14.54 International Trade
— Lecture 16: Trade and Inequality —

Today's Plan

1. Trade and Wage Inequality
2. Trade and Regional Inequality

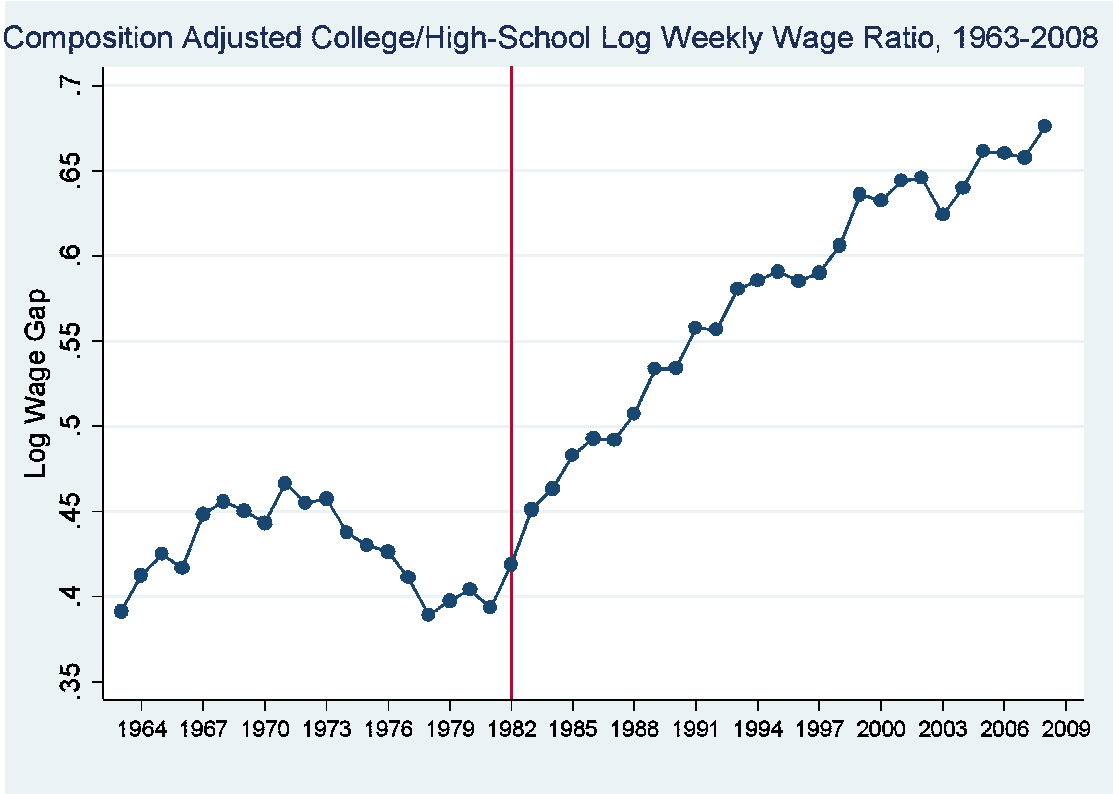
1. Trade and Wage Inequality

Rising Wage Inequality in U.S.

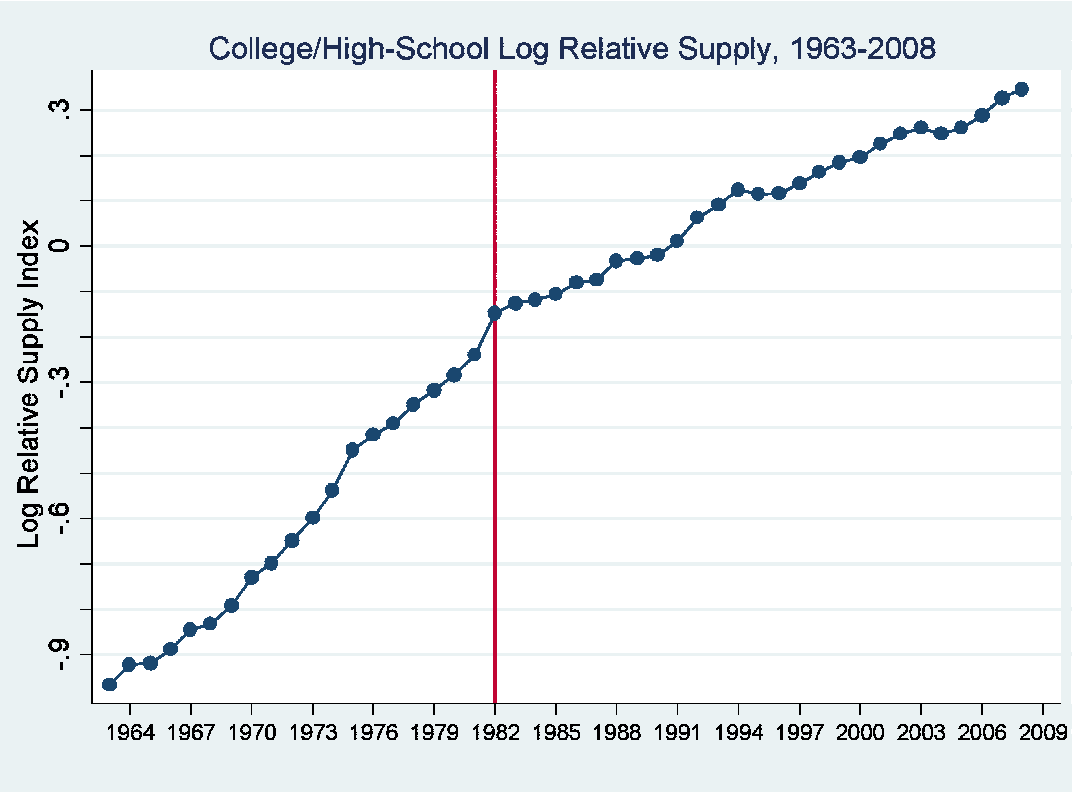
Figure 5: Overall U.S. Wage Inequality, 1940-98

Courtesy of Lawrence F. Katz. Used with permission.

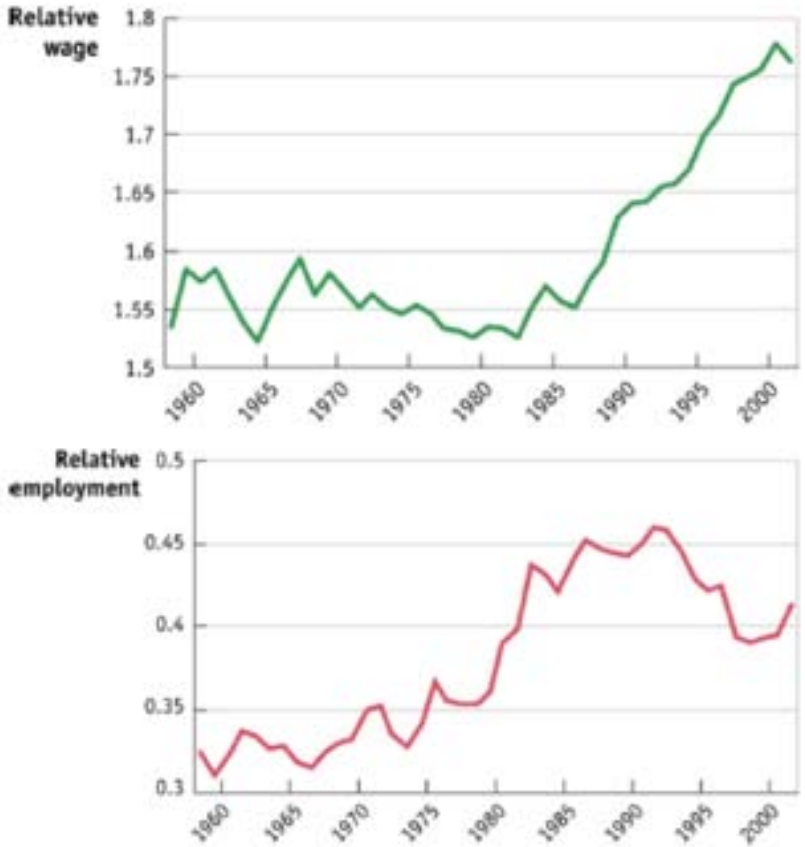
Rising Wage Inequality in U.S.: College Premium



Why Has U.S. Wage Inequality Risen: Supply or Demand?

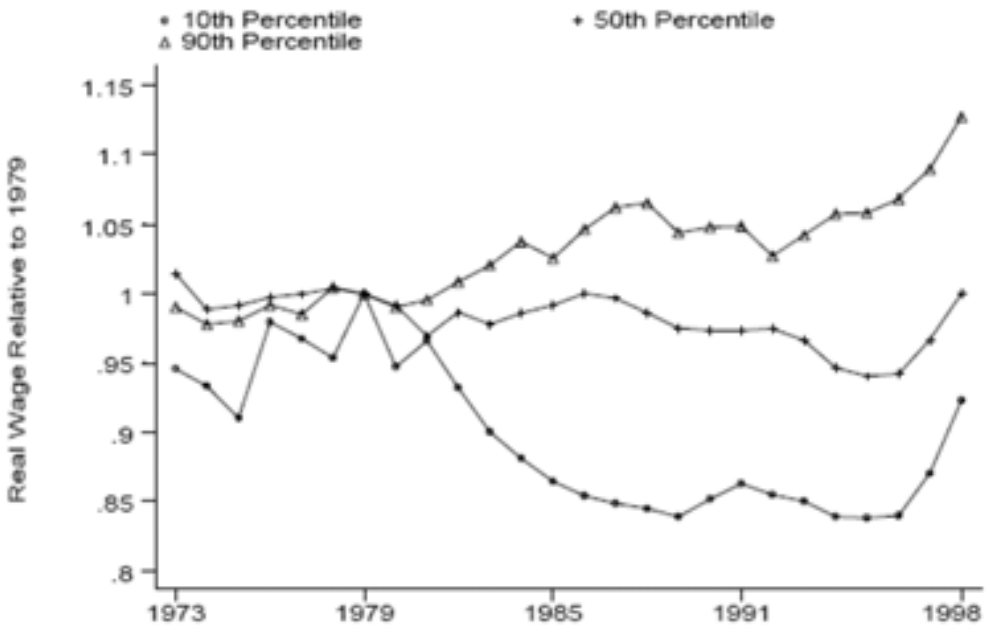


Similar Pattern for the Relative Wages and Employment of Nonproduction/Production Workers



U.S. Wage Inequality and Welfare

Figure 3: Indexed Real Hourly Wage by Percentile, 1973-98 (1979=1)



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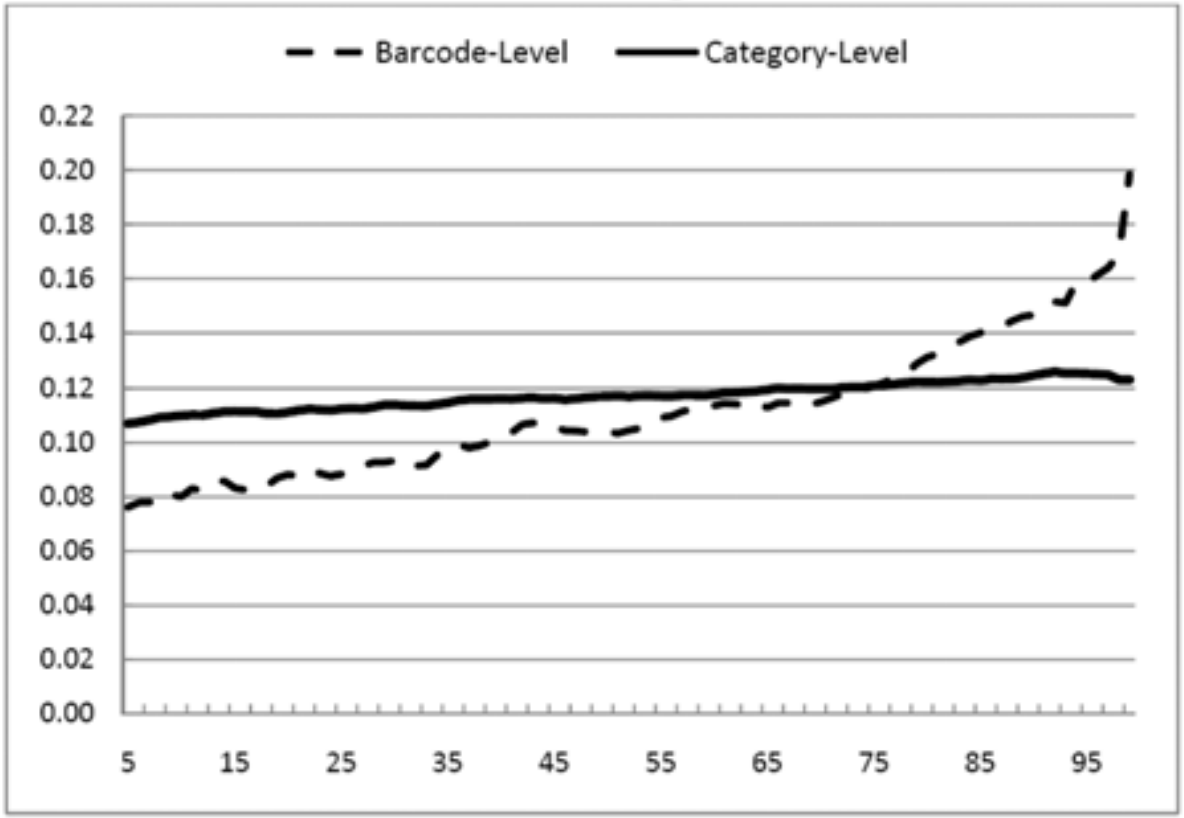
U.S. Wage Inequality and Welfare

Figure 12: Food Price Inflation by Percentile Applying Income-Specific Weights to Price Indexes for 640 Food Categories 1994-2005



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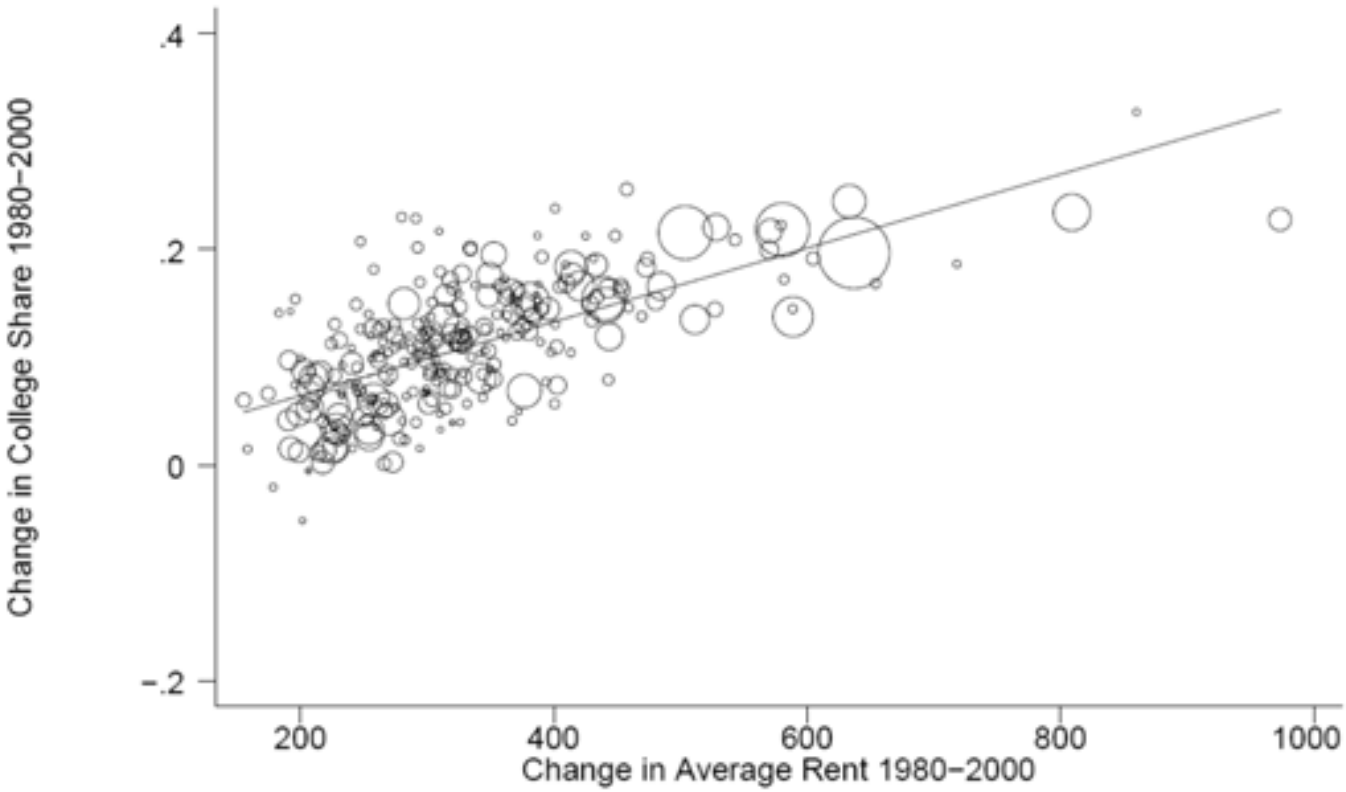
U.S. Wage Inequality and Welfare



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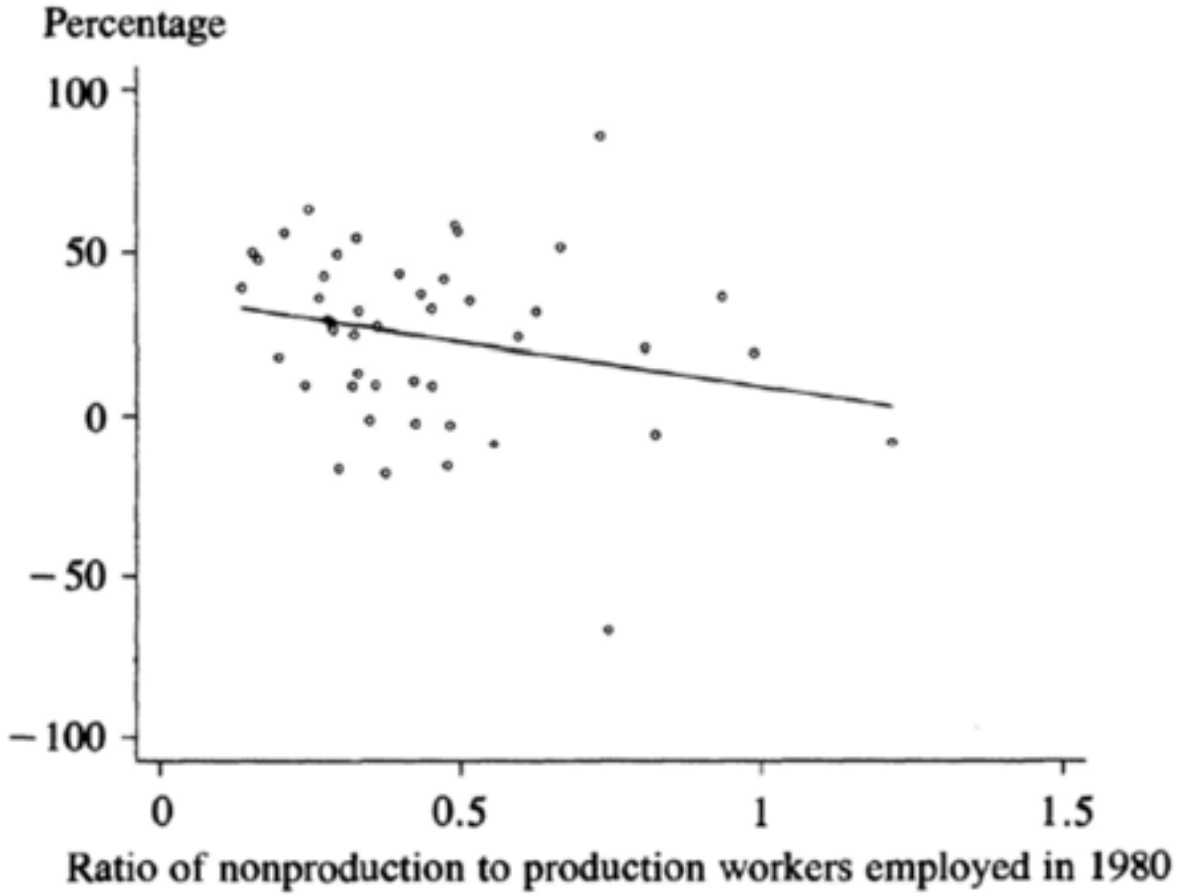
Problem (I): Absence of Relative Price Changes

Figure 9. Percentage changes in the 1980s of Export Prices by Industry Versus the Nonproduction-Worker Intensity of Industries



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Problem (II): Within vs. Between Demand Shifts

TABLE II
PROPORTION OF INCREASED USE OF SKILLS "WITHIN" INDUSTRIES

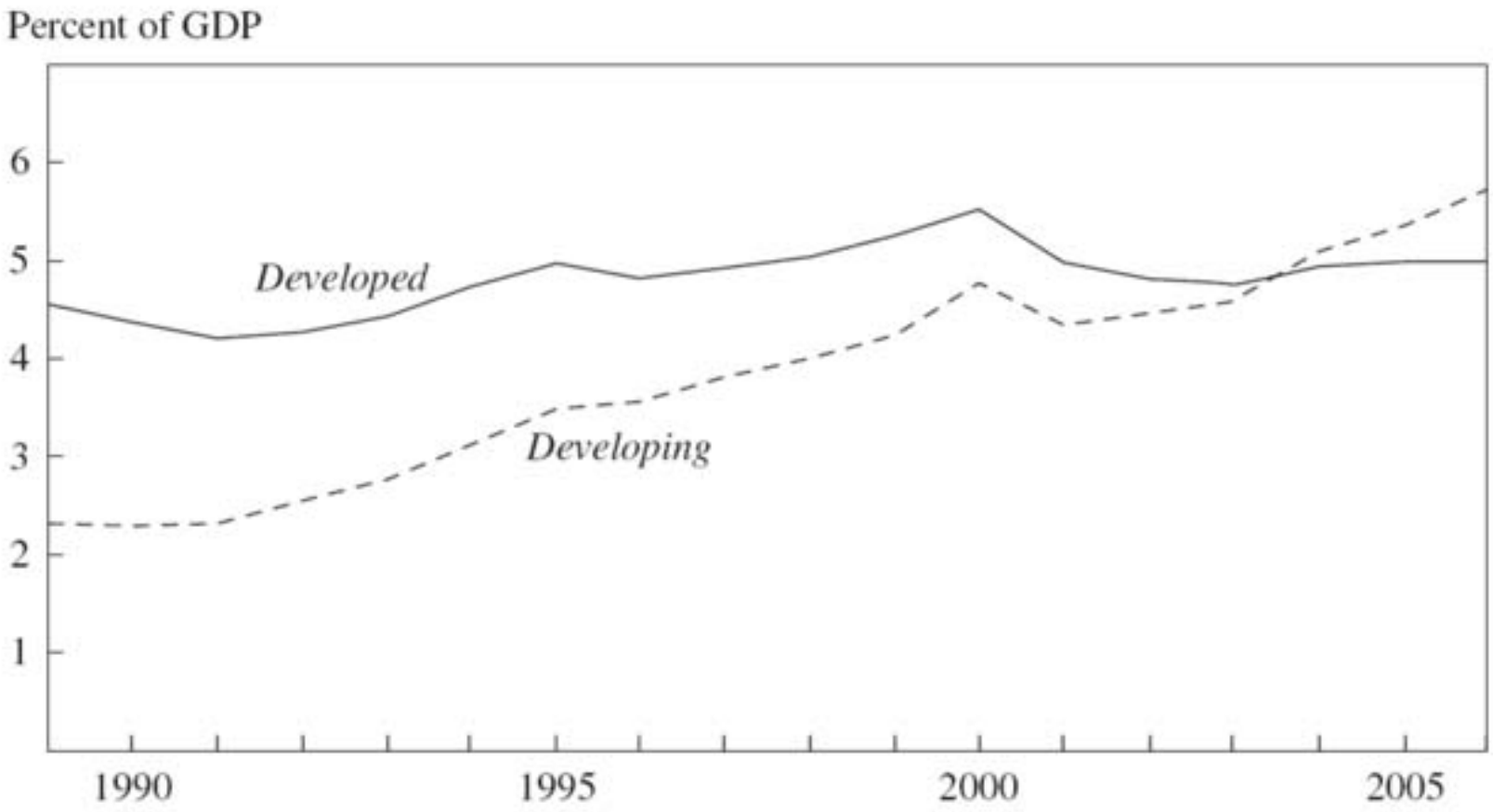
	1970–1980			1980–1990			
Country	Change in % non-production (annualized)	% within	Change in wage ratio (%)	Change in % nonproduction (annualized)	% within	Change in wage ratio (%)	Note
U. S.	0.20	81	−2	0.30	73	7	
Norway	0.34	81	−3	—	—	—	1970,80,n/a
Luxembourg	0.57	90	6	0.30	144	12	
Sweden	0.26	70	3	0.12	60	−3	
Australia	0.40	89	−17	0.36	92	2	1970,80,87
Japan	—	—	—	0.06	123	3	n/a*,81,90
Denmark	0.44	86	−11	0.41	87	7	1973,80,89
Finland	0.42	83	−11	0.64	79	−2	
W. Germany	0.48	93	5	—	—	—	1970,79,n/a
Austria	0.46	89	7	0.16	68	7	1970,81,90
U. K.	0.41	91	−3	0.29	93	14	
Belgium	0.45	74	6	0.16	96	−5	1973,80,85
Average	0.40	84.3	−1.8	0.28	91.5	4.2	

Early Conclusion on Trade and Wage Inequality

- Stolper-Samuelson mechanism unlikely to have contributed to increase inequality in the United States in the 90s
- Most likely candidate: Skill-Biased Technological Change
- Other possible candidate: trade in Intermediate Goods/Offshoring (see Feenstra and Hanson)

Is It Still True Today?

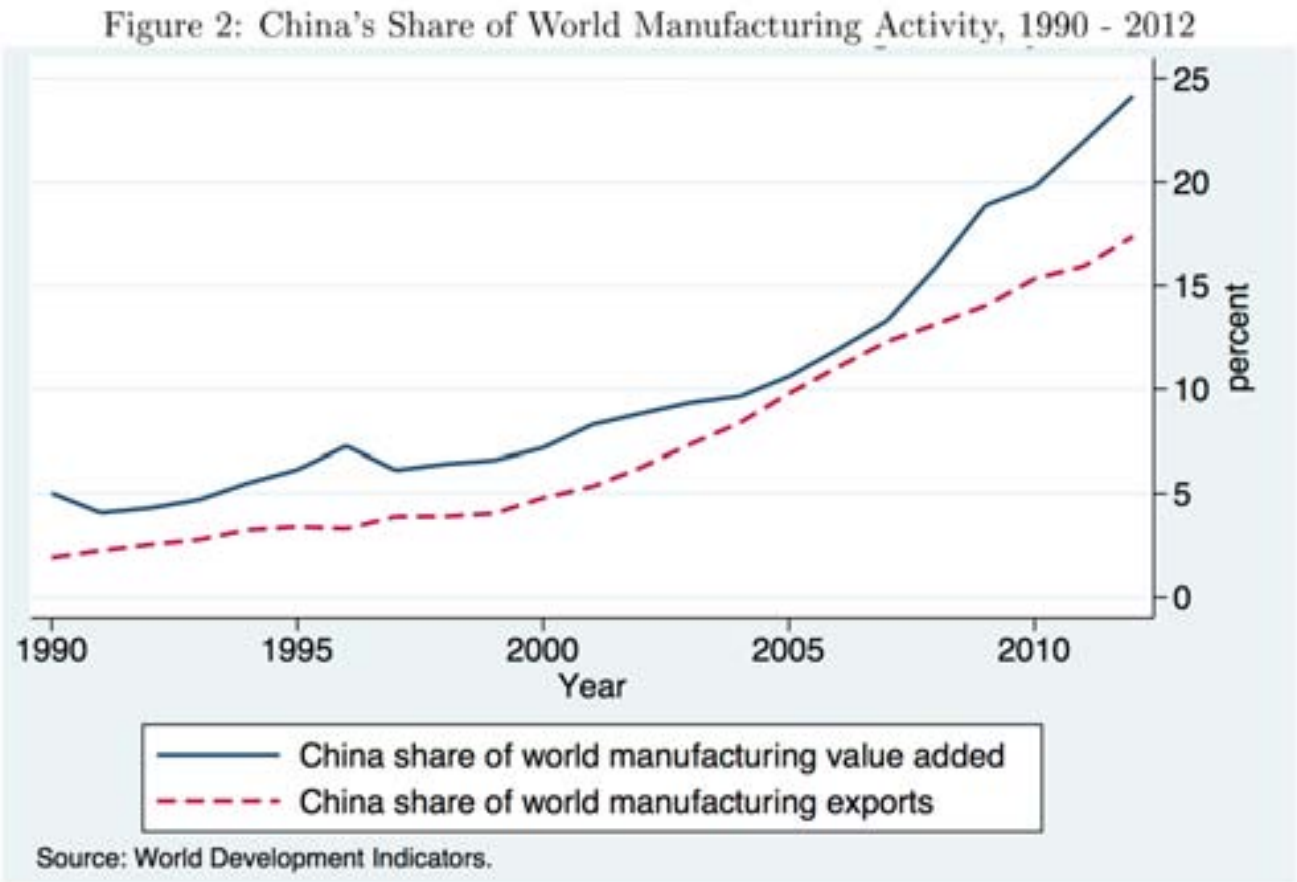
Figure 1. Imports of Manufactures from Developed and Developing Countries, 1989–2006



Sources: U.S. International Trade Commission DataWeb and author's calculations.

Trade and Regional Inequality

The China Shock



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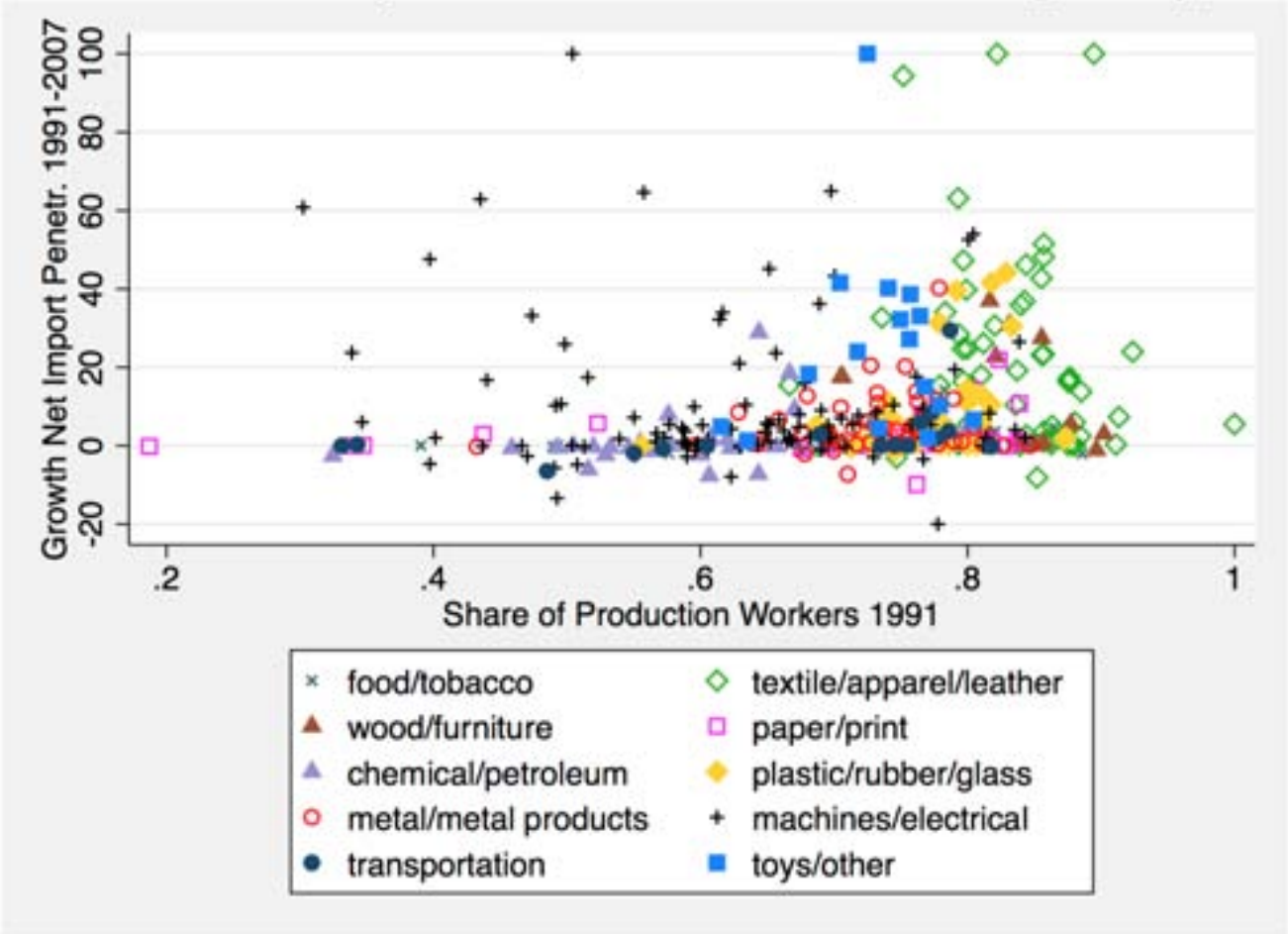
The China Shock

but shock varies across industries...

Figure 4: ΔChina-U.S. Net Import Penetration in Detailed Manufacturing Industry, 1991 - 2007



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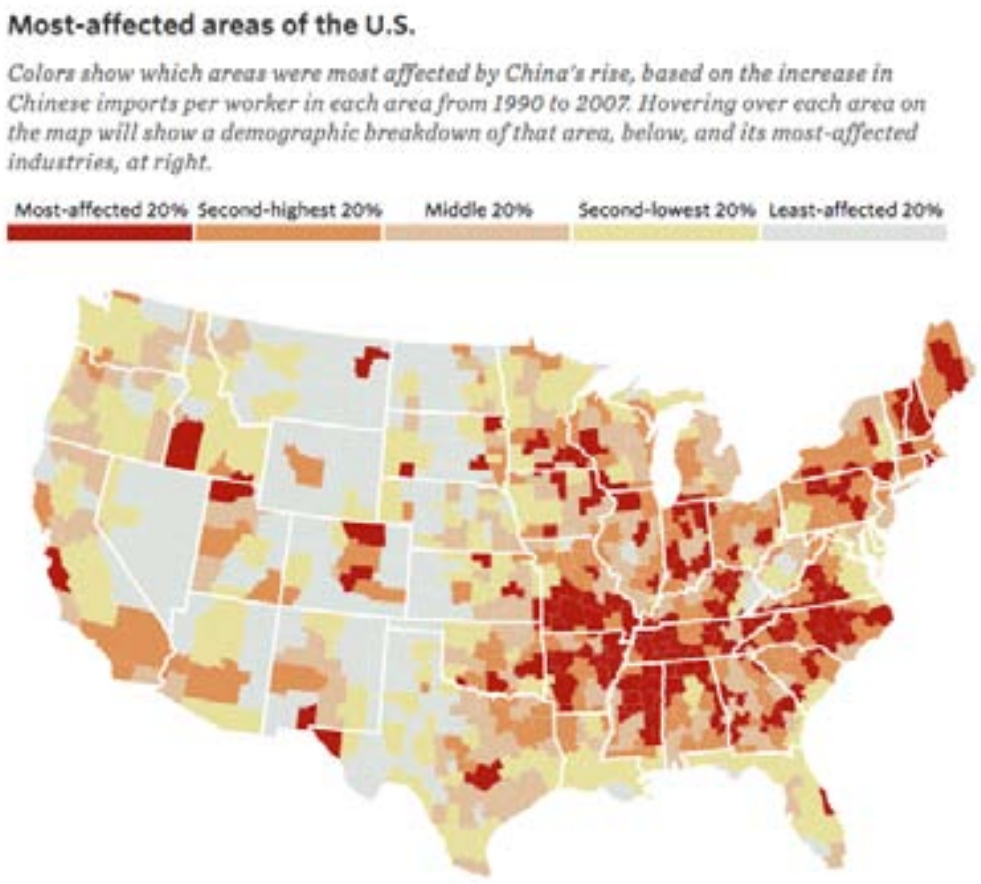
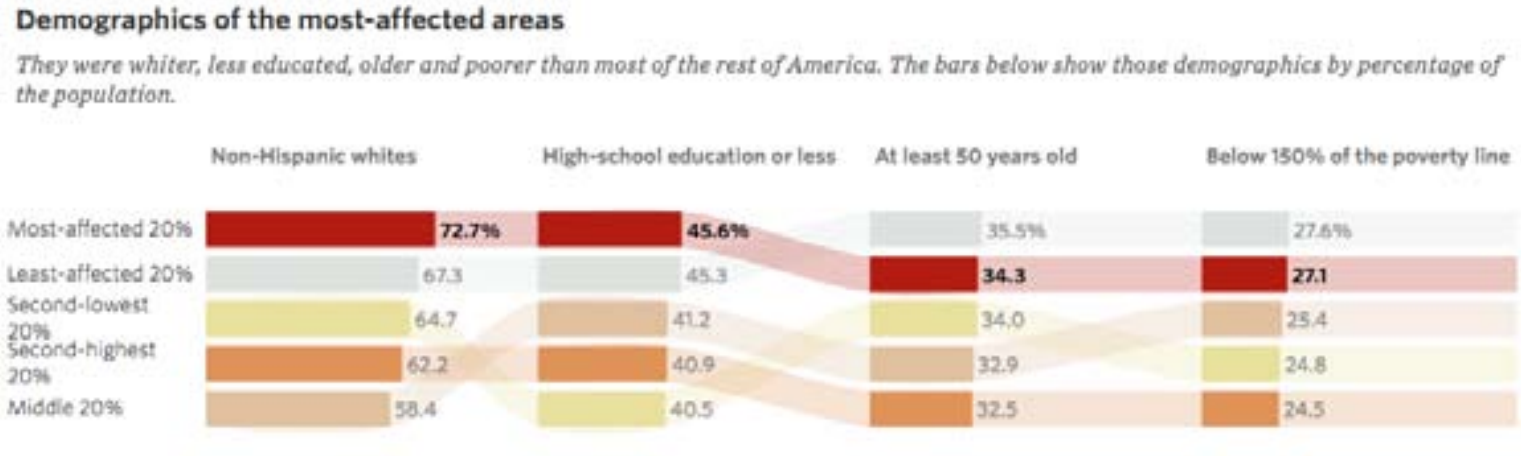
The China Shock

and hence across local labor markets...



The China Shock

and demographic groups...



Labor Market Consequences across Regions

Table 4: Import Competition and Outcomes in U.S. Local Labor Markets, 1990 - 2007

A. Δ Fraction of Working Age Population in Manufacturing, Unemployment, NILF

Employed in Manufacturing (1)	Employed in Non-Manufacturing (2)	Unemployed (3)	Not in Labor Force (4)
-0.60***	-0.18	0.22***	0.55***
(0.10)	(0.14)	(0.06)	(0.15)

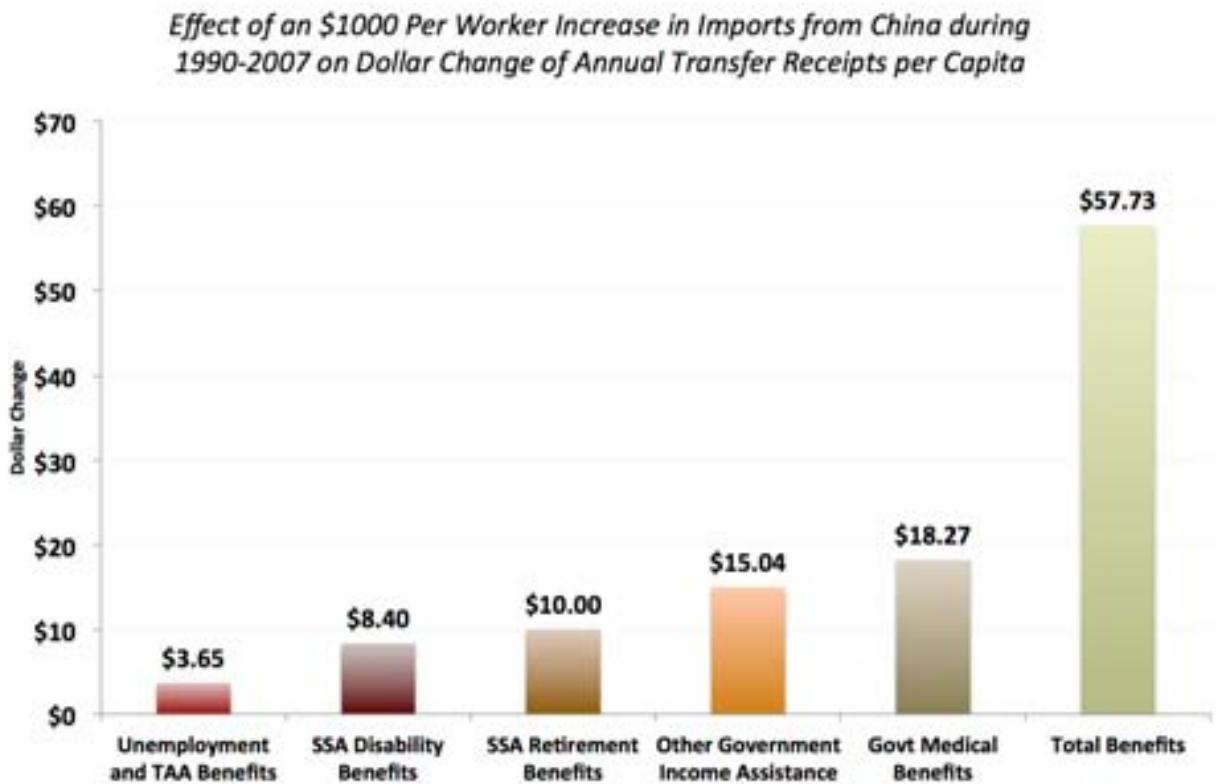
B. Δ Log Population, Log Wages, Annual Wage and Transfer Income

Δ Log CZ Population (log pts) (5)	Δ Avg Log Weekly Wage (log pts) (6)	Δ Annual Wage/Salary Inc per Adult (US$) (7)	Δ Transfers per Capita (US$) (8)
-0.05	-0.76***	-549.3***	57.7***
(0.75)	(0.25)	(169.4)	(18.4)

N=1444 (722 commuting zones x 2 time periods 1990-2000 and 2000-2007). Employment, population and income data is based on U.S. Census and American Community Survey data, while transfer payments are based on BEA Regional Economic Accounts. All regressions control for the start of period percentage of employment in manufacturing, college-educated population, foreign-born population, employment among women, employment in routine occupations, average offshorability index of occupations, and Census division and time dummies. Models are weighted by start of period commuting zone share of national population. Robust standard errors in parentheses are clustered on state. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Government Transfers

Figure 7: Imports from China and Induced Government Transfer Receipts in Commuting Zones, 1990 - 2007



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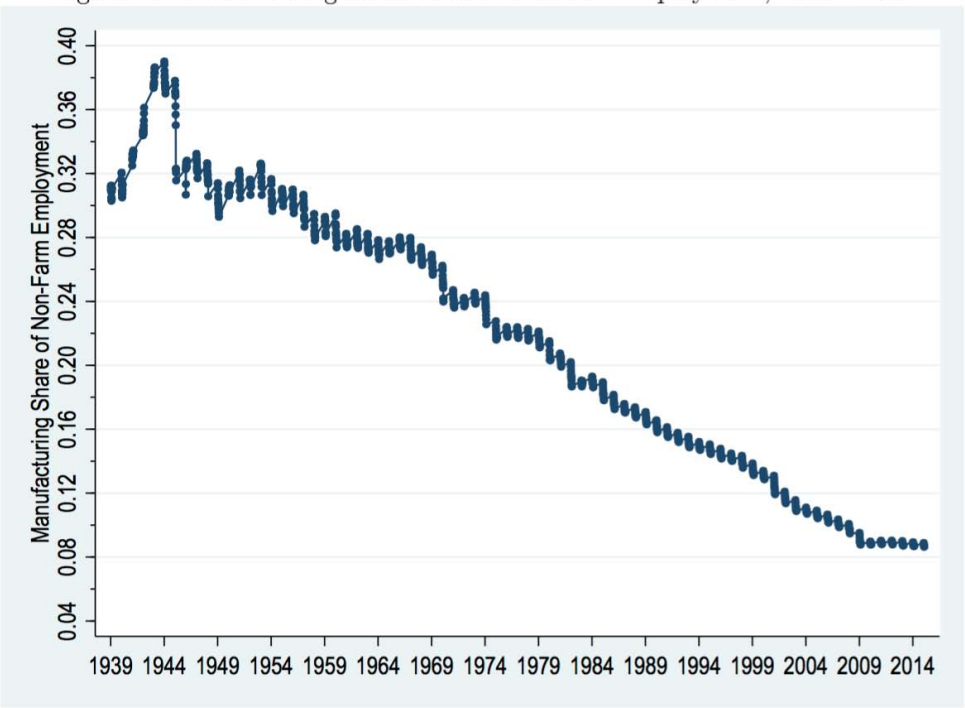
But What About the Aggregate Effects of China?

Figure 1: Manufacturing Share of U.S. Nonfarm Employment, 1939 - 2015



Source: FRED Economic Data https://research.stlouisfed.org/fred2/graph/?g=1Gor

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