

Data

Regional / Geographic Disaggregation:

- States (48 excluding AK, HI and DC)
- Commuting Zones (721 CZs, 1990 definitions)
- Counties (3,049)

Labor Market Data:

- LAUS (county-level data available from 1976)
- CES (jobs data) and BEA (wages)

Population and Migration:

- IRS and BEA / Census (Yearly interpolations from IRS, Soc. Sec., Medicare and ACS.)

Instrument: Bartik – Industry Composition

$$Z_{i,t}^{IND} = \sum_{j=1}^J \left(\bar{s}_{i,t-1}^j \frac{\Delta \mathcal{E}_{t,-i}^j}{\mathcal{E}_{t-1,-i}^j} \right)$$

$$\bar{s}_{i,t-1}^j = \frac{1}{4} \sum_{\tau=1}^4 \frac{e_{i,t-\tau}^j}{E_{i,t-\tau}}$$

- $\bar{s}_{i,t-1}^j$ – Share of industry j in region i 's total employment (4-year avg.)
- $\Delta \mathcal{E}_{t,-i}^j / \mathcal{E}_{t-1,-i}^j$ – pct. change in industry j 's employment (aggregate)

Instrument: Housing Net Worth

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

$$\Delta \ln E_{i,2007+h} = \alpha_{i,h}^E + \beta_h^E Z_{i,06-09}^H + \theta_{98,h}^E \bar{g}_{i,98}^E + \theta_{02,h}^E \bar{g}_{i,02}^E + \varepsilon_{i,2009+h}^E$$

- $Z_{i,06-09}^H = \frac{\Delta \ln p_{i,2006-2009} \times H_{i,2006}}{NW_{i,2006}}$, change in housing net worth
- Instrument with Saiz (2010) (regional housing supply elasticities)

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

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

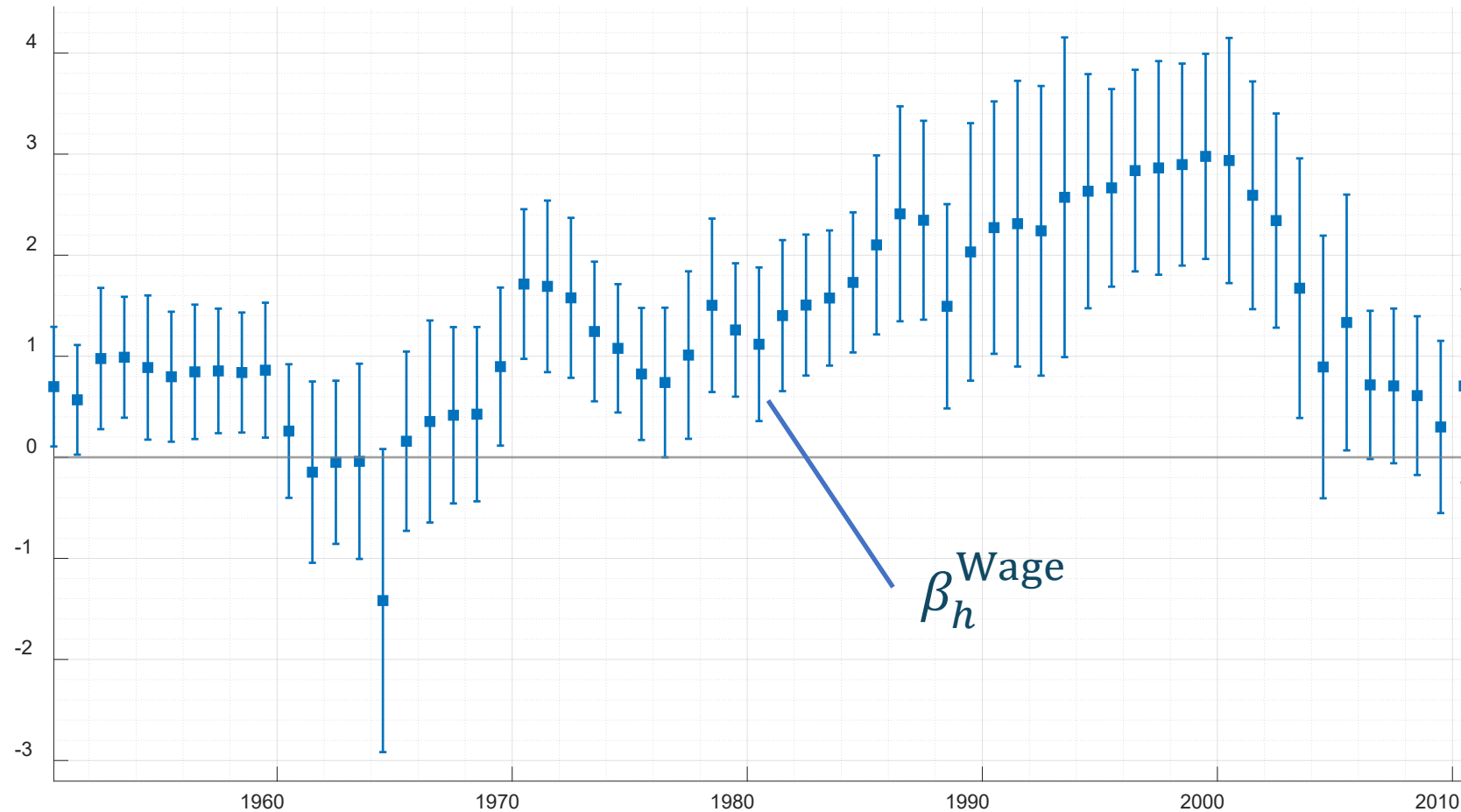
$$\Delta \ln E_{i,2001+h} = \alpha_h^E + \beta_h^E \hat{Z}_i^{IMP} + \Gamma_h^E X_{i,2001+h} + \theta_h^E \bar{g}_i^E + \varepsilon_{i,2001+h}^E$$

$$Z_i^{IMP} = \sum_j s_i^j \frac{\Delta IM_{China}^j}{Y_{2000}^j + IM_{2000}^j - EX_{2000}^j}$$

- s_i^j : emp. share of industry j in region i in 2000
- Y_{2000}^j : national domestic absorption for industry j
- Predicted $\Delta IM_{China}^j / Y_{2000}^j$ based on Chinese exports to other countries

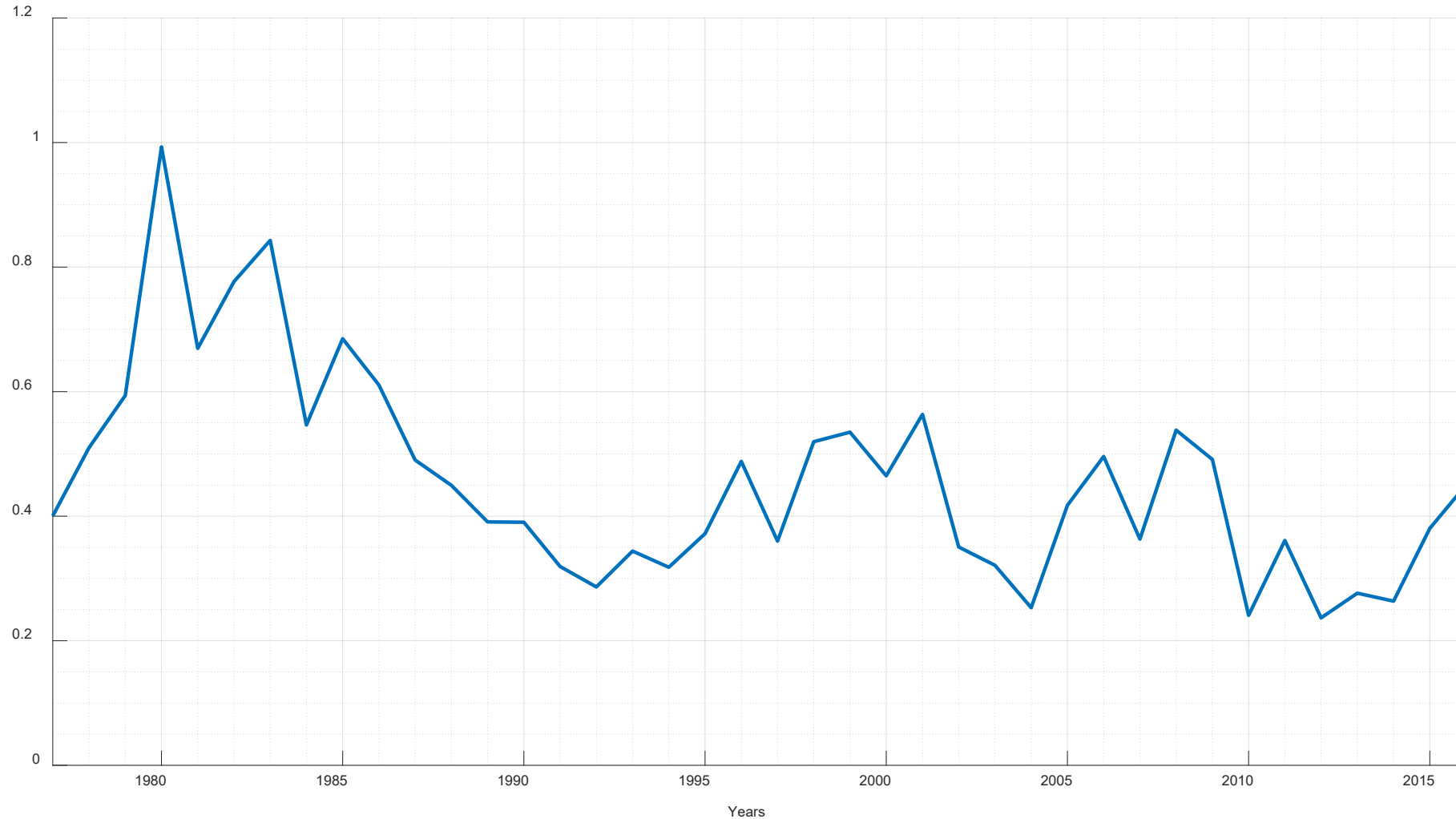
Instrument: Bartik – Industry Composition

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



Instrument: Bartik – Industry Composition

Cross-sectional Standard Deviation of $Z_{i,t}^{IND}$



Instrument: Bartik – Industry Composition

In vs. Out Migration

