



IFS Annual Lecture 2017

Professor David Autor:

Economic and Political Consequences of China's Rise for the United States: Lessons from the China Shock

22 June 2017

The Royal Society, London



WiFi Network: rsnetwork
Password: Newton+apple



@TheIFS #IFSAnnualLecture



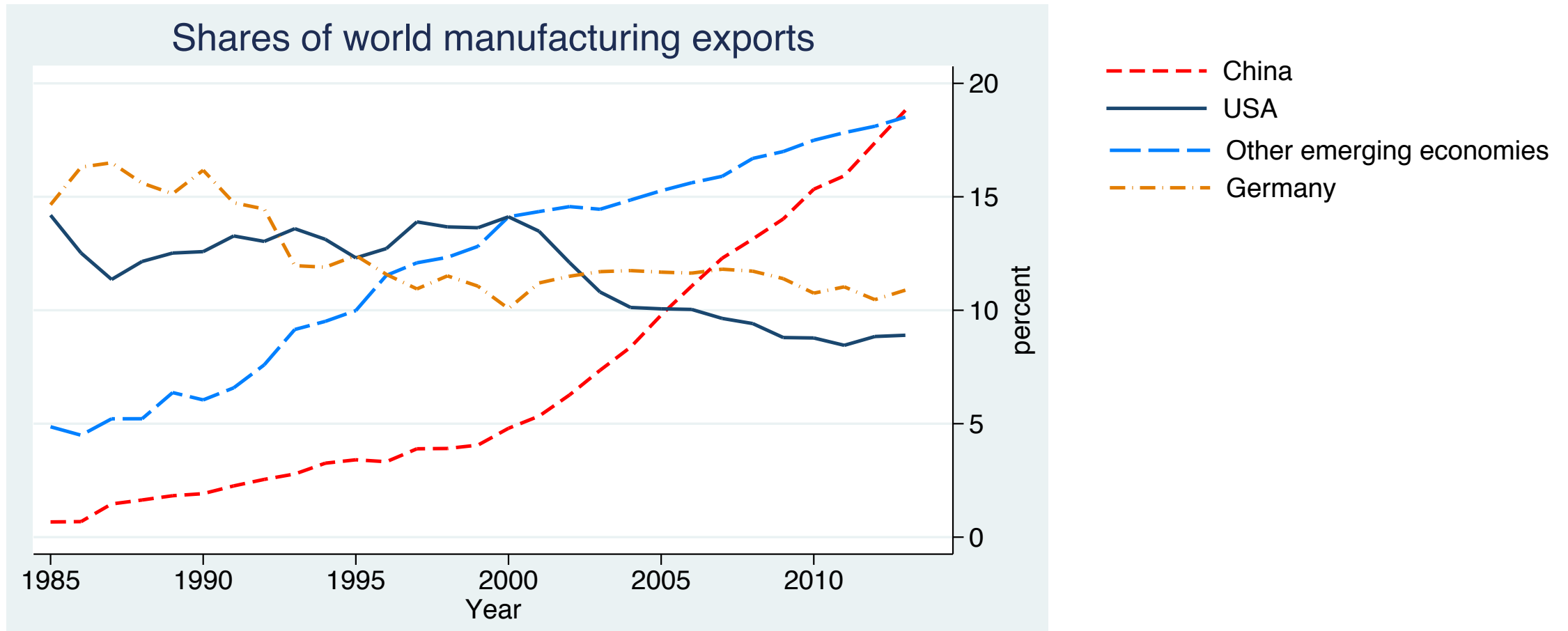
Economic and Political Consequences of China's Rise for the United States: Lessons from the China Shock

David Autor

Ford Professor and Associate Head, MIT Economics

IFS Annual Lecture, June 2017

China's Historic Rise as a World Manufacturing Power



Autor, Dorn, Hanson 2016

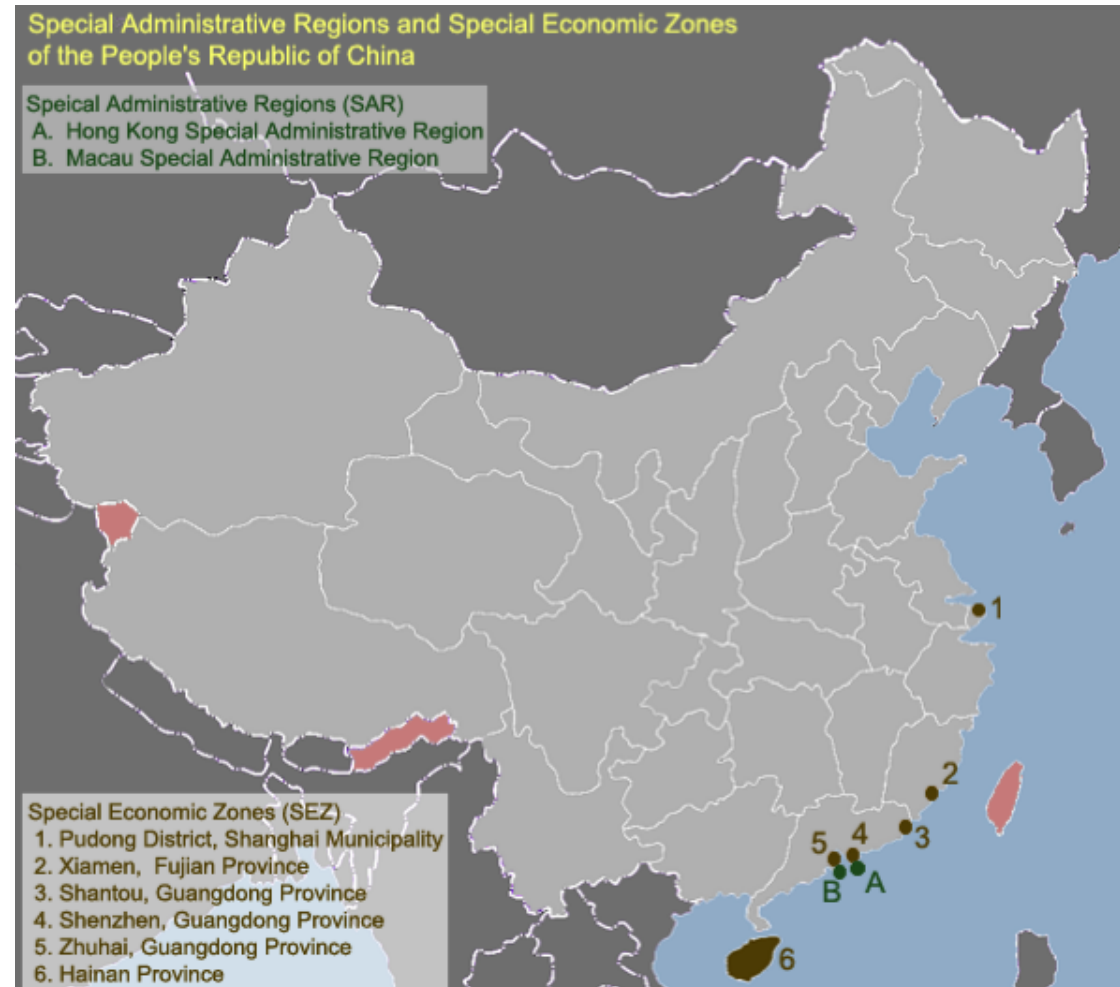
China's Historic Rise as a World Manufacturing Power

Deng Xiaoping, 1904–1997

- Chairman of the Central Advisory Commission of the Communist Party of China
- Chairman of the Central Military Commission
- Chairman of the National Committee of the Chinese People's Political Consultative Conference



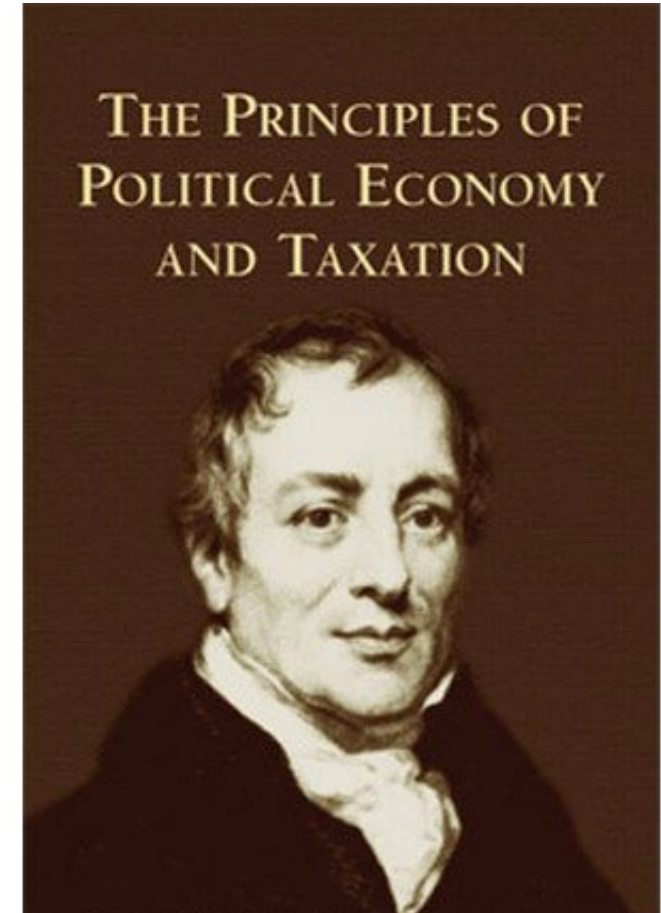
China's Special Economic Zones (SEZs)



The Case for Free Trade

Ricardo's Big Idea

- Trade allows countries to specialize in the goods in which they are most productive – comparative advantage
- Free trade among consenting nations raises GDP in all of them

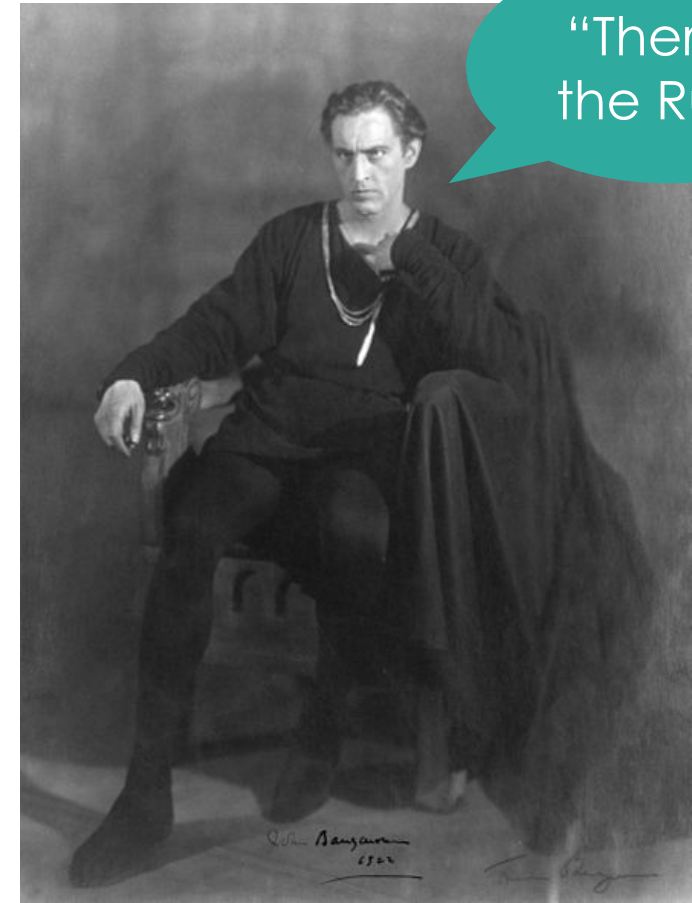


David Ricardo, 1772 – 1823

But Here's the Rub

Winners and Losers

- What is true for the welfare of a country in aggregate does not necessarily apply for all citizens in a country
- Trade normally creates winners and losers
- Diffuse benefits, concentrated costs



Drew Barrymore as Hamlet in 1922

Why Is Free Trade Not a Free Lunch?

1. Trade necessitates reallocation of workers and jobs

- Workers displaced from career jobs
- May require new location, new occupation
- Often leaves economic – and psychological – scars

Why Is Free Trade Not a Free Lunch?

1. Trade mandates reallocation of workers/jobs

2. Trade permanently alters skills demands

- Typically raises demand for high-skill workers in industrialized countries
- Reduces demand for low-skill workers
- Even as trade grows pie modestly, can shrink some slices substantially

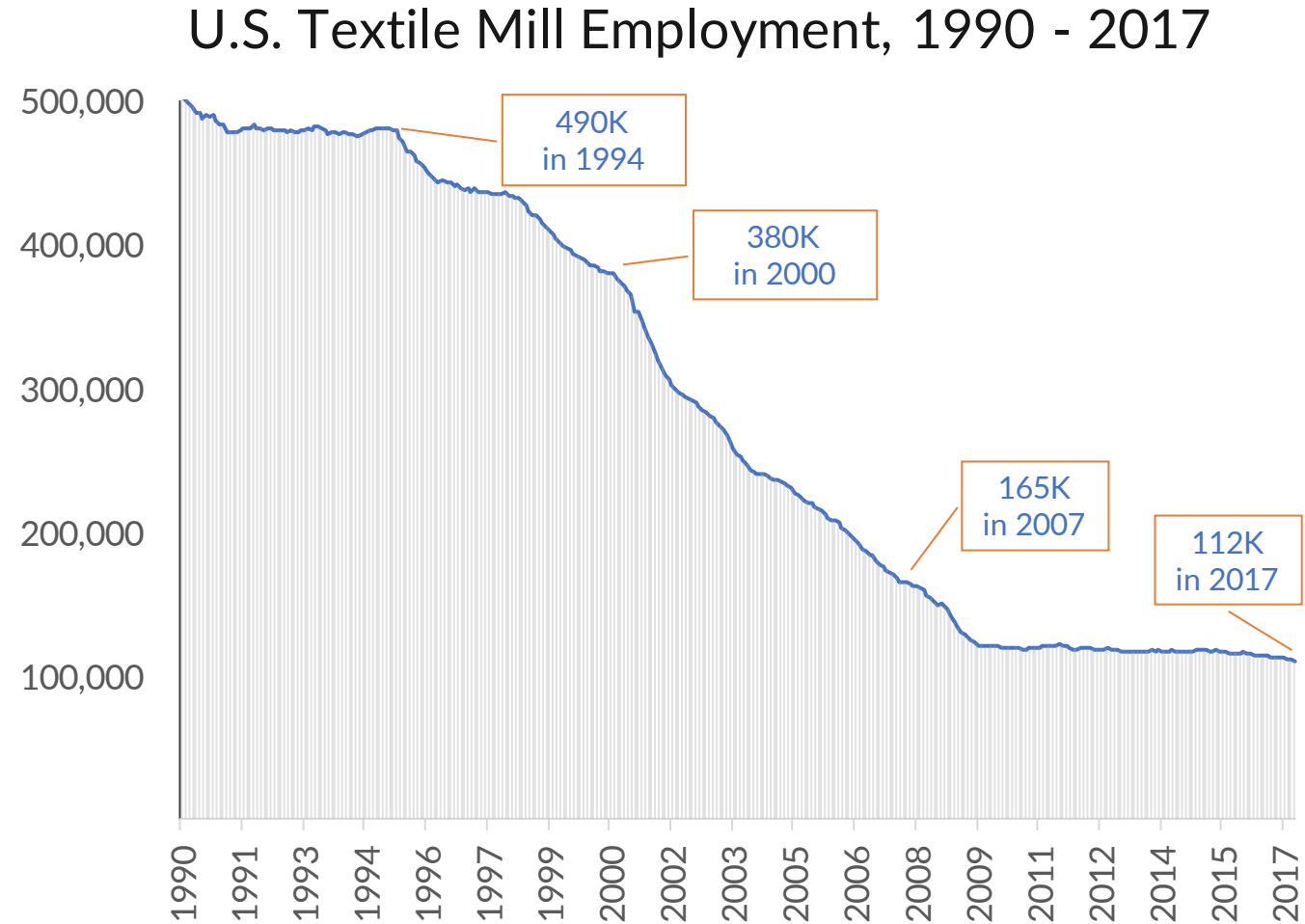
Why Is Free Trade Not a Free Lunch?

1. Trade mandates reallocation of workers/jobs
2. Trade permanently alters skill demands
- 3. Textbook scenario...**
 - Displaced workers move quickly to new opportunities
 - New businesses open, taking advantage of slack
 - New jobs created are about as good as the old ones
 - Concentrated local impacts diffuse nationally
 - A small decline in *aggregate* demand for production workers
 - But no *local* crater where manufacturing once stood

Why is Free Trade Not a Free Lunch?

1. Trade mandates reallocation of workers/jobs
2. Trade permanently alters skill demands
3. Textbook scenario
- 4. The bad scenario...**
 - If workers are not geographically mobile...
 - If they have trouble acquiring new skills...
 - If firms do not enter declining locales...
 - If public benefits programs induce workers to withdraw from labor market...
 - *Then economic costs will fall heavily on a few*

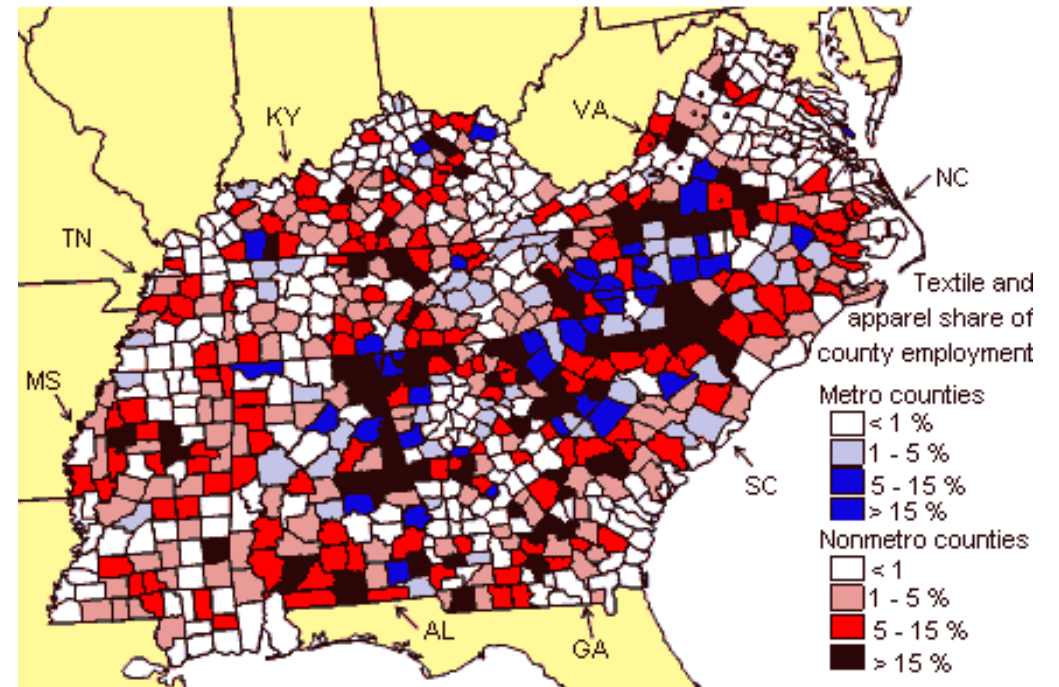
Trade Disruption: The Case of Textiles



Trade Disruption: The Case of Textiles

- 400K textile jobs is tiny in market of 150M workers
- But textile and apparel jobs geographically concentrated
 - 50% of all textile jobs were in 8 Southern states
 - 57 counties > 15% of jobs
 - Southeastern non-metro counties – Highest U.S. rates of rural poverty
 - 25% of workers high school dropouts
- *Diffuse benefits, concentrated costs*

In 2000, half of U.S. textile and apparel employment was located in eight southeastern States



Source: U.S. Department of Labor, Bureau of Labor Statistics, *Quarterly Census of Employment and Wages*, 2000.

Learning from Labor-Market Adjustment to Seismic Changes in International Trade

Evidence from the China Shock

1. Do workers quickly find reemployment?
2. Do new businesses pick up the slack?
3. Are new jobs about as good as old ones?

Beyond employment

4. How trade shock have affected U.S. politics
5. Manufacturing as a hub of innovation

Looking ahead

U.S. Manufacturing Employment Sharply Contracts After China Joins the World Trade Organization in 2001

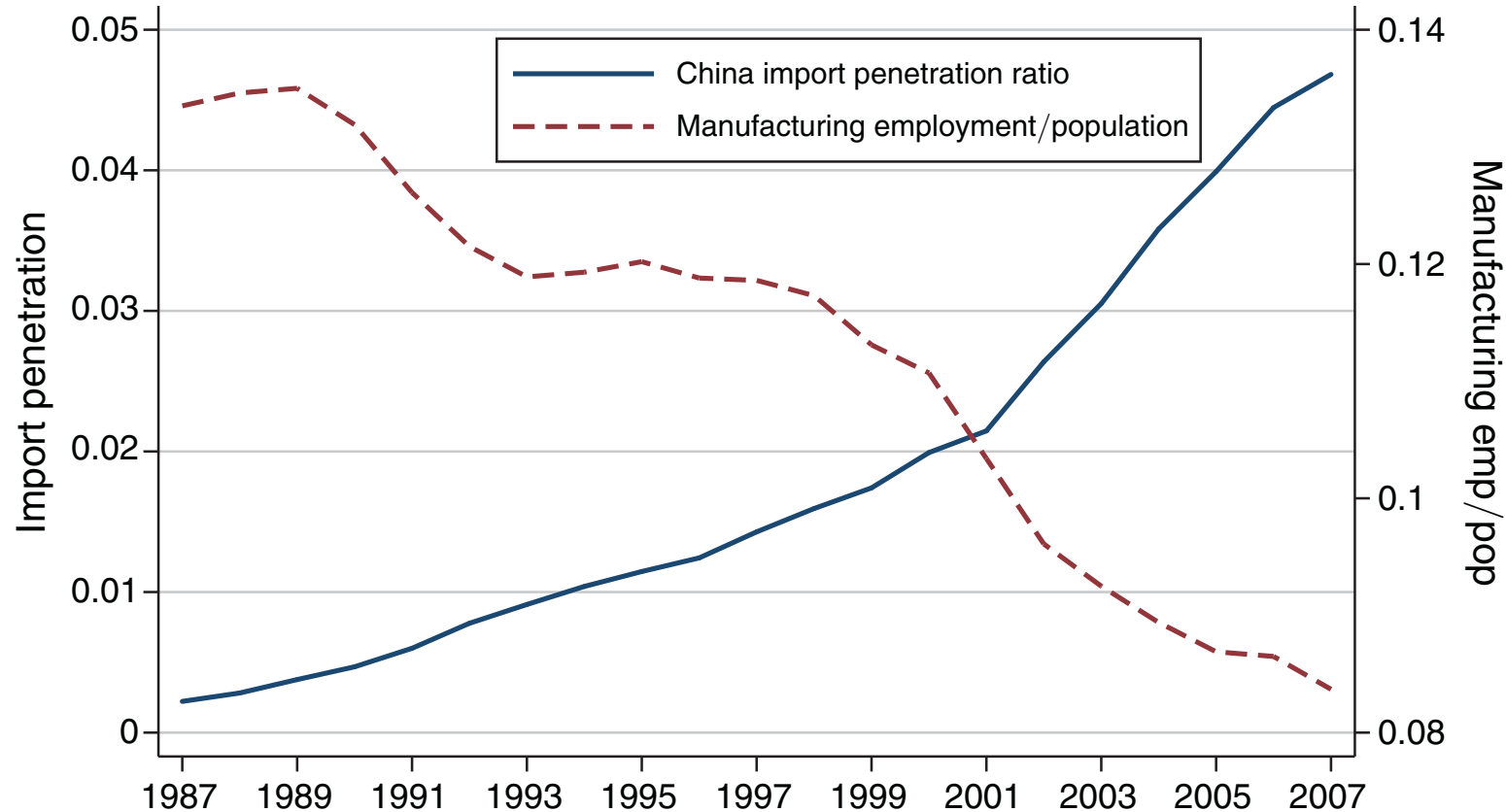
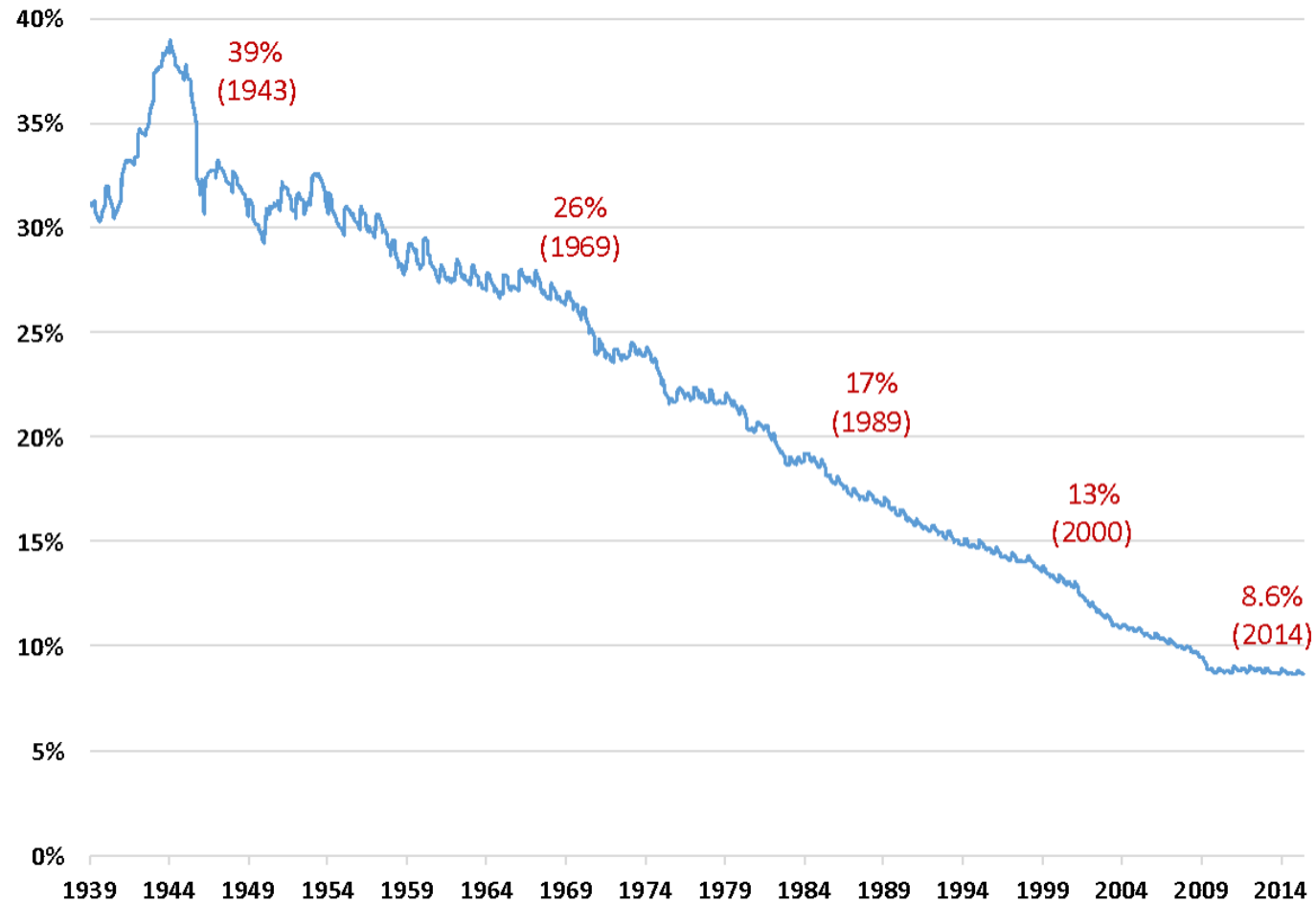


Figure 1.

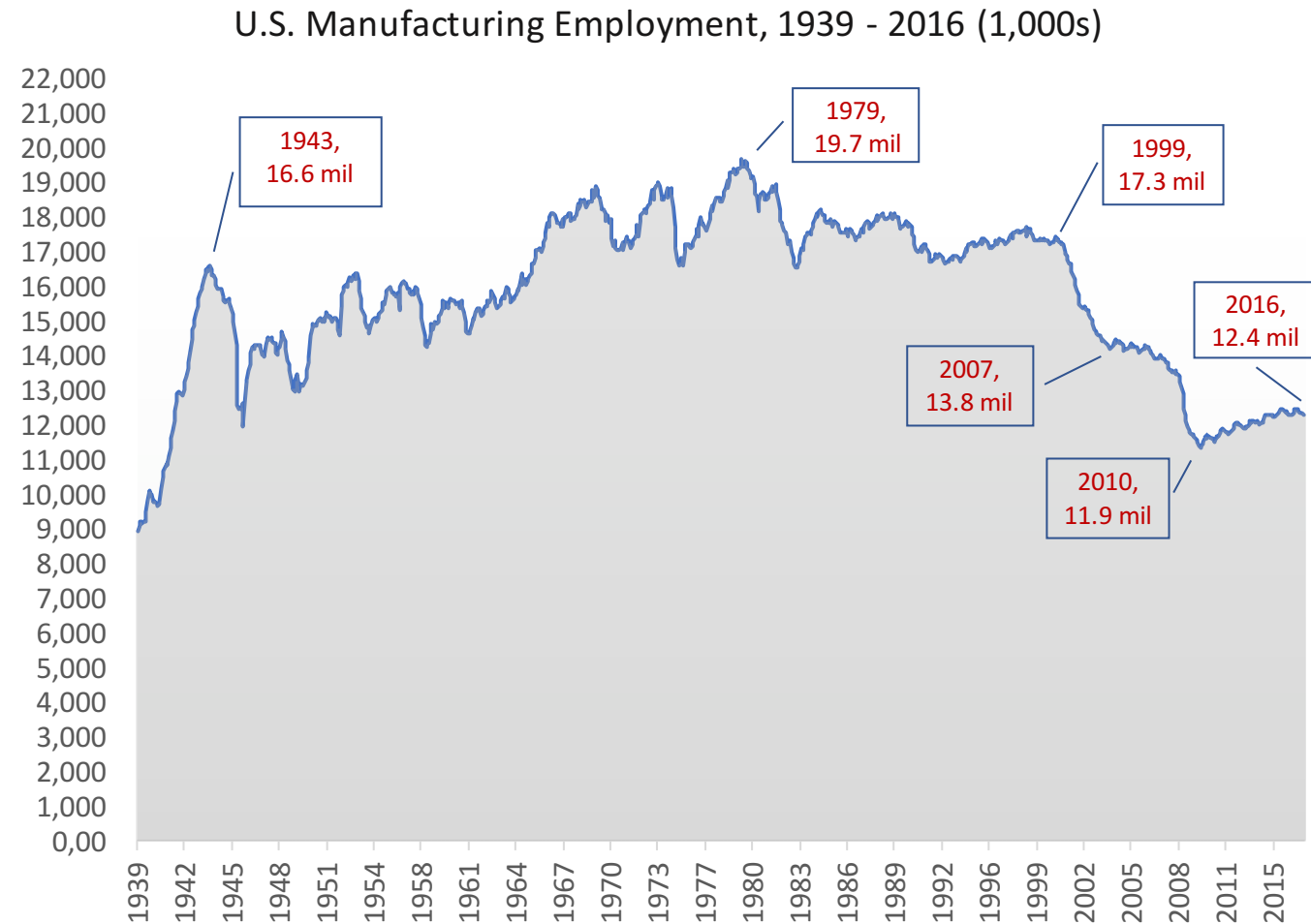
Left scale: Chinese goods as a share of U.S. goods expenditure

Right scale: Share of U.S. working-age population employed in manufacturing

A Long Decline: The Share of U.S. Employment in Manufacturing, 1939 – 2014



U.S. Manufacturing Employment Fell by 20% During 1999—2007, and by 32% During 1999—2016



Learning from Labor-Market Adjustment to Seismic Changes in International Trade

Evidence from the China Shock

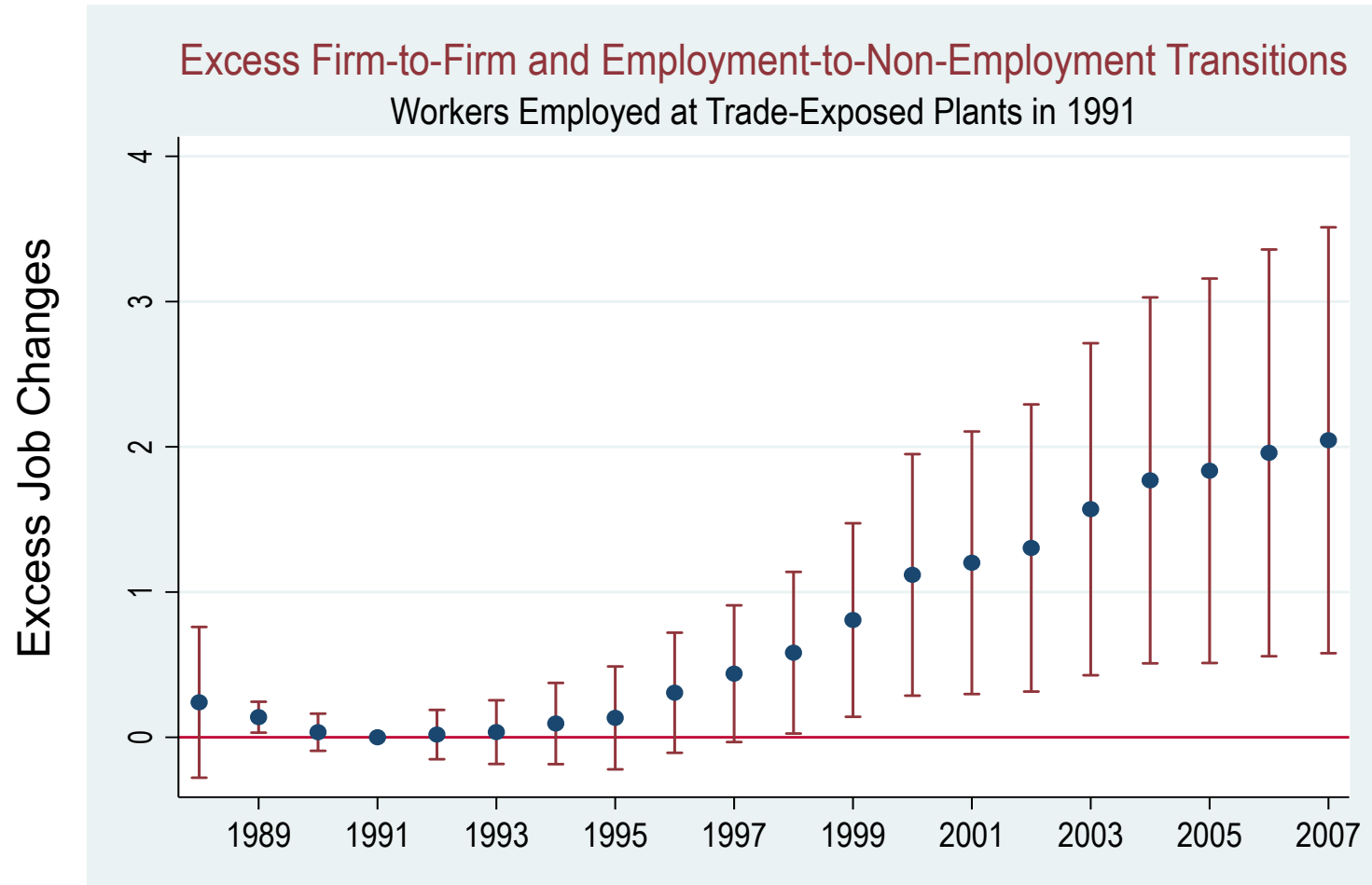
- 1. Do workers quickly find reemployment?**
2. Do new businesses pick up the slack?
3. Are new jobs about as good as old ones?

Beyond employment

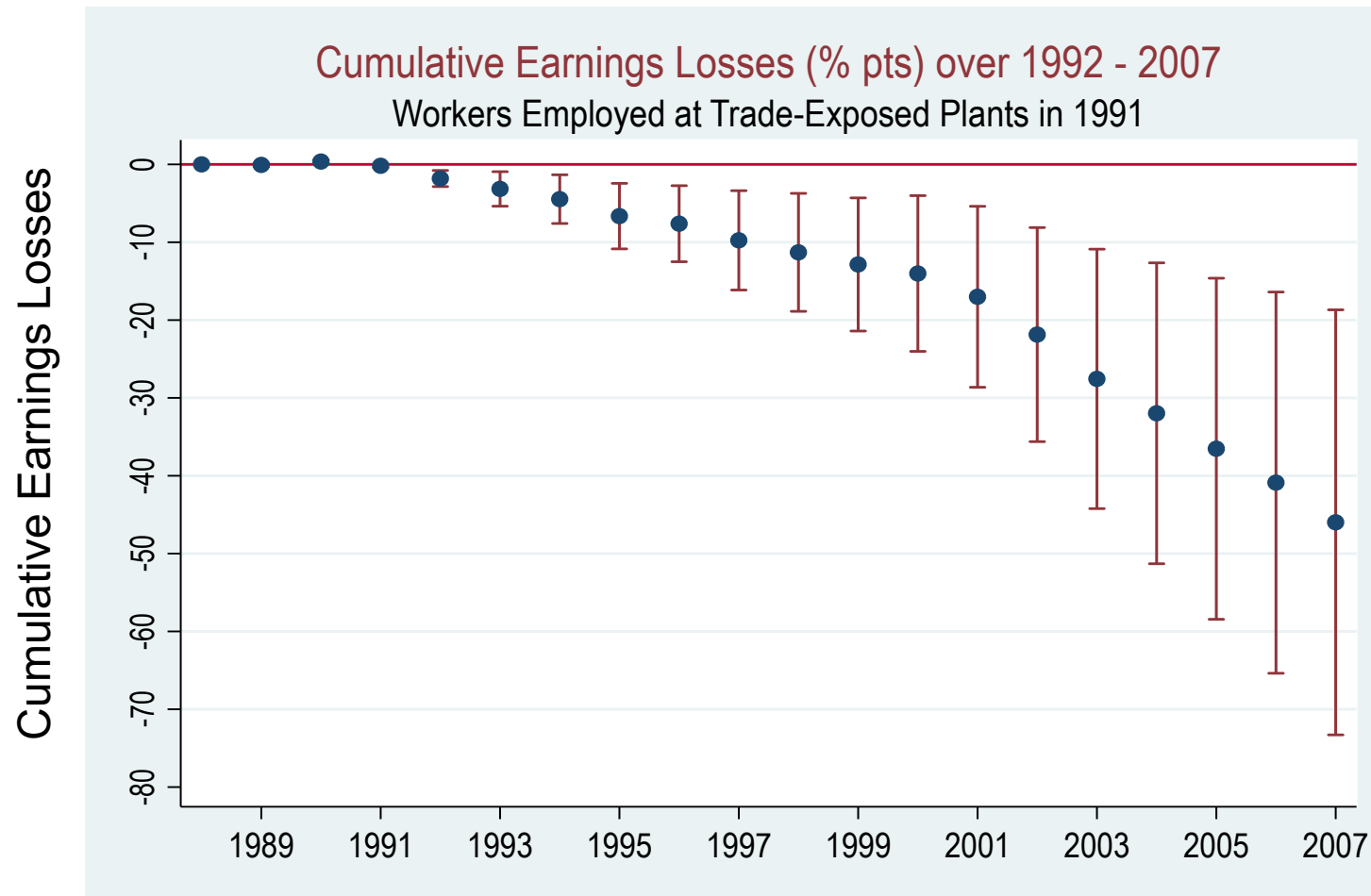
4. How trade shock have affected U.S. politics
5. Manufacturing as a hub of innovation

Looking ahead

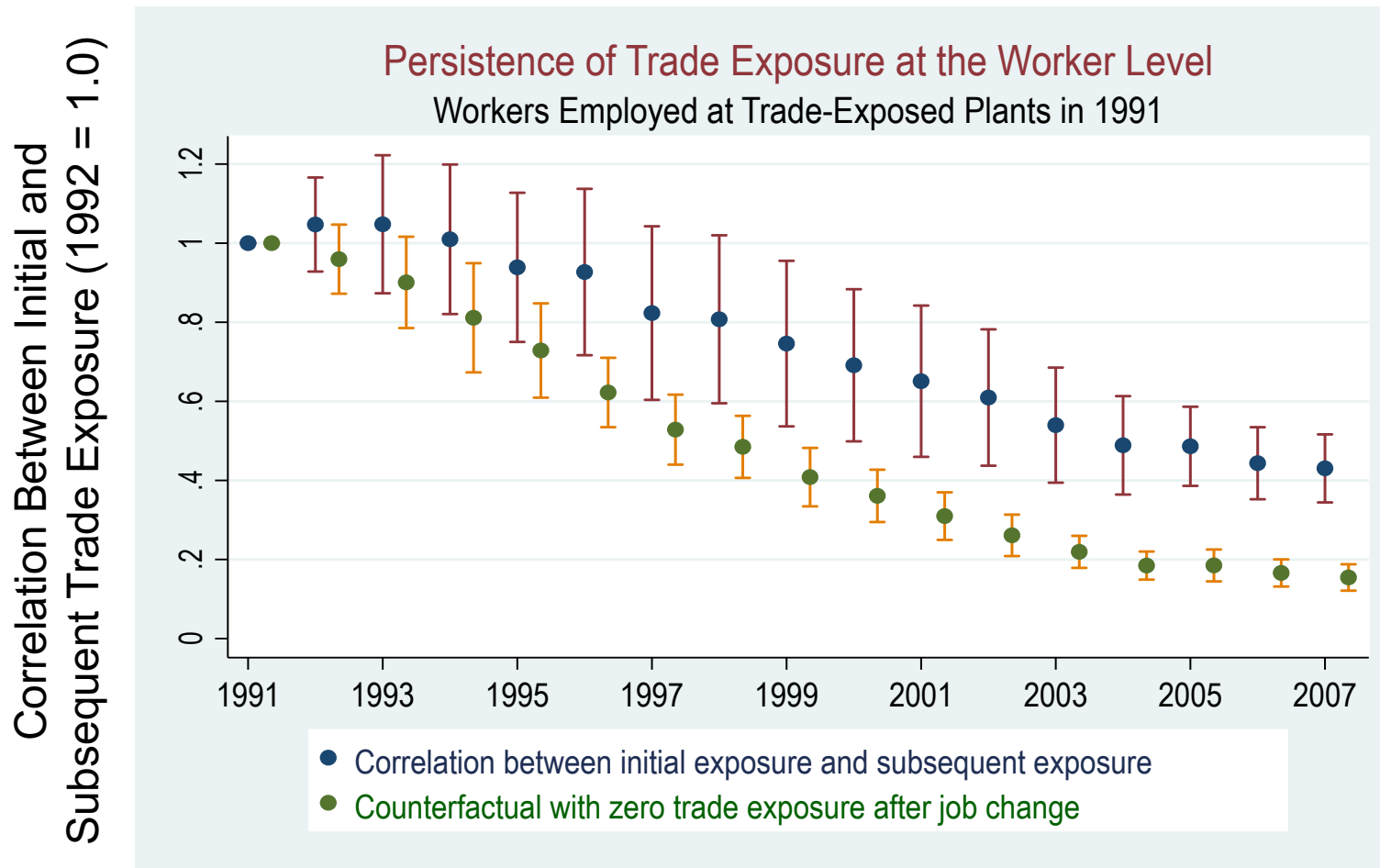
Trade-Exposed Workers do a Lot of 'Transitioning'



Cumulatively, they Lose About ½ Year of Expected Annual Income Over the Next 16 Years



Stuck in a Rut: Workers Move From One Trade-Exposed Sector to Another



Learning from Labor-Market Adjustment to Seismic Changes in International Trade

Evidence from the China Shock

1. Do workers quickly find reemployment?
- 2. Do new businesses pick up the slack?**
3. Are new jobs about as good as old ones?

Beyond employment

4. How trade shock have affected U.S. politics
5. Manufacturing as a hub of innovation

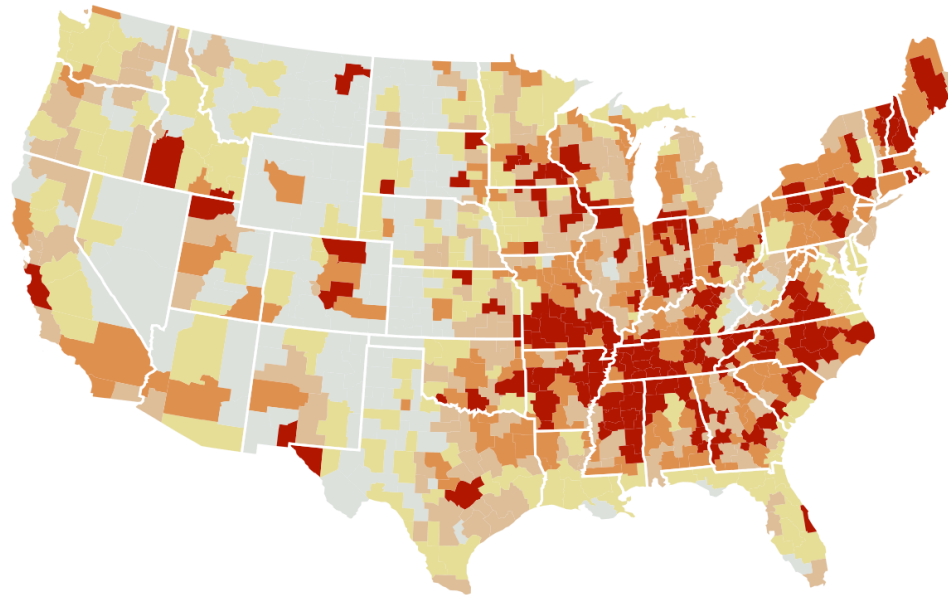
Looking ahead

Concentrated Impact of China Trade Shock: 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

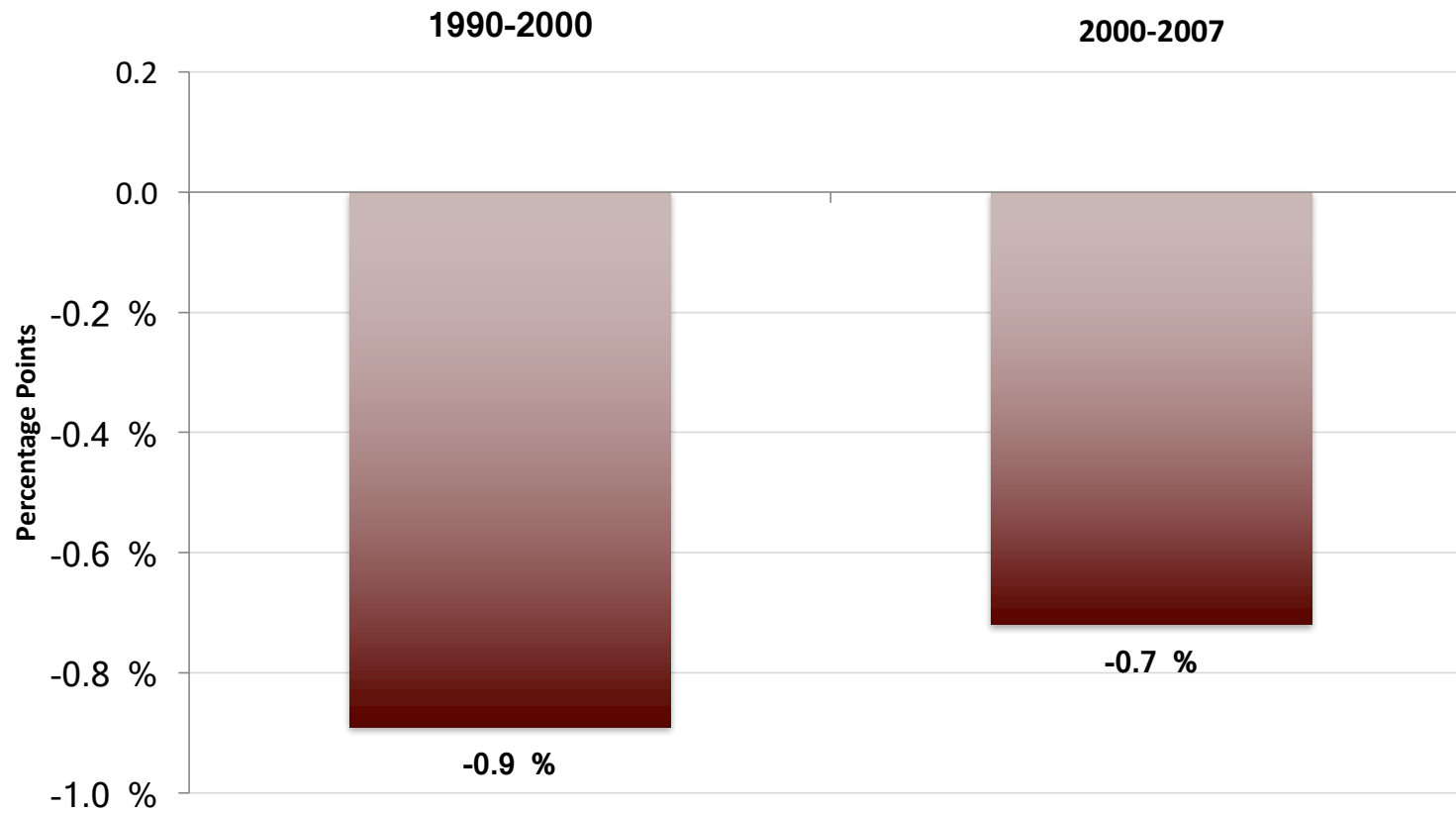
Most-affected industries, based on number of areas* Impact per worker†

| | | |
|---|-----------|--------|
| 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 | 68 areas | \$207k |

Autor, Dorn, Hanson & Wall Street Journal, 2016

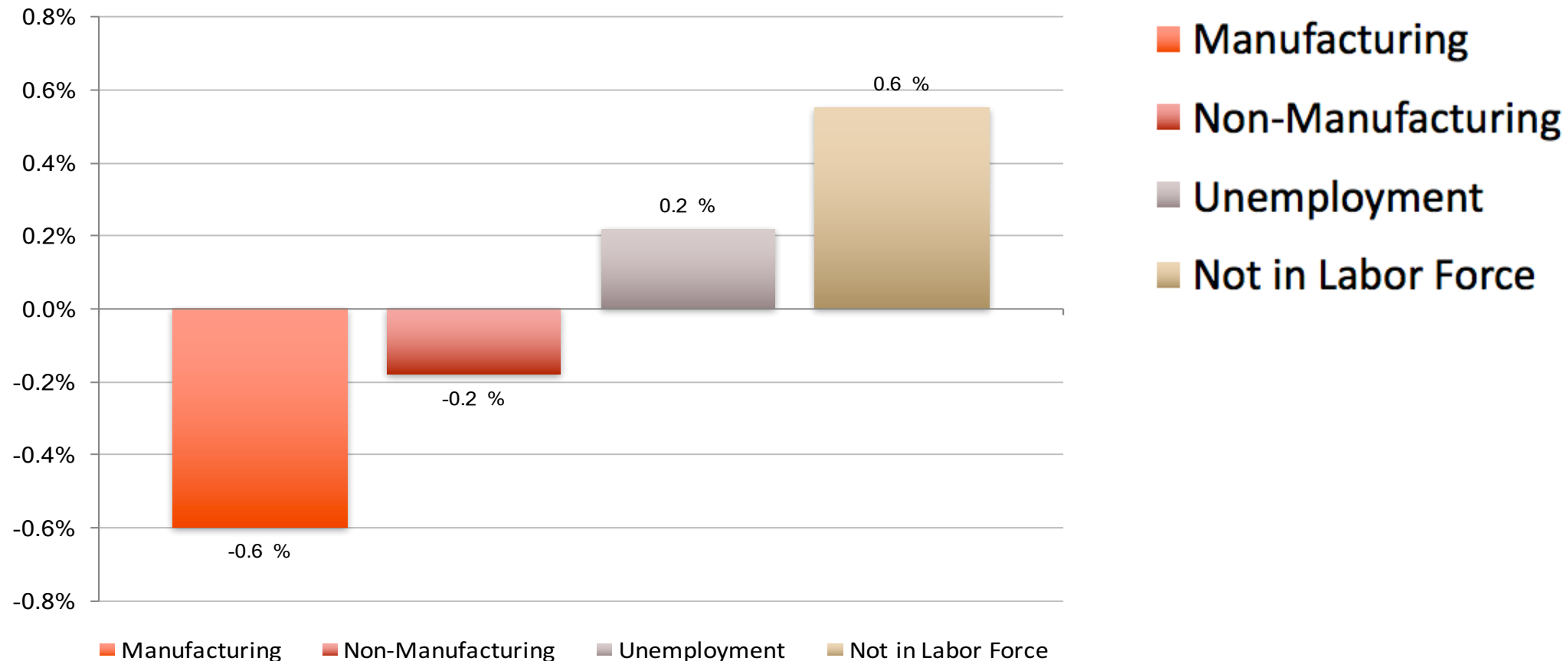
Effect of China Trade Shock on Manufacturing Employment Per U.S. Adult by Decade, 1970 – 2007

Effect of an \$1000 Per Worker Increase in Imports from China during 1990-2007 on the Change in Manufacturing Employment as a Percentage of the Working age Population



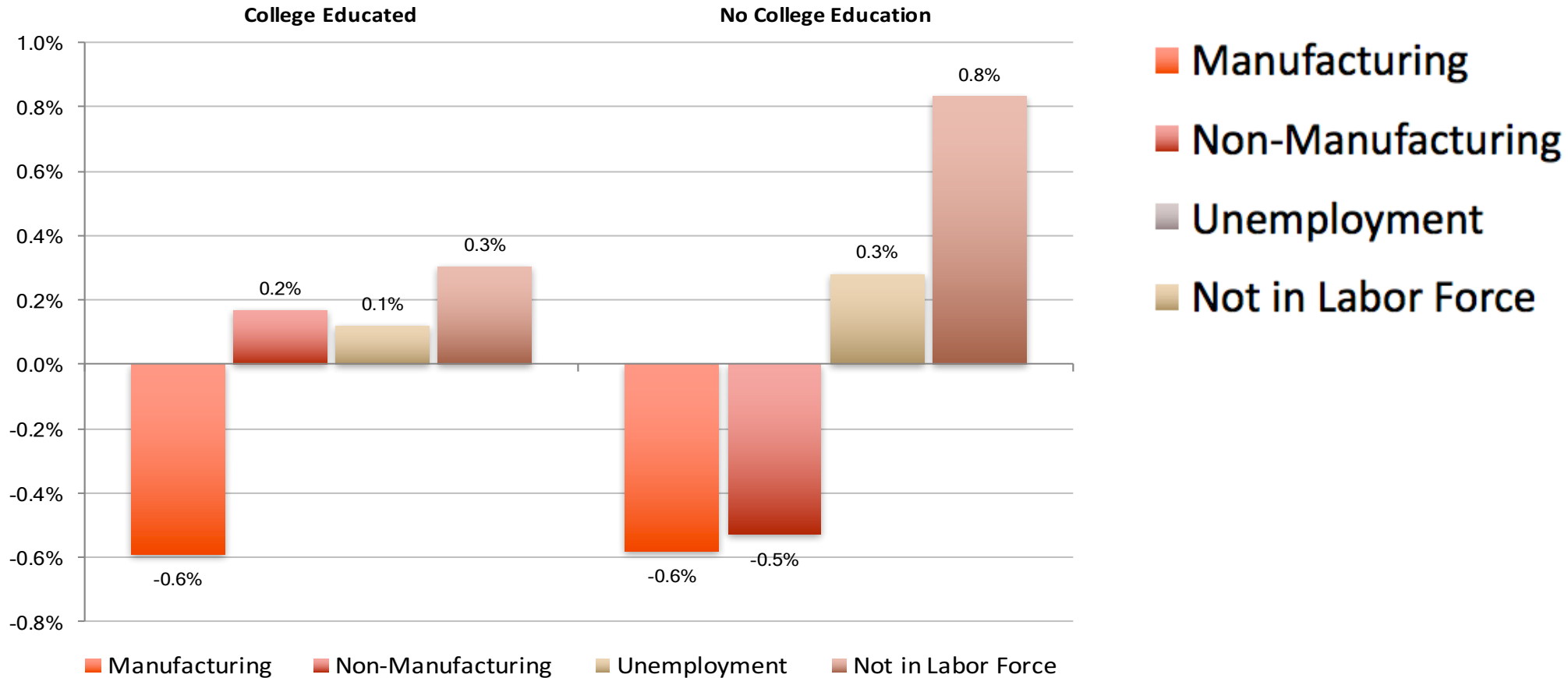
Loss of Manufacturing Employment Not Primarily Offset by Rising Non-Manufacturing Employment

Effect of an \$1000 Per Worker Increase in Imports from China during 1990-2007 on Share of Population in Employment Categories



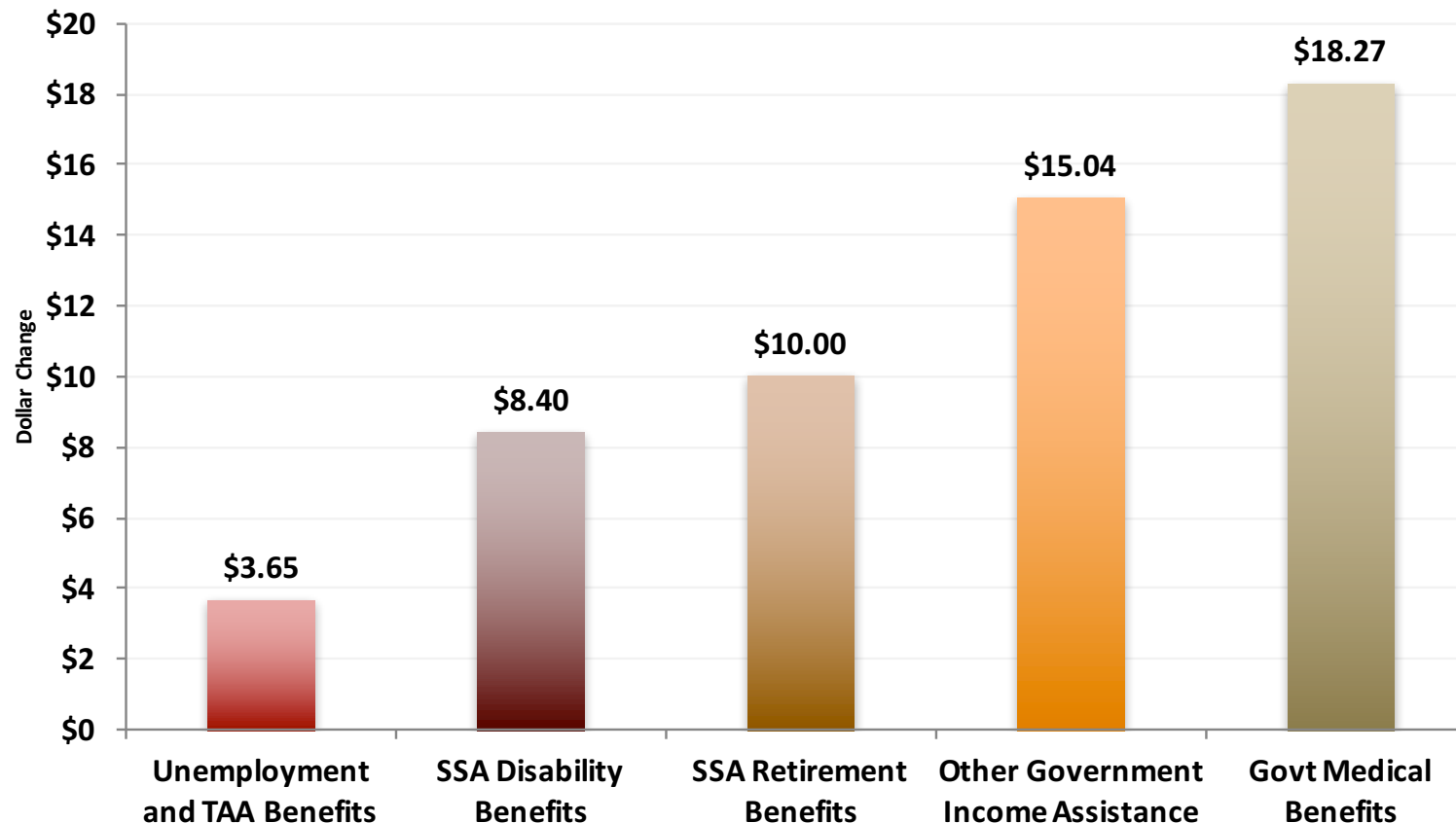
Effects Much More Severe for Non-College Adults

Effect of an \$1000 Per Worker Increase in Imports from China during 1990-2007 on Share of Population in Employment Categories



Induced Rise in Public Transfer Benefits – But Mostly Not Unemployment and Trade Adjustment Assistance

*Effect of an \$1000 Per Worker Increase in Imports from China during 1990-2007
on Dollar Change of Annual Transfer Receipts per Capita*



Learning from Labor-Market Adjustment to Seismic Changes in International Trade

Evidence from the China Shock

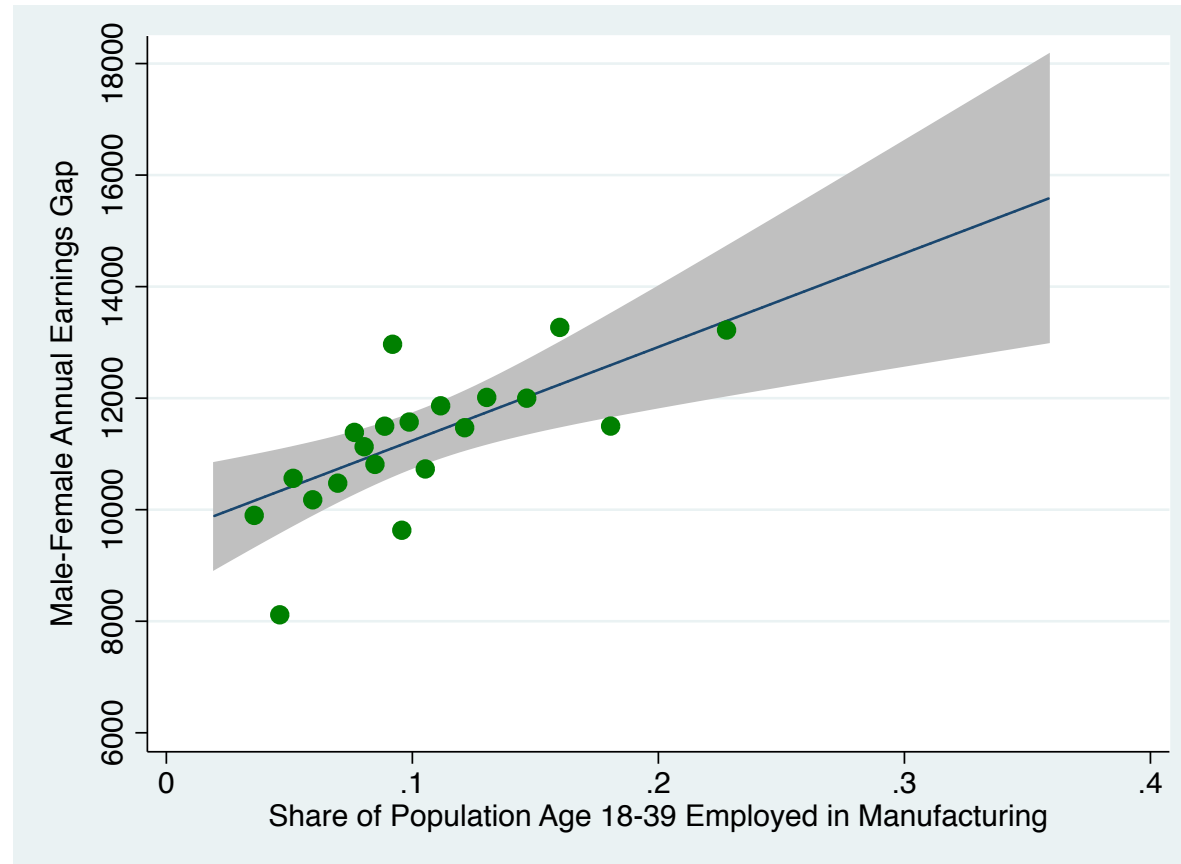
1. Do workers quickly find reemployment?
2. Do new businesses pick up the slack?
- 3. Are new jobs about as good as old ones?**

Beyond employment

4. How trade shock have affected U.S. politics
5. Manufacturing as a hub of innovation

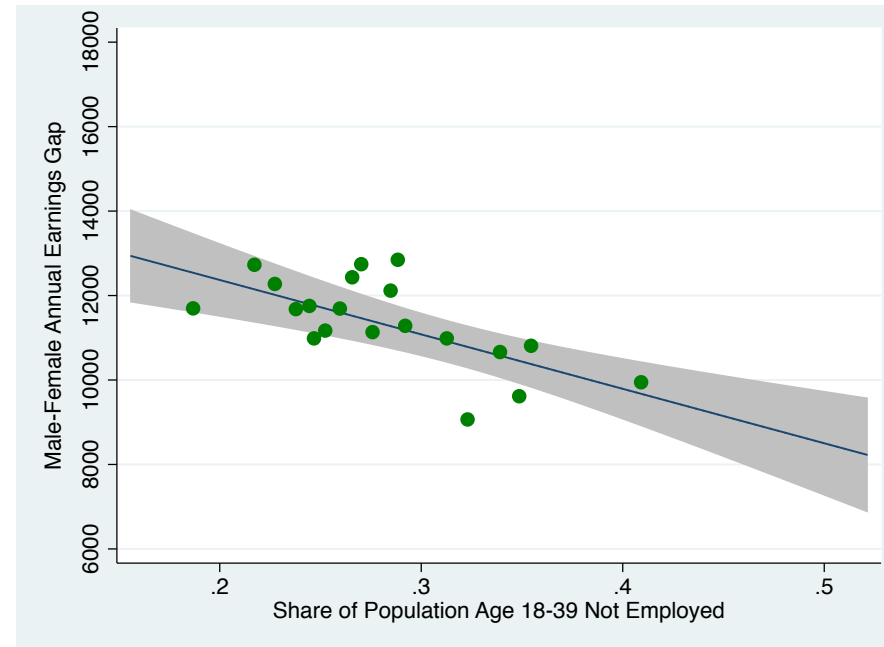
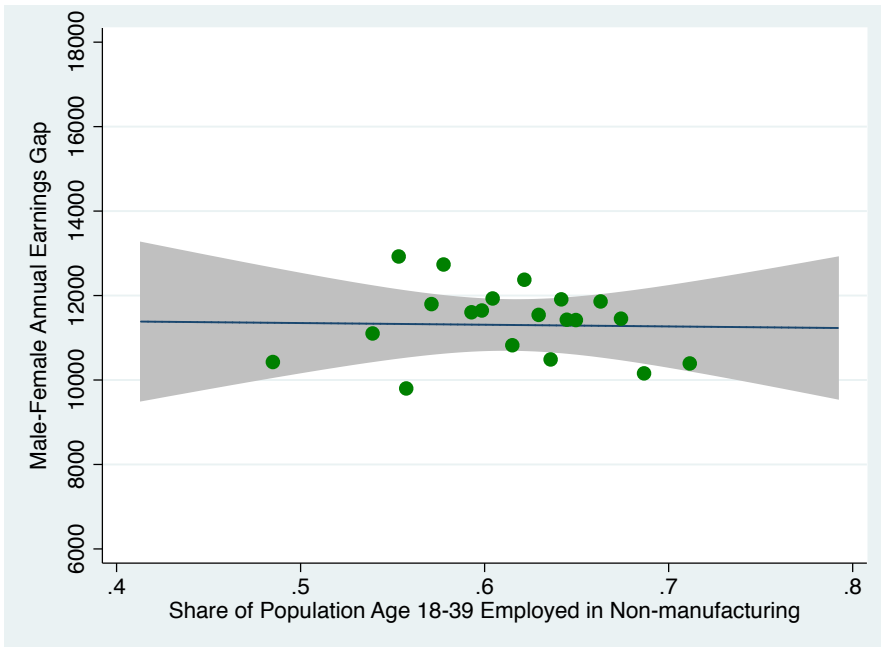
Looking ahead

Across Local Labor Markets: Male-Female Annual Earnings Gap Rises w/Manufacturing Share



Autor, Dorn and Hanson 2017

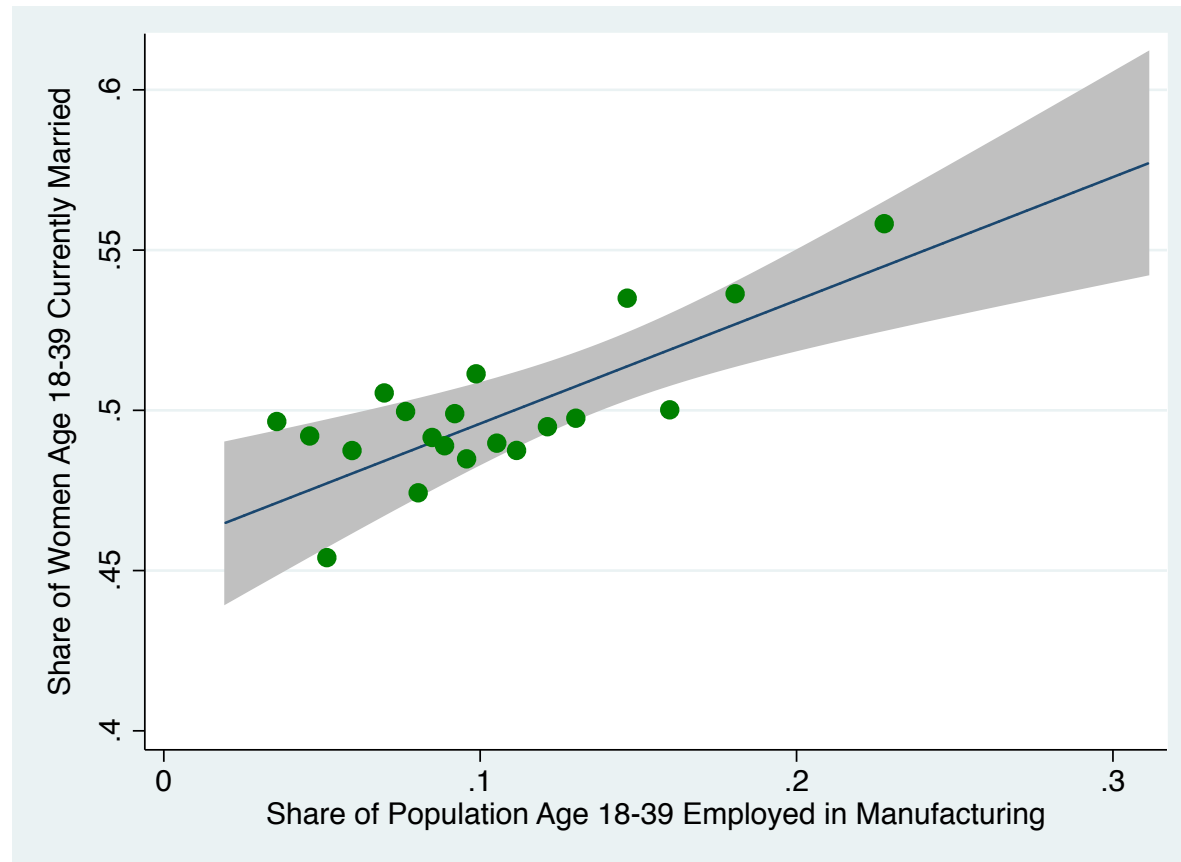
M-F Earnings Gap: Uncorrelated w/Non-Manufacturing Employment, Positively Correlated w/Non-Employment



- 722 Commuting Zones (in 20 bins of equal population size)
- Fraction of pop age 18-39 employed in non-manufacturing or not employed
- Gap between unconditional male and female median earnings in the CZ

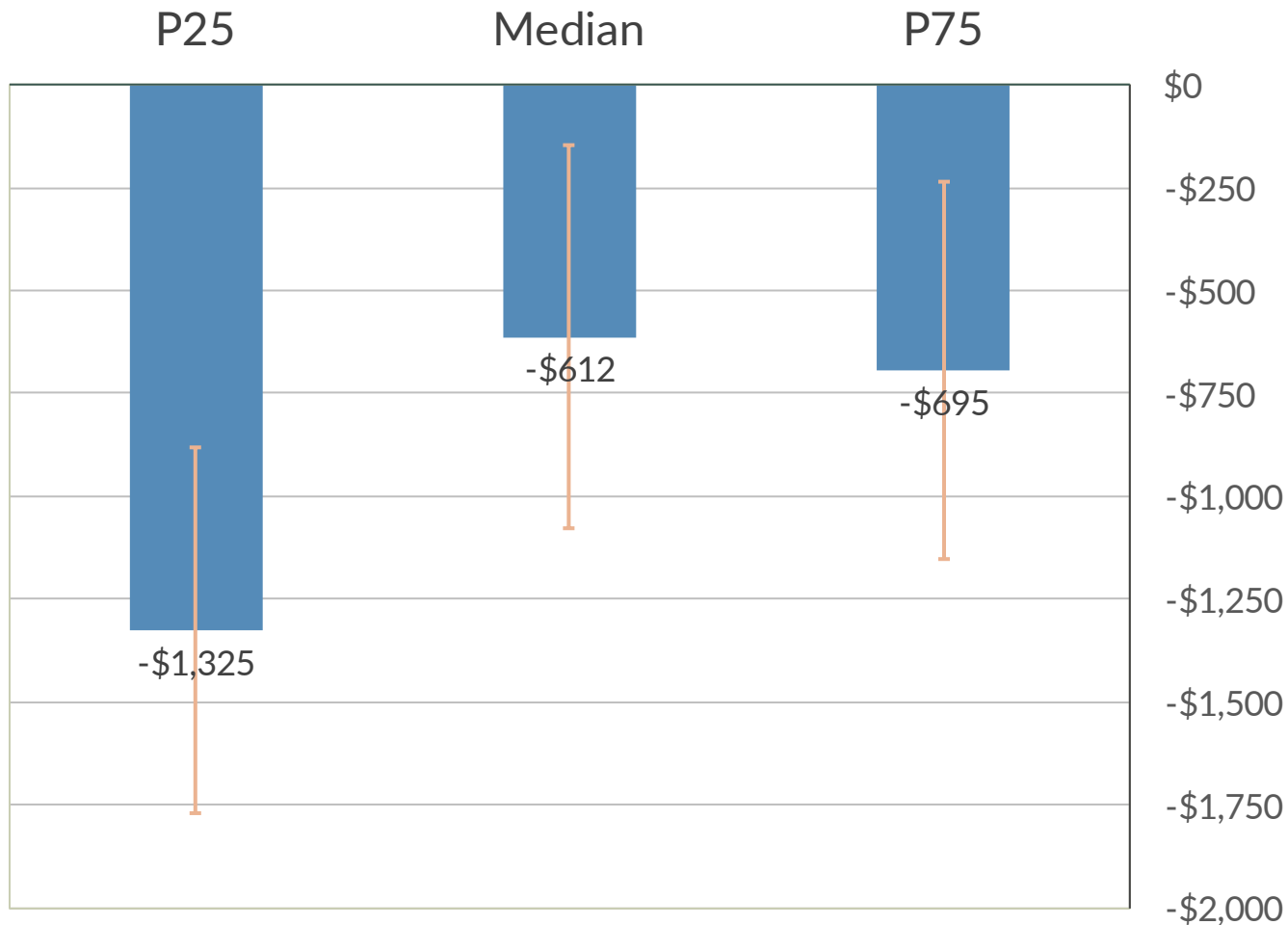
Autor, Dorn and Hanson 2017

Marriage Among Women Ages 18 – 39 Positively Correlated with Manufacturing Employment Share



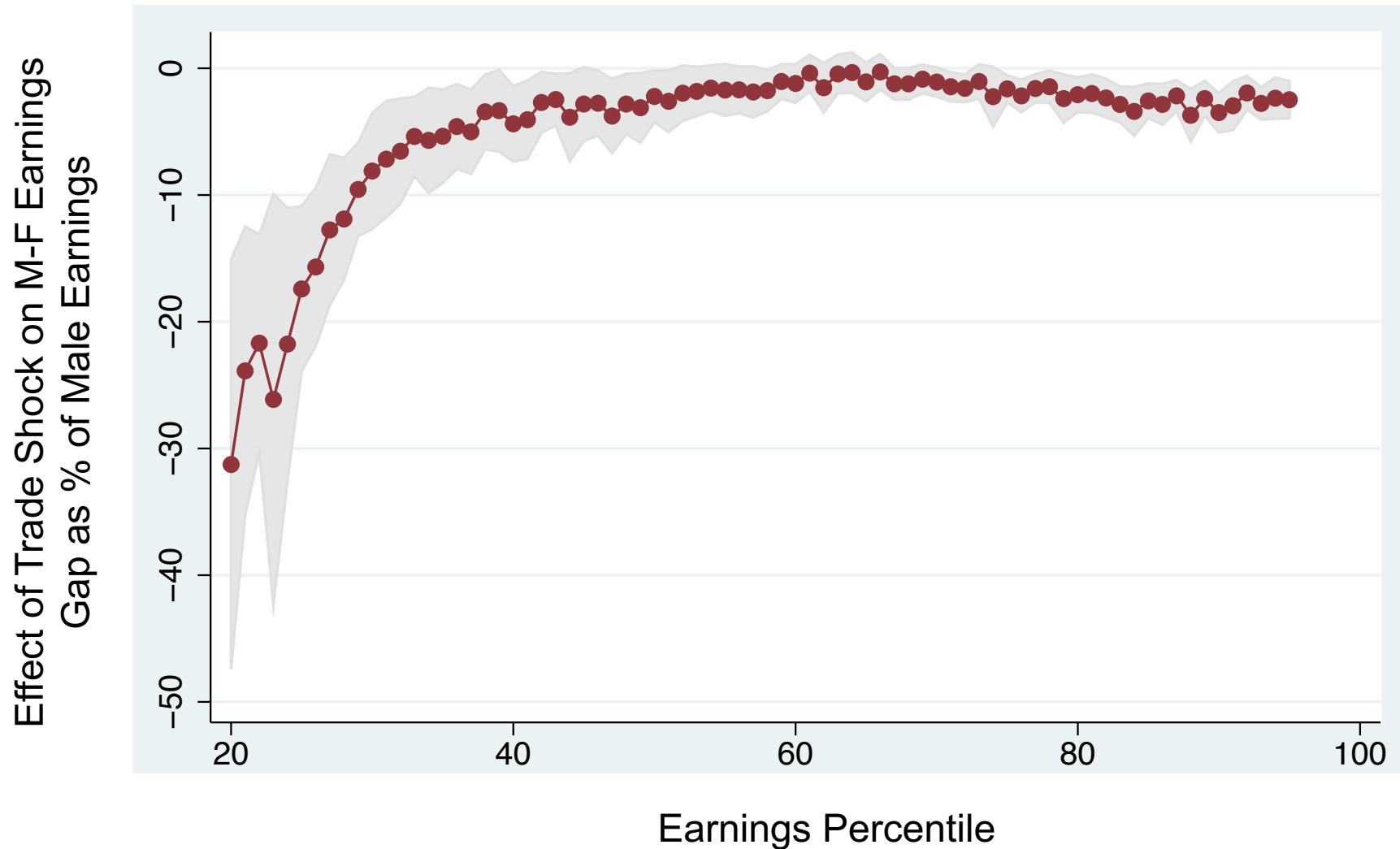
Autor, Dorn and Hanson 2017

Impact of a One-Unit Trade Shock on Male-Female Annual Earnings Gap @ P25, P50, and P75



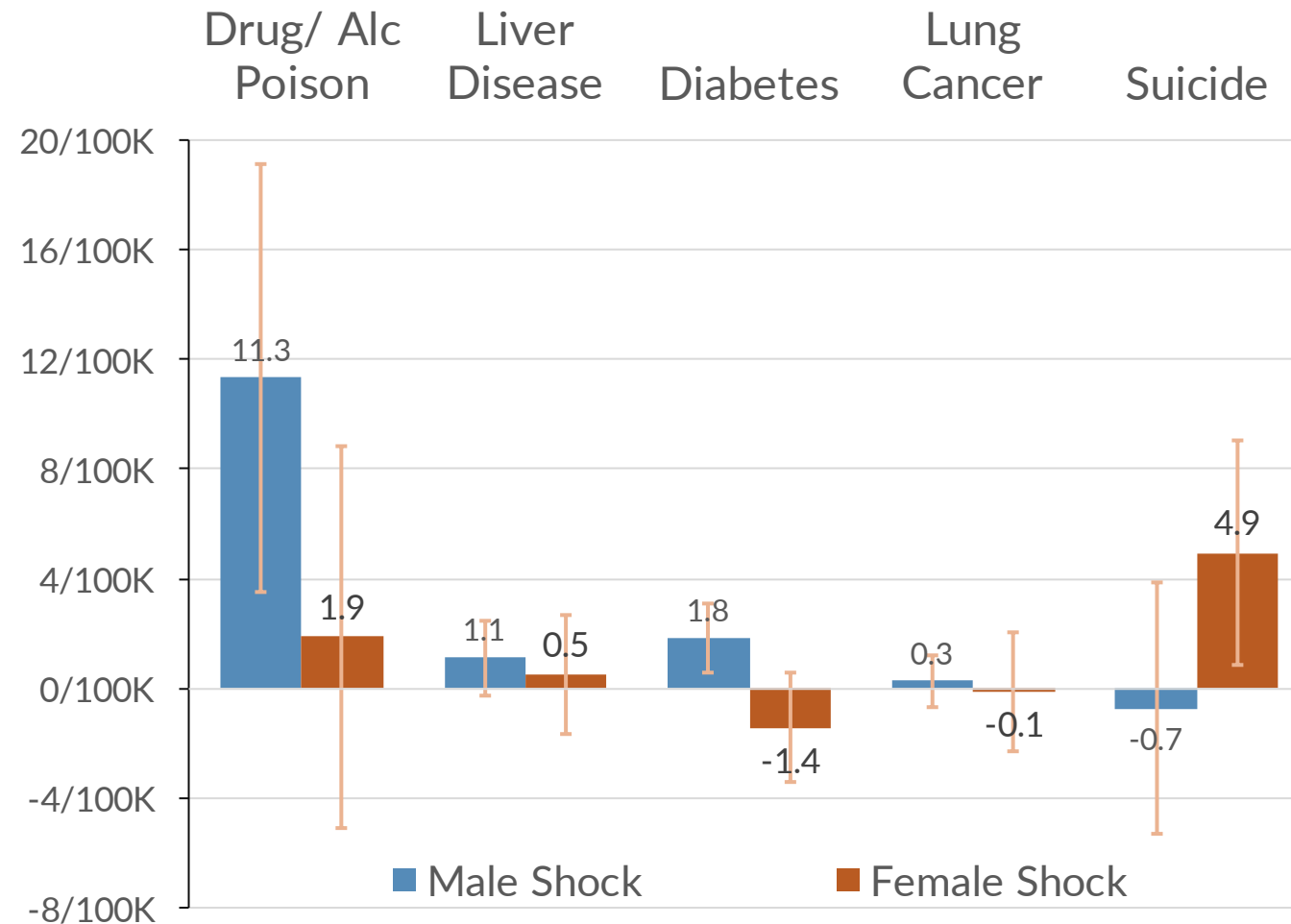
The China trade shock differentially reduces male relative to female earnings in the bottom quartile of the annual earnings distribution

Proportionate Effect of Unit Trade Shock on Male-Female Annual \$ Gap: % of Initial Male Annual Earnings

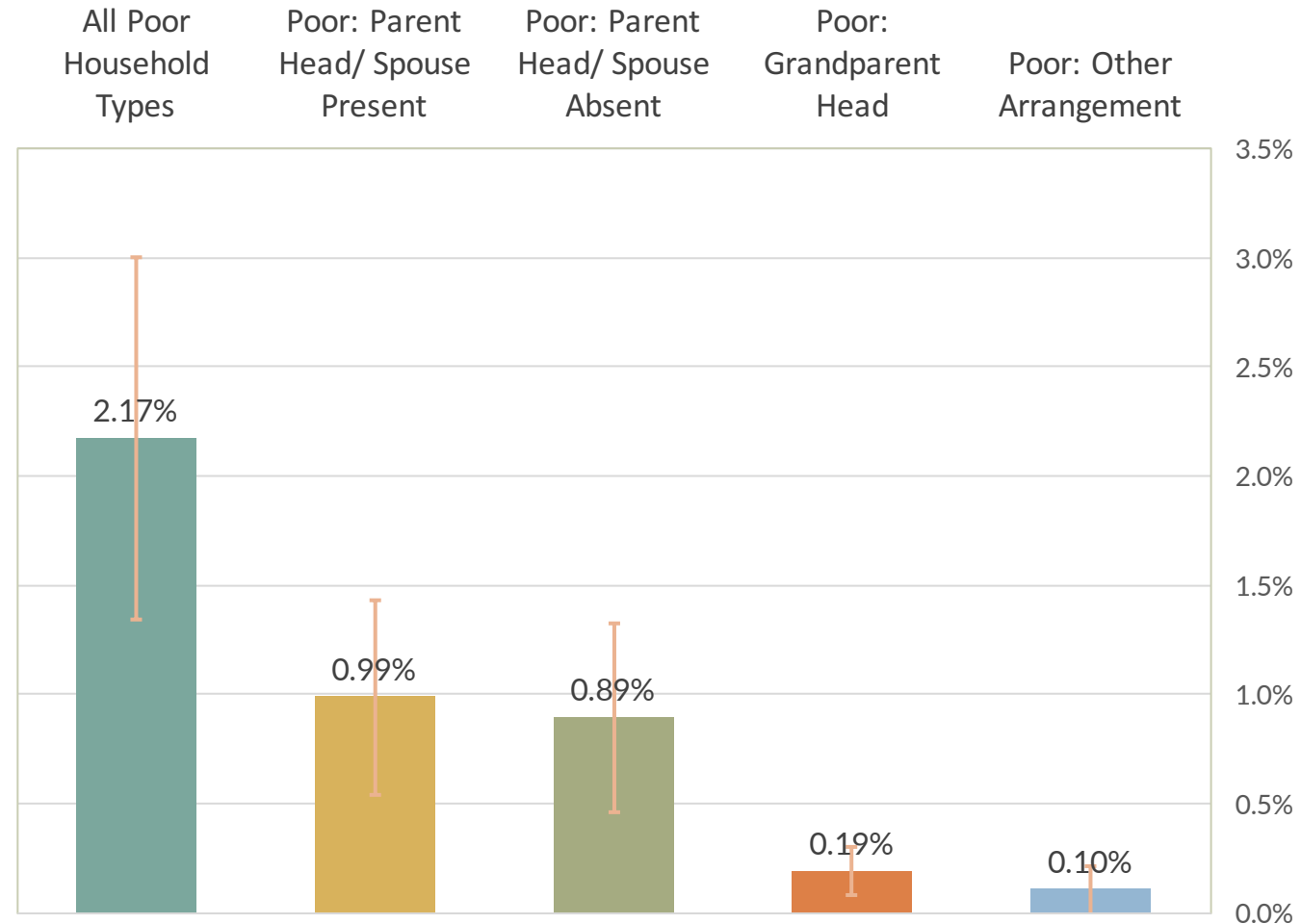


Proportionate losses for men are much larger below the 40th percentile of the annual earnings distribution

Trade Shocks Raise Incidence of Drug and Alcohol Deaths among Men: Mortality per 100K Adults Ages 20 – 39



Trade Shocks Raise Incidence of Poverty: Impact of a Unit Trade Shock on Fraction of Children <18 Living In Poverty



Learning from Labor-Market Adjustment to Seismic Changes in International Trade

Evidence from the China Shock

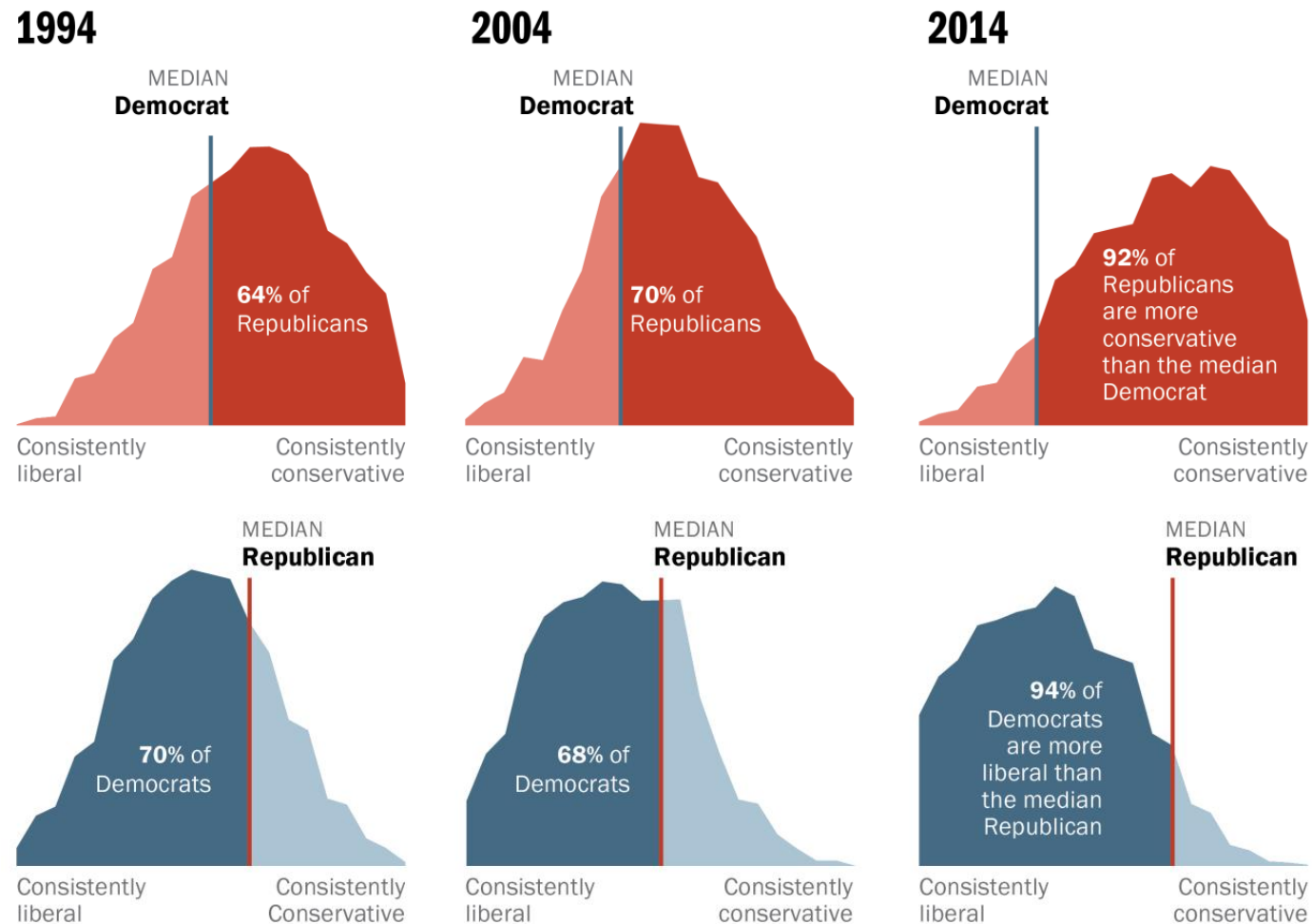
1. Do workers quickly find reemployment?
2. Do new businesses pick up the slack?
3. Are new jobs about as good as old ones?

Beyond employment

- 4. How trade shock have affected U.S. politics**
5. Manufacturing as a hub of innovation

Looking ahead

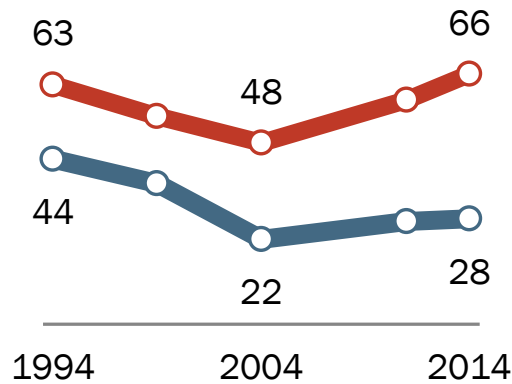
Political Polarization: Distribution of Republicans and Democrats on a 10-item scale of political values



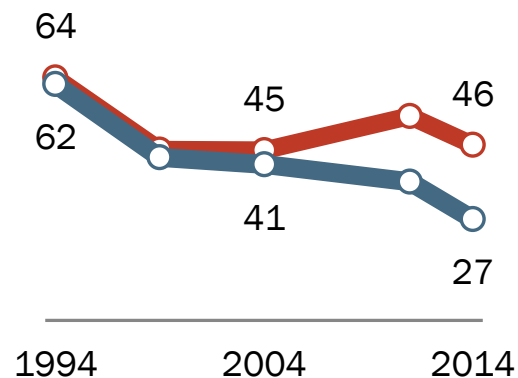
Pew Research Center, 2016

Political Polarization: Republican and Democratic Worldviews Diverging

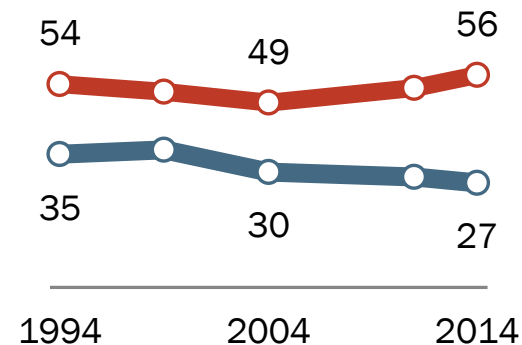
Poor people today have it easy because they can get government benefits without doing anything in return



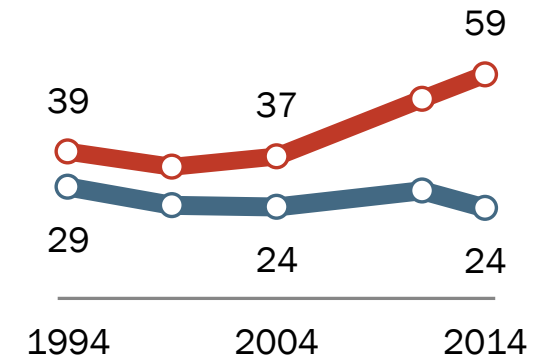
Immigrants today are a burden on our country because they take our jobs, housing and health care



Most corporations make a fair and reasonable amount of profit

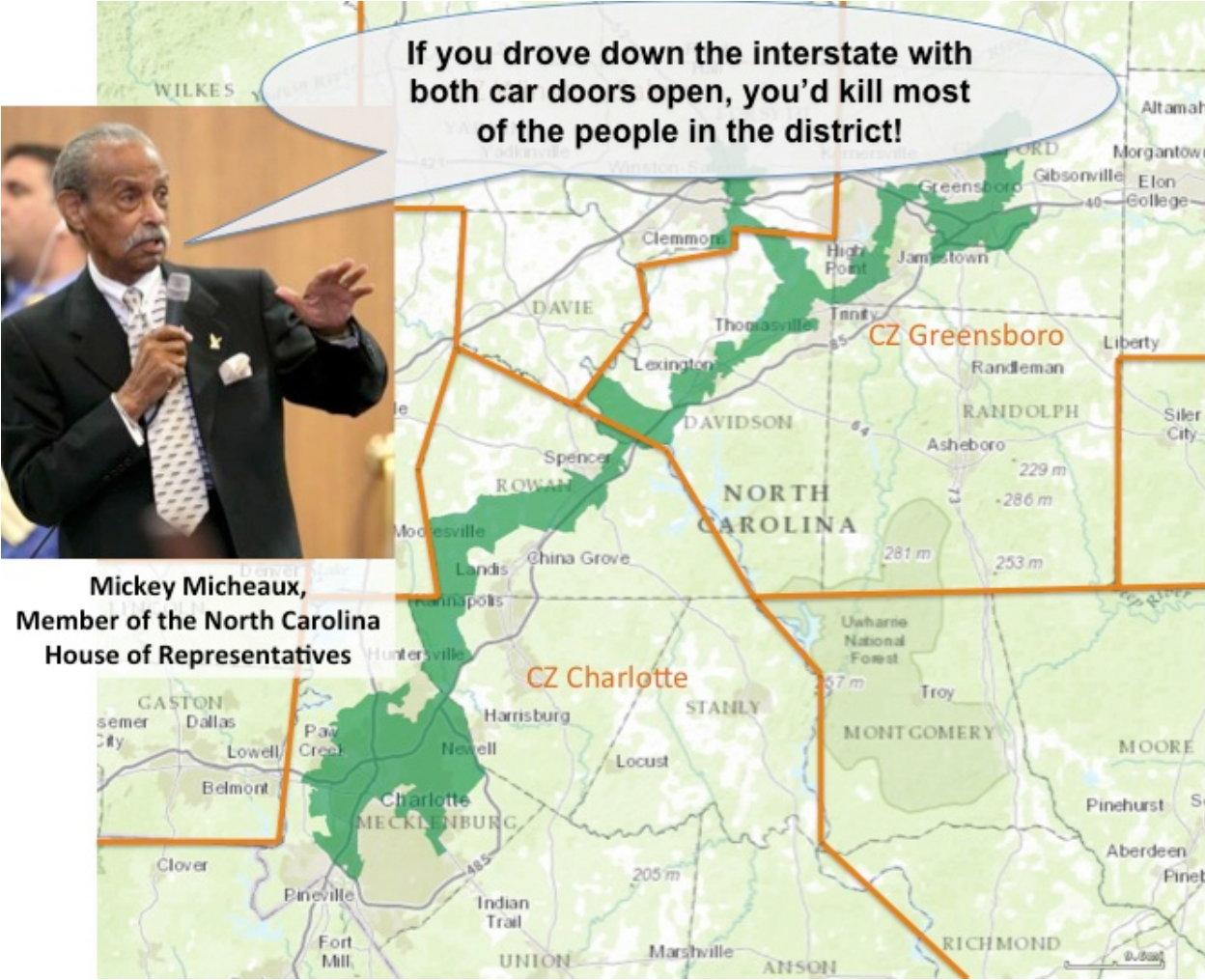


Stricter environmental laws and regulations cost too many jobs and hurt the economy



Pew Research Center, 2016

Gerrymandering: North Carolina District 12: “Most Gerrymandered” Distinct in America

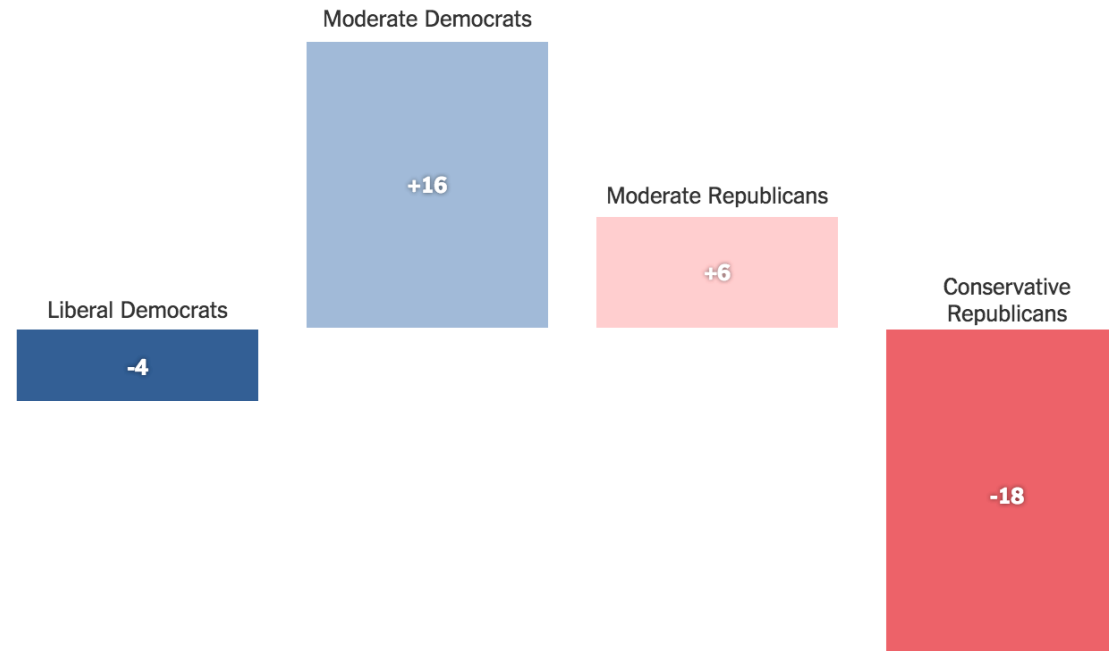


**Mickey Micheaux,
Member of the North Carolina
House of Representatives**

Effect of Dialing Back Trade Shock by 50% on Composition of House of Representatives, 2002 – 2010

What Would The House Look Like If We Had Less Trade?

If imports from China had grown half as fast between 2002 and 2010 as they actually did, Congress probably would have fewer conservatives and liberals and more moderates, according to a new study by a group of economists.



Source: Autor, Dorn, Hanson and Majlesi. "Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure"

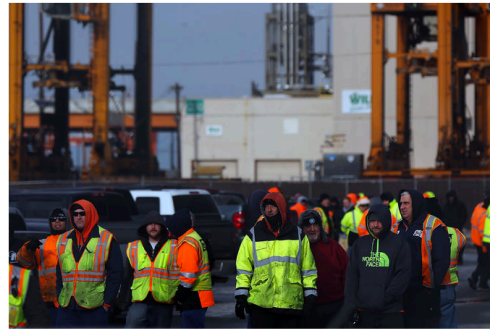
New York Times, 4/26/2016

What about the Rise of Donald J. Trump?

The New York Times

Why Trump Now?

Thomas B. Edsall MARCH 1, 2016



Longshoremen at the Port of Newark. Spencer Platt/Getty Images

In their January 2016 paper, “[The China Shock](#),” David Autor, David Dorn and Gordon Hanson, economists at M.I.T., the University of Zurich and the University of California-San Diego respectively, found that

If one had to project the impact of China’s momentous economic reform for the U.S. labor market with nothing to go on other than a standard undergraduate economics textbook, one would predict large movements of workers between U.S. tradable industries (say, from apparel and furniture to pharmaceuticals and jet aircraft), limited reallocation of jobs from tradables to non-tradables, and no net impacts on U.S. aggregate employment. The reality of adjustment to the China shock has been far different. Employment has certainly fallen in U.S. industries most exposed to import competition. But so too has overall employment in local labor markets in which these industries were concentrated. Offsetting employment gains either in export-oriented tradables or in non-tradables have, for the most part, failed to materialize.

THE NEW YORKER
ECONOMIC POPULISM AT THE
PRIMARIES

Winnipeg Free Press
New type of nationalism
a worldwide problem

Slate

Could This Map Make Donald Trump President?

By Jordan Weissmann

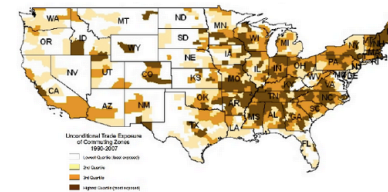


111 77



A certain R.E.M. song comes to mind.

Spencer Platt/Getty Images



David Autor, David Dorn, and Gordon Hanson

The image is from a recent paper by economists David Autor, David Dorn, and Gordon Hanson, and shows how badly different regions of the country were exposed to economic competition from China during its rise to manufacturing dominance (the

The Washington Post

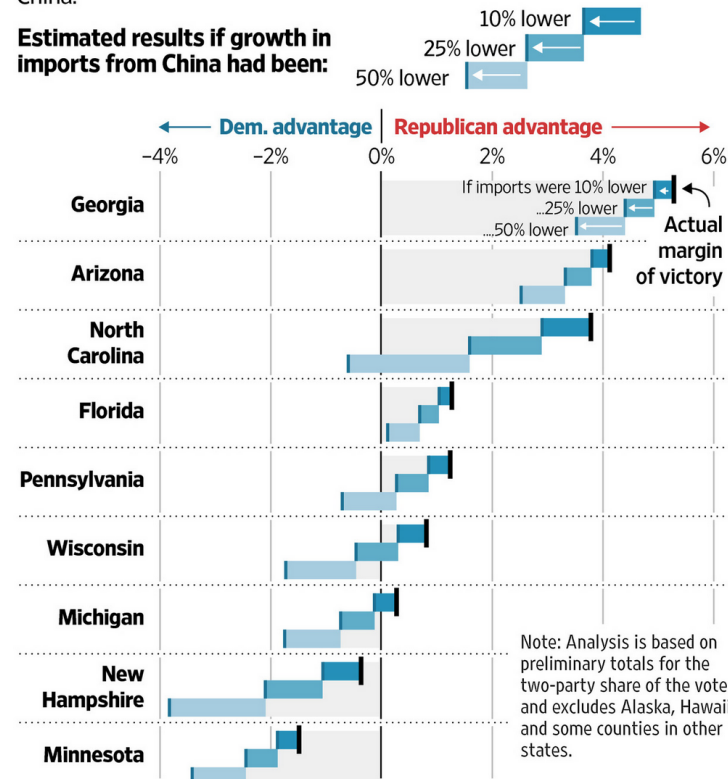
This may be the most important chart for understanding politics today

Effect of Dialing Back the China Trade Shock on Trump's Vote Share in Swing States in 2016

Game Changer

Economists estimate that results in key swing states would have been different if those states hadn't been hit as hard by rising imports from China.

Estimated results if growth in imports from China had been:



Sources: David Autor of the Massachusetts Institute of Technology; David Dorn of the University of Zurich; Gordon Hanson of the University of California, San Diego; Kaveh Majlesi of Lund University

THE WALL STREET JOURNAL.

Wall Street Journal, 11/22/2016

Learning from Labor-Market Adjustment to Seismic Changes in International Trade

Evidence from the China Shock

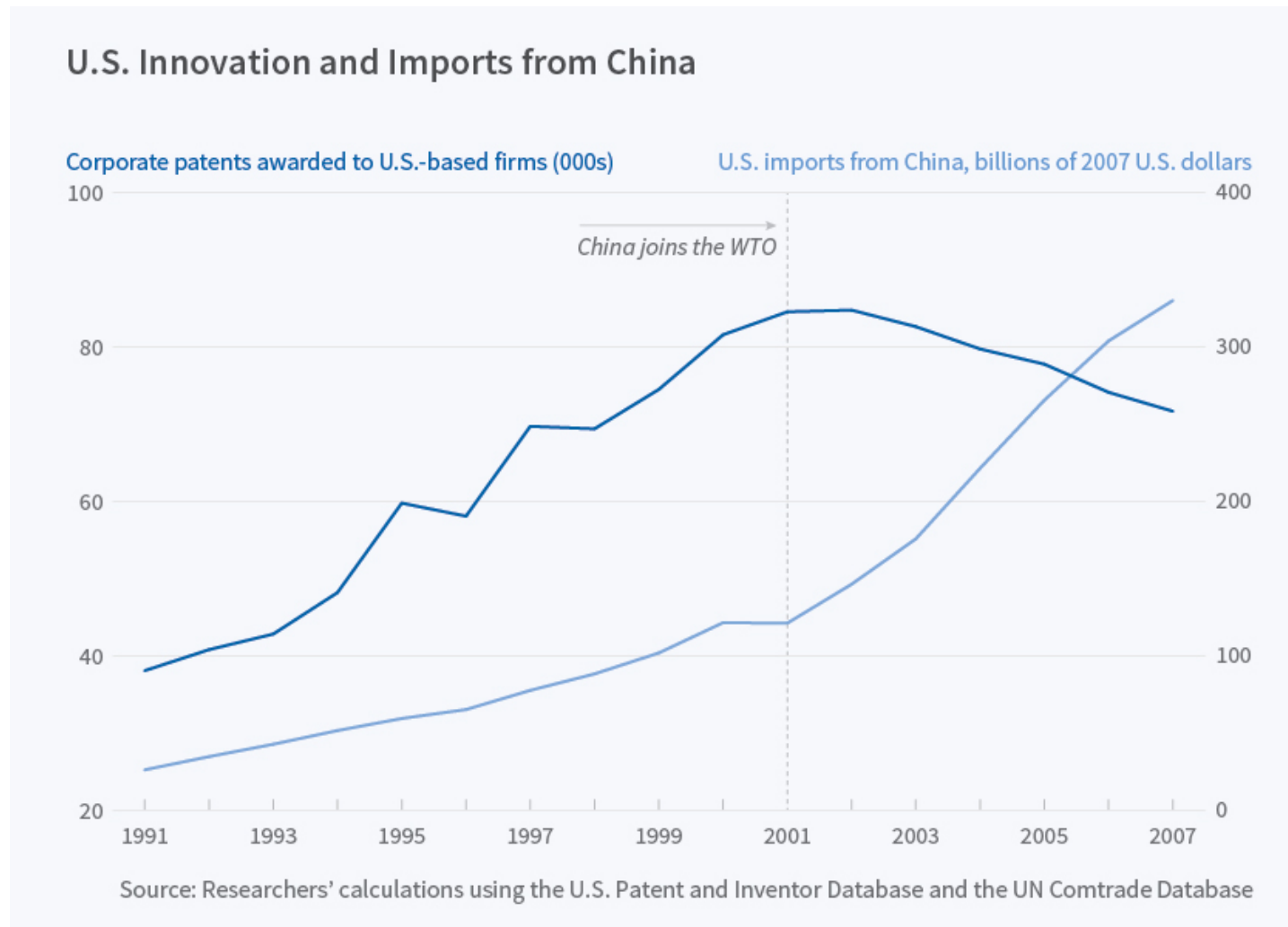
1. Do workers quickly find reemployment?
2. Do new businesses pick up the slack?
3. Are new jobs about as good as old ones?

Beyond employment

4. How trade shock have affected U.S. politics
- 5. Manufacturing as a hub of innovation**

Looking ahead

Sharp Fall in Successful Patent Applications by Import-Competing U.S. Firms After 2001



Learning from Labor-Market Adjustment to Seismic Changes in International Trade

What have we learned?

1. Labor market adjustment is slow and costly
2. Manufacturing employment is 'different' and important
3. Trade shock has affected U.S. politics
 - Contributed to polarization of House of Representatives 2000 – 2010
 - Contributed to Donald J. Trump electoral victory in 2016
4. More than just 'about jobs' – impacts innovative capacity over longer term

Prospects and Policies

1. China's rise has been fabulous for global welfare
2. For U.S., a challenge—but there's no going back
 - In part, China Shock just accelerated the inevitable
 - Not likely to recur —China has developed
3. Shock has laid bare our labor market challenges
 - Declining labor force participation and earnings of non-college adults
 - Lost appetite for globalization
4. We were too sanguine about 'free trade = free lunch' story
 - And woefully unprepared accordingly
5. Will the next big shock emanate from Silicon Valley not China?
 - And can we be bettered prepare next time...?

Thank you