Discussion of Bloom, Handley, Kurman, and Luck's The Impact of Chinese Trade on US Employment: The Good, The Bad, and the Debatable

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Roadmap

1. Big picture praise of the paper (Trade is about reallocation!)
2. Chinese imports are also a positive input shock
3. Sources of differences between ADH and BHKL
4. NAICS minutia (super exciting!)
5. Establishment-level industry switching is small in levels
6. Estab adding and dropping dominant margins of adjustment

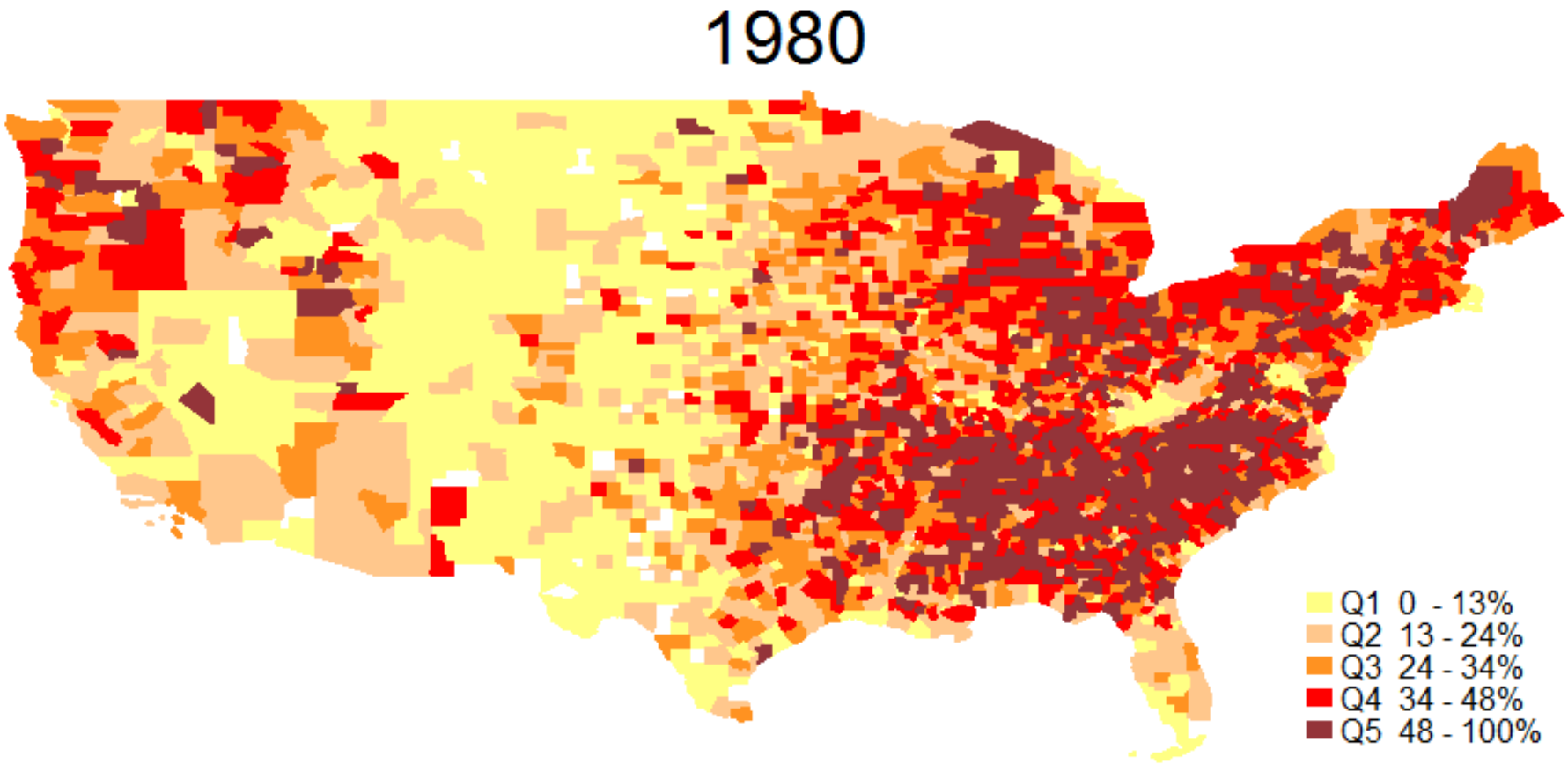
1. Paper highlights the fact that trade (and technology) lead to **reallocation** of employment

- Debate about trade and manufacturing job loss misses point
- Trade models assume full employment
  - Changes to trade costs, etc. change trade flows
  - These affect allocation of employment across sectors
- Unemployment is not due to trade (or technology), but to frictions that slow or prevent reallocation
  - Artuc, Chaudhuri, McLaren (2010) estimate mobility costs in US
  - Dix-Carneiro (2014) estimate large mobility costs in Brazil
  - These costs reduce aggregate gains from trade

Autor, Dorn, and Hanson (2013) highlight spatial concentration of US manufacturing

- Importance of manufacturing varies by region
- Manufacturing imports thus affect regions differently

Manufacturing emp shares spatially concentrated

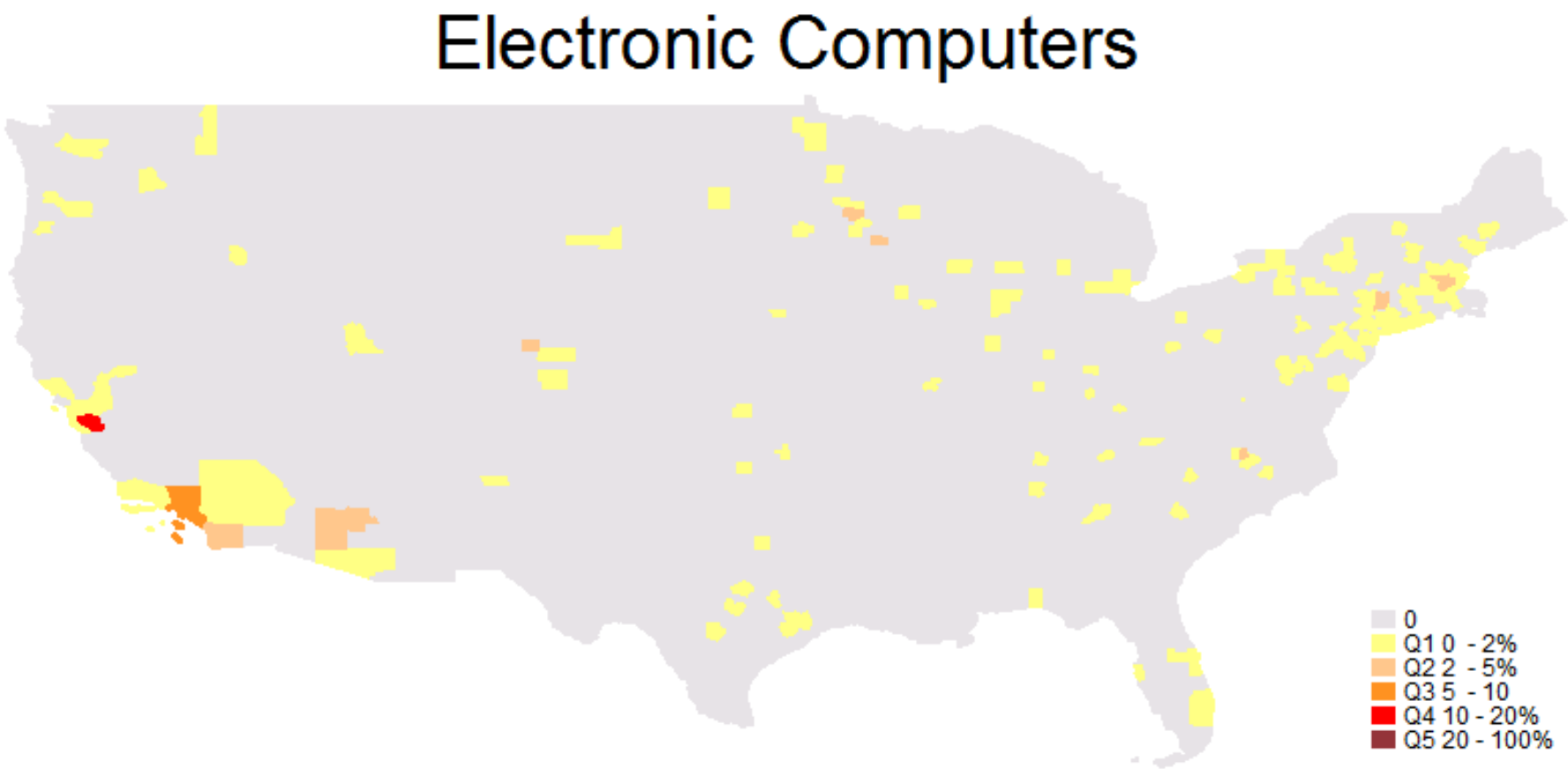


Source: Eckert, Fort, Schott, and Yang (2019)

Autor, Dorn, and Hanson (2013) highlight spatial concentration of US manufacturing

- Importance of manufacturing varies by region
- Manufacturing imports thus affect regions differently
- Certain industries especially concentrated
  - “...in the US vacuum cleaner industry (SIC 3635), about 75% of the employees work in one of the four largest plants" (p. 890; Ellison and Glaeser, 1997)
- CZs specialized in Chinese import-competing industries hit hard
  - Relative declines in manufacturing employment
  - Relative increases in unemployment, NILF, SSDI
- This paper: not all China-competing CZs negatively affected

Distribution of Electronic Computing Equipment manuf employment in 1980



2. Cheaper inputs from China are a positive shock

$$\Delta Outcome_{firm} = \alpha + \beta_1 \Delta Exposure_{firm}^{Output} + \beta_2 \Delta Exposure_{firm}^{Input} + \varepsilon_{firm}$$

	$\Delta ln\left(Emp_{firm}^{Total}\right)$	$\Delta ln\left(Emp_{firm}^{Man}\right)$	$\Delta ln\left(Emp_{firm}^{MPRO}\right)$
$\Delta Exposure_{firm}^{Output}$	-3.582**	-5.667***	-4.346***
	1.410	1.662	1.570
$\Delta Exposure_{firm}^{Input}$	0.343	-5.794	14.47***
	5.283	6.186	4.848
Constant	0.036	0.045	-0.004
	0.033	0.040	0.047
Observations	2,900	2,900	2,900

Notes: Balanced panel of US manuf & MPRO firms, 1997 - 2007.
MPRO is Management (55) and Prof, Technical, Scientific Services (54).
Exposure is China Imp Pen, instrumented with China mkt share in 3rd mkts.

Source: Ding, Fort, Redding, and Schott (2019)

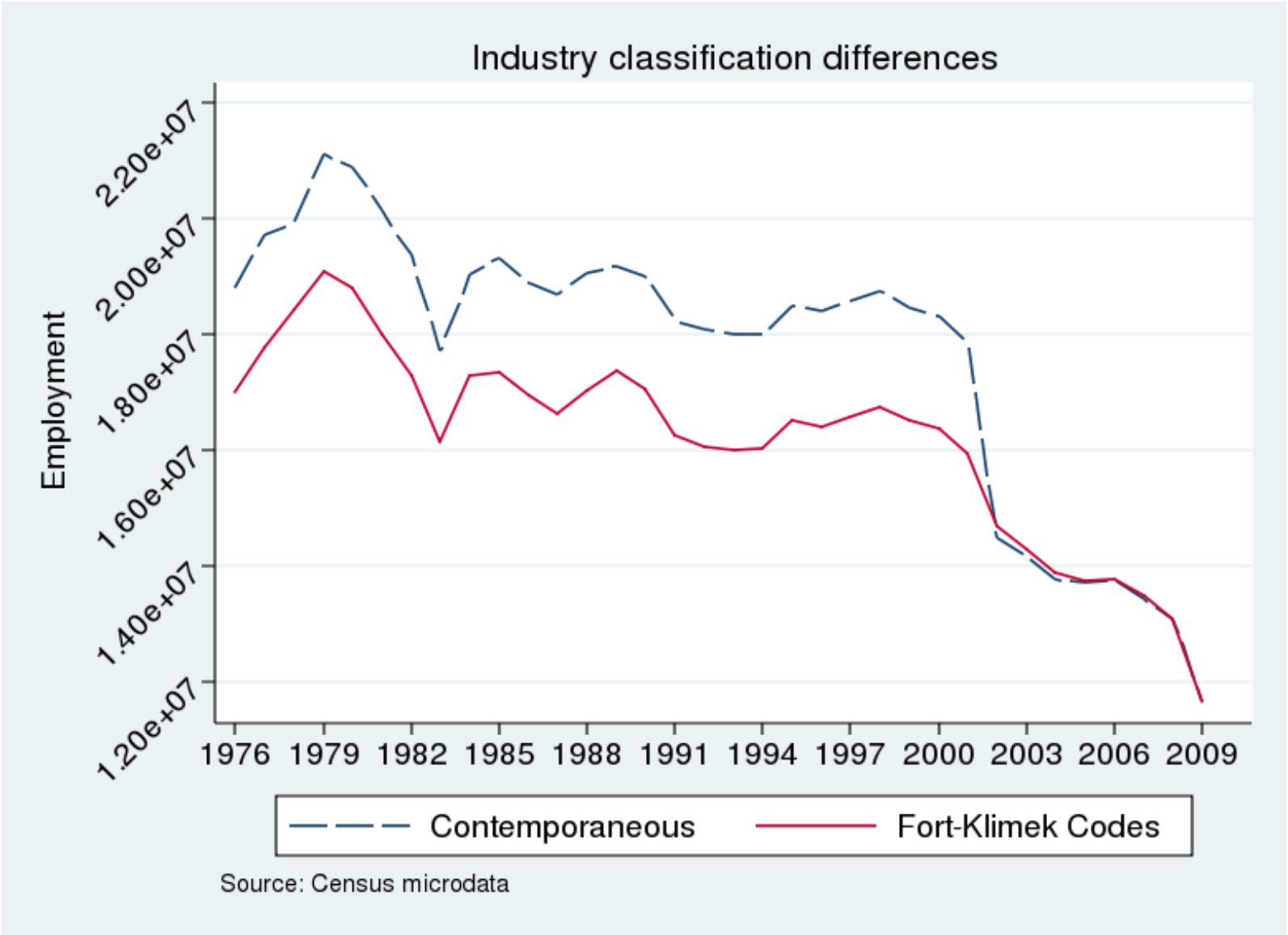
3. Sources of differences between ADH and BHKL?

- Both find large, negative effects on manufacturing employment
- ADH (2013) find (-)/insig effects on non-manufacturing emp
  - (-)/sig effects on low-skill non-manufacturing emp
  - (+)/insig effect on high-skill non-manufacturing emp
- BHKL (2019) find (+)/sig non-manufacturing emp effects
  - Driven by high human capital CZs
- Differences due to:
  - Emp data based on where plants vs. households are located
  - NAICS versus SIC
  - Import penetration measure (as in AADHP 2016)
  - Stacked 5 year differences

4. Why NAICS versus SIC matters!

- SIC classified establishments using many different criteria
- NAICS classifies establishments based on what they do
- Huge implied decline in manuf emp when SIC $\Rightarrow$ NAICS
  - Systematic differences in reclassified establishments

Manufacturing under SIC vs. NAICS



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- Major change in treatment of auxiliary estabs (54 and 55)
  - Under SIC in 1997: 1.2M workers at Auxiliary estabs in “Manuf”
  - Under NAICS in 1997: these workers classified under Services
  - Industry concordances miss the auxiliary changes

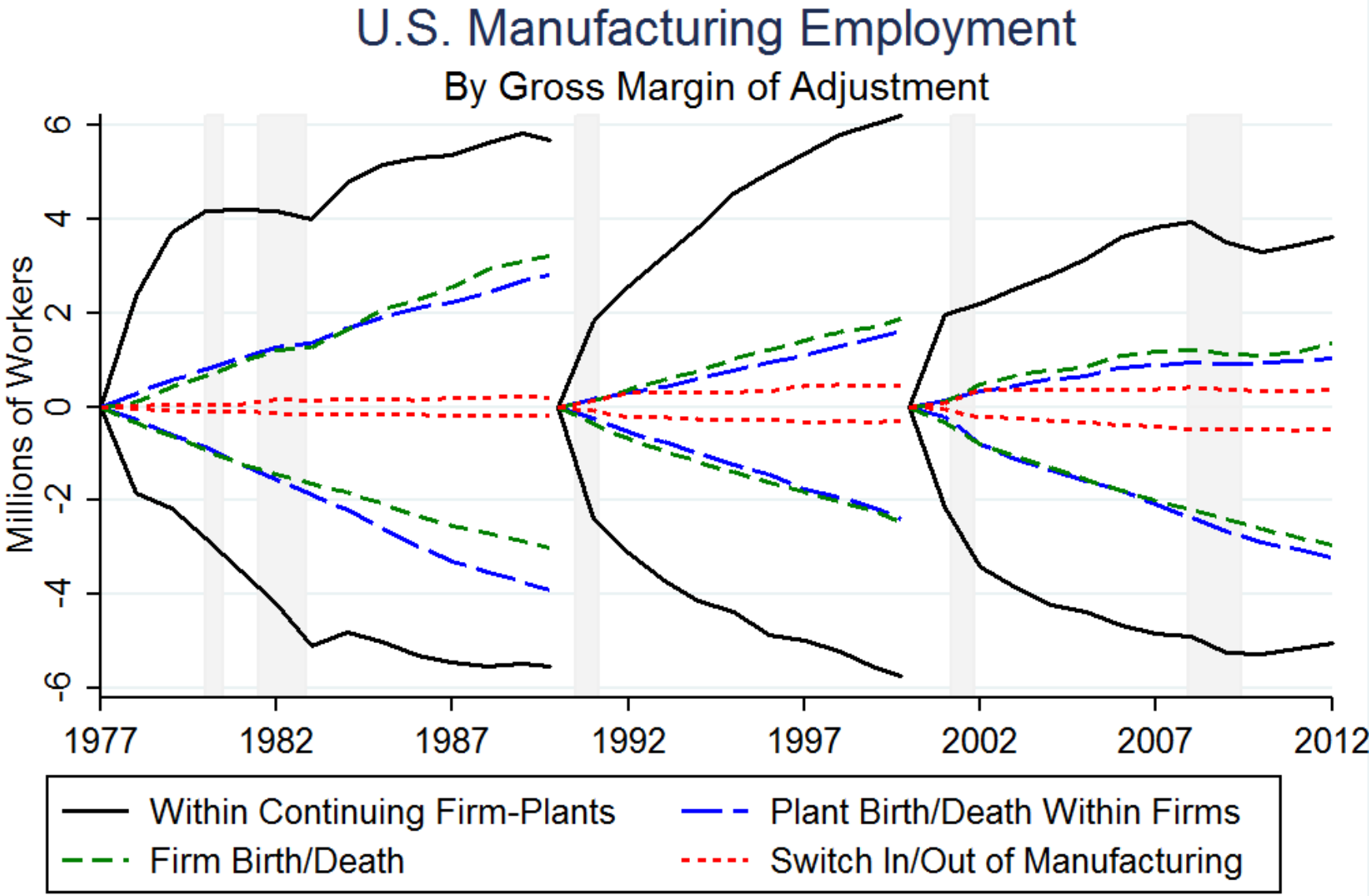
Key result in paper is estab-level industry switching

- Establishment's industry code changes from manuf to non-manuf
  - Most switching into NAICS 54 and 55
- "*The prominence of industry switching in driving the impact of Chinese trade is remarkable – it accounts for 1/3 of the total job losses in overall manufacturing.*" (1992-2012)
- Accurate to say that 1/3 of the relative effect of Chinese imports on net manufacturing employment growth is due to plant switching

Table 3: Employment Growth Decomposition of the Impact of Chinese Trade

Dep var. contribution to sectoral employment	Net Employment Growth	Continuing Establishments (conventional and switching)			Entry of Establishments		Exit of Establishments	
		Job Creation	Job Destruction	Net switching	by Firm Continuers	by Firm Birth	by Firm Continuers	by Firm Birth
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Effect on CZ employment growth component in Manufacturing sector								
Annual Δ in China IP	-3.558**	0.414	-0.842	-1.111***	-0.285	0.854	-1.593*	-0.995
	(1.674)	(0.686)	(0.818)	(0.191)	(0.532)	(0.598)	(0.832)	(0.882)
Panel B: Effect on CZ employment growth component in Services sector								
Annual Δ in China IP	1.460*	0.001	0.666**	0.141***	-0.033	-0.063	0.611**	0.137
	(0.823)	(0.315)	(0.285)	(0.060)	(0.318)	(0.419)	(0.287)	(0.329)

5. Establishment-level switching is small in levels

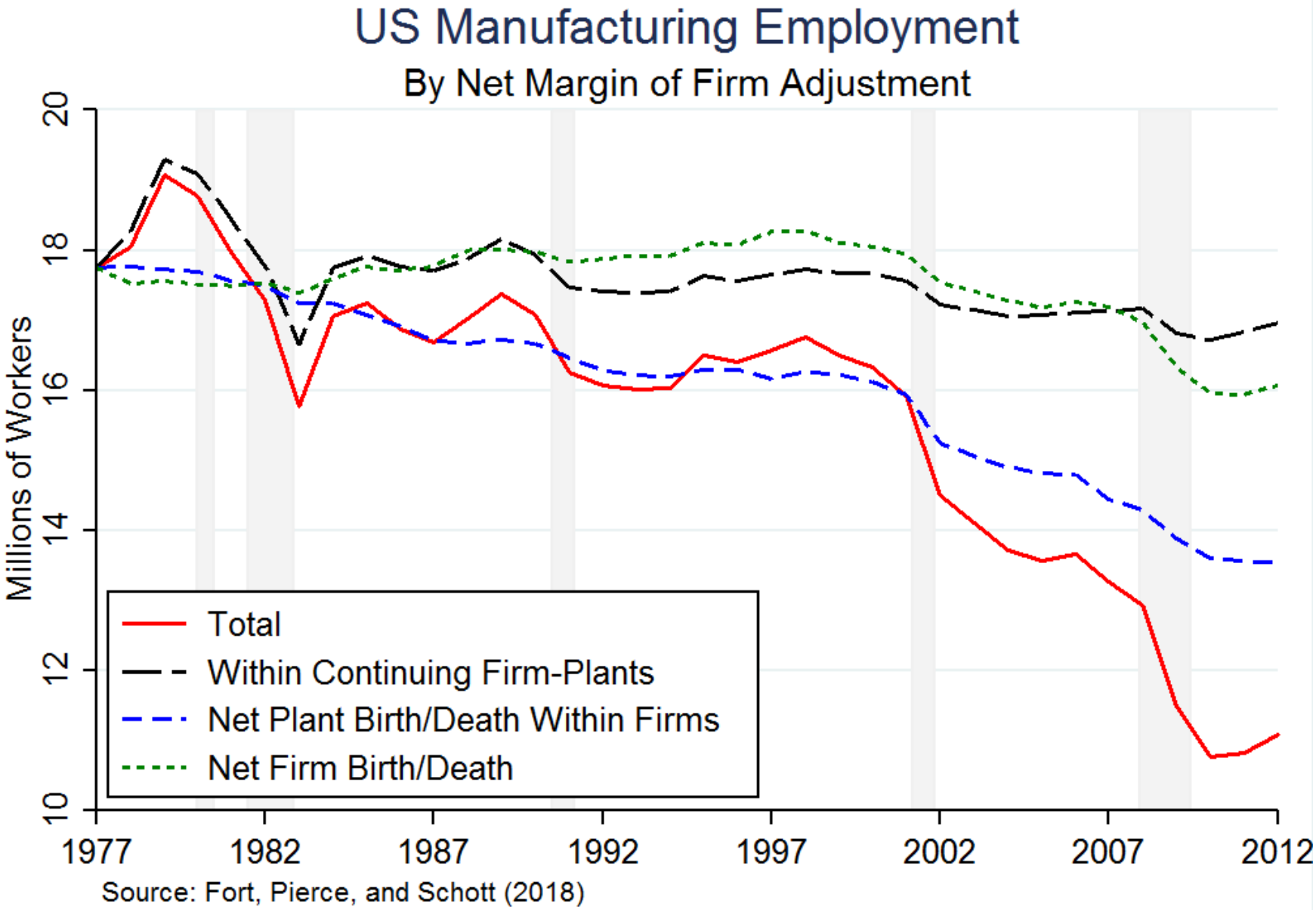


Source: Fort, Pierce, and Schott (2018)

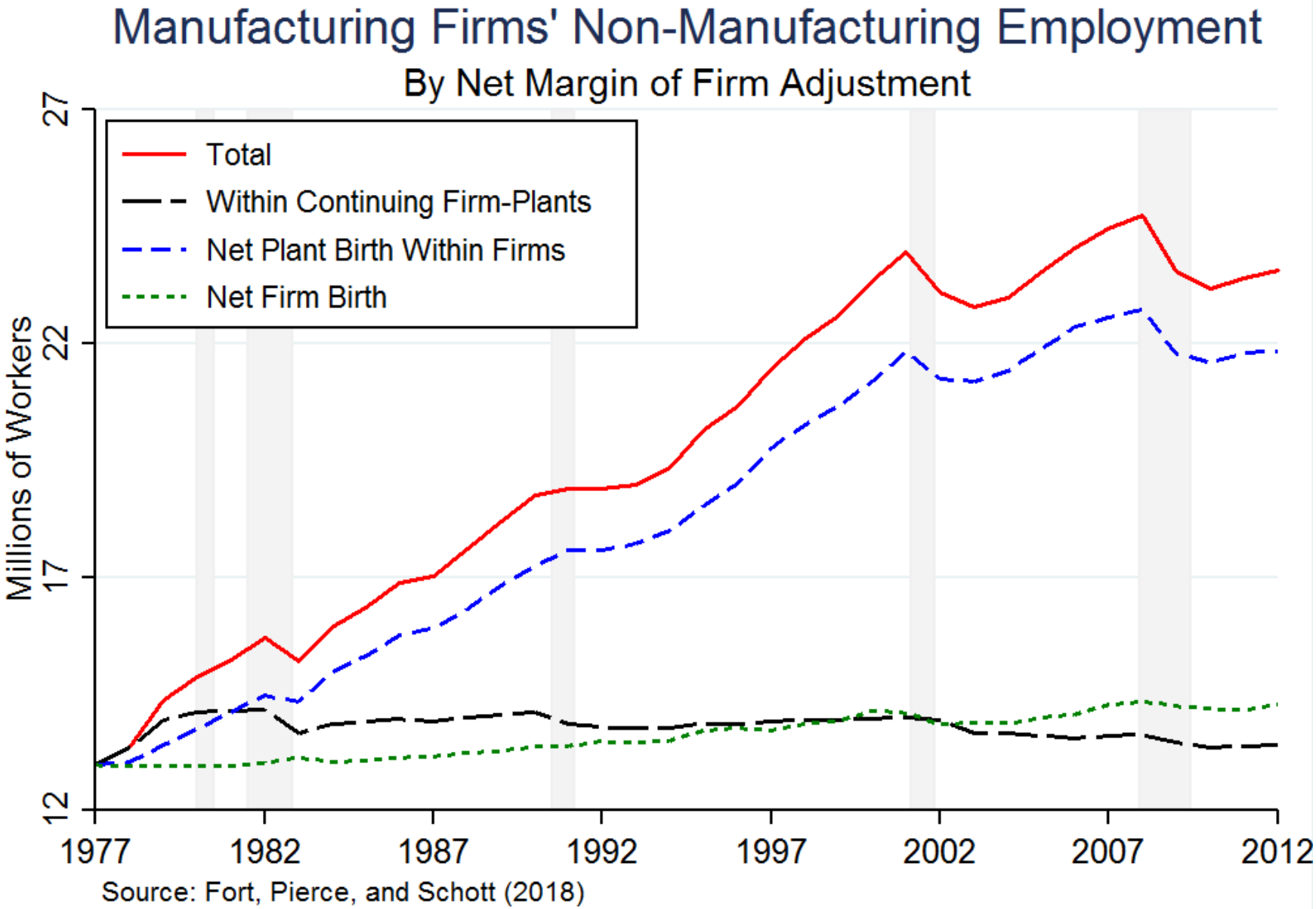
Highlights the pitfalls of Diff-N-Diff level extrapolation

- ADH: "*...we estimate that rising exposure to Chinese import competition explains...44% of the [US manufacturing employment] decline for the full 1990 to 2007 period.*" (p. 21)
  - Manuf emp declines by 3.8M from 1990-2007
  - ADH thus "explain" 1.672M job losses
- BHKL: 1/3 of China effect on manuf emp due to plant switching
- Levels of plant switching from 1990 to 2012 are relatively small
  - Gross plant switching out of manuf for 1990 - 2012 is 0.782M jobs
  - Gross plant switching into manuf for 1990 - 2012 is 0.822M jobs
  - Net switching out of manufacturing is thus +26k jobs
  - Net switching out of manuf is -108k jobs for 2000-2012
- ADH approach implies 0.552M job losses from switching

6. Continuing estab changes only 12% of agg decline



New estab adding drives Manuf firms NM growth



Paper raises important big picture questions

- Reminds us that trade is about reallocation!
- Establishment-level death most important margin in levels
  - But plant-level industry switching correlated with China shock
- Is reallocation less costly when done within establishments?
- Authors show that switching estabs have more churn
  - Suggests they do not keep the same workers
  - Does this decrease reallocation costs for workers?