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Commentary on "Inter-State Labor Mobility and the U.S. Economy"

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It's a great pleasure to join you in this hallowed setting and discuss a fine paper by Andrea Foschi, Christopher House, Christian Proebsting, and Linda L. Tesar. Their study is brimming with empirical findings, and I will touch on only some of them.

Five of their findings, in particular, set the stage for my remarks below.

- Gross inter-state migration rates fell one-sixth over the 1980s and 90s but show no clear trend since. (Figure 1)
- Absolute net migration rates show no clear trend over the past half century. (Figure 2)
- The elasticity of state-level net migration rates to state-level labor demand shifters exhibits no discernable and statistically significant trend from 1950 to 2011. (Figure 8)
- The cross-state standard deviations of (a) the Bartik labor demand shifter and (b) employment growth rates fell after the early 1980s, flattening out in the 21st century. (Figure 12)
- The declining volatility of state-level shocks contributed to the fall in gross inter-state migration rates. (Section 4.2)

Overall, these findings are reassuring about the extent of spatial mobility in the United States and about the strength of migration responses to regional labor demand shocks. While the authors are circumspect in drawing conclusions, I gather that they also see their results as reassuring in these respects.

In what follows, I offer two sets of remarks. The first set points to reasons for concerns about the extent of spatial mobility in the United States in recent decades. My second set of remarks highlights structural changes in the economy that imply less need for spatial mobility in the coming years and decades.

2. *Migration Responses: Strong or Weak?*

If migration responses (of workers and jobs) are powerful and rapid, then regional unemployment, wage, and income differentials should dissipate quickly in response to regional labor demand shocks. Do these implications hold in the data? Specifically:

1. Do state-level unemployment rates rapidly adjust to state-level labor demand shifts?
2. Are regional wage differentials large? Have they shrunk over time?
3. Do people migrate to regions with higher incomes? How, if at all, has this migration response changed over time?

2.1 *Model-Implied Unemployment Responses to State-Level Labor Demand Shifts*

In Section 3.1, the authors fit statistical models of the form

$$Y_{i,t+h} = \alpha^Y_{i,h} + \alpha^Y_{t,h} + \beta^Y_h Z_{i,t} + \delta^Y_h Z_{i,t-1} + \varepsilon^Y_{i,t+h}, \qquad (1)$$

where $Y_{i,t+h}$ is the unemployment rate in state i and year $t+h$, $Z_{i,t}$ is the Bartik labor demand shifter for state i at t, $\varepsilon^Y_{i,t+h}$ is an error term, the α's are state and year fixed effects, and the β^Y_h and δ^Y_h are the coefficients of interest. The authors estimate these coefficients for $h = 0, 1, \ldots, 5$.

The authors' Figure 6 plots the estimated β^Y_h coefficients. While helpful, this plot does not answer question (1) above. That is, it does not tell us the model-implied magnitude and persistence of unemployment rate responses to the realized sequence of Bartik labor demand shifters.

To cast some light on this matter, I first residualize the Bartik shifters with respect to the state and year fixed effects in equation (1). I then treat these residualized Bartik values as forcing variables that drive deviations in state-level unemployment rates around the baseline paths implied by the state and year effects. This exercise is analogous to "historical decompositions" derived from a structural VAR. The basic idea there, working with the Wold moving average representation of the structural VAR, is to treat the realized sequence of structural innovations as forcing variables that drive deviations in the outcome variables around their baseline paths. See Burbidge and Harrison (1984), for example.

Specifically, I compute model-implied deviations about state and year effects in state-level unemployment rates as follows:

$$UR_{i,t} = -100\left(\sum_{h=0}^{9} \beta_h \cdot \widetilde{Z_{\iota,t-h}} + \sum_{h=0}^{9} \delta_h \cdot \widetilde{Z_{\iota,(t-1)-h}}\right), \quad (2)$$

where the $\widetilde{Z_{\iota,t}}$ are the residualized Bartik values for state i and year t, and β_h and δ_h are the coefficients estimated by the authors for $h = 0,\ 1,\ \ldots, 5$. I set $\beta_{10} = \delta_{10} = 0$, and linearly interpolate to get β_h and δ_h for $h = 6$ to 9.[1] Since the sample starts in 1976 and I need 10 lags of the Bartik variables, this procedure yields model-implied values of $UR_{i,t}$ from 1986 to 2016.

My Figure 1 below displays the $UR_{i,t}$ series for selected states. These charts show sizable, multi-year deviations of state-level unemployment rates from their baseline paths, driven by the realized sequence of the (residualized) Bartik values. I see these charts as answering question (1) in the negative.

This conclusion is tentative, because the analogy between Figure 1 and VAR-based historical decompositions is imperfect in a potentially important respect. In particular, the structural innovations in VAR-based historical decomposition exercises are

[1] The authors kindly supplied the β_h and δ_h estimates and the observed values of the state-level Bartik variables, which made it possible for me to compute the state-level series on the left side of (2).

serially uncorrelated, while the forcing variables in equation (2) are positively autocorrelated.[2] In private correspondence, Chris House argues that this fact implies that my calculations in (2) overstate the magnitude and variability of state-level unemployment responses to the realized labor demand shifters. Chris and I have not converged on this matter, but I note the matter here because he may be correct. In any event, it would be useful to have a sound method for constructing historical decompositions based on local projections. I did not find a standard approach to this type of exercise when perusing the literature on applications of local projections.

Setting this technical matter aside, there are reasons to think that Figure 1 understates the magnitude and variability of state-level unemployment responses to state-level labor demand shocks. In particular, other studies find that (a) negative state-level labor demand shocks produce larger short-run responses than positive ones, and (b) labor demand shocks spill over across states. See Davis et al. (1997), Baker et al. (2022) and Foschi et al. (2025).

Extending the authors' specification (1) to incorporate this type of asymmetry and spatial spillovers would lead to more explanatory power for the Bartik variables (and other demand shifters) and, I suspect, larger state-level unemployment rate movements in response to state-level and regional labor demand shocks. One reason to think so is the regional similarity of state-level unemployment deviations in Figure 1. Note, for example, the similarity of the paths for California and Arizona and of the paths for Michigan and Indiana. This similarity suggests that incorporating state-level spillover effects will yield state-level unemployment rate fluctuations that are larger in amplitude because, for example, the timing of shocks to labor demand in Indiana coincide with the timing of shocks to labor demand in Michigan.

[2] Looking across states, the mean of the first-order serial correlation coefficients of the residualized Bartik variables in equation (2) is 0.48.

Figure 1. Model-Implied Unemployment Rate Responses to Realized Bartik Labor Demand Shifters, Selected States, 1986 to 2016

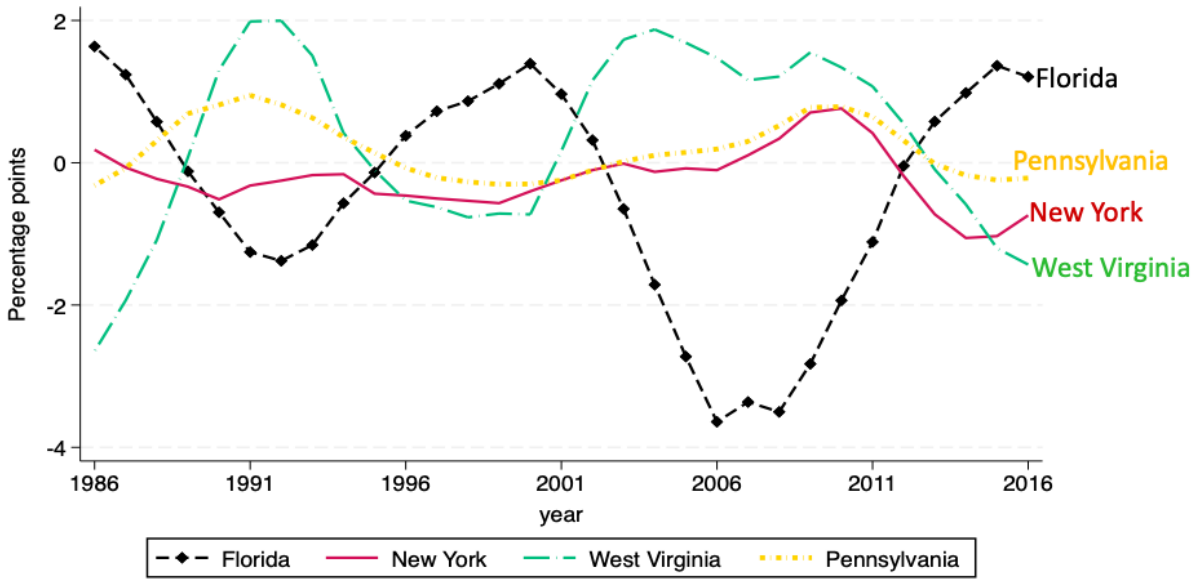
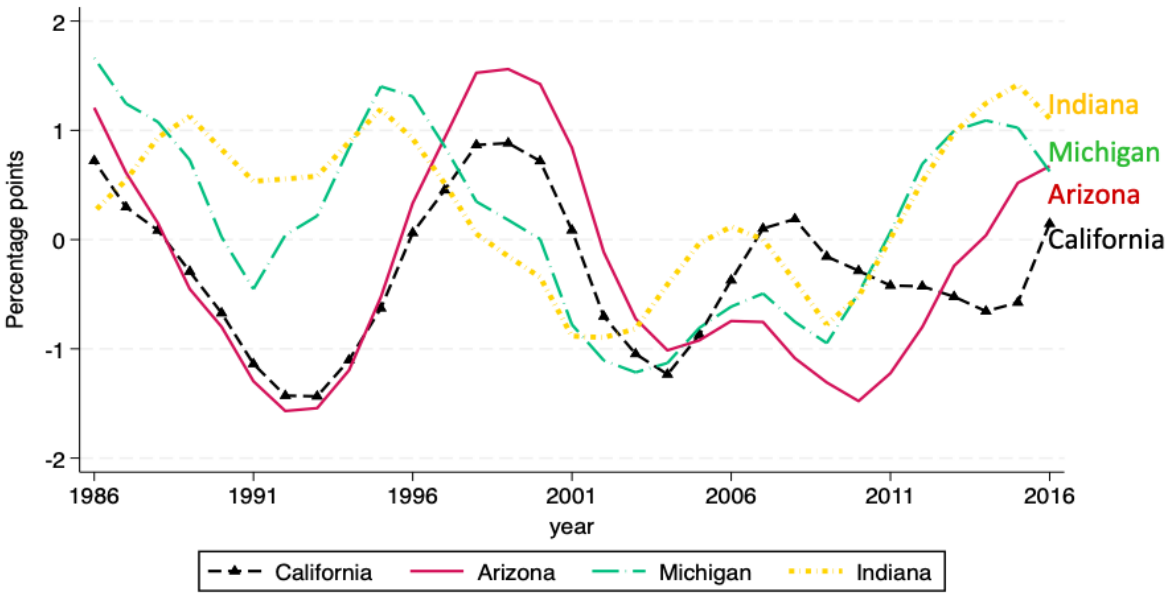


Figure 1 Continued



Source: Author's calculations, as described in the text.

2.2 *Other Evidence and a Provisional Assessment*

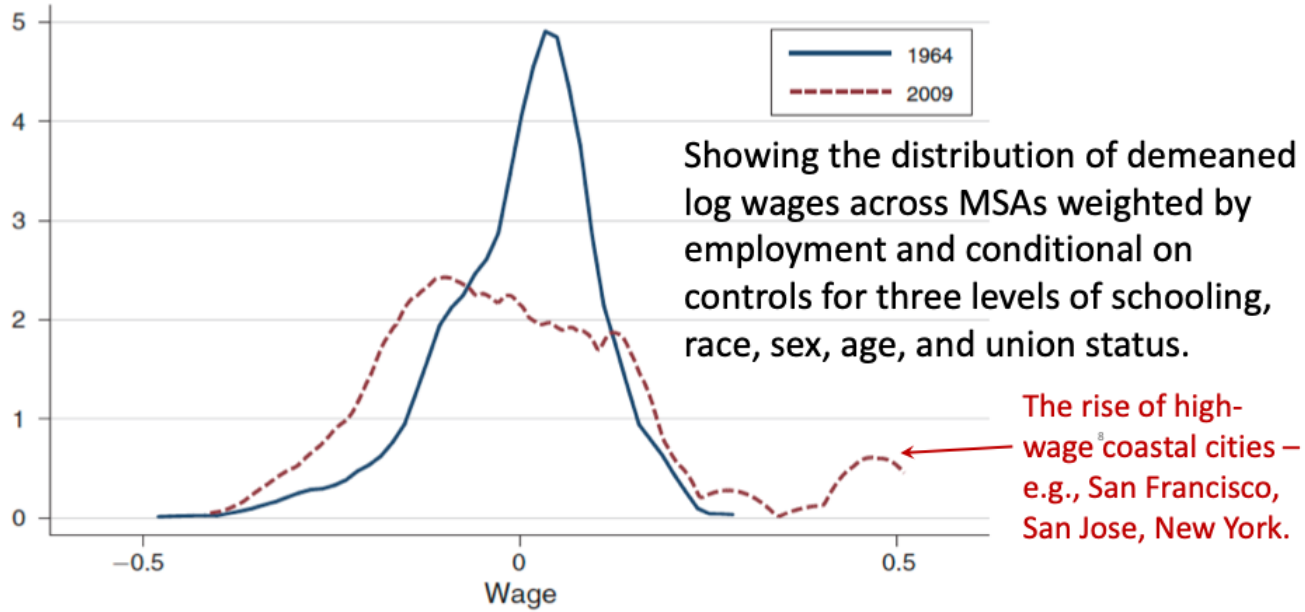
Thus far, my remarks gloss over the possibility that left-behind areas suffer from poor economic and social outcomes with little outmigration of workers or in-migration of jobs. Attention to this issue requires a different sort of analysis than the one pursued by the authors. This is not a criticism. It's simply a recognition that multiple types of investigation are needed to fully assess the extent and character of spatial mobility in the United States.

Figures 2 reproduces a key figure in Hsieh and Moretti (2019) It reveals a sharp increase from 1964 to 2009 in the dispersion of log wages across metropolitan statistical areas (MSAs). In part, but only in part, this phenomenon reflects the economic success of high-wage coastal cities like San Francisco, San Jose, and New York. Apparently, something has inhibited the arbitrage of spatial wage differentials over this period. That's not to say that spatial reallocation frictions arise mainly in the labor market, though some do – state and local occupational licensing restrictions, for example. Hsieh and Moretti stress the role of policy-driven restrictions on new housing supply that limit the supply of workers to high-productivity areas, with strong negative effects on aggregate U.S. productivity.

Figure 3 reproduces a key figure in Ganong and Shoag (2017). It shows that regional income convergence rates fell after the 1960s, and that the tendency of people to migrate from poorer to richer U.S. regions has weakened greatly since the 1950s. Looking at Figure 3 in isolation, one might attribute these developments to a great shrinkage in regional income differentials. This interprets fails empirically as indicated, for example, by the evidence in Figure 2.

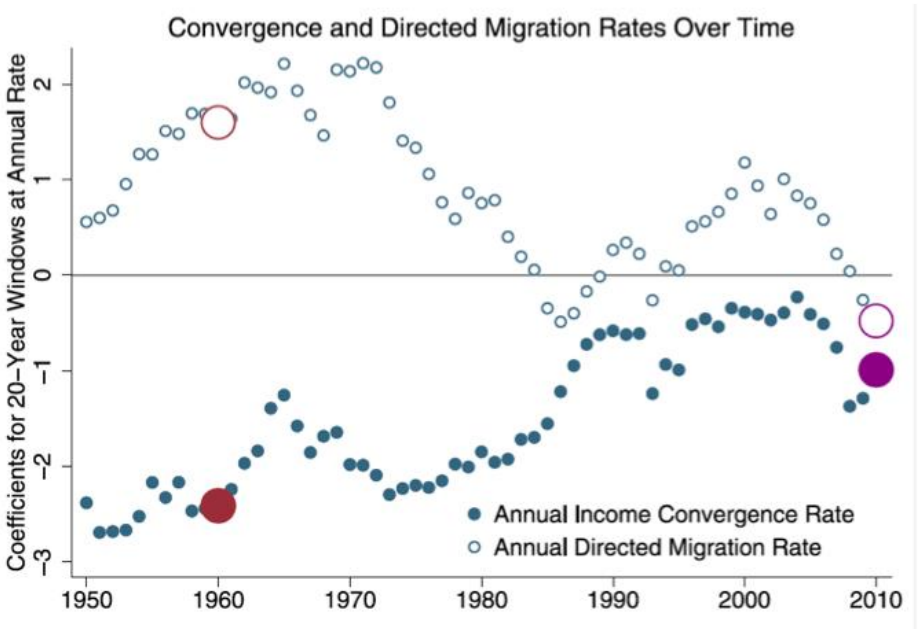
Taking stock, Figures 1 to 3 lead me to conclude that there are strong reasons for concern about the adequacy of migration responses to regional labor demand shocks in the United States.

Figure 2. Log Wage Dispersion across 220 MSAs in 1964 and 2009



Source: Reproduced from Hsieh and Moretti. Annotations added by the author.

Figure 3. Regional Income Convergence and Migration, 1950 to 2010



Source: Reproduced from Ganong and Shoag (2017).

2. *Looking Forward: Less Need for Spatial Reallocation of Workers?*

There are sound reasons to answer this question in the affirmative. Over time, the industry mix of employment has become more similar across U.S. states. Partly for this reason, state-level business cycles became more uniform. See Fieldhouse et al. (2024), Foschi et al. (forthcoming) and the paper at hand, especially Figure 12 and the related discussion. This process played out over several decades and is unlikely to reverse anytime soon, if ever. Greater spatial similarity of the industry mix means that adjusting to future industry shifts will require less spatial reallocation, moderating the negative consequences of frictions that inhibit reallocation.

The share of jobs accounted for by cyclically sensitive – and often spatially concentrated – manufacturing industries has also declined markedly in recent decades. One reason the deindustrialization of employment involved so much hardship for individuals, families, and communities is that manufacturing job loss is both spatially and temporally concentrated. It is much harder to find a well-paying new job when the job loss event occurs in the midst of a recession (Davis and von Wachter, 2012), especially when many other unemployed workers in the local labor market have similar skill profiles.

The recent shift to remote work also lessens the need for spatial reallocation, conditional on the magnitude of aggregate and local shocks. Why? Because residential location choices are becoming less tethered to employer worksite locations. As a consequence, the geographic footprint of firm-level and industry-level workforces has become more spatially diffused.

My recent work in Akan et al. (2025) develops systematic evidence on this point. We exploit longitudinal earnings and location data for individuals employed by a balanced panel of mostly smaller and mid-sized employers. The underlying data come

Gusto, a firm that offers payroll processing and other HR services to its client firms. The individual-level monthly data cover the period from January 2019 to December 2023. They include the zip code of each employer's worksite and of each employee's residence.

Using these data, we find that the mean distance from employee home to employer worksite rose from 15 miles in 2019 to 26 miles in 2023. Twelve percent of employees hired after March 2020 live at least fifty miles from their employers in 2023, triple the pre-pandemic share. The increase in "distant" employees is almost entirely accounted for by persons hired since March 2020. It follows that the spatial diffusion of firm-level footprints will continue to unfold as workforces turn over and new employees reside farther away, on average, than employees hired before the pandemic.

These findings imply that future job displacements due to industry and firm-level declines will be less clustered in space. Moreover, a larger share of job losers will be displaced into local labor markets that are less depressed as a consequence of more diffuse firm-level footprints. As a consequence, future labor market downturns and restructurings will be more spatially dispersed, moderating the negative effects of job loss on individuals, families, and communities (conditional on the overall scale of job losses).

These three developments – greater similarity across states in the industry mix of jobs, the declining share of manufacturing jobs, and the partial untethering of residential locations from employer locations – strongly suggest that future labor market downturns will involve less hardship than past downturns, conditional on the overall scale of job loss. This is an important piece of good news to counterbalance the concerning evidence of inadequate spatial reallocation in recent decades.

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