

# International Trade: The USA & China

Autor, David H., David Dorn, and Gordon H. Hanson. 2013. The China Syndrome: Local Labor Market Effects of Import Competition in the United States. *American Economic Review* 103(6): 2121-2168.

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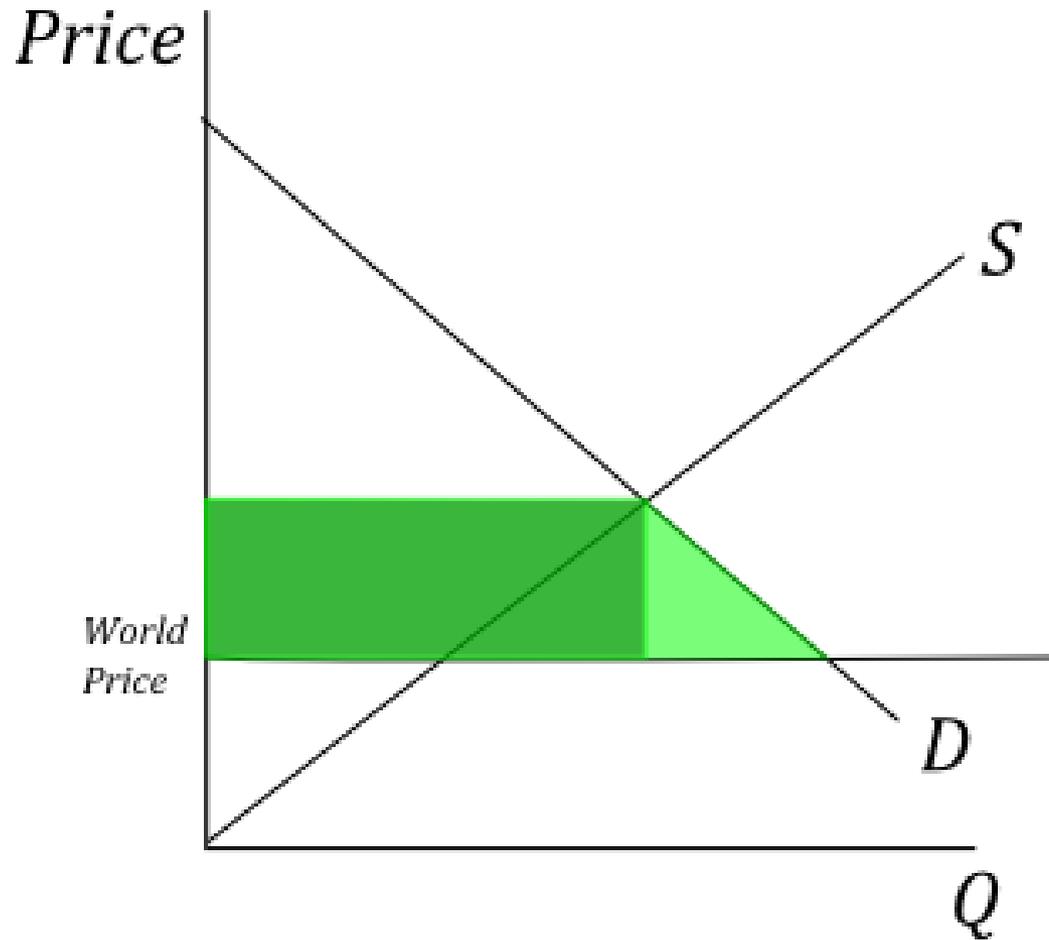
# China's Comparative Advantage

- Labor Intensive Manufacturing
- Why?
- Labor Intensive: China has a large population of relatively unskilled workers with low wages
- Manufacturing: you can ship the product overseas
- Other labor intensive sectors, like restaurants, tourism, janitorial work are safer from overseas competition

# China's Comparative Advantage

- 40% of US imports
  - Luggage
  - Rubber and Plastic Footwear
  - Games and Toys
  - Die-cut paperboard
- 30% of US imports
  - Apparel
  - Textiles
  - Furniture
  - Leather Goods
  - Electrical Appliances
  - Jewelry
  - and more

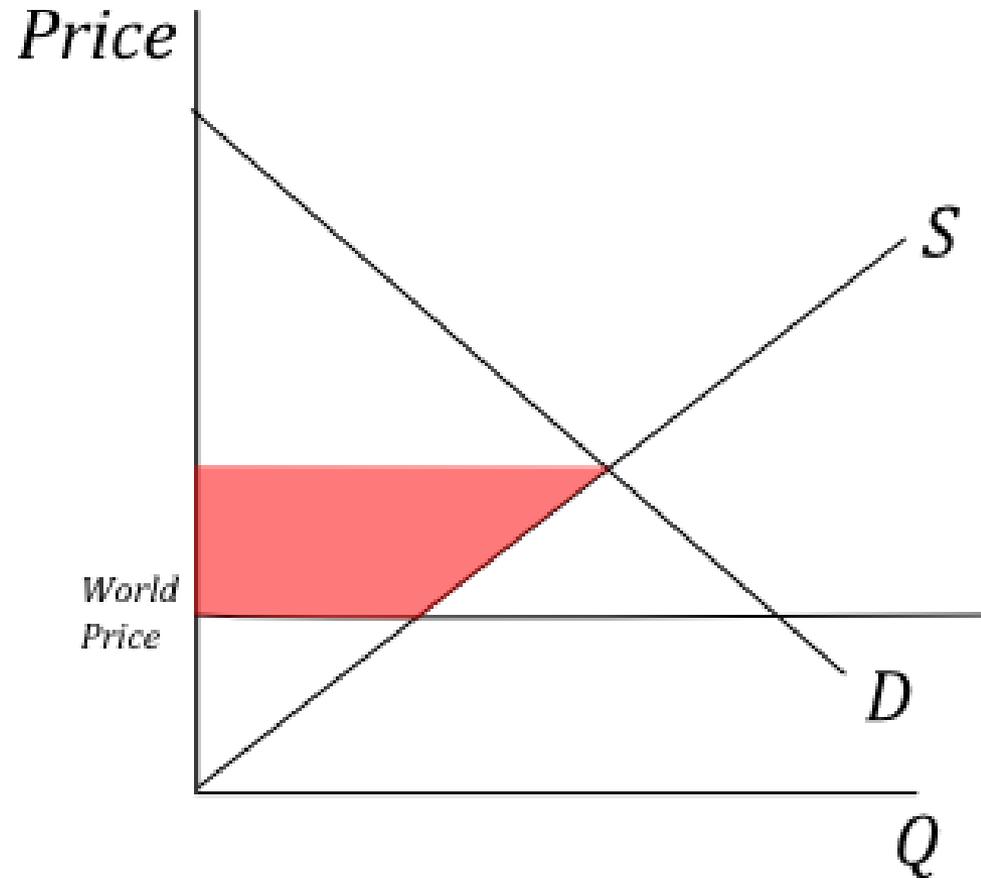
# Who in the US Benefits?



# Gains to Consumers

- Share of US spending on Chinese goods
  - 1991: 0.6% (\$1 in \$200)
  - 2007: 4.6% (\$1 in \$20)
- Walmart Effect

# Who in the US Loses?



# Predictions

- US Firms operating in sectors where China has a competitive advantage will be:
  - Less profitable
  - More likely to exit the market
  - Reduce output/employment

# US Manufacturing and Chinese Imports

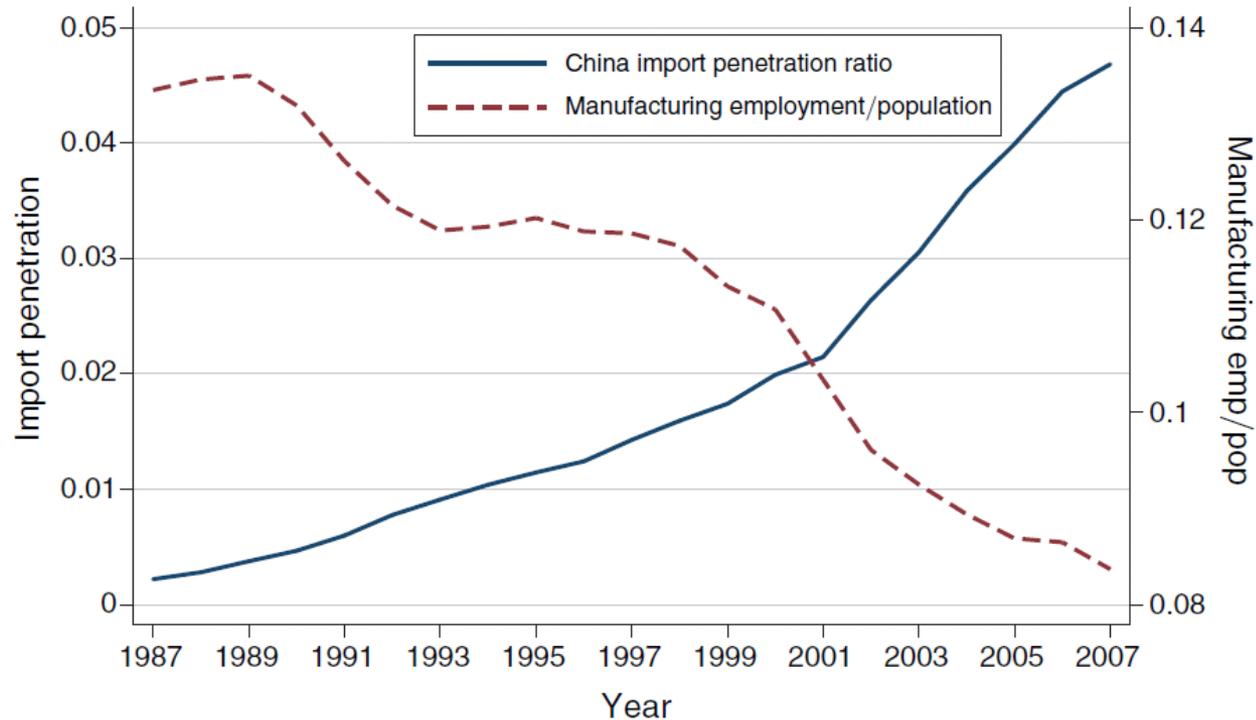


FIGURE 1. IMPORT PENETRATION RATIO FOR US IMPORTS FROM CHINA (*left scale*), AND SHARE OF US WORKING-AGE POPULATION EMPLOYED IN MANUFACTURING (*right scale*)

# Not Conclusive

- Consistent with predictions
- Possible Causes for Doubt
  - Spurious Correlation (luck)
  - Reverse Causality
  - Omitted Variable

# Just Luck?

- Ideally...
  - many economies
  - all identical except for exposure to Chinese import competition
- Could use countries...
  - but each country is different in many ways
- These papers uses local economies in the USA

# What's a Local Economy?

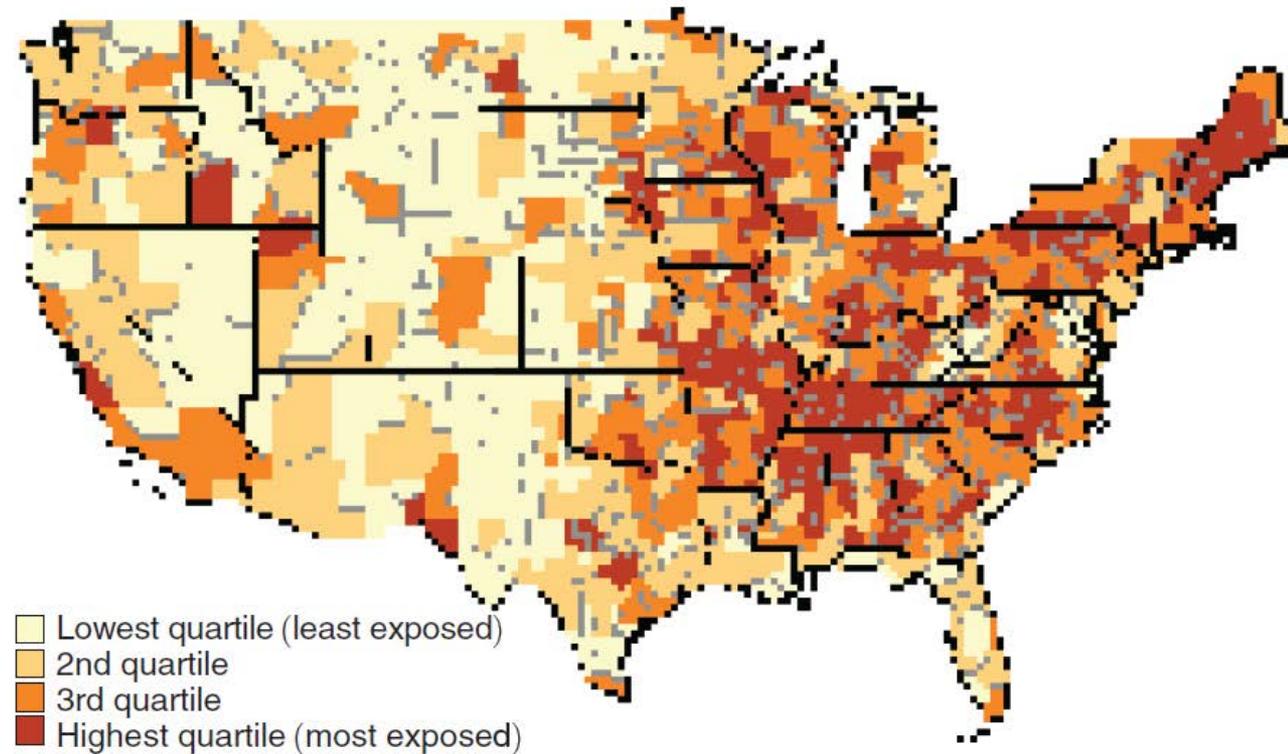
- They have data on commuting in every county in USA
- They assume:
  - If its *highly likely* people in one county commute to another, then the counties belong to the *same* local economy
  - If its *highly unlikely* people in one country commute to another, then the counties belong to *different* local economies
- This *cluster analysis* provides 722 local economies in USA

# Exposure to Chinese Competition

- For every industry, assign a score based on how much competition from China has risen (based on imports)
- For every local economy, look at what industries are present
- Some local economies are highly exposed to Chinese competition
- Others are not

# Who is Exposed?

Panel B. Trade Exposure by Commuting Zone, 1990–2007



# Results

- More Exposure to China...
  - Larger decline in manufacturing employment
  - Reduced non-manufacturing wages
- How much? Increased trade with China accounts for...
  - 1990s: 16-33% of decline in US Manufacturing
  - 2000s: 26-55% of decline in US Manufacturing
  - Approximately 1.5mn workers

# Do Workers Move Into New Fields?

- There is little evidence non-manufacturing employment rises to offset declines
- Instead, more exposure to China indicates
  - Higher unemployment rates (almost 1 for 1)
  - Higher rates of claiming disability benefits
- Non-college educated workers are disproportionately impacted

# Omitted Variables?

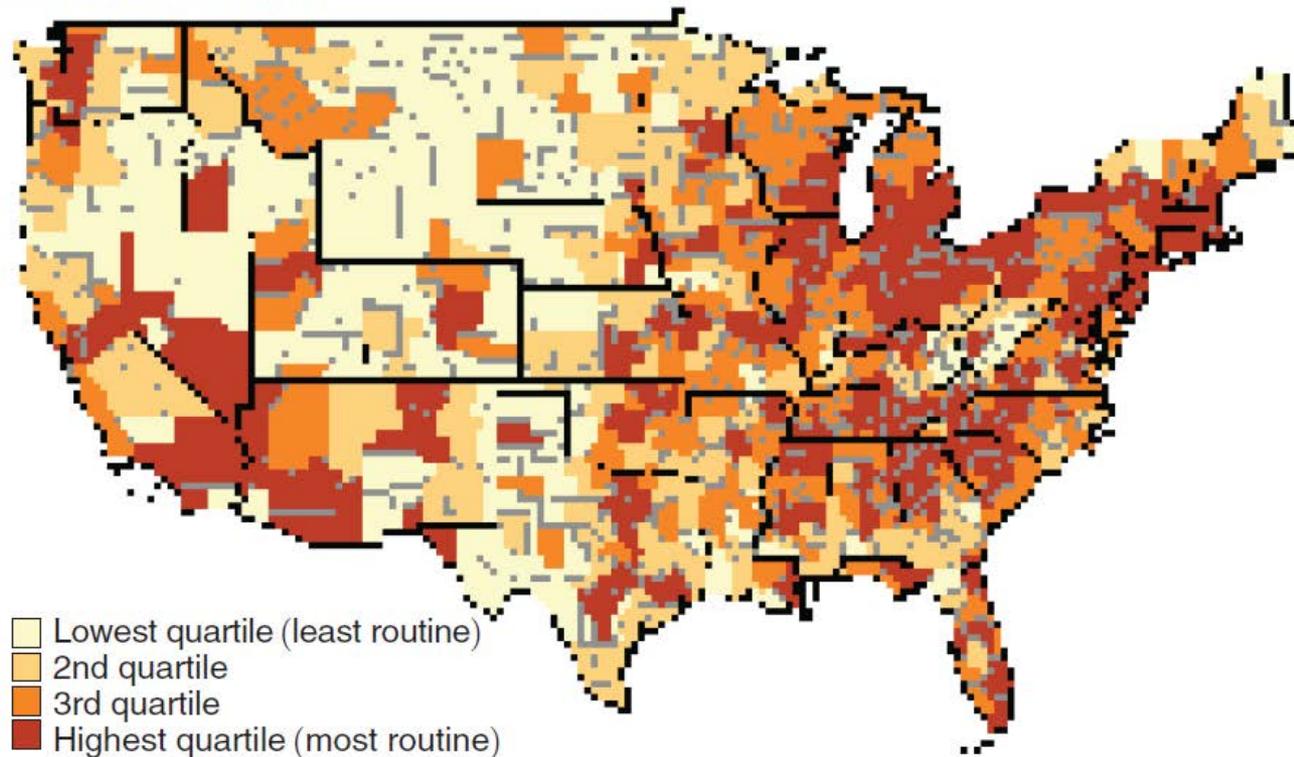
- Perhaps industries exposed to Chinese competition are *also* easier to automate
- Switch away from labor to capital
- This would also reduce employment

# Measuring Ease of Automation

- Authors code every industry for number of...
  - Routine tasks (easiest to automate)
  - Manual tasks
  - Abstract tasks (hardest to automate)
- Assign each local economy a score for share of easily automated industries

# Ease of Automation

Panel A. Routine Employment Share by Commuting Zone in 1990



# Overlap

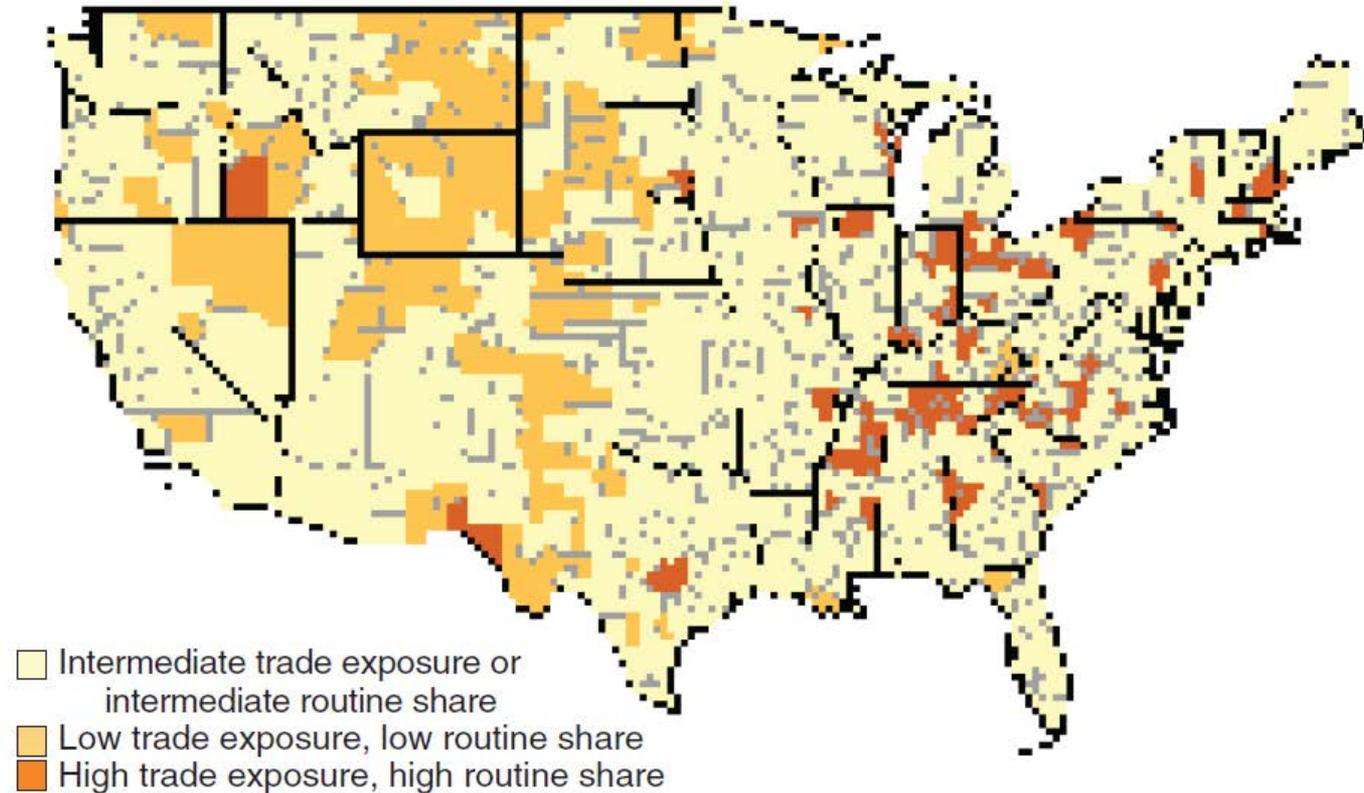


FIGURE 2. THE JOINT GEOGRAPHIC DISTRIBUTION OF TRADE AND TECHNOLOGY EXPOSURE

# Conclusions

- USA consumers gain from trade with China
  - \$1 in \$20 spent on cheaper goods than otherwise
  - Diffuse and difficult to see
- Labor Intensive Manufacturing loses from trade with China
  - Jobs lost
  - Local wages suppressed
  - Difficulty transitioning to new careers