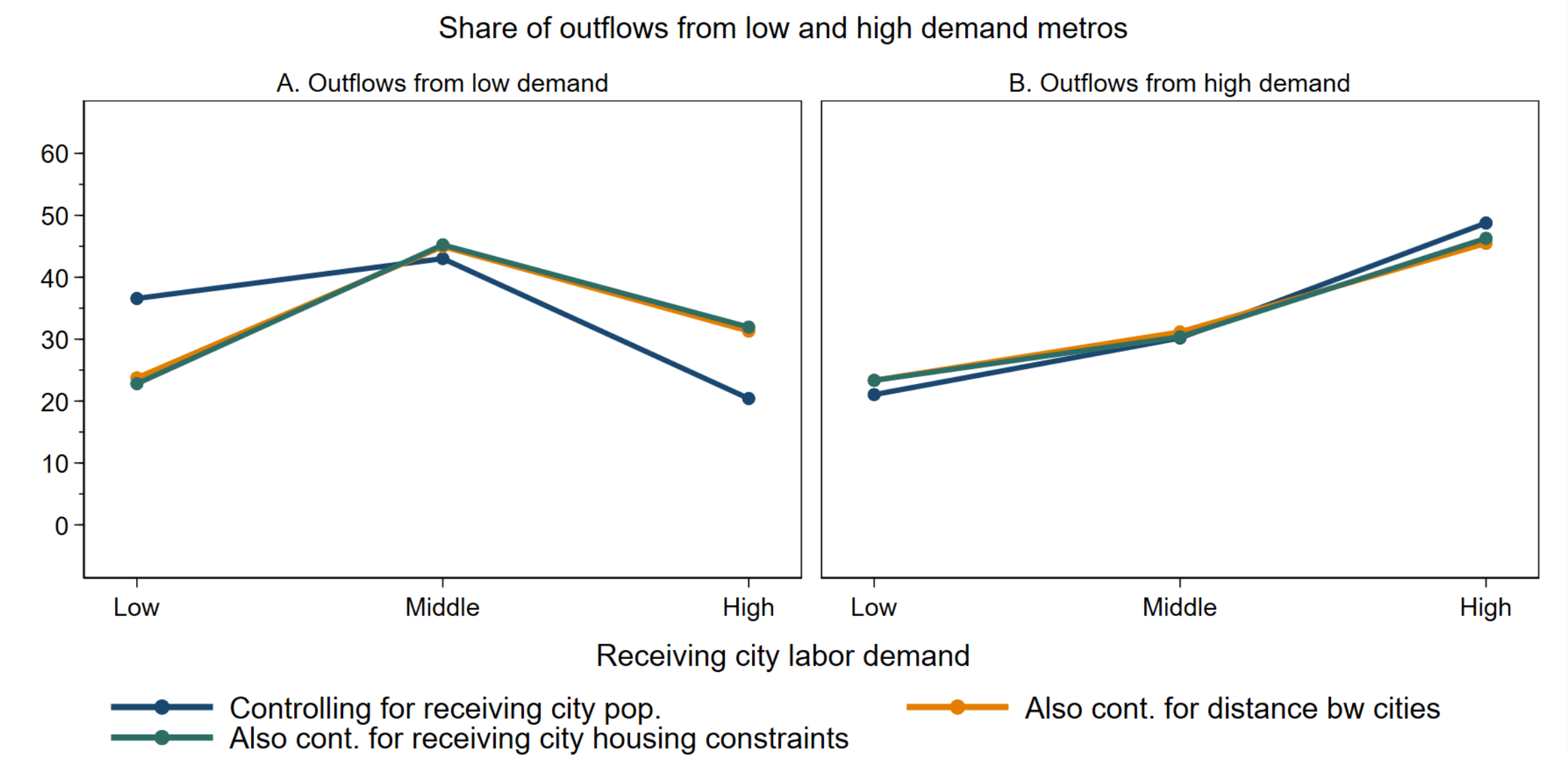
- Average distance to nearest strong labor market city from a :
  - Very weak (bottom decile) labor market city = 120 miles
  - Very strong (top decile) labor market city = 70 miles
- And strongest LM cities have twice as many nearby strong labor markets as weakest LM cities



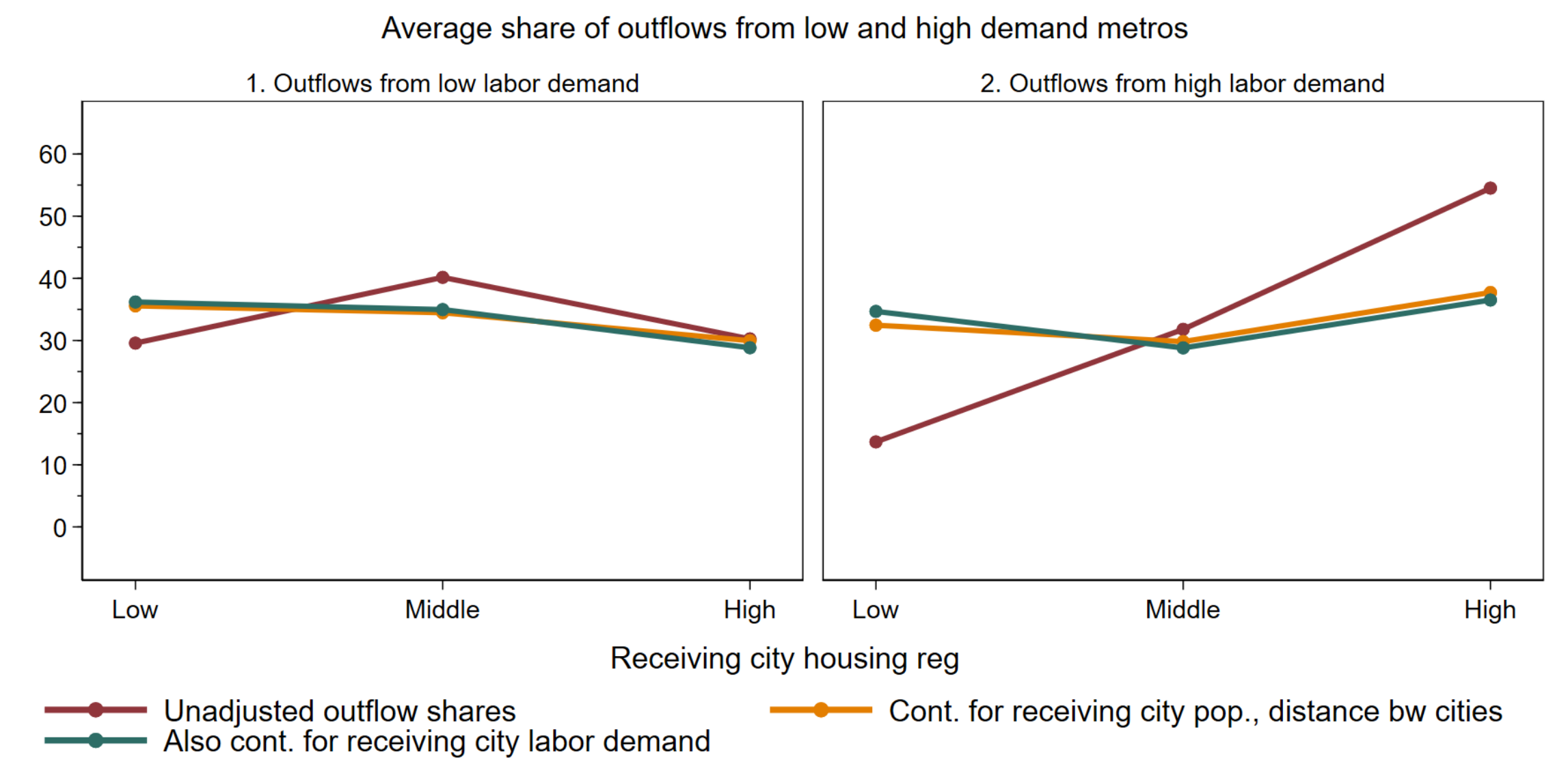
Adjusting for distance reduces the asymmetry in outflows from low and high demand metros



Adjusting for housing constraints doesn't help explain migrants' location decisions



Outflows are fairly similar to low, middle, and high housing reg. cities



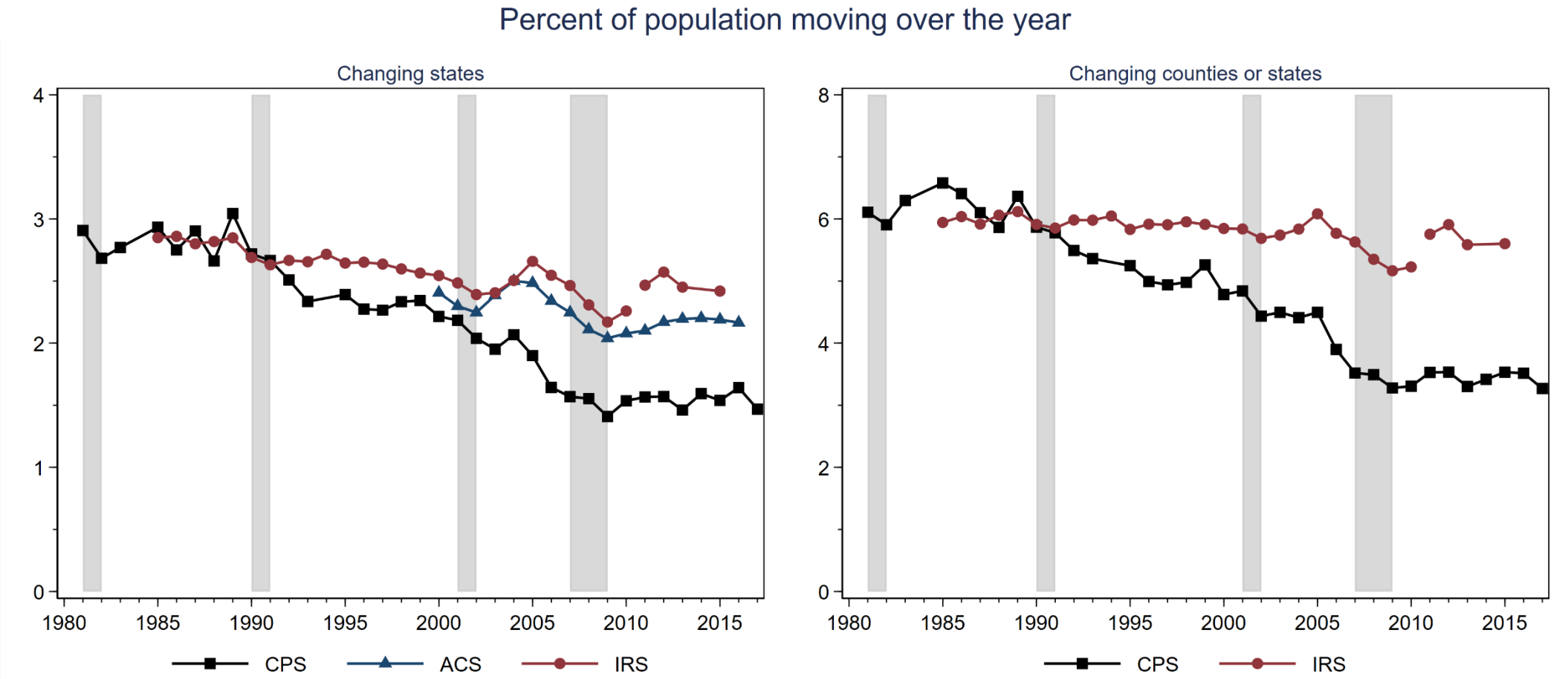
Concluding thoughts: Implications

Pessimistic outlook for future re-allocative activity via migration

- Internal migration rates are roughly unchanged on net since 2009 despite improving labor market
  - Long-run trend decline in mig. likely still having influence, offset by modest pro-cyclicality
- Migration from low to high labor demand cities on average appears hampered by the geog. concentration of low labor demand cities
  - Suggests that it may be exceedingly difficult to encourage migration from less prosperous to more prosperous areas
- May justify continued focus on place-based policies

Auxiliary Slides

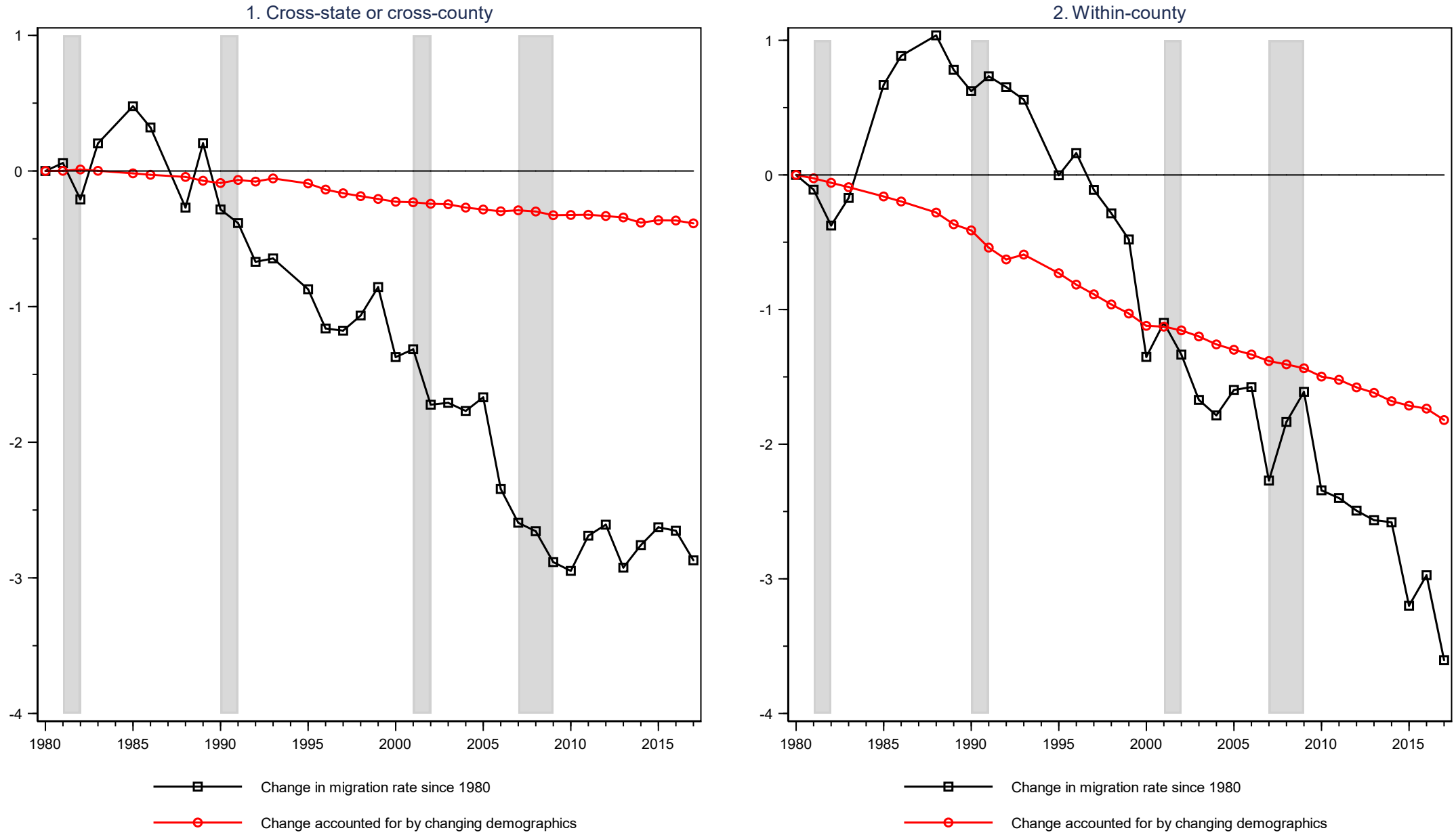
Trends in longer-distance internal migration

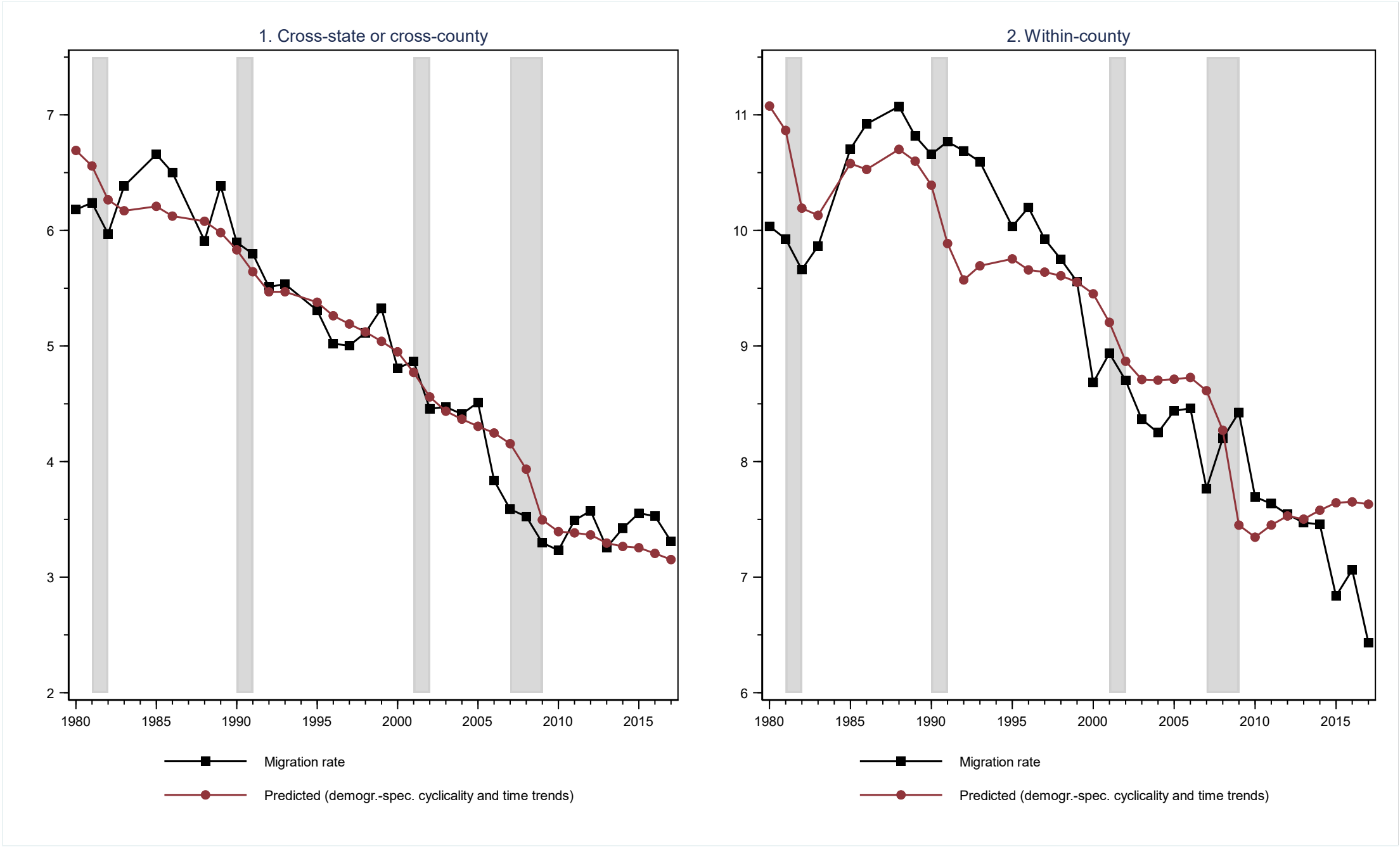


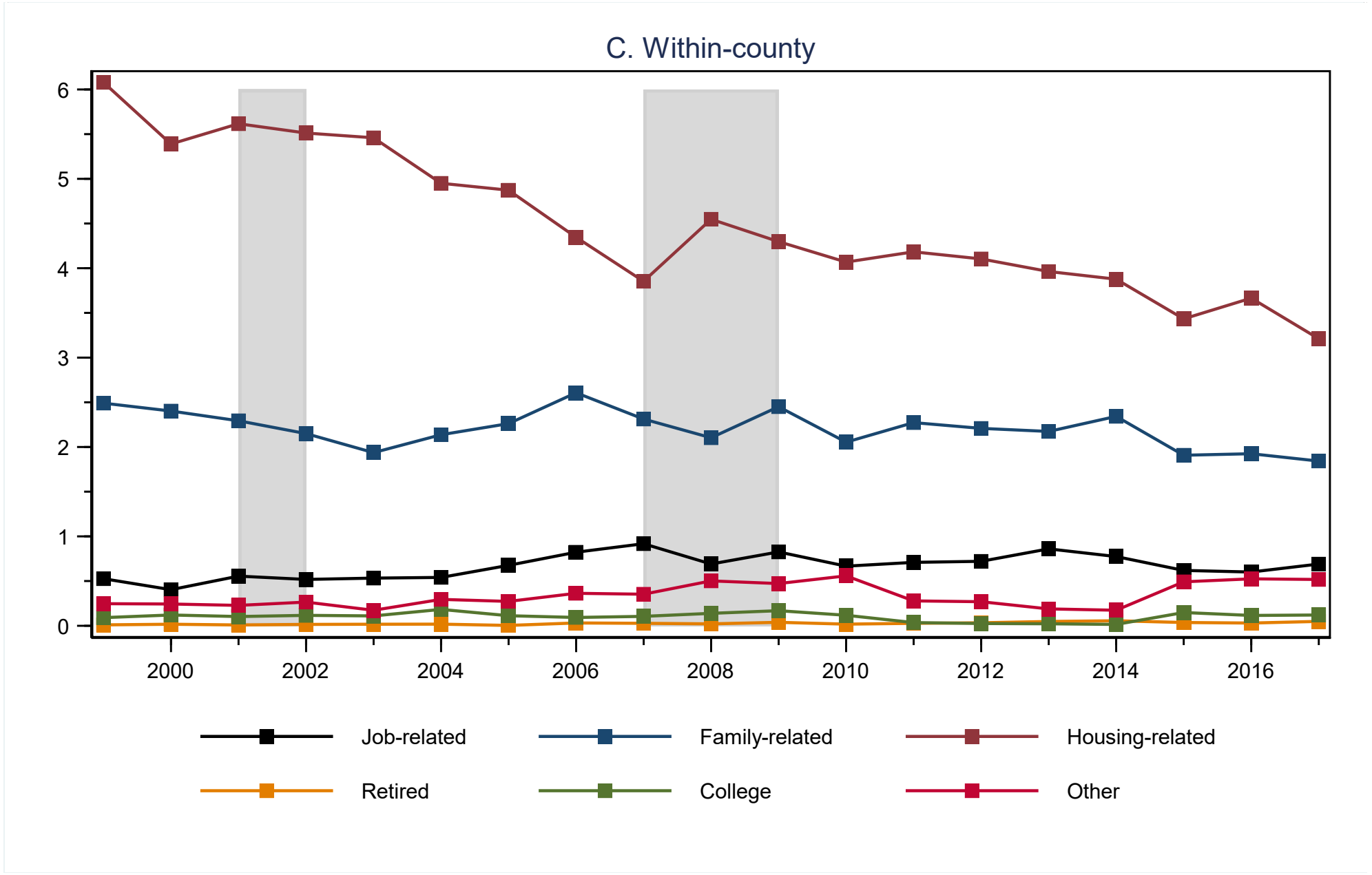
Note: Authors' calculations from the ASEC supplement to the CPS, as provided by IPUMS (black line); publically available data on county-to-county migration flows from the IRS (red line); and ACS data, as provided by IPUMS (blue line). Estimates are computed for all ages, and for CPS and ACS estimates respondents with imputed values for migration are excluded from the calculations.

	Dependent variable: Dummy variable for whether respondent (16+) moved indicated location in previous year (x 100)					
	Cross-state		Cross-state or cross-county		Within county	
	(1)	(2)	(3)	(4)	(5)	(6)
Unemployment rate gap	-0.08	0.03	-0.10	0.03	-0.26	-0.49
	(0.01)	(0.03)	(0.02)	(0.05)	(0.02)	(0.06)
Coefficient on unemployment rate gap interacted with indicator variables for:						
Age (16-24 is omitted group):						
Age 25-34		-0.08		-0.12		0.09
		(0.02)		(0.04)		(0.04)
Age 35-44		-0.12		-0.23		0.11
		(0.05)		(0.07)		(0.08)
Age 45-54		-0.02		0.00		0.27
		(0.04)		(0.06)		(0.08)
Age 55-64		0.04		0.02		0.33
		(0.04)		(0.06)		(0.07)
Age 65+		-0.09		-0.14		0.36
		(0.04)		(0.06)		(0.07)
Race (White is omitted group):						
Black		-0.03		-0.05		0.42
		(0.04)		(0.05)		(0.07)
Hispanic		0.13		0.08		-0.01
		(0.04)		(0.05)		(0.08)
Other		0.22		0.62		-0.44
		(0.31)		(0.47)		(0.61)
Education (at most high school degree is omitted group):						
Some college or more		0.10		0.24		0.04
		(0.07)		(0.10)		(0.12)
Sex (male is omitted group):						
Female		-0.02		-0.02		0.04
		(0.02)		(0.03)		(0.04)
Homeownership status (owner is omitted group):						
Renter		-0.14		-0.04		-0.09
		(0.03)		(0.05)		(0.06)

Note: Each column presents the coefficient on the unemployment rate gap (standard error in parentheses) for a separate regression. All regressions are estimated at the individual level for the 16+ population, use CPS ASEC surveys from 1980-2017, and have an observation count of 2,743,808. Regressions in columns (1), (3), and (5) only include the national unemployment rate gap and a linear time trend as covariates. Regressions in columns (2), (4), and (6) include dummy variables for the age, race, education, sex, and homeownership groups as listed in the table; dummies for the demographic groups interacted with the national unemployment rate gap; and group-specific time trends. The coefficient on the unemployment rate gap interactions are provided for each group.


1. Cross-state or cross-county
2. Within-county
1
0
-1
-2
-3
-4
1980
1985
1990
1995
2000
2005
2010
2015
Change in migration rate since 1980
Change accounted for by changing demographics


1. Cross-state or cross-county
2. Within-county
Migration rate
Predicted (demogr.-spec. cyclicality and time trends)
Migration rate
Predicted (demogr.-spec. cyclicality and time trends)


C. Within-county
6
5
4
3
2
1
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
Job-related
Family-related
Housing-related
Retired
College
Other

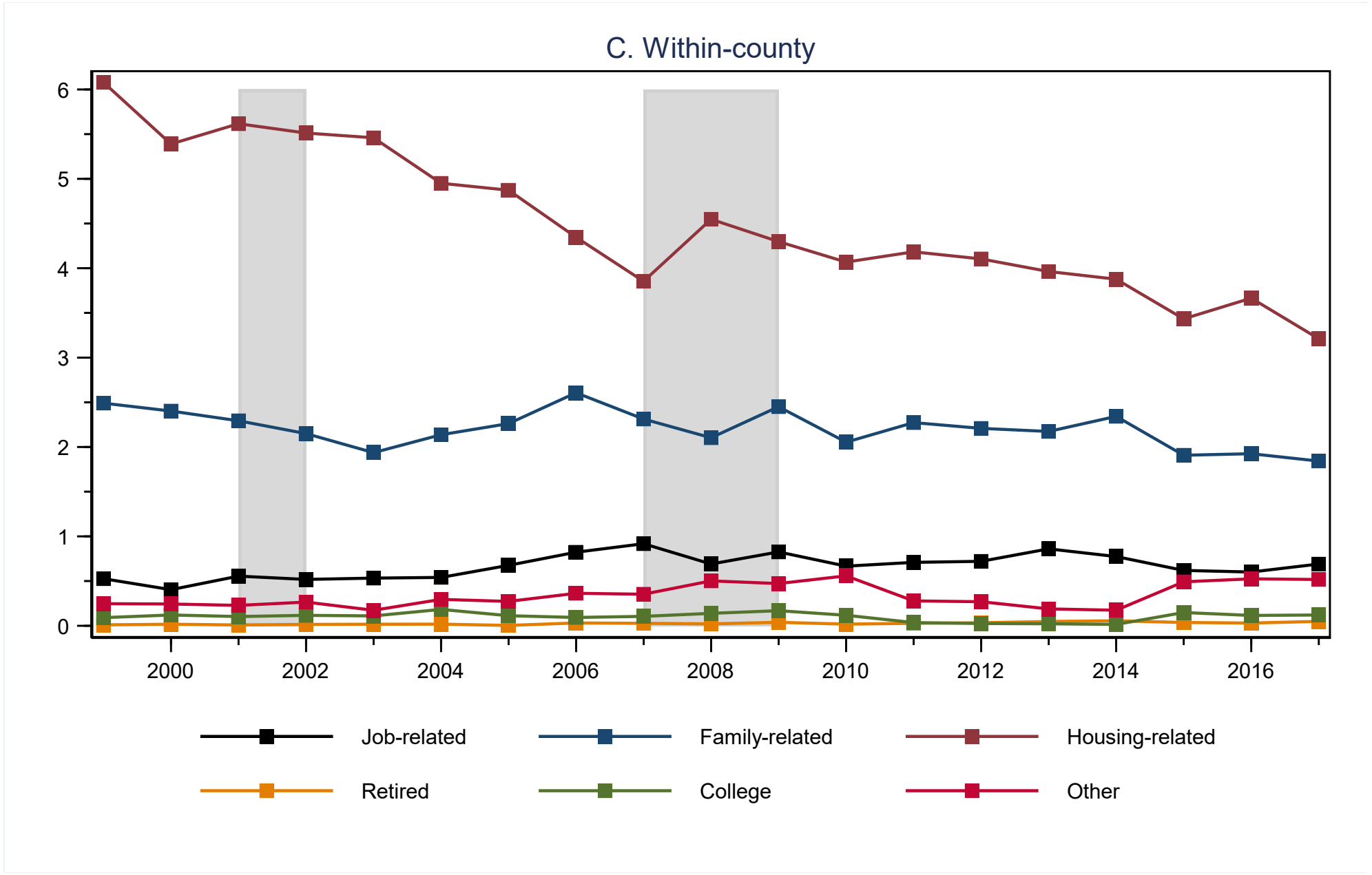

C. Within-county
6
5
4
3
2
1
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
Job-related
Family-related
Housing-related
Retired
College
Other

Fig 10B. Change in percent changing jobs and changing states, 1983-1987 to 2013-2017

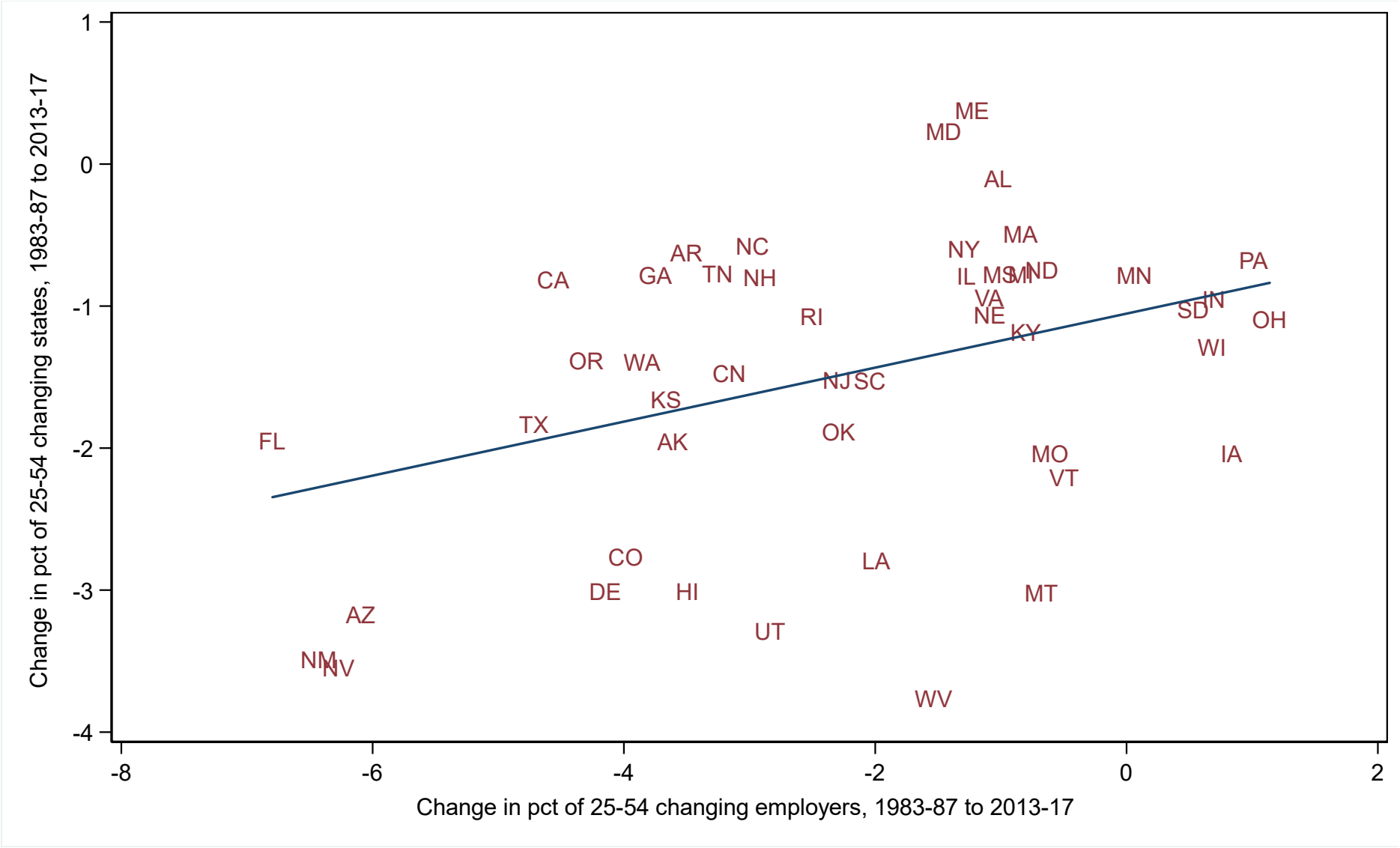


Fig 16B. Average and median number of metros in the top tercile of the demand dist. within 200 miles

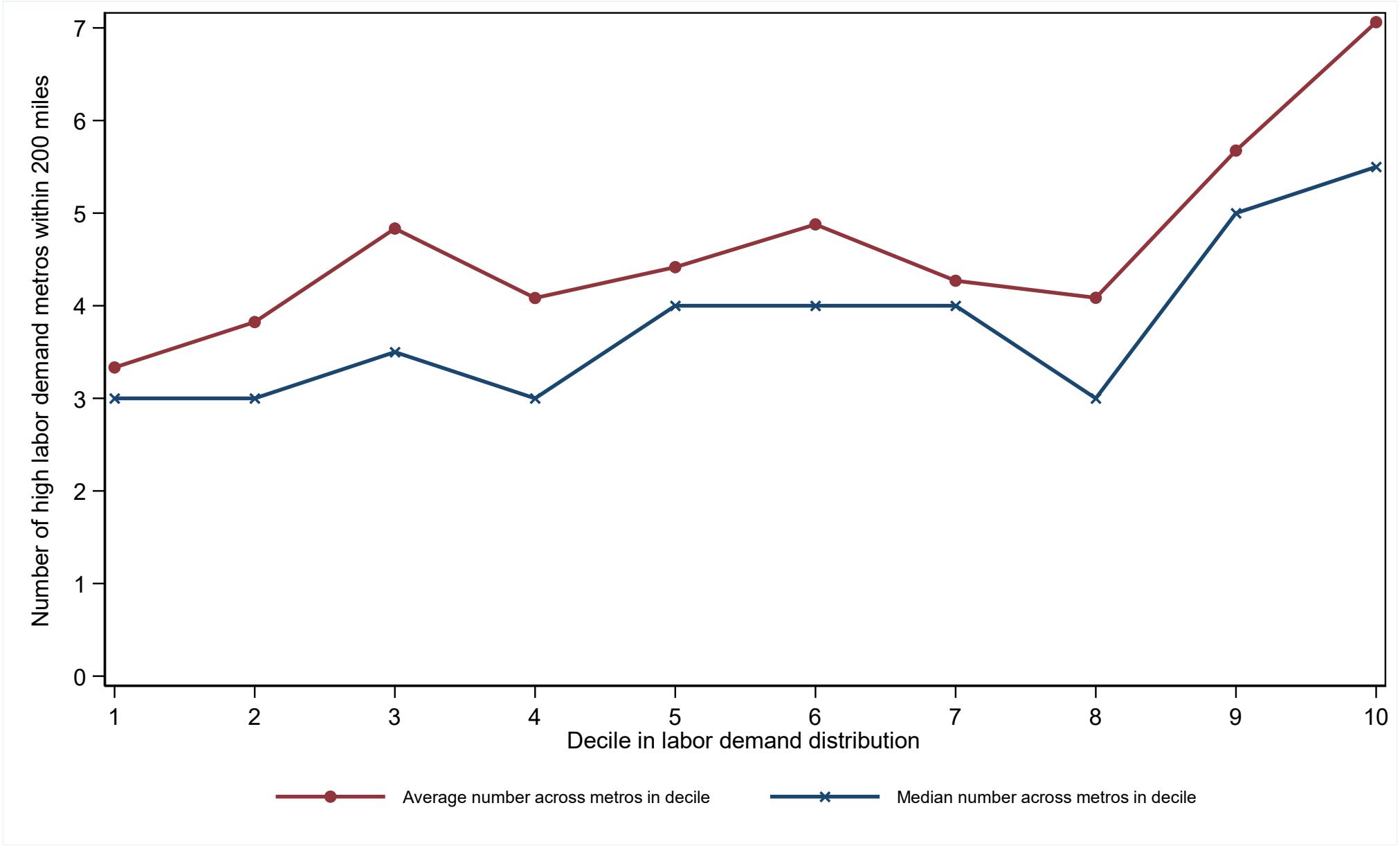
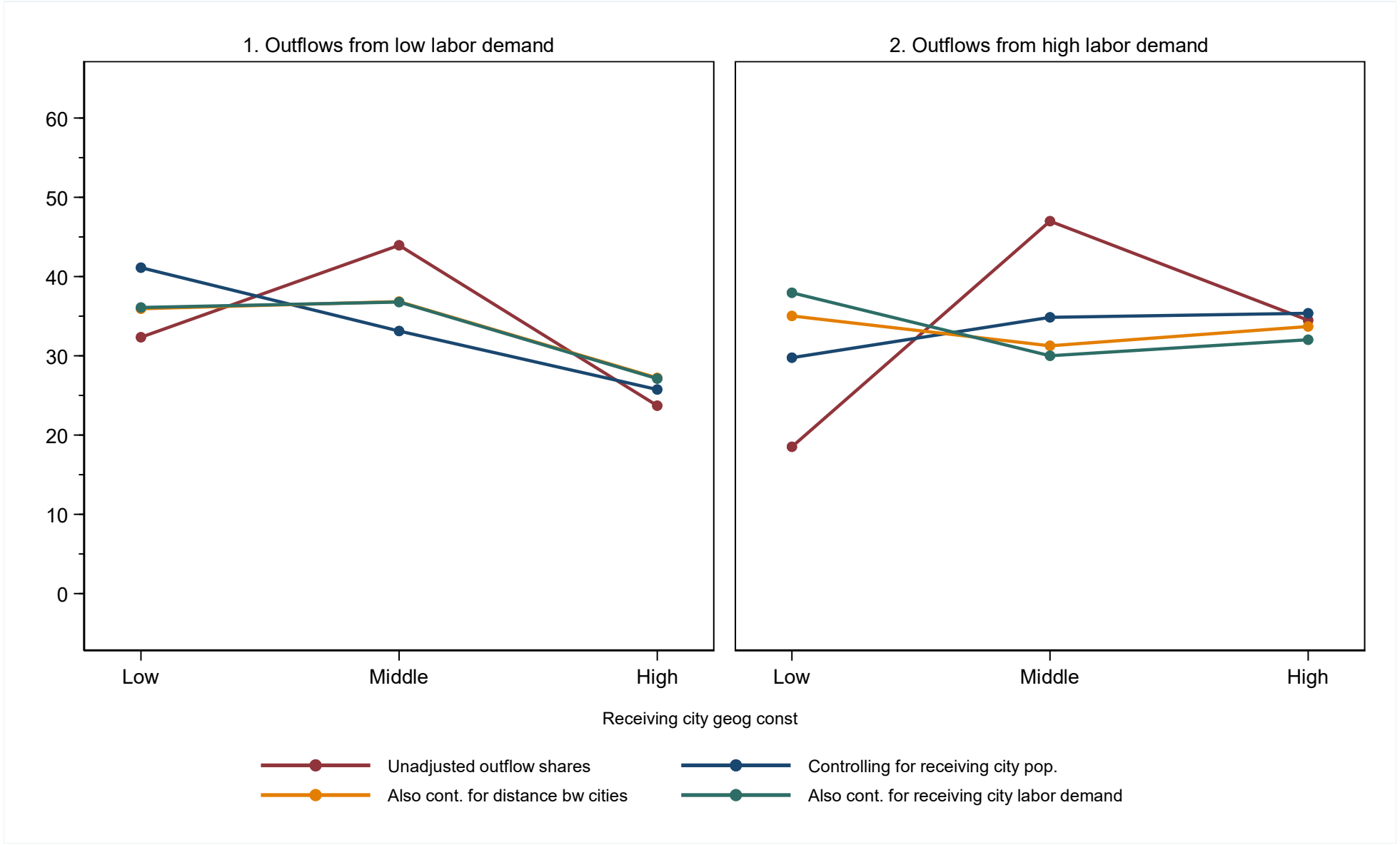


Fig 17B. Outflows to metros based on their tercile of geographic constraint distribution



Outflows, controlling for demographic differences