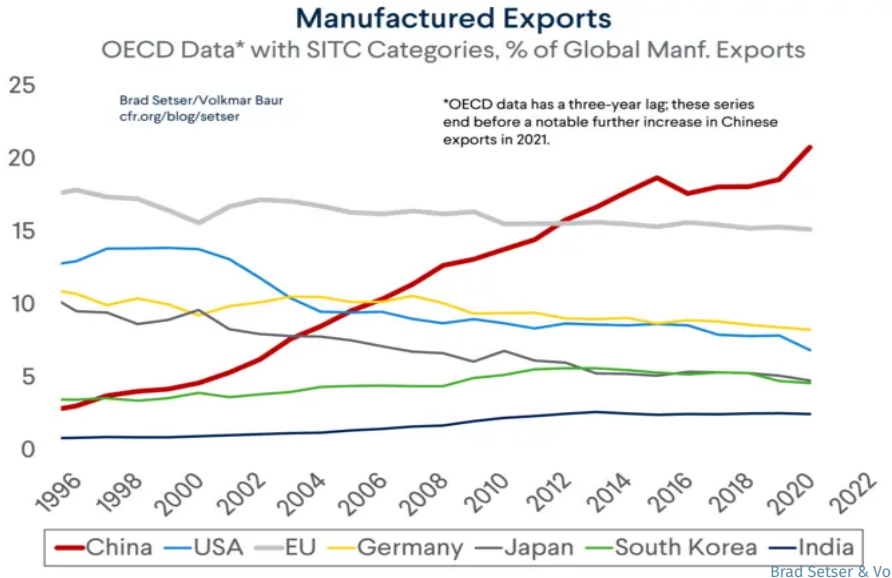
Places versus people: The ins and outs of labor market adjustment to globalization

David Autor, MIT and NBER
David Dorn, University of Zurich and CEPR
Gordon Hanson, Harvard and NBER
Maggie R. Jones, U.S. Census Bureau
Bradley Setzler, Penn State and NBER

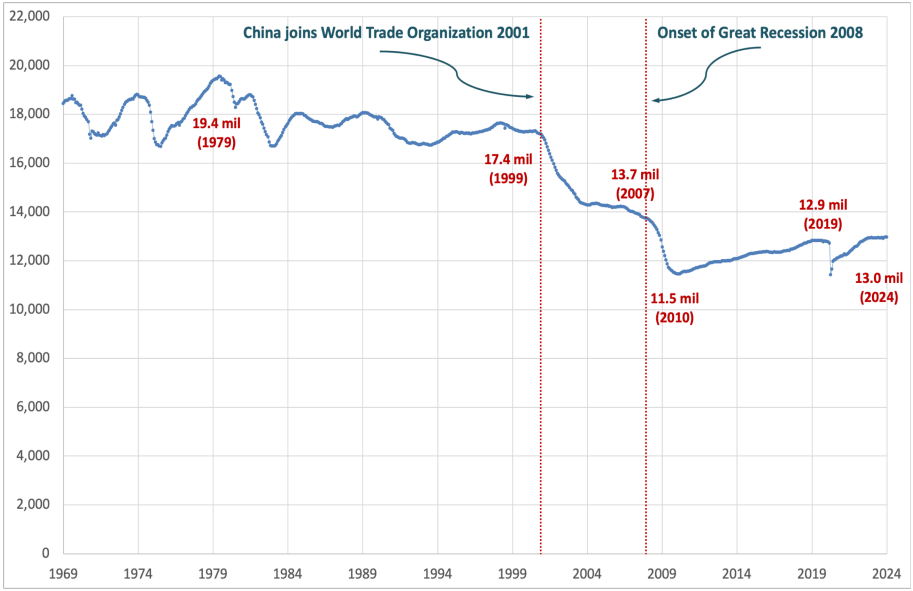
May 02, 2025

Any opinions and conclusions expressed herein are those of the authors and do not reflect the views of the U.S. Census Bureau. The Census Bureau has ensured appropriate access and use of confidential data and has reviewed these results for disclosure avoidance protection (Project 7511151: CBDRB-FY24-CES014-008, CBDRB-FY24-0253, CBDRB-FY24-0328, CBDRB-FY24-0391, CBDRB-FY24-0433, CBDRB-FY24-0451).

China's share of world manufacturing exports: From 3% in 1996 to 22% in 2022



U.S. manufacturing emp: $> 20\%$ decline in 8 years: 17.4m in 1999 $\rightarrow$ 13.7m in 2007



Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

We *know* there was Manufacturing job loss in 'China shocked' places, 1991–2007
But core questions about adjustment and the longer-run are unanswered

1. How do trade-exposed places adjust in the long(er) run, from 2000–2019?
   - What is the time path of recovery?
   - How do the 'new' jobs compare to pre-shock jobs – sectors, wages?
   - How do the 'new' workers compare to pre-shock workers – education, race, age, gender?

We *know* there was Manufacturing job loss in 'China shocked' places, 1991–2007
But core questions about adjustment and the longer-run are unanswered

1. **How do trade-exposed places adjust in the long(er) run, from 2000–2019?**
   - What is the time path of recovery?
   - How do the 'new' jobs compare to pre-shock jobs – sectors, wages?
   - How do the 'new' workers compare to pre-shock workers – education, race, age, gender?
2. **How do trade-exposed workers (aka people) adjust in the long(er) run?**
   - Do workers move across industries, across places (as literature imagines)?
   - Do incumbents exit the labor force? Do different workers enter the labor force?
   - If old jobs are replaced by new jobs, in what sectors, how do earnings compare?

We *know* there was Manufacturing job loss in 'China shocked' places, 1991–2007
But core questions about adjustment and the longer-run are unanswered

1. **How do trade-exposed places adjust in the long(er) run, from 2000–2019?**
   - What is the time path of recovery?
   - How do the 'new' jobs compare to pre-shock jobs – sectors, wages?
   - How do the 'new' workers compare to pre-shock workers – education, race, age, gender?
2. **How do trade-exposed workers (aka people) adjust in the long(er) run?**
   - Do workers move across industries, across places (as literature imagines)?
   - Do incumbents exit the labor force? Do different workers enter the labor force?
   - If old jobs are replaced by new jobs, in what sectors, how do earnings compare?
3. **How are adjustments of places and people connected?**
   - Do incumbent workers *and* their original places recover in tandem?
   - *Or* do incumbents workers move elsewhere to recover, while original places languish?
   - *Or* do places recover through worker replacement, while original incumbents languish?

Our simple angle of attack, exploiting U.S. register data 2000–2019

- **Goal:** Measure margins and magnitudes of labor market adjustment to adverse shocks—overall, by group, and among incumbents vs. others
- **Method:** Decompose changes in stocks of workers in places into trade-induced flows of workers *across* labor markets, sectors, employment status, countries, and entry + retirement

Our simple angle of attack, exploiting U.S. register data 2000–2019

- **Goal:** Measure margins and magnitudes of labor market adjustment to adverse shocks—overall, by group, and among incumbents vs. others
- **Method:** Decompose changes in stocks of workers in places into trade-induced flows of workers *across* labor markets, sectors, employment status, countries, and entry + retirement

We link $\Delta's$ stocks of workers in places to flows of workers across six margins:

1. Origin $\leftrightarrow$ destination locations (commuting zones)
2. Manufacturing $\leftrightarrow$ non-manufacturing
3. Employment $\leftrightarrow$ non-employment
4. Working age $\rightarrow$ retirement age (age 65+)
5. Youth (age <18) $\rightarrow$ adult worker
6. Foreign born $\rightarrow$ employed in US

Our simple angle of attack, exploiting U.S. register data 2000–2019

- **Goal:** Measure margins and magnitudes of labor market adjustment to adverse shocks—overall, by group, and among incumbents vs. others
- **Method:** Decompose changes in stocks of workers in places into trade-induced flows of workers *across* labor markets, sectors, employment status, countries, and entry + retirement

We link $\Delta's$ stocks of workers in places to flows of workers across six margins:

1. Origin $\leftrightarrow$ destination locations (commuting zones)
2. Manufacturing $\leftrightarrow$ non-manufacturing
3. Employment $\leftrightarrow$ non-employment
4. Working age $\rightarrow$ retirement age (age 65+)
5. Youth (age <18) $\rightarrow$ adult worker
6. Foreign born $\rightarrow$ employed in US

Adjustment margins considered by quantitative GE literature

Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

Places: Much evidence on how China shock affected *local labor markets*

1. Steep declines in manufacturing employment (not offset by non-manuf)
   - Bernard, Jensen, Schott '06; Autor, Dorn, & Hanson '13; Dauth, Findeisen, Suedekum '14; Donoso, Martin, Minodo '15; Malgouyres '16; Pierce & Schott '16; Dix-Carneiro & Kovak '17; Foliano & Riley '20; Costinot, Sarvimäki & Vogel '22, Batistich & Bond '23; Dorn & Levell '24; Bloom, Handley, Kurmann, & Luck '24; Enriquez '24
2. Large rise in labor force exit, non-employment
   - ADH '13; Utar '14; Balsvik, Jensen, & Salvanes '15; Dix-Carneiro & Kovak '17; Citino & Linarello '19; Autor, Dorn & Hanson '19
3. Very little population adjustment
   - Bound & Holzer '00; ADH '13; Dao, Furceri, & Loungani '17; Greenland, Lopresti, & McHenry '19; Auten, Glaeser, Summers '18; ADH '21; Borusyak, Dix-Carneiro, & Kovak '22; Zabeck '24
4. Adverse social impacts on many margins—crime, marriage, health, mortality
   - Feler & Senses '17; Dix-Carneiro, Soares, Ulyssea '18; Lang, McManus & Schuar '18; ADH '19; Adda & Fawaz '20; Pierce & Schott '20

People: Less evidence on how China shock affected *trade-exposed workers*

1. Classic Jacobson, LaLonde & Sullivan findings on long-term effects of job loss
   - Jacobson, LaLonde, & Sullivan '93; Sullivan & Von Wachter '09; Couch & Placzek '10; Schmieder, Von Wachter, & Heining '23
2. Scarring effects of trade shocks on workers initially in manufacturing
   - Autor, Dorn, & Hanson, '14; Hakkala & Huttunen, '16; Utar, '18; De Lyon & Pessoa, '20; Dauth, Findeisen, & Suedekum, '21; Costinot, Sarvimäki & Vogel, '22, '24
3. Depth of damage, speed of recovery differ by country and initial conditions
   - Scarring effects vary by country: Bertheau et al., '23
   - Some rustbelts are rustier: Gagliardi, Moretti & Serafinelli, '23
   - Faster recovery in places w/more colleges: Howard, Weinstein, Yang, '22; Gagliardi et al., '23
4. Some social programs aid adjustment
   - Trade adjustment assistance and wage insurance: Hyman, '18; Hyman, Kovak, & Leive, '24
   - EITC: Bastian & Black, '24
   - Retraining (after work accidents) in Denmark: Humlum, Plato, & Munch, '24

Quantitative models: Strong predictions on channels of adjustment

- Quantitative models posit three adjustment channels
  - Location change; Sector and occupational change; Home production
- Models predict fairly rapid place-based adjustment
  - Caliendo, Dvorkin, & Parro, '19; Galle, Rodríguez-Clare, & Yi '22; Rodríguez-Clare, Ulate & Vasquez '22
- But places exhibit slow recoveries to trade shocks
  - Brazil, Denmark, Finland, France, India, Italy, Portugal, UK, US
  - Minimal recovery from China trade shock in US through 2019: Autor, Dorn, Hanson '21
  - Uneven recovery from shock through 2015: Bloom et al. '24
  - *Relative* gains among non-manufacturing workers: Pierce, Schott & Tello-Trillo '24
- And worker-level changes in occupations, places are gradual, incomplete
  - Bound & Holzer, '00; Dao, Furceri, & Loungani, '17; Dix-Carneiro '14; Howard, '20; Zabeck, '24

Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

Objective: Linking outcomes of places vs. people in trade adjustment

Confidential earnings, employment data for US labor market, 2000–2019

- LEHD: Worker-level panel covering 43 mainland US states
  - Quarterly earnings from each employer identifier
  - Industry and county of each job
- Opportunity Databank: Household Tax and SSA data
  - Demographics: Birthday, Race, Sex, Foreign-born status
- National Samples: ACS 2005-19; Decennial Census 2000 & 2010
  - Educational attainment for random subsamples
- Admin data employment counts line up well with official statistics.

Manufacturing decline between 2000 and 2019

- Manufacturing employment count fell from 17.1mil → 12.mil (29%)
- Manufacturing employment share fell from 14.2% → 9.1% (36%)
- Manufacturing workers as share of working-age pop fell from 9.8% → 7.0% (29%)

Year:	2000		2019	
Sector:	Non-mfg	Mfg	Non-mfg	Mfg
Number of Workers (millions):	103.2	17.1	121.2	12.2

Empirical motivation: Industry exposure

- Forcing variable: Δ industry-level Chinese import penetration:

$$\Delta \text{IP}_j^{us} \equiv \frac{\text{US imports from China}_{j,2007} - \text{US imports from China}_{j,2000}}{\text{All US domestic shipments and net imports}_{j,2000}}$$

- Problem: Δ China's penetration of US industries is endogenous
  - Could be driven by China-specific supply shocks or US-specific demand shocks
  - We are interested in the exogenous, supply-driven component...
  - Attributable to rising Chinese productivity, falling China-facing trade barriers
- Sol'n: Canonical 2SLS strategy, exploiting Chinese exports to other countries k

$$\Delta \text{IP}_j^{non\text{-}us} \equiv \sum_k \left(\frac{k\text{'s imports from China}_{j,2007} - k\text{'s imports from China}_{j,2000}}{\text{All US domestic shipments and net imports}_{j,1998}} \right)$$

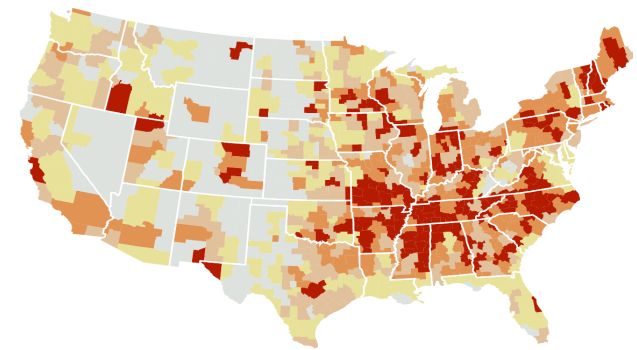
- This provides an industry-level source of trade exposure

Strong regional component to trade shock → Local labor market approach
Concentrated in South Atlantic, South Central, Northeast, Great Lakes

Most-affected areas of the U.S.

Colors show which areas were most affected by China's rise, based on the increase in Chinese imports per worker in each area from 1990 to 2007. Hovering over each area on the map will show a demographic breakdown of that area, below, and its most-affected industries, at right.

Most-affected 20% | Second-highest 20% | Middle 20% | Second-lowest 20% | Least-affected 20%



Most-affected industries

*Most-affected industries, based on number of areas**	*Impact per worker†*
Furniture and fixtures — 196 areas	*$44k*
Games, toys, and children's vehicles — 114 areas	*$488k*
Sporting and athletic goods — 106 areas	*$82k*
Electronic components — 87 areas	*$65k*
Plastics products — 84 areas	*$11k*
Motor-vehicle parts and accessories — 79 areas	*$12k*
Electronic computers	

Autor, Dorn, Hanson; WSJ, 2016

Translation from industry-level to commuting zone-level (CZ) shocks

- Measuring local labor market exposure to industry-level demand shocks
  - We take a modern Bartik approach: Exposure identified by industry-level *shocks*
  - Shocks are projected onto start-of-period CZ industry employment *shares*
  - Controlling for main effects of summed manufacturing shares (Borusyak, Hull, Jaravel '22
- The CZ-specific change in import penetration from China is

$$\Delta \text{IP}_{cz}^{us} \equiv \sum_{j \in \text{manuf}}^{J} \left(\frac{L_{cz,j,2000}}{L_{cz,2000}} \Delta \text{IP}_{j}^{us} \right)$$

- CZ-level instrument is defined as above, except replacing $\Delta \text{IP}_{j}^{us}$ with $\Delta \text{IP}_{j}^{non\text{-}us}$

$$\Delta \text{IP}_{cz}^{non\text{-}us} \equiv \sum_{j \in \text{manuf}}^{J} \left(\frac{L_{cz,j,1990}}{L_{cz,1990}} \Delta \text{IP}_{j}^{non\text{-}us} \right)$$

Regression analysis at the commuting zone level

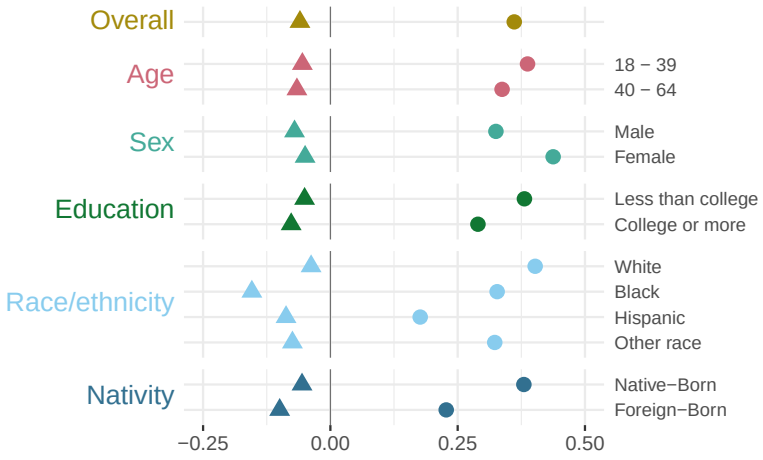
- Estimating year-specific coefficient on import penetration measure, β_t

$$\Delta Y_{cz,t} = \mu_t + \beta_t \Delta \text{IP}_{cz} + \gamma_t \left(\frac{\sum_{j \in \text{manuf}}^{J} L_{cz,j,2000}}{\sum_J L_{cz,2000}} \right) + \delta_t X_{cz,2000} + \epsilon_{cz,t}$$

  - β_t is estimated for each of 19 time periods $t = 2000 - 2001, ..., 2000 - 2019$ by TSLS with CZs weighted by 2000 working-age population
  - γ_t controls for main effect of manufacturing employment share, so β_t is identified by local mix of manufacturing industries, conditional on manufacturing share
  - $X_{cz,2000}$ controls for Census division-by-year fixed-effects
  - Omits Silicon Valley CZ (major outlier in tech growth)

- Spec derived from a (partial eq'm) gravity trade model in Autor, Dorn, Hanson '13
  - Perhaps the most scrutinized regression specification in recent labor econ (since QOB)

Exposure ($\sigma's$) defined at CZ-level: Differs sharply by sector, demographic group

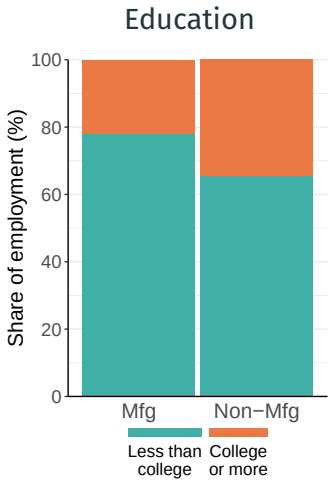


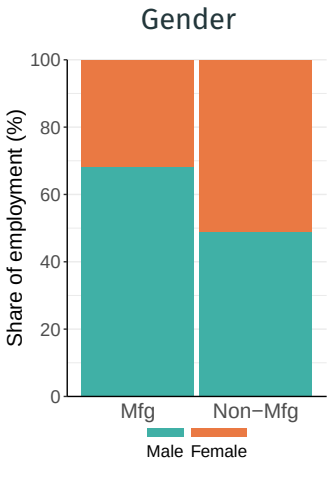
Interquartile range $\sim \sigma$

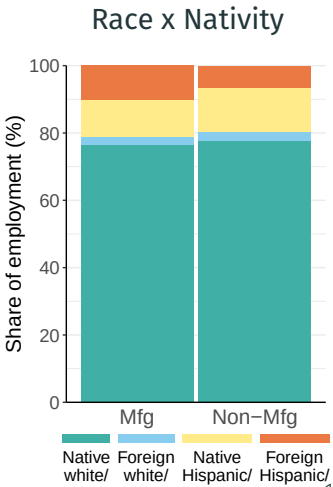
- 25.4 mil workers **overall** in top quartile
- 5.7 mil manufacturing **workers** (36%) in top quartile
- 19.7 mil non-manuf **workers** (21%) in top quartile

Manufacturing sector: Non-college white men substantially over-represented

Education, sex, race/nativity of manufacturing & non-manufacturing workers in 2000





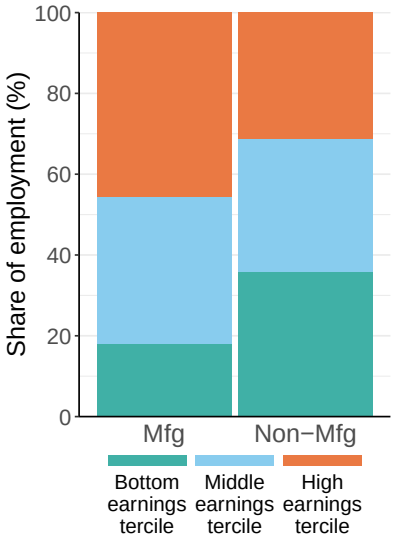


Manufacturing jobs: Half of mfg workers were top tercile earners in 2000

Constructing earnings terciles

- Three equally-sized earnings terciles in 2000
- Not specific to region, education, sector, etc.
- Apply PCE inflation-adjusted terciles through 2019, allowing shares to grow or shrink

$\approx 45\%$ manuf workers in top 3rd in 2000

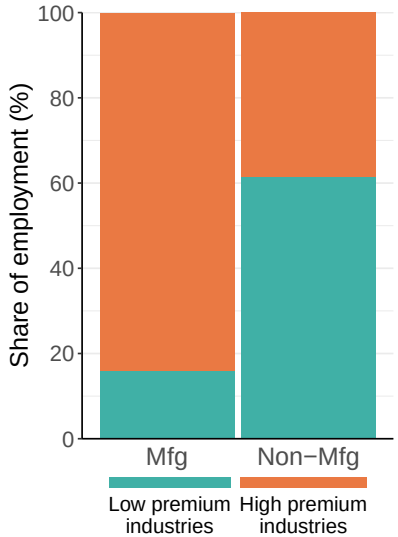


Manufacturing jobs: Most manufacturing workers were in high premium inds

Split industries into high/low premium

- Card, Rothstein & Yi ’24 estimate AKM wage premia for 4-digit NAICS industries
- Split industries into above-average, below-average wage premium

Most mfg workers in high premium inds in 2000



Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

Measuring CZ-level net effects: Employment-population ratio

Emp-pop changes: We decompose the total employment to population ratio change in a commuting zone between 2000–2019 as :

$$\underbrace{\frac{\text{emp}_{cz}^{19}}{\text{pop}_{cz}^{19}} - \frac{\text{emp}_{cz}^{00}}{\text{pop}_{cz}^{00}}}_{\text{change in emp/pop rate}} = \underbrace{\frac{\text{emp}_{cz}^{19} - \text{emp}_{cz}^{00}}{\text{pop}_{\mathbf{cz}}^{\mathbf{00}}}}_{\text{net emp change}} + \underbrace{\frac{\text{emp}_{cz}^{19}}{\text{pop}_{\mathbf{cz}}^{\mathbf{19}}} - \frac{\text{emp}_{cz}^{19}}{\text{pop}_{\mathbf{cz}}^{\mathbf{00}}}}_{\text{effect of pop change on emp/pop}}$$

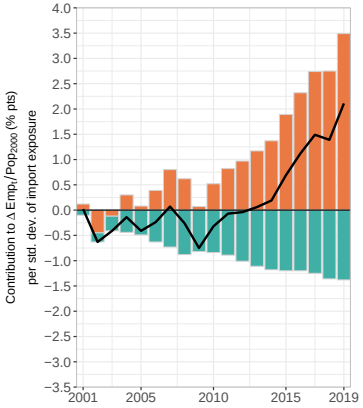
Net job change: Using the industry of the employer from LEHD, we decompose the total employment change in a commuting zone between 2000–2019 as:

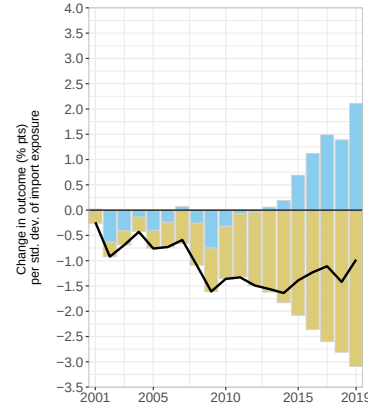
$$\underbrace{\frac{\text{emp}_{cz}^{2019} - \text{emp}_{cz}^{2000}}{\text{pop}_{cz}^{2000}}}_{\text{net emp change}} = \underbrace{\frac{\text{emp}_{\text{mfg in } cz}^{2019} - \text{emp}_{\text{mfg in } cz}^{2000}}{\text{pop}_{\mathbf{cz}}^{\mathbf{2000}}}}_{\text{net emp change in mfg}} + \underbrace{\frac{\text{emp}_{\text{non-mfg in } cz}^{2019} - \text{emp}_{\text{non-mfg in } cz}^{2000}}{\text{pop}_{\mathbf{cz}}^{\mathbf{2000}}}}_{\text{net emp change in non-mfg}}$$

CZ-level net effects: Emp-pop ratio and net employment changes

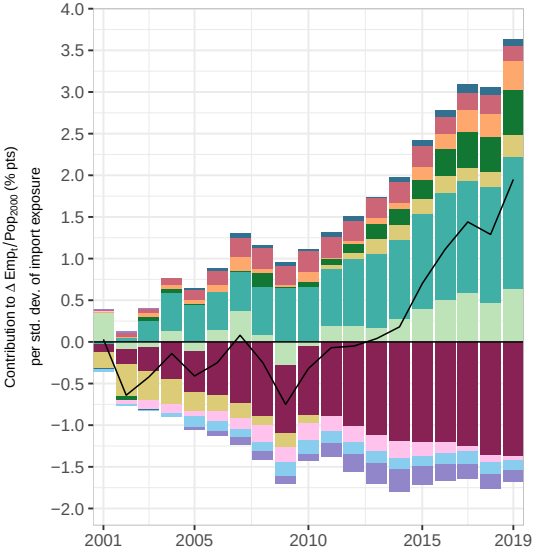
$$\Delta Y_{CZ,t} = \frac{\text{emp}_{cz}^{2019} - \text{emp}_{cz}^{2000}}{\text{pop}_{cz}^{2000}}$$

$$\Delta Y_{CZ,t} = \frac{\text{emp}_{cz}^{19}}{\text{pop}_{cz}^{19}} - \frac{\text{emp}_{cz}^{00}}{\text{pop}_{cz}^{00}}$$





CZ-level net effects: Trade-induced changes in industry composition



Major losses

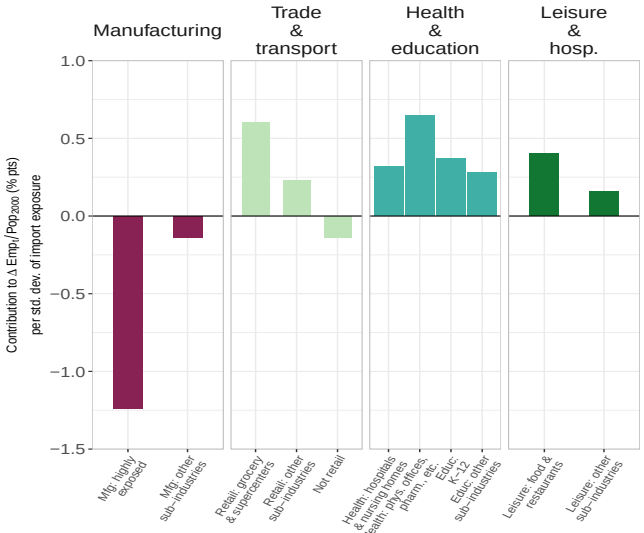
- Manufacturing

Major gains

- Health Care and Education
- Trade and Transport (2015–2019)
- Leisure and Hospitality (2015–2019)

Trade & transport
Leisure & hospitality
Other services
Total employment
Health & education
Finance & real estate
Information tech.
Manufacturing
Construction
Mining & resource
Business & prof.
Government

CZ-level net industry effects: Steep fall in manufacturing, 2000 – 2019



Major gains

- Retail
- Health services
- Education, Leisure

Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

The ins and outs of place-based adjustment: Net changes reflect gross flows

1. **Employment ↔ Non-Employment gross flows**
   - Workers non-employed in the U.S. 2000 and employed in current CZ post 2000 and v.v. (**including immigrants**)
2. **Cross-CZ Employment ↔ Employment gross flows**
   - Workers employed in current CZ in 2000 and employed in different CZ post 2000 and v.v.
3. **Sectoral reallocation Manufacturing ↔ Non-manufacturing net flows**
   - Workers employed in manufacturing in CZ in 2000, employed in non-manufacturing in same CZ post 2000 and v.v.
4. **Youth → Worker inflows, Worker → Retiree outflows**
   - **Inflow:** Youth <18 in 2000 → working in CZ post-2000 (**including foreign-born youth**)
   - **Outflow:** Adult working in CZ in 2000 → age 65+ post 2000

The ins and outs of place-based adjustment: Net changes reflect gross flows

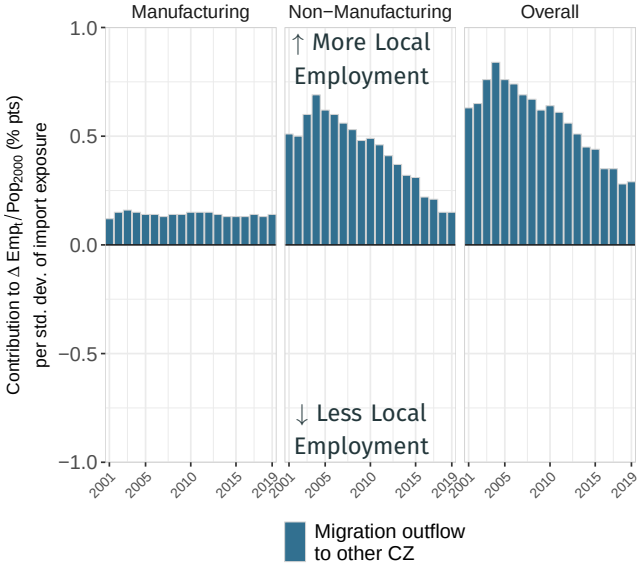
Net mfg (or non-mfg) emp Δ = sum of inflows − outflows across four margins:

$$\underbrace{\frac{\text{emp}^{19}_{\text{mfg in cz}} - \text{emp}^{00}_{\text{mfg in cz}}}{\text{pop}^{00}_{\text{cz}}}}_{\text{net emp change in mfg}} =$$

$$\underbrace{\frac{\text{inflow}^{\text{non-employment}}_{\text{mfg in cz, 00-19}} - \text{outflow}^{\text{non-employment}}_{\text{mfg in cz, 00-19}}}{\text{pop}^{00}_{\text{cz}}}}_{\text{net flows from non-employment}} + \underbrace{\frac{\text{inflow}^{\text{sectoral}}_{\text{mfg in cz, 00-19}} - \text{outflow}^{\text{sectoral}}_{\text{mfg in cz, 00-19}}}{\text{pop}^{00}_{\text{cz}}}}_{\text{net flows from other sectors}} +$$

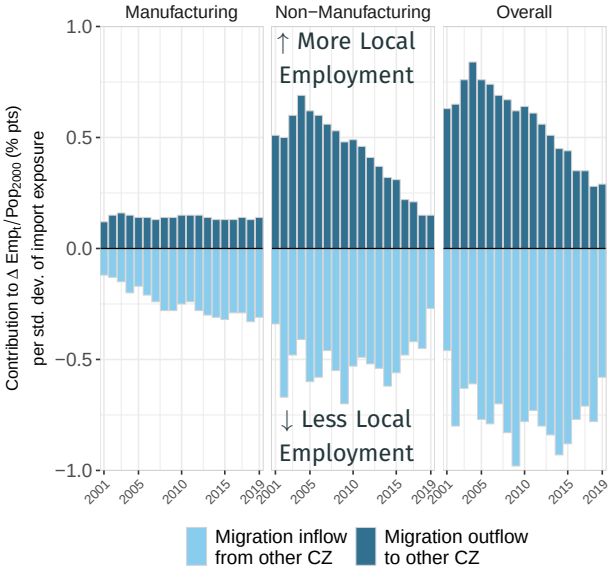
$$\underbrace{\frac{\text{inflow}^{\text{geographic}}_{\text{mfg in cz, 00-19}} - \text{outflow}^{\text{geographic}}_{\text{mfg in cz, 00-19}}}{\text{pop}^{00}_{\text{cz}}}}_{\text{net flows from other CZs}} + \underbrace{\frac{\text{inflow}^{\text{aging}}_{\text{mfg in cz, 00-19}} - \text{outflow}^{\text{aging}}_{\text{mfg in cz, 00-19}}}{\text{pop}^{00}_{\text{cz}}}}_{\text{net flows from working age set, 18–64}}$$

Net changes reflect gross flows: Fall in worker outflows



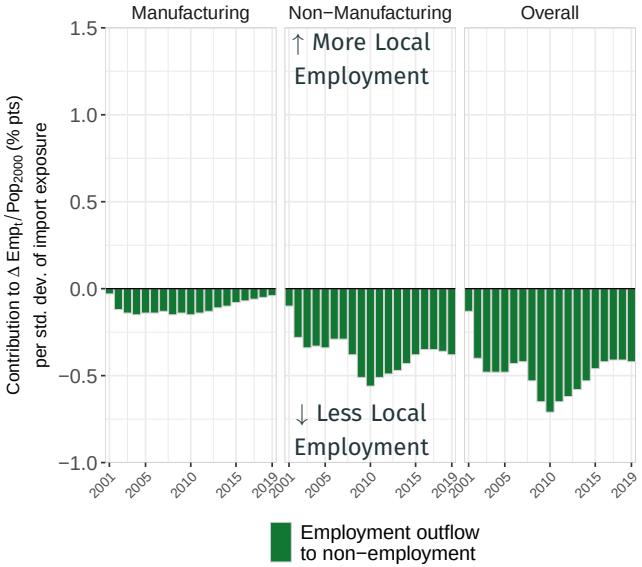
- Reduced worker *outflows* to employment in other CZs

Net changes reflect gross flows: Fall in worker inflows AND outflows



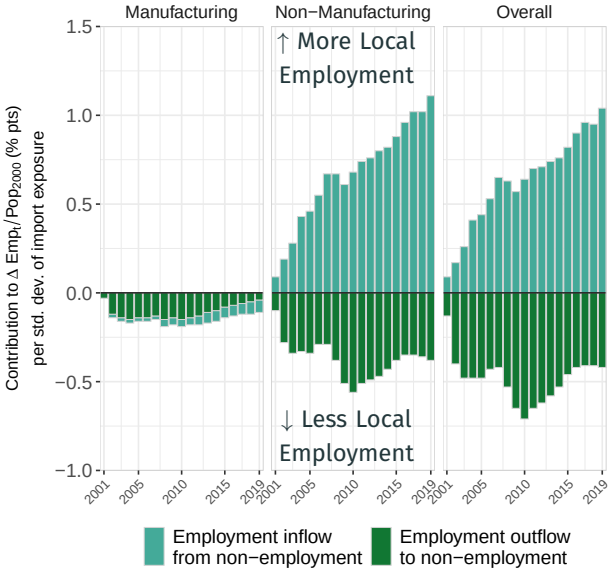
- Reduced worker *outflows* to employment in other CZs
- Reduced worker *inflows* from employment in other CZs
- cf. Notodiwigdo ’20; Borusyak et al. ’22; Koenen & Johnston ’24; Zabeck ’24

Ins and outs: Small *outflows* to non-employment



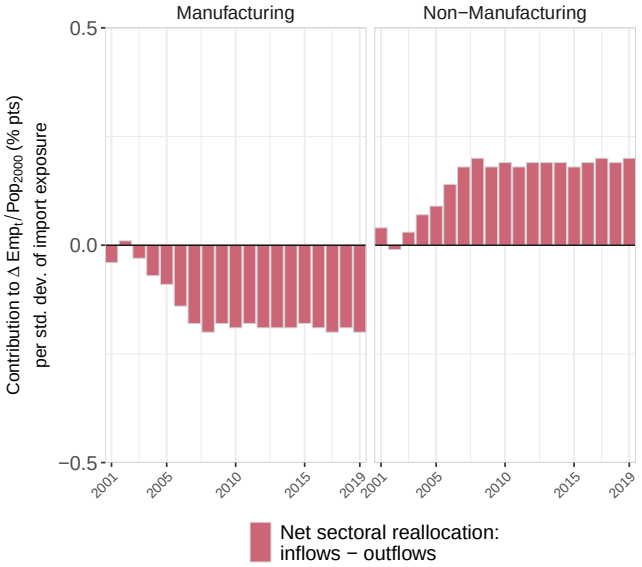
- Increased worker *outflows* to non-employment

Ins and outs: Small *outflows* to, large *inflows* from, non-employment



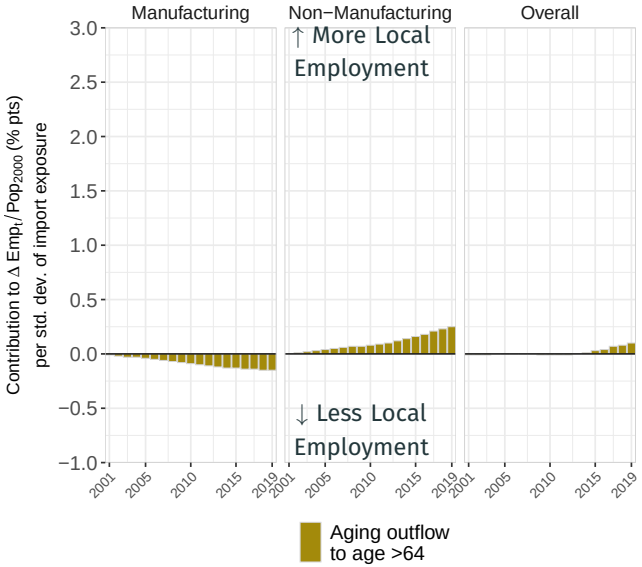
- Increased worker *outflows* to non-employment
- Increased *inflows* of adult workers not previously employed in U.S.

Ins and outs: Modest net worker flows manufacturing to non-mfg



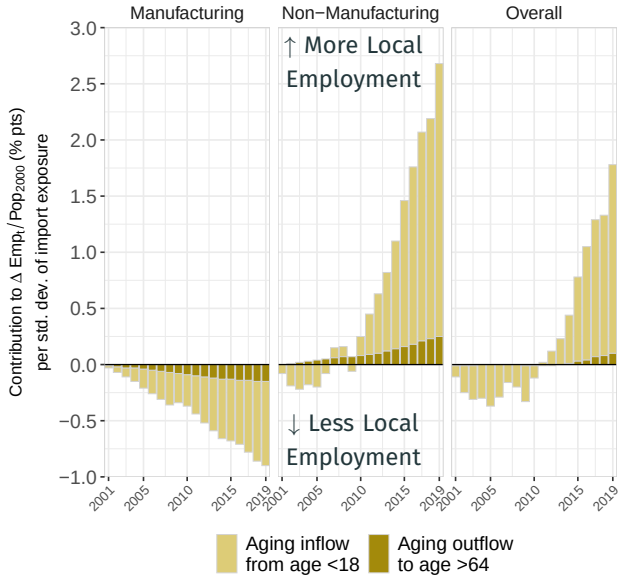
- Minimal net flows from manufacturing → non-manufacturing
- *All net flows from manufacturing to non-manufacturing* occur during 2001–07, at height of shock

Net changes reflect gross flows: Slightly lower retirement outflows



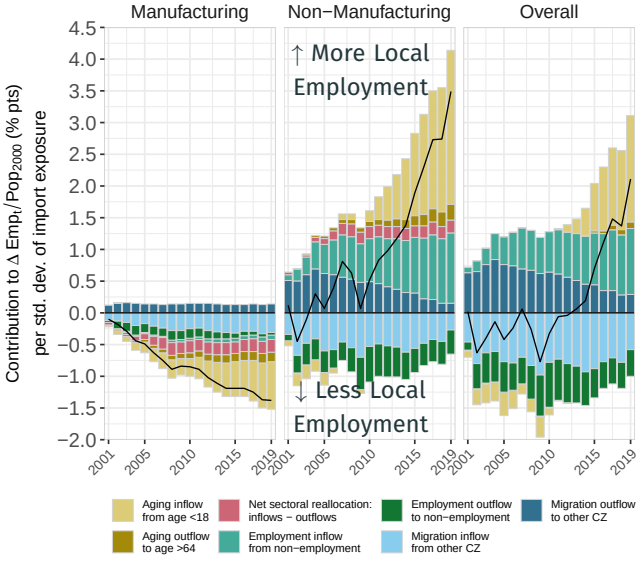
- Slightly lower *retirement outflows* (age 65+)

Net changes reflect gross flows: Large inflows of *new* workers (<18 in year 2000)



- Slightly lower *retirement outflows* (age 65+)
- Dramatic rise in *youth entrant inflows* (age < 18 in 2000)

Everything, everywhere, all at once: Non-manuf jobs, worker inflows are key



All channels combined

- Non-manufacturing accounts for all emp growth
- Sources of workers
  1. New adult entrants
  2. New youth entrants
  3. Reduced cross-CZ worker outflows

Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

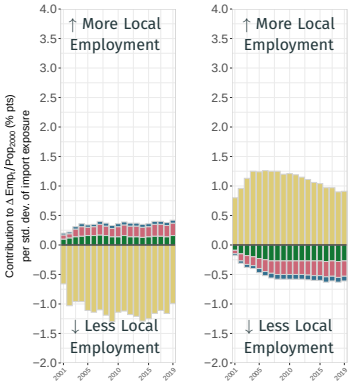
Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

Ins/outs by nativity×race: Whites+Blacks static; Hispanics, immigrants dynamic

Cross-CZ worker flows

In Out



Back

Native white/Black

Foreign white/Black

Native Hispanic/other

Foreign Hispanic/other

Ins/outs by nativity×race: Whites+Blacks static; Hispanics, immigrants dynamic

Cross-CZ worker flows

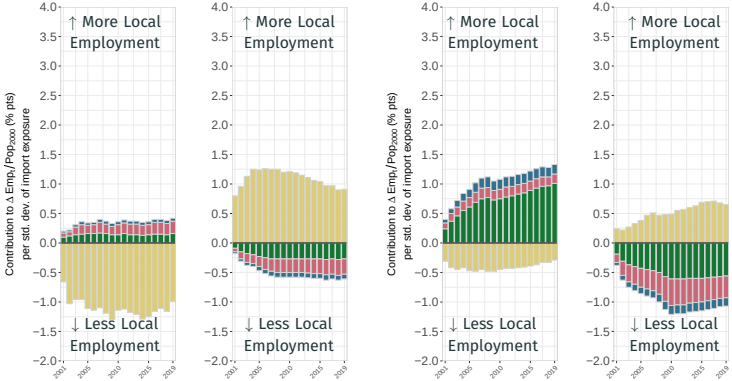
In

Out

Emp ↔ Non-emp

Inflow

Outflow



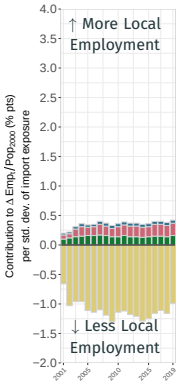
Back

Native white/Black | Foreign white/Black | Native Hispanic/other | Foreign Hispanic/other

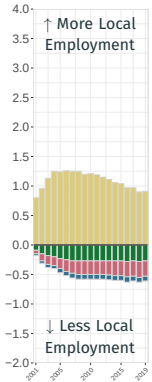
Ins/outs by nativity×race: Whites+Blacks static; Hispanics, immigrants dynamic

Cross-CZ worker flows

In

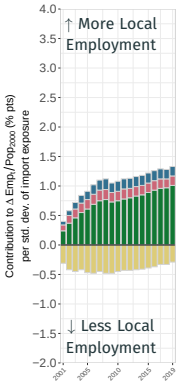


Out

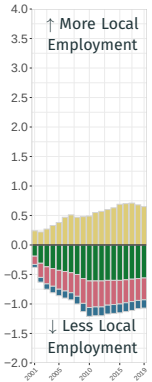


Emp ↔ Non-emp

Inflow

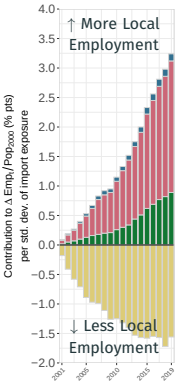


Outflow

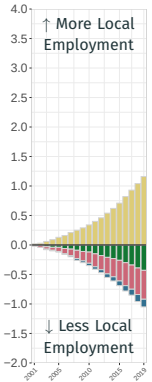


Aging in, Aging-out

Entry



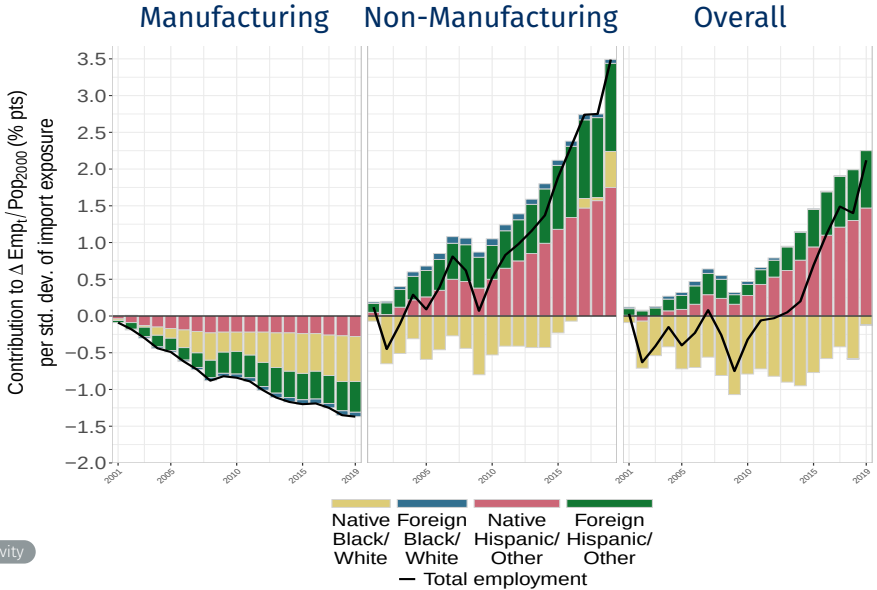
Retirement



Back

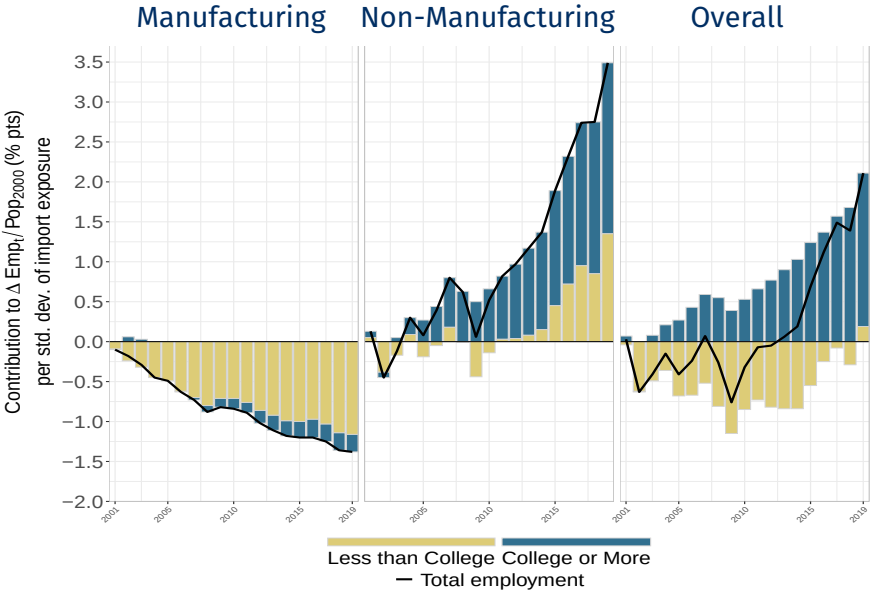
Native white/Black | Foreign white/Black | Native Hispanic/other | Foreign Hispanic/other

Net emp $\Delta's$ by race/nativity: All gains to native Hispanics, foreign non-Hispanics

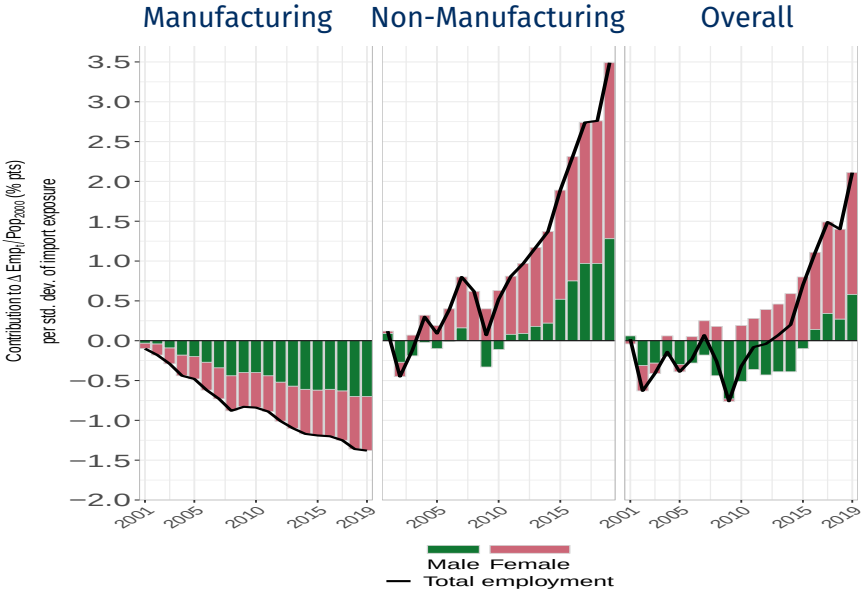


Gross flows by nativity

Net employment $\Delta's$ by education group: All net gains accrue to college grads



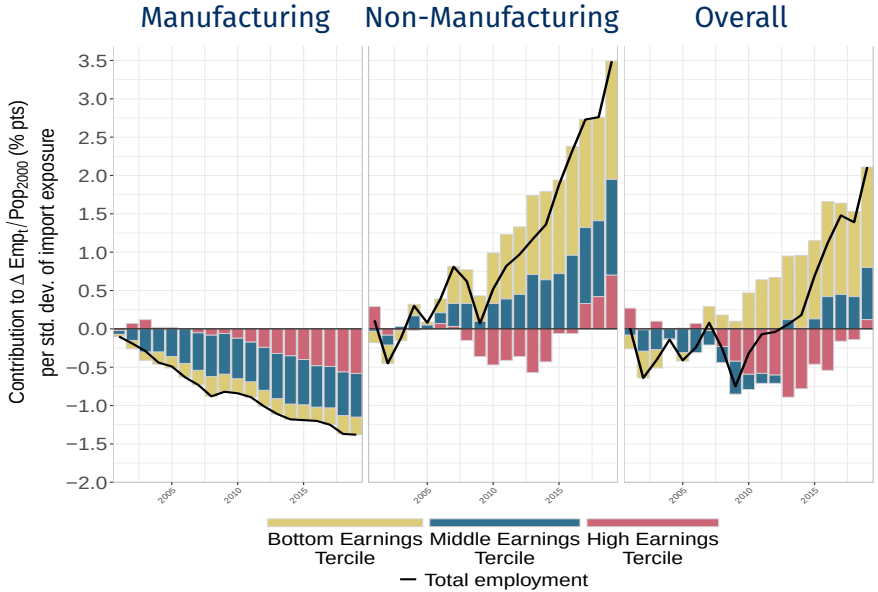
Net emp by sex: Women account for $> 2/3^{rds}$ of net employment gains



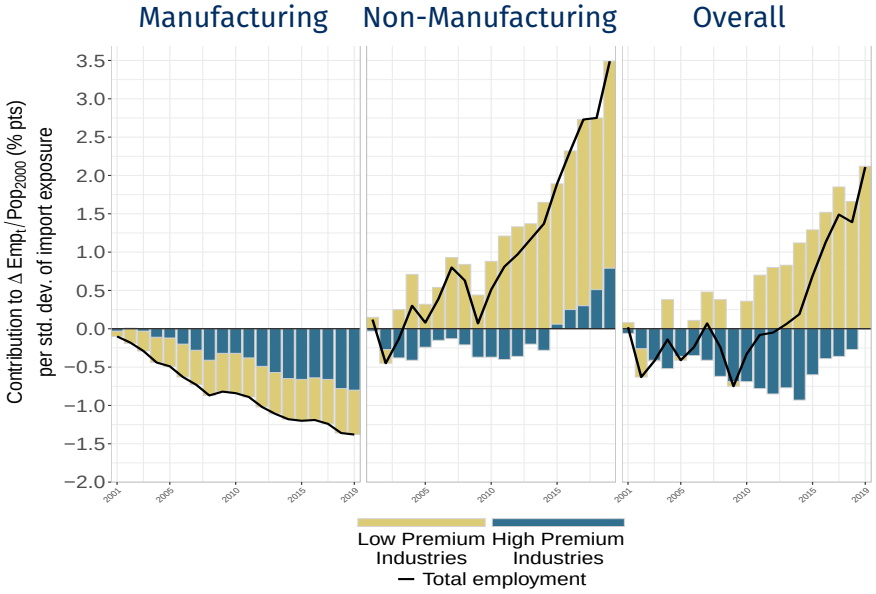
Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

Net emp by earnings tercile: Losses at mid + high terciles, gains at bottom tercile



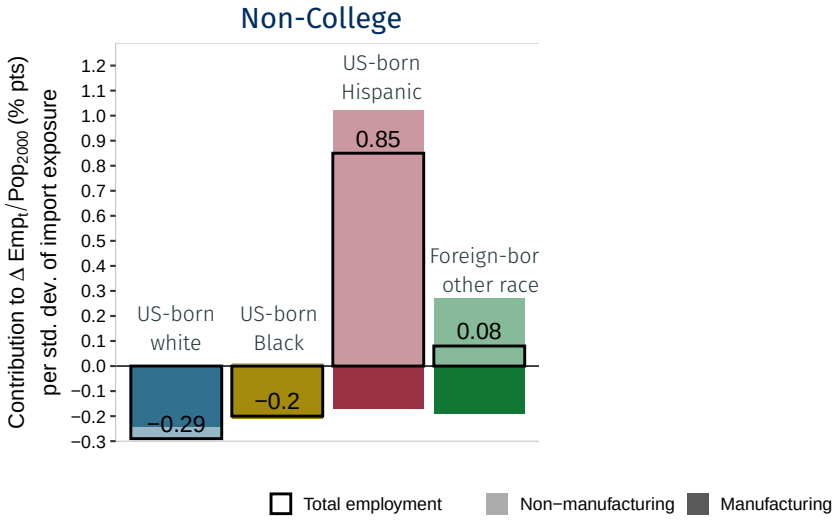
Δ ind premiums: Losses in high + low premium inds, gains in low premium inds



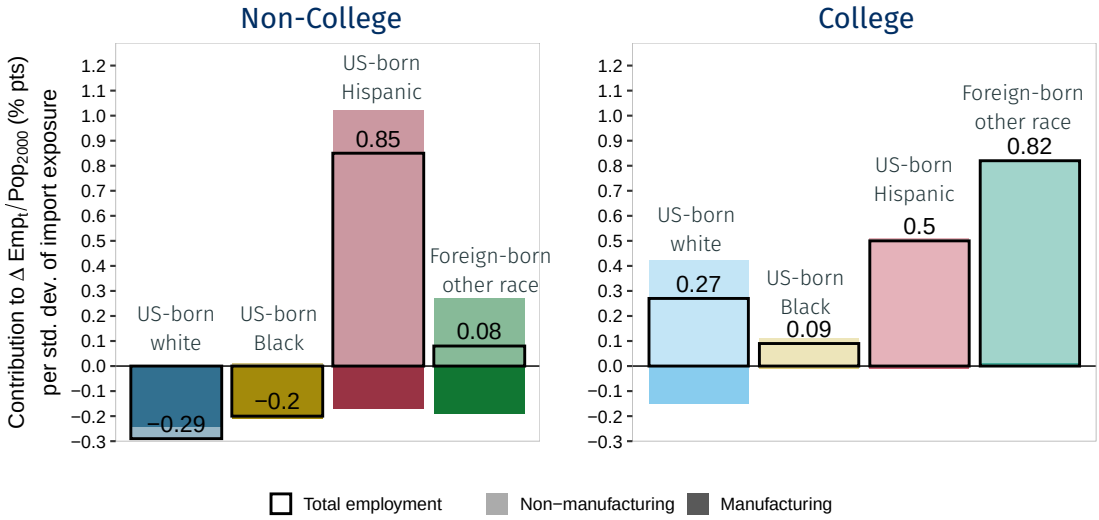
Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

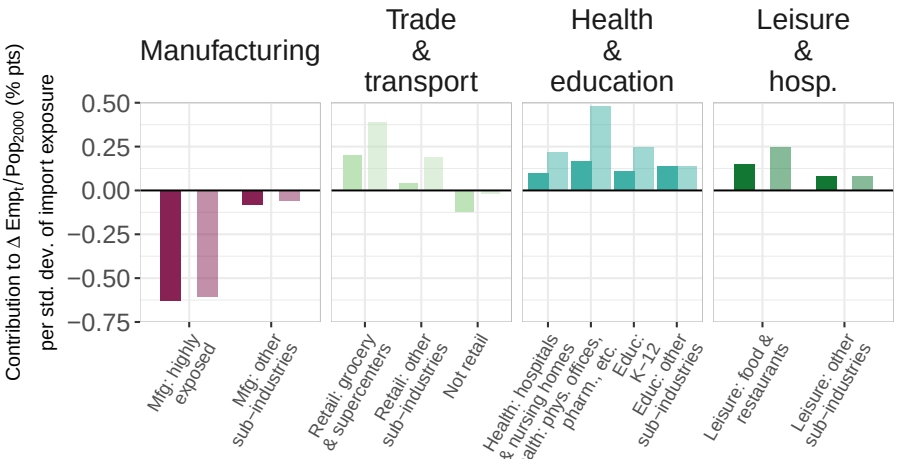
Dynamism — Big net gains for US-born Hispanics, Foreign-born other races



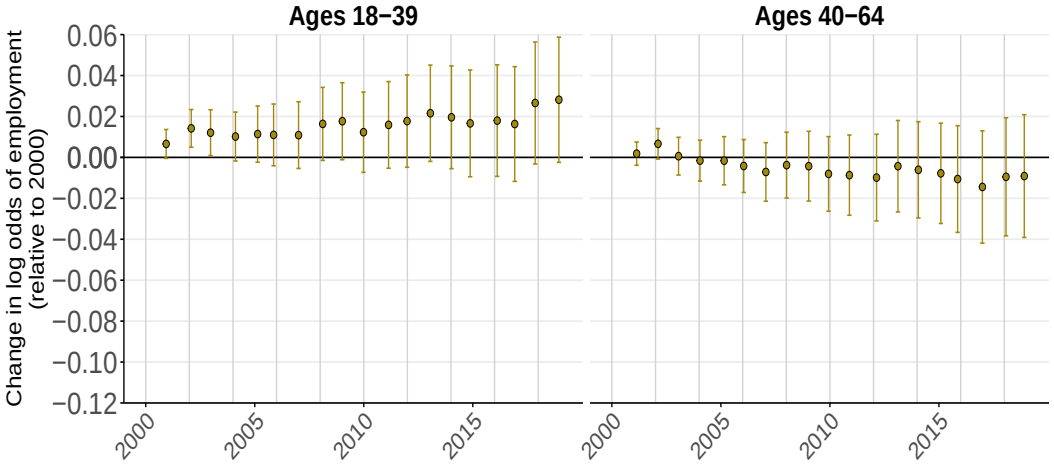
Dynamism — Big net gains for US-born Hispanics, Foreign-born other races



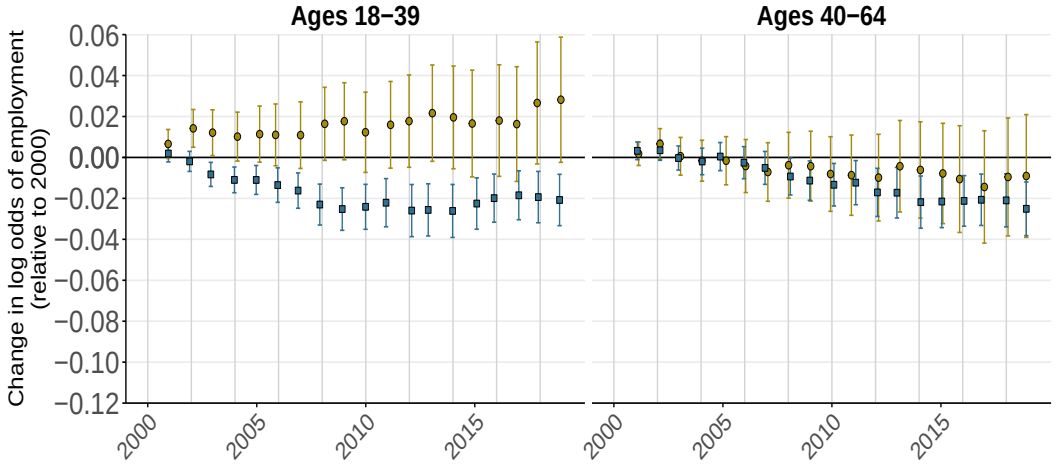
Dynamism — Women & men lost similar number of manufacturing jobs But many more women then entered non-manufacturing



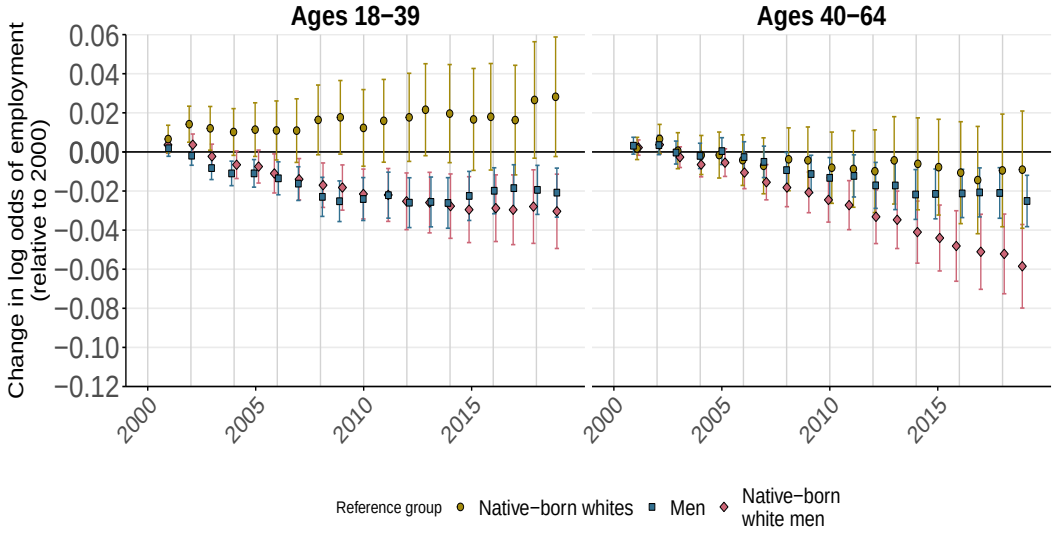
Decline — Native-born, white, non-college males losing market share



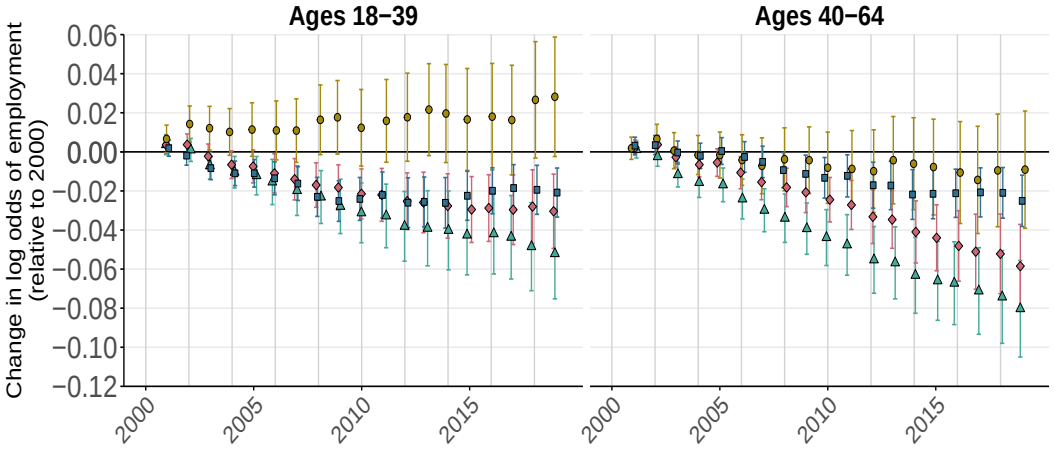
Decline — Native-born, white, non-college males losing market share



Decline — Native-born, white, non-college males losing market share



Decline — Native-born, white, non-college males losing market share



Agenda

1. Research question: Places vs. people
2. The state of knowledge
3. Approach: Data, identification, and stage setting
4. Net effects: Emp, pop, and emp/pop
5. The ins and outs of labor market adjustment
6. The quiet revolution in trade-exposed CZs
   - Changing workforce: Native v foreign-born; College v non-college; Men v women
   - Changing job quality: Earnings terciles and industry premia
   - Places vs people: Dynamism vs. decline
7. Conclusions and next steps

Conclusions and next steps: Places vs people

1. The path of employment: Down and rebound
   - Employment in trade-exposed places recovers after one decade, then overtakes
   - Manufacturing declines continually; Emp/pop remains depressed despite job growth

Conclusions and next steps: Places vs people

1. **The path of employment: Down and rebound**
   - Employment in trade-exposed places recovers after one decade, then overtakes
   - Manufacturing declines continually; Emp/pop remains depressed despite job growth
2. **Trade-exposed places: Labor markets rebuild**
   - Different workers, different sectors, generally lower earnings

Conclusions and next steps: Places vs people

1. **The path of employment: Down and rebound**
   - Employment in trade-exposed places recovers after one decade, then overtakes
   - Manufacturing declines continually; Emp/pop remains depressed despite job growth
2. **Trade-exposed places: Labor markets rebuild**
   - Different workers, different sectors, generally lower earnings
3. **Trade-exposed people: Workers are *not* moving on, over, or out**
   - **Not**: Taking jobs in other CZs; Moving to non-manuf; Dropping out of labor force

Conclusions and next steps: Places vs people

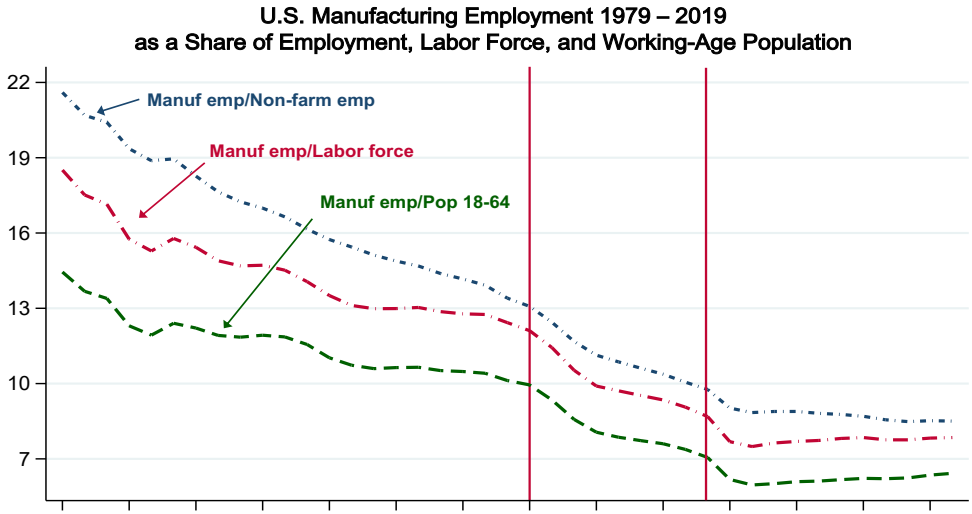
1. **The path of employment: Down and rebound**
   - Employment in trade-exposed places recovers after one decade, then overtakes
   - Manufacturing declines continually; Emp/pop remains depressed despite job growth
2. **Trade-exposed places: Labor markets rebuild**
   - Different workers, different sectors, generally lower earnings
3. **Trade-exposed people: Workers are *not* moving on, over, or out**
   - **Not**: Taking jobs in other CZs; Moving to non-manuf; Dropping out of labor force
4. **Recovery is *generational***
   - New workers enter, labor markets reconstitute, exposed workers do not rebound

Conclusions and next steps: Places vs people

1. The path of employment: Down and rebound
   - Employment in trade-exposed places recovers after one decade, then overtakes
   - Manufacturing declines continually; Emp/pop remains depressed despite job growth
2. Trade-exposed places: Labor markets rebuild
   - Different workers, different sectors, generally lower earnings
3. Trade-exposed people: Workers are *not* moving on, over, or out
   - **Not**: Taking jobs in other CZs; Moving to non-manuf; Dropping out of labor force
4. Recovery is *generational*
   - New workers enter, labor markets reconstitute, exposed workers do not rebound
5. On the agenda
   - Where did deterred workers *not* come from?
   - Where did incumbents *not* go?
   - What are the *sources* of rising labor demand in China shock-exposed CZs?
   - How are the *children of the China shock* faring?

Thank you

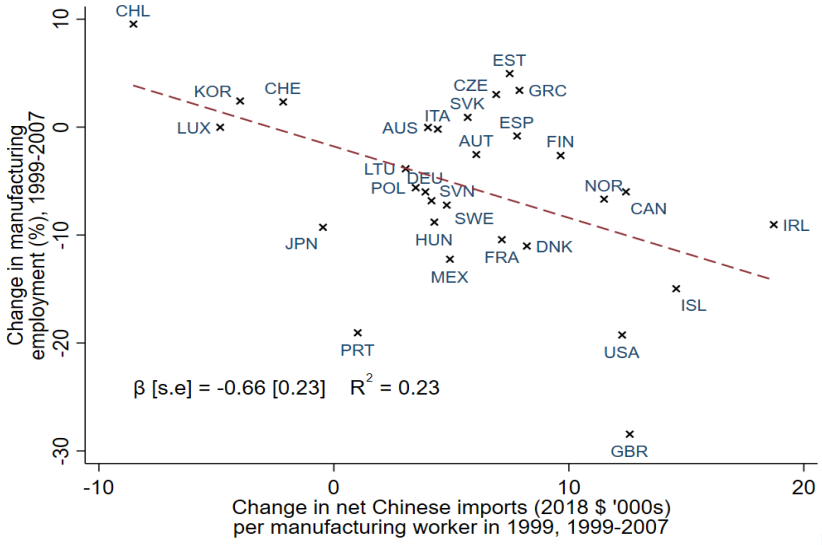
As a share of emp or pop: Declining US manufacturing emp accelerates post 2000



Back

Employment is from CES; labor force is from CPS; population is from NVSS

Worldwide: Δ Chinese imports ↔ Δ manufacturing employment, 1999-2007

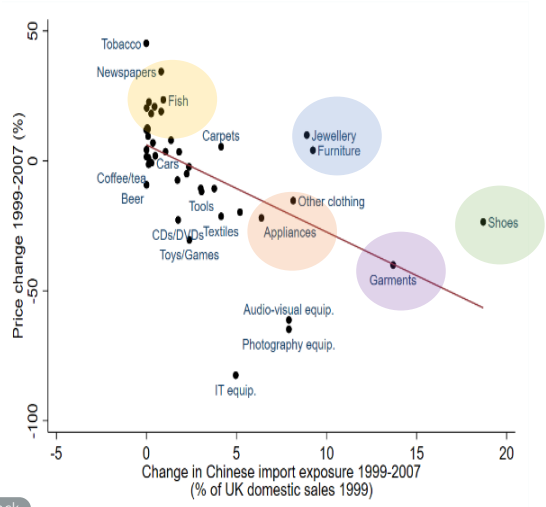


Back

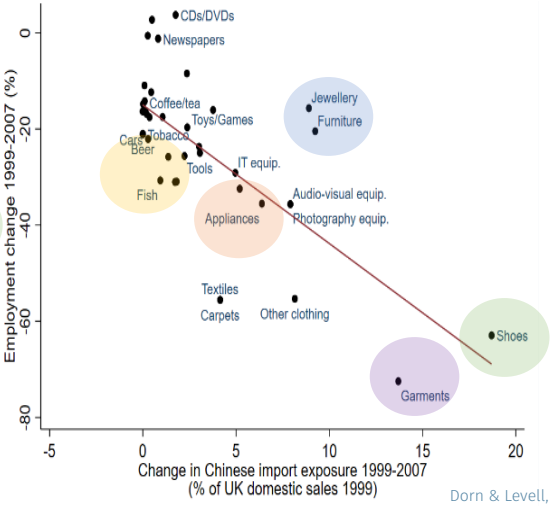
Dorn and Levell 2024

Trade, prices, and employment: It works just like the theory says

Δ Goods Prices



Δ Emp in Goods-Producing Sectors

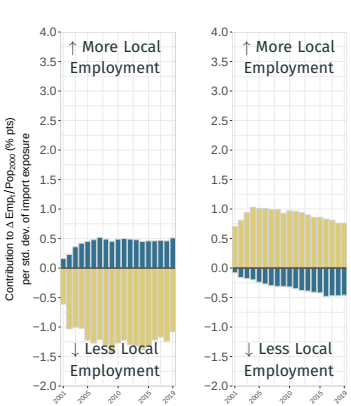


Dorn & Levell, '24

Back

Ins/outs by education: Non-college grads staying put; College grads flow in & out

Cross-CZ worker flows



Back

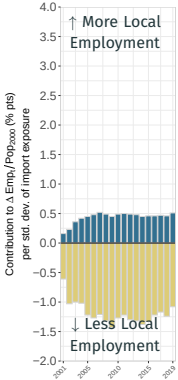
Less than college

College or more

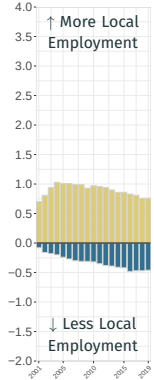
Ins/outs by education: Non-college grads staying put; College grads flow in & out

Cross-CZ worker flows

In

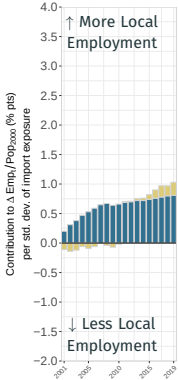


Out

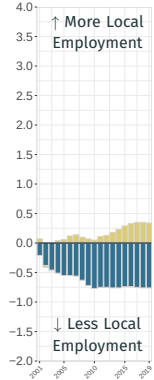


Emp ↔ Non-emp

Inflow



Outflow



Back

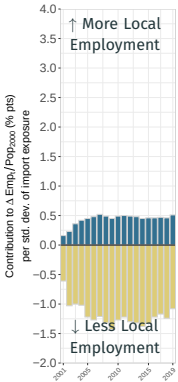
Less than college

College or more

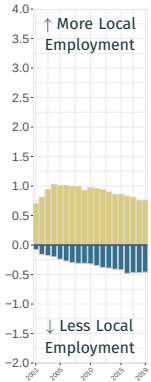
Ins/outs by education: Non-college grads staying put; College grads flow in & out

Cross-CZ worker flows

In

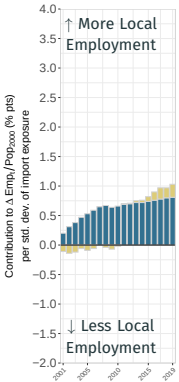


Out

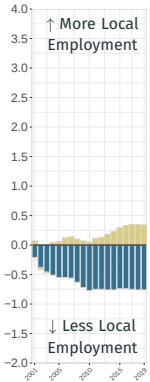


Emp ↔ Non-emp

Inflow

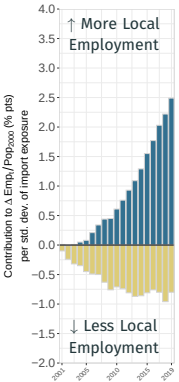


Outflow

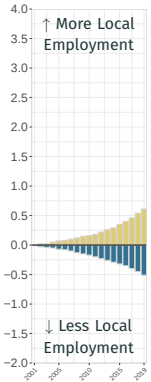


Aging in, Aging-out

Entry



Retirement



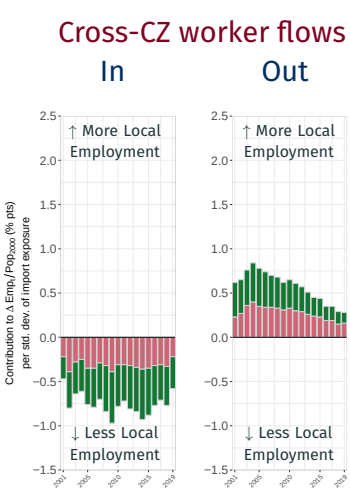
Back

Less than college

College or more

Ins/outs by sex: Women — both adults and youth — are majority of new entrants

Cross-CZ worker flows

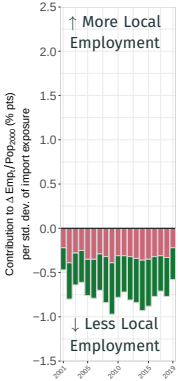


Male Female

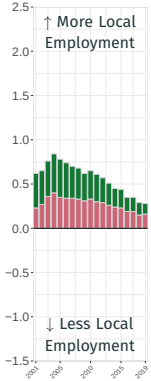
Ins/outs by sex: Women — both adults and youth — are majority of new entrants

Cross-CZ worker flows

In

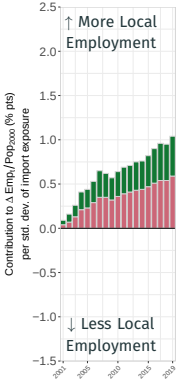


Out

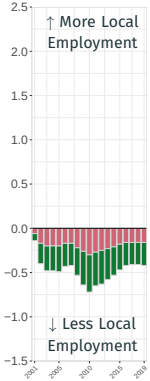


Emp ↔ Non-emp

Inflow



Outflow



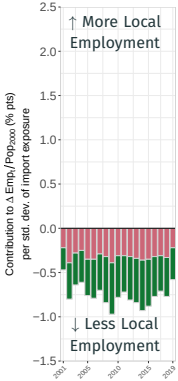
Male Female

Back

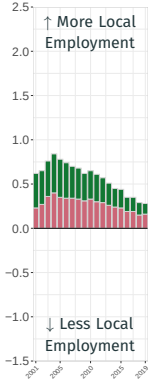
Ins/outs by sex: Women — both adults and youth — are majority of new entrants

Cross-CZ worker flows

In

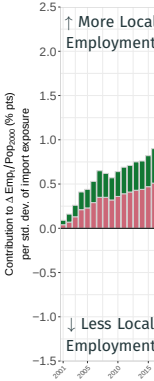


Out

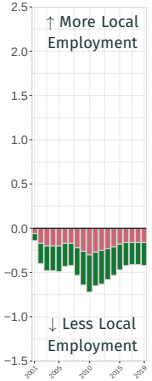


Emp ↔ Non-emp

Inflow

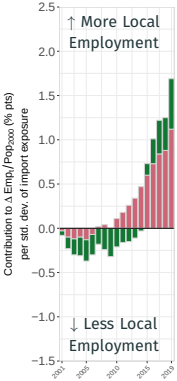


Outflow

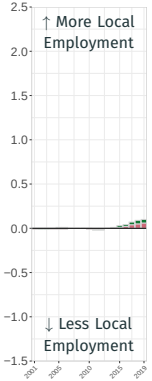


Aging in, Aging-out

Entry



Retirement

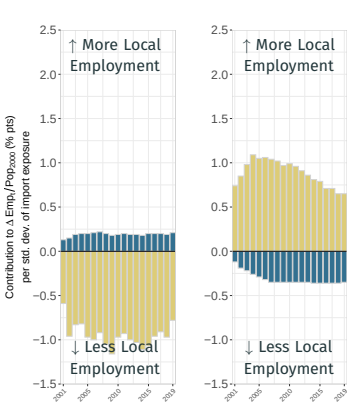


Male Female

Back

Ins/outs by nativity

Cross-CZ worker flows

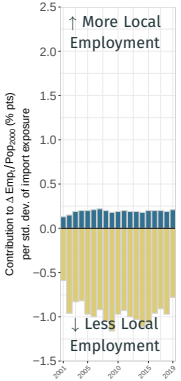


Native Foreign

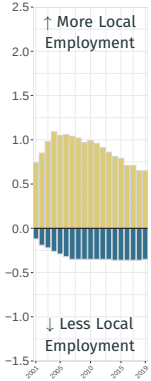
Ins/outs by nativity

Cross-CZ worker flows

In

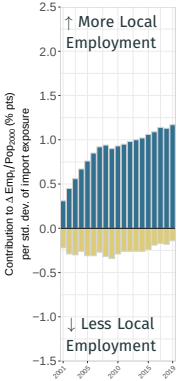


Out

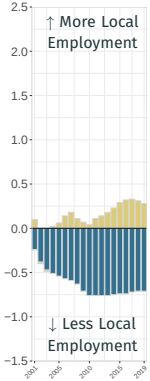


Emp ↔ Non-emp

Inflow



Outflow



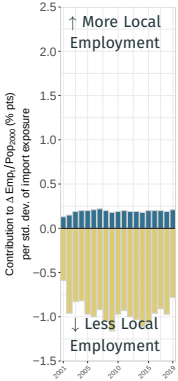
Native Foreign

Back

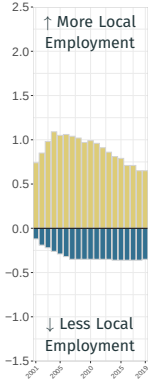
Ins/outs by nativity

Cross-CZ worker flows

In

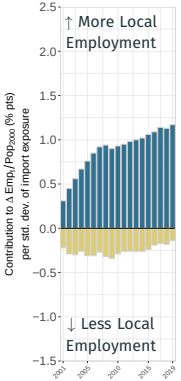


Out

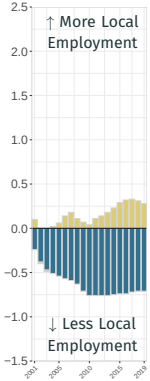


Emp ↔ Non-emp

Inflow

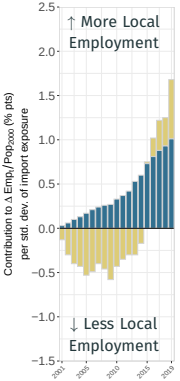


Outflow

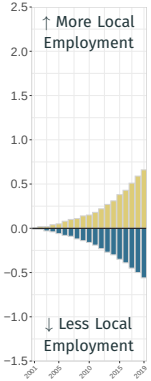


Aging in, Aging-out

Entry



Retirement



Native Foreign

Back