The Chinese Trade Shock and Communicating Zone Black Employment

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Outline

- Introduction
- Review of literature
- Contributions
- Data, summary and empirical methodology
- Interpretation of results
- Conclusions and next steps

Introduction

- This paper uses the Chinese trade shock data of Autor, Dorn and Hanson.
- The data is merged with Quarterly Workforce Indicator census data to calculate employer concentration at Commuting zone level.
- The paper explores the extent to which exposure to trade shocks affected the employer concentration and;
- Whether the incidence of local monopsony power increased at commuting zone level because of trade.
- An extension of Acemoglu *et* al. (2014) work on the effects of Chinse import penetration on US job market.

Introduction

- Economists have long sought to explain why wages in the US have exhibited puzzling behavior in recent decades.

- Real wage growth has slowed significantly (Acemoglu and Autor, 2011 on Benmelech *et* al. 2018).

- The link between productivity growth and real increase in hourly compensation appears to have declined (Mishel 2012, Bivens and Mishel 2015; and Uguccioni, 2016; Benmelech *et* al. 2018).

- The labor share of national income also diminished since early 2000s (Karabarbounis and Neiman, 2014; Benmelech *et* al. 2018).

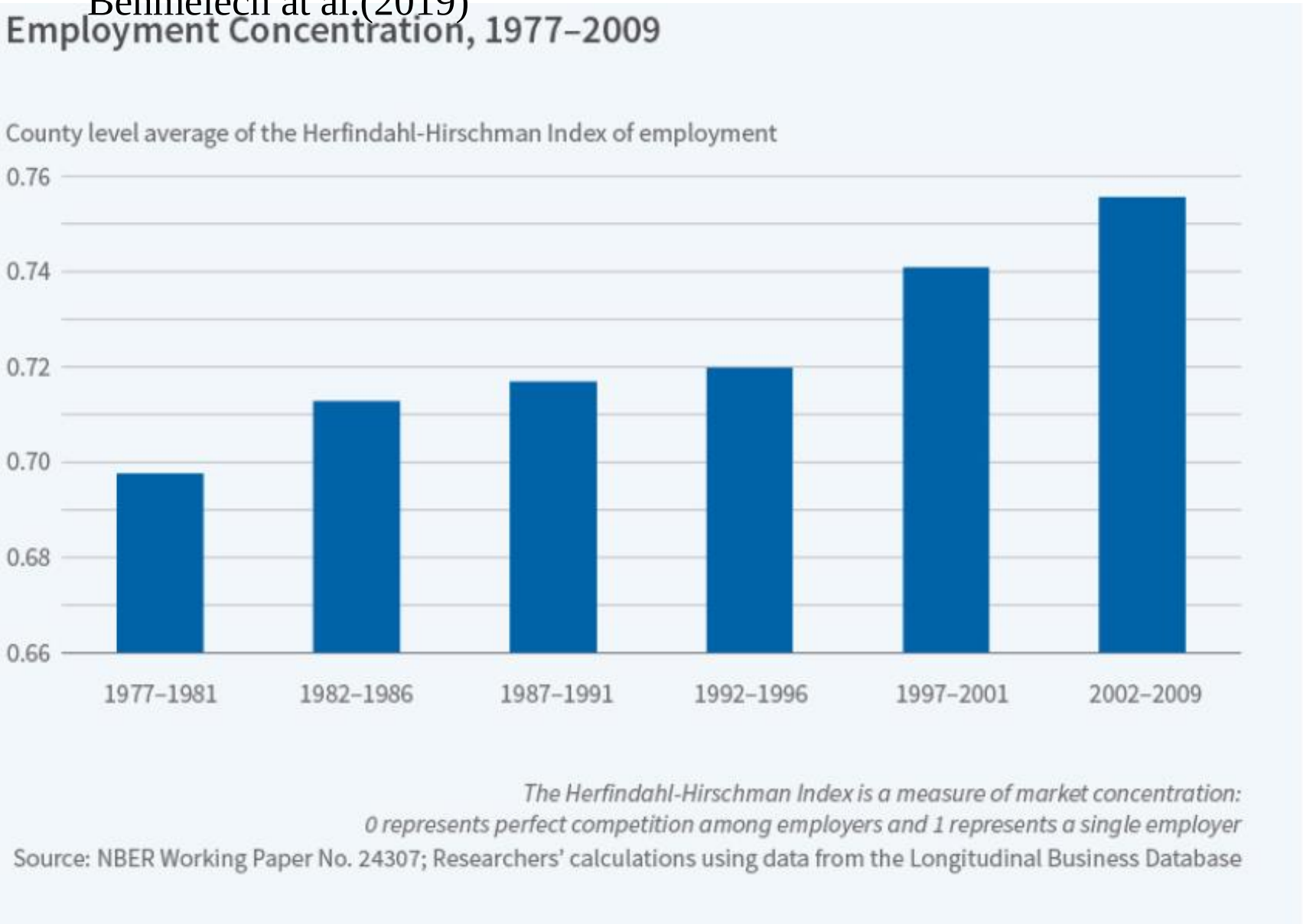
Introduction……ctd

- Is the US labor market competitive?

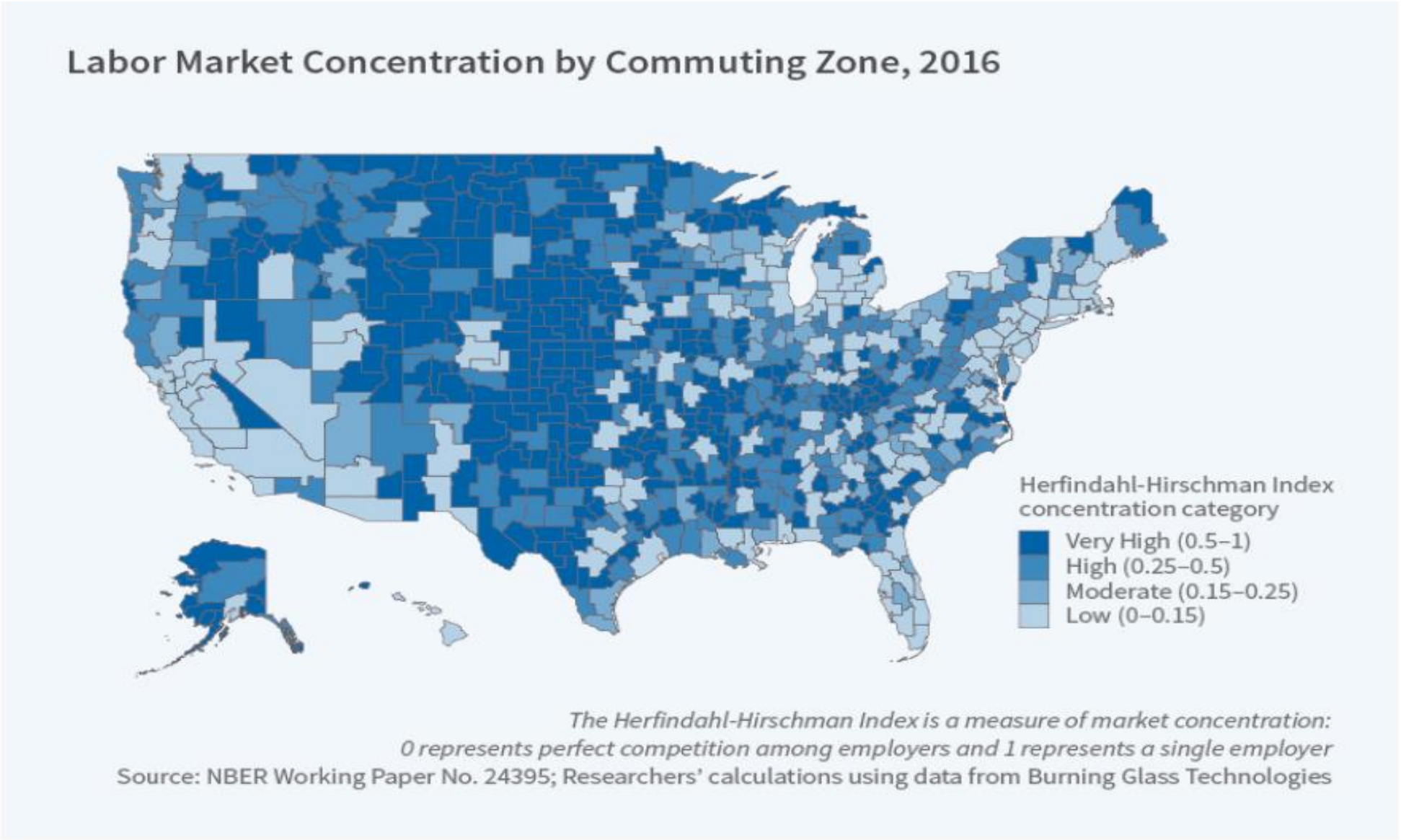
- Hershbain *et* al. 2019 argue that in a very competitive labor market, if the assumption of allocative efficiency is to hold, the marginal revenue product of labor must be equal to worker's wage.
- Efraim Benmelech, Nittai Bergman and Hyunseob Kim, Benmelech, 2019 uses county-level census data for industrial firms for the period 1977 to 2019.

- They measure the impact of employer concentration on wages in local labor markets, while controlling for worker productivity.
- Negative relationship between employer concentration and wages and substantial cross-sectional and time series variation in concentration

Figure_1: Employment concentration, 1977-2009 by Benmelech at al.(2019)



Figure#2, Labor market concentration by commuting zone, 2016 by Azar at. al.(2019)



Summary Statistics

Figures: 1 and 2 shows, respectively employer concentration measured by HHI by year and by commuting zones.

The period of this and other studies that find rising employer concentration coincides with the period of rising U.S. imports from China commonly known as “china shock.

Acemoglu et al.(2014) investigates the contribution of the rapid increase of import competition from China on U.S employment.

They apply industry and local labor market-level approach to estimate the size of employment losses in directly exposed industries, in indirectly exposed upstream and downstream industries inside and outside manufacturing and the net effect of conventional labor reallocation in non-exposed sectors.

Research Question

- Does the swift rise of import penetration from China to U.S account some variation on labor market concentration across the U.S?
- If so, what is the direction of the incidence? Positive or negative?
- Is the direction and intensity equal across sectors?
- How can we explain the difference of incidences across the sectors?

Review of Literature

- Azar at al.(2019) used data on the near universe of online US job vacancies to calculate labor market concentration using the Herfindahl-Hirschman index (HHI) for each commuting zone by 6-digit SOC occupation.

- Elizabeth Weber Handwerker and Matthew Dey used the detailed microdata of occupational Employment Statistics(OES) to estimate employer labor market power by occupation for nearly all workers in the United States, in all sectors, all occupations and all geography areas, from 2015 to 2017.

- The authors document wide variation in the extent and wage impact of explicit oligopsony by occupation and how much of that variation can be explained by various occupational characteristics (Dey and Handwerker, 2019).

Review of Literature

- Benmelech at al.(2019) analyze the effect of local-level labor market concentration on wages.using census data over the period 1977-2009.

- They find that; First, local-level employer concentration exhibits substantial cross-section and time-series variation and increase over time.

- There is a negative relation between local-level employer concentration and wages which is more pronounced at high levels of concentration and increases over time. The negative relation between labor market concentration and wages becomes stronger when unionization rate is low.

- When labor markets are less concentrated, the link between productivity growth and wage growth is stronger. Last, exposure to great import competition from China also known as “the China Shock”, is associated with more concentrated labor markets.

Review of Literature

- The paper by Mary Kate Batistich, Timothy N. Bond “ Stalled Racial Progress and Japanese Trade in the 1970” (Batistich and Bond, 2019) assesses the rapid rise in import competition from Japan during the late 1970s and 1980s.

- Acemoglu et al.(2014) explore how much of the sluggish US employment growth can be explained by the quick rise of import competition from China. Using employment data from County Business Patterns.

- This paper will fill out the gap in the literature by closely examining the impact of China Trade shock on Commuting Zone employer concentration.

Data

- This paper uses the Quarterly Work Force Indicator (QWI) dataset which provides employment data by zip code and various types of firms used to calculate employer concentration.
- Also utilizes Acemoglu et al.(2014) international trade data, which they sourced from the United Nations Comtrade Database.

- The QWI comprises 32 indicators detailing a variety of firm's characteristics and workers demographics at several levels of geographic aggregation.

- The current research uses data on all private firms, at the county level, with aggregation at the 2-digit North American Industry Classification System(NAICS) sector level.
- We use employment data for fifty US states and Washington DC

Data

- Total Czones: 741
- Firm Types:
- Firm1, up to 19 employees,
- firm2, 20-49,
- firm3, 50-249
- Firm4, 250-499
- Firm5, 500+
- Employment Stable: estimate of stable jobs or the number of jobs held on both the first and the last day of the quarter with the same employer. Not necessarily being employed for a full quarter

Classes

- Three main sectors: 1) Exposed sector to comprise all manufacturing industries for which predicted import exposure rose by at least 2 percentage point between 1991 to 2011.
- 2) Non exposed-tradable industries refer to those industries that produce tradable goods or commodities, but which do not fall within the exposed category.
- 3) Non exposed non tradable sector.

Herfindahl-Hirschman Index (HHI)

- The employer concentration is calculated using Herfindahl-Hirschman Index (HHI).
- HHI = 10,000(S1∧2 + S2∧2 + S3∧2 + S4∧2 + S5∧2) .
- The Department of Justice agencies generally consider markets in which the HHI is between 1500 and 2500 points to be moderately concentrated.
- When markets in which HHI is in excess of 2,500 points to be highly concentrated.

Methodology

$$\Delta E_{i\tau} = \alpha_\tau + \beta \Delta IP_{i\tau}^{CZ} + \gamma X_{i0} + \epsilon_{i\tau} \quad (1)$$

Methodology

$$\Delta E_{ik\tau} = \alpha_{k\tau} + \beta_1 \Delta IP_{i\tau}^{CZ} \times 1\left[\text{Exposed}_k\right] + \beta_2 \Delta IP_{i\tau}^{CZ} \times 1\left[\text{Non-Exposed Tradable}_k\right] + \tag{2}$$

$$\beta_3 \Delta IP_{i\tau}^{CZ} \times \left(1 - 1\left[\text{Exposed}_k\right] - 1\left[\text{Non-Exposed Tradable}_k\right]\right) + \gamma X_{ik0} + \epsilon_{ik\tau}$$

Table#1, Summary Statistics of employment by commuting zone and firm types

Variables	N	mean	sd	min	max	p25	p50	p75
czone	105,653	21,083	11,448	100	39,400	11,101	22,500	30,903
industry	105,653	50	17	11	92	42	52	62
firmsize	105,653	3	1	1	5	1	3	4
emptotal	105,653	665	2,044	2	96,076	89	208	531
emp5	105,653	319	1,872	0	96,076	0	0	0
emp4	105,653	50	271	0	16,673	0	0	0
emp3	105,653	111	584	0	44,540	0	0	0
emp2	105,653	70	351	0	22,519	0	0	0
emp1	105,653	115	668	0	49,536	0	0	37

Table_2: Summary Statistics of HHI by commuting zone and sectors

summarize emp_share					
Variable	Obs	Mean	Std. Dev.	Min	Max
emp_share (HHI)	5,702	0.437003	0.216884	0.2052668	1

2SLS Estimates of Import Effects on Commuting Zone Employer concentration

	Overall Employer conc 1991-2011			Sectoral Employer conc 1991-2011			Overall 1991-2007	Sectoral 1991-2007
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Commuting Zone Import Exposure	-0.31	-1.31**	-1.28**				-1.17*	
	(0.44)	(0.57)	(0.56)				(0.62)	
Commuting Zone Import Exposure x 1{Exposed Sector}				-2.88***	-4.16***	-3.54***		-3.41***
				(0.80)	(1.18)	(1.20)		(1.27)
Commuting Zone Import Exposure x 1{Non-Exposed Tradable Sector}				5.09***	4.46*	7.06***		4.54**
				(1.53)	(2.32)	(2.44)		(1.91)
Commuting Zone Import Exposure x 1{Non-Exposed Non-Tradable Sector}				0.50	-0.40	-0.49		-0.49
				(0.41)	(0.49)	(0.54)		(0.59)
Sector x Time Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector x Mfg Emp Share at Baseline	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Sector x Census Division Dummies	No	No	Yes	No	No	Yes	Yes	Yes
N	565	565	565	1560	1560	1560	565	1576

Interpretation and conclusion

- There is a clear incidence of Chinese trade shock on employer concentration.
- The sign and intensity of incidence of Chinese trade shock on employer concentration varies when we consider the sectors.
- Exposure to trade with china decreases the monopsony power in sectors directly exposed to trade but increases the monopsony power in sectors non exposed directly to trade but are tradable.
- The intensity varies when we look at different periods of analysis or we consider control variables.

Next steps and research

- Look at how Chinese impot shock affects employer-based health insurance
- Does the concentration increase or not the willingness of companies to offer more or less compensations in the form of health insurance beyond the wage?

Thank You