

Protectionism and Industrial Location

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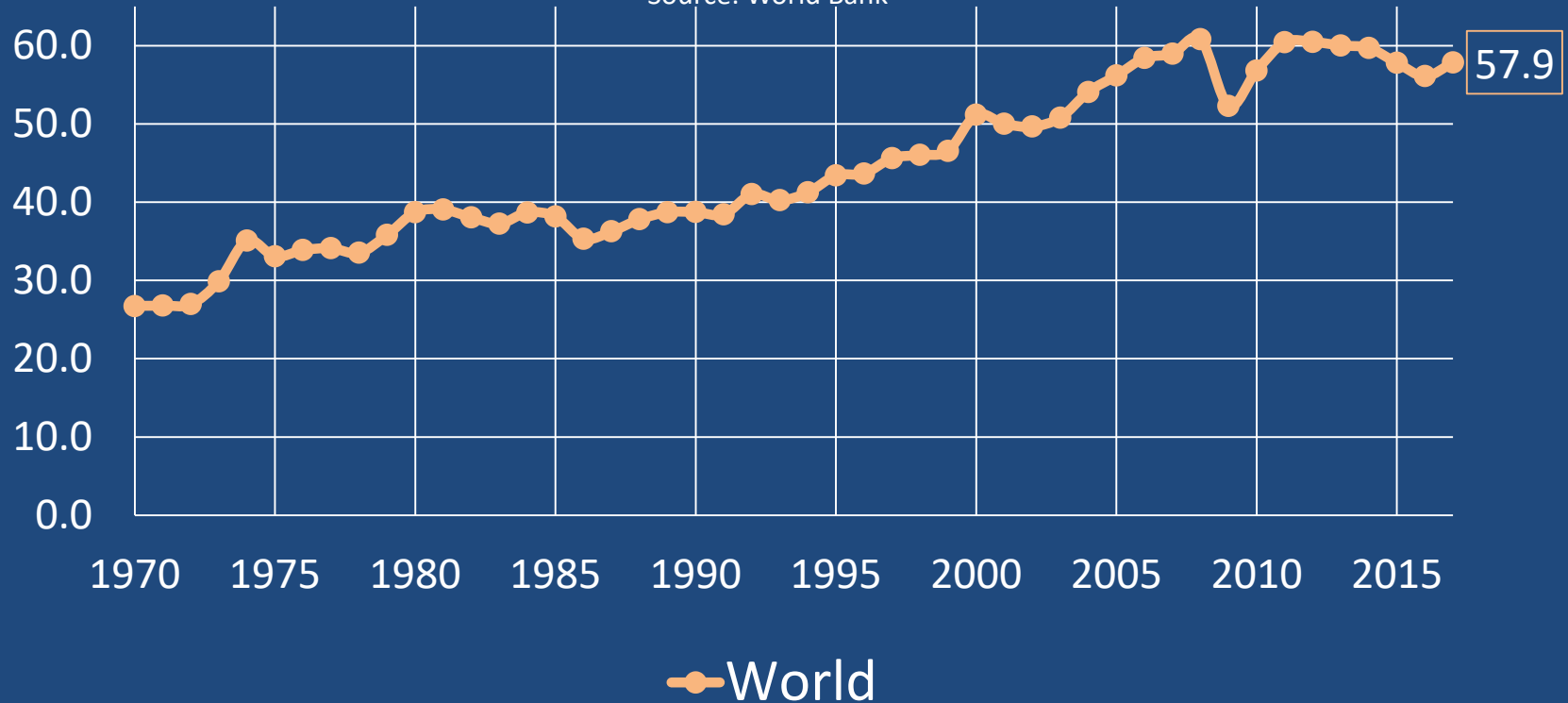
Yale University-NBER

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2019

Trade (% of GDP)

Source: World Bank

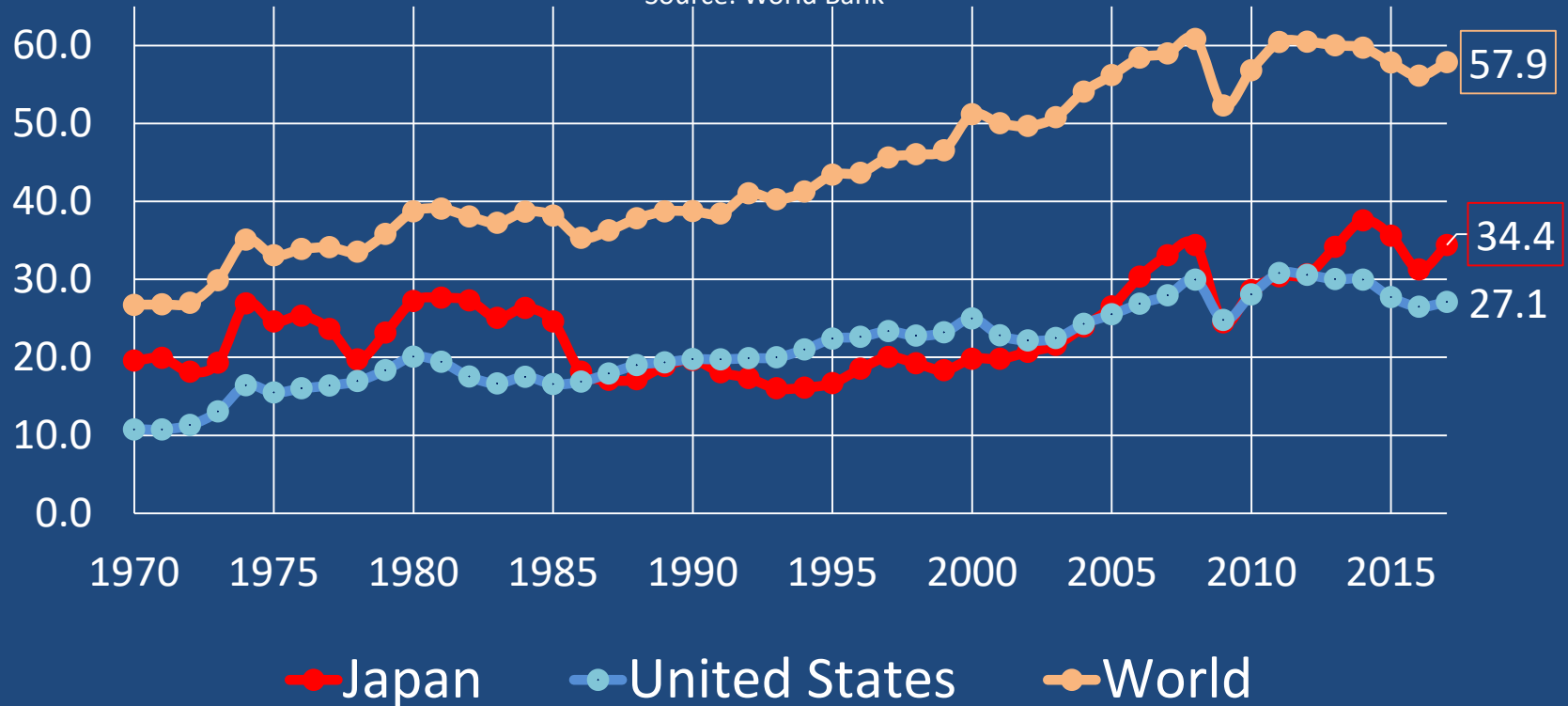


Observation:

Trade (exports + imports) over GDP in the WORLD doubled over the last 40 years

Trade (% of GDP)

Source: World Bank



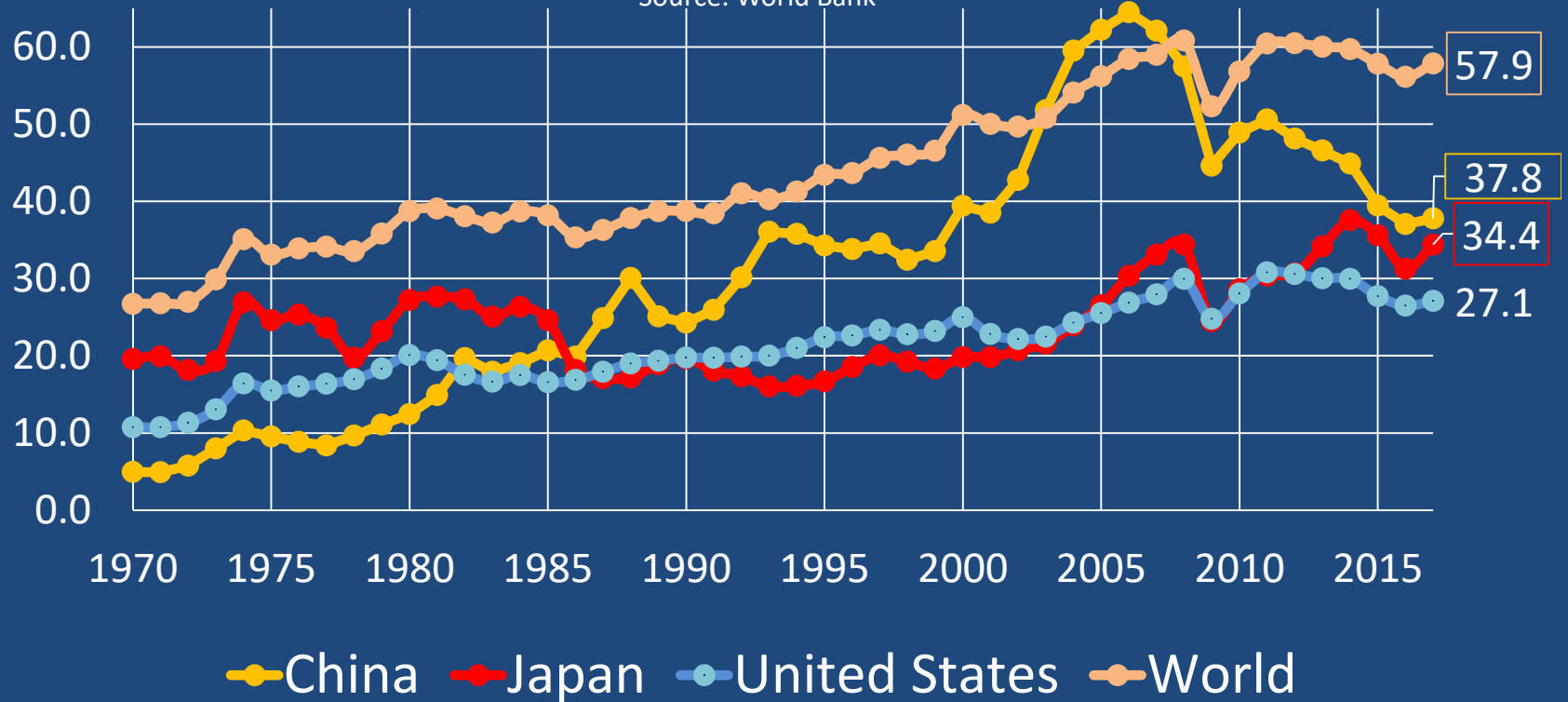
Observation:

For the case of the U.S. it almost tripled!

For the case of Japan, 75% higher!

Trade (% of GDP)

Source: World Bank



Observation:

For the case of China, 7 times larger!

Introduction

- The world has become more open!
 - This phenomenon has **relocated industries** and labor across space
- **Openness** has resulted in **aggregate welfare gains**
 - Shown by several academic studies
- But, it had **distributional consequences**
 - For instance, faster decline in manufacturing jobs in the U. S., in part, due to China's trade expansion
 - See: Caliendo et. al. (2019)

America and the New Protectionism

- As a result, **protectionism materialized in the U.S**
 - Over the course of 2018, the U.S. imposed import tariffs ranging between 10% and 50%
 - In response, U.S. trading partners, especially China, have retaliated with tariffs averaging 16%
- **What are the effects?**
- **Can protectionism bring industries back home?**
 - How long it takes for production to relocate?
- **Is the country better off?**
 - Does it have distributional consequences?

Reasons for trade protectionism

- Terms of trade manipulation
 - Neoclassical trade theory
- Political economy motives
 - Grossman and Helpman, 1994
- Trade protectionism brings industries back home
 - Many historical examples
 - Price index could fall iff relocation effect is large
 - Venables 1987, Roger and Martin 1995, Baldwin et al 2003, among others
 - Not aware of any quantitative assessment

What are the economic mechanisms?

- Profits across locations influenced by market access, local factor prices, and **trade policy**
- Protectionism can create incentives to relocate production
 - Easier for firms to locate in places with:
 - abundant capital structures
 - cheaper labor
 - deeper integration to the value chain (input-outputs)
 - better access to local and global markets
- But,...

What are the economic mechanisms?

- Relocation of production is costly
- Costly to build capital structures
- Costly for workers to switch sectors/regions

New Quantitative Framework

- We develop a new quantitative framework to study these and other questions
 - “The Quantitative Effects of Trade Policy on Industrial and Labor Location”, (joint with Fernando Parro)
 - Model with 38 countries, 50 U.S. states, multiple industries
 - Dynamic quantitative analysis that uses new aggregate data on firm entry and exit
 - OECD Enterprises

Production location

Share of firms

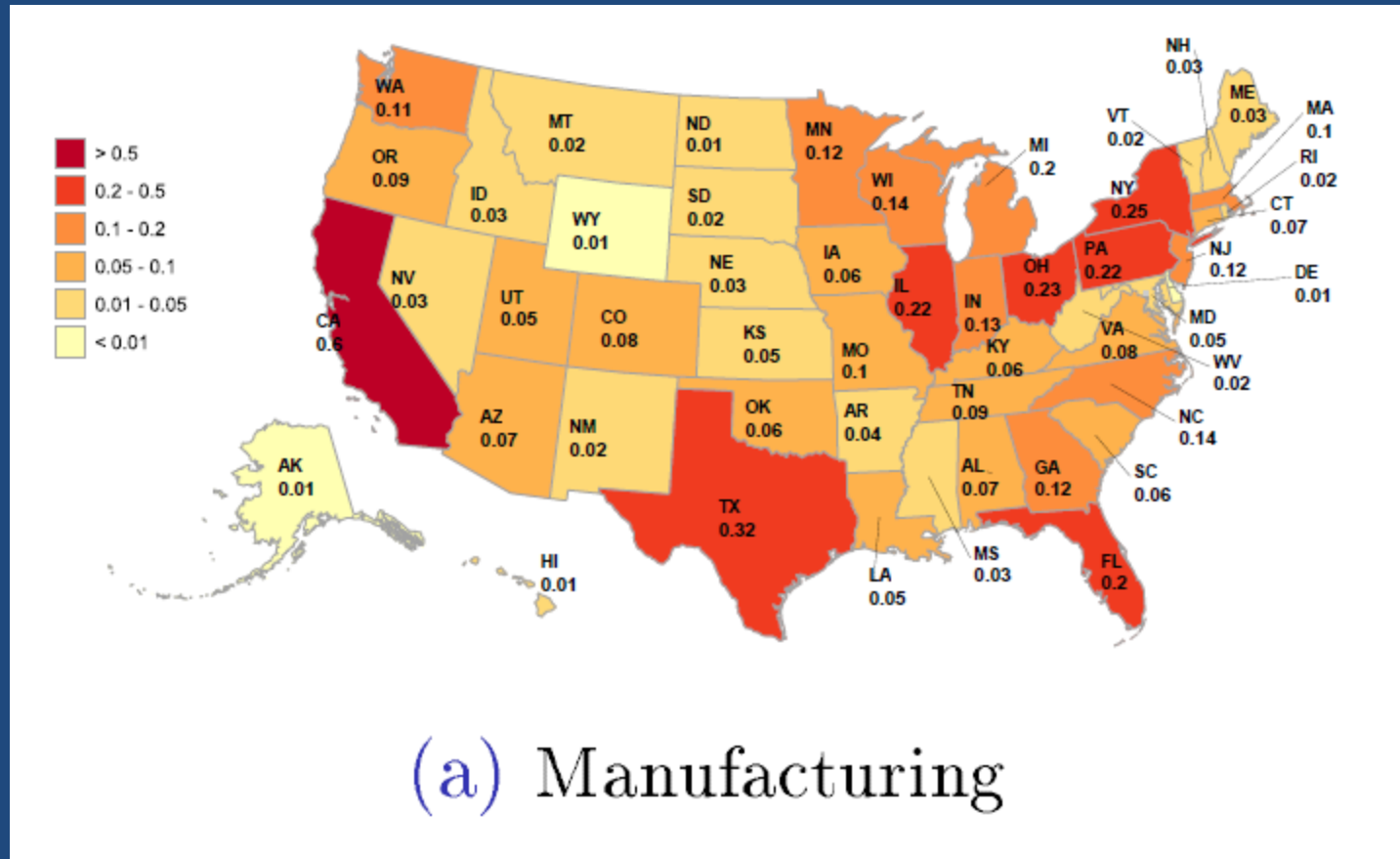
(2015, % of world total)

	Manufacturing	Construction	Wholesale	Services
United States	4.7%	8.5%	7.3%	12.0%
China	6.5%	1.2%	1.0%	2.5%
France	4.3%	9.1%	4.7%	7.0%
Germany	4.1%	5.7%	3.4%	5.5%

Source: OECD Enterprises. Firms are active employer enterprises

Establishments across space in the U.S.

(% of world total 2015)



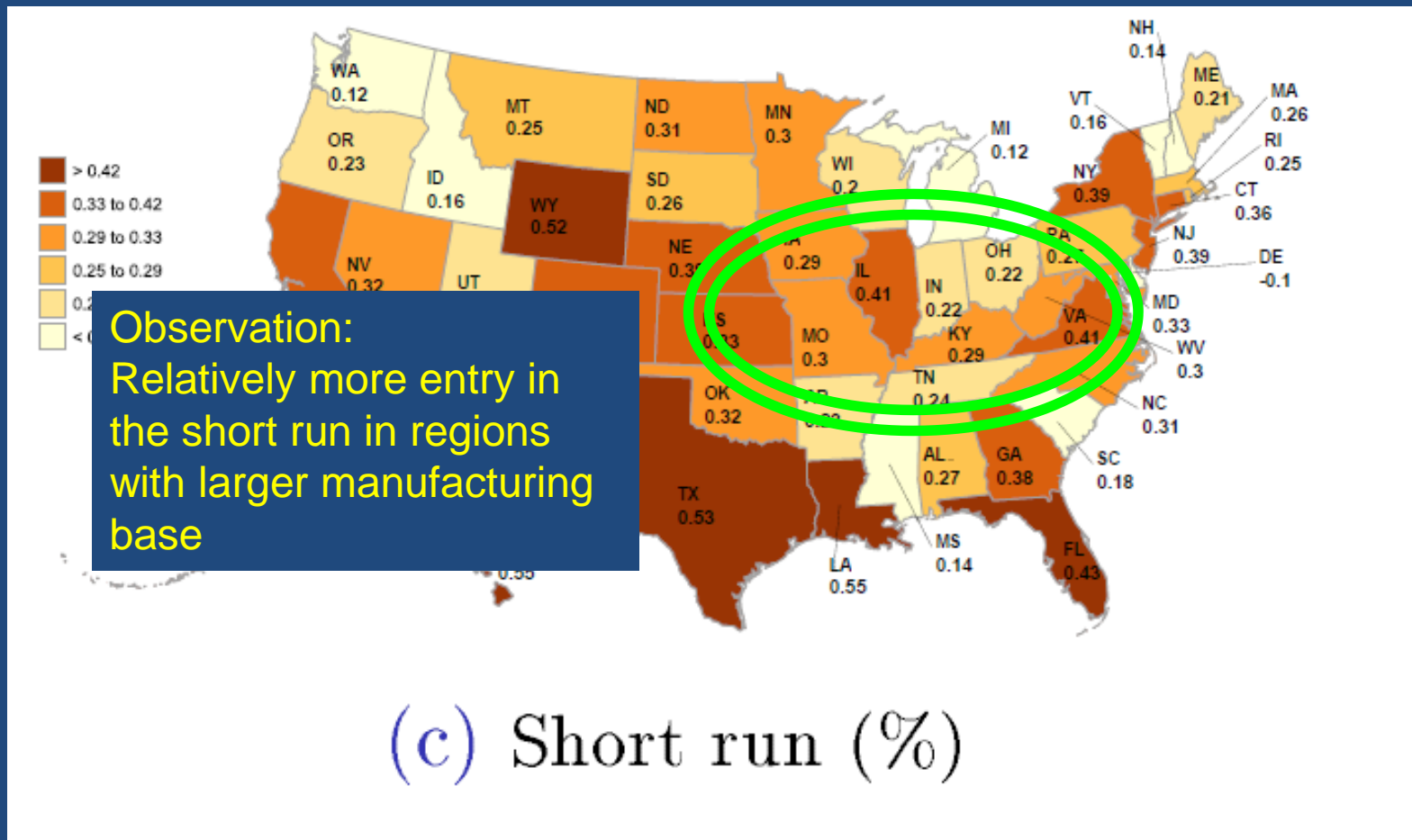
What are the effects?

- Study the effects of a unilateral increase in U.S. manufacturing tariffs to 25% from an average initial level of about 3.5%
- I'll present some of our **preliminary findings**
- Still much work to be done

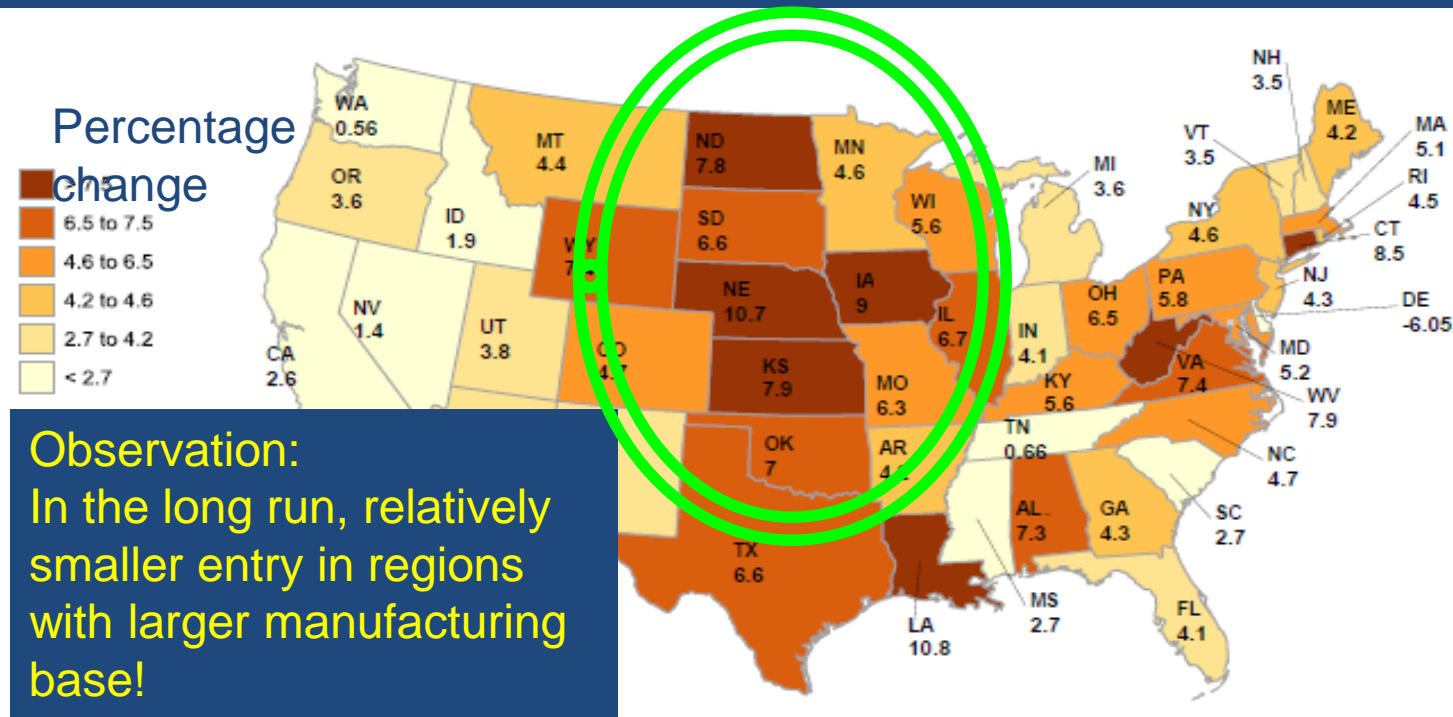
Effects of trade protectionism on industrial location

- Increase in the mass of manufacturing firms in U.S.
 - Short run effect: 0.33% (aprox. 900)
 - Long run effect: 4.66% (aprox. 12,800)
- Very heterogeneous effects across regions
 - Relatively more entry in the short run in regions with larger manufacturing base
 - In the long run, **relatively smaller entry in regions with larger manufacturing base today!**

Short Run effects of trade protectionism on industrial location



Long Run effects of trade protectionism on industrial location



(d) Long run (%)

Change in the mass of firms across countries in the Long Run

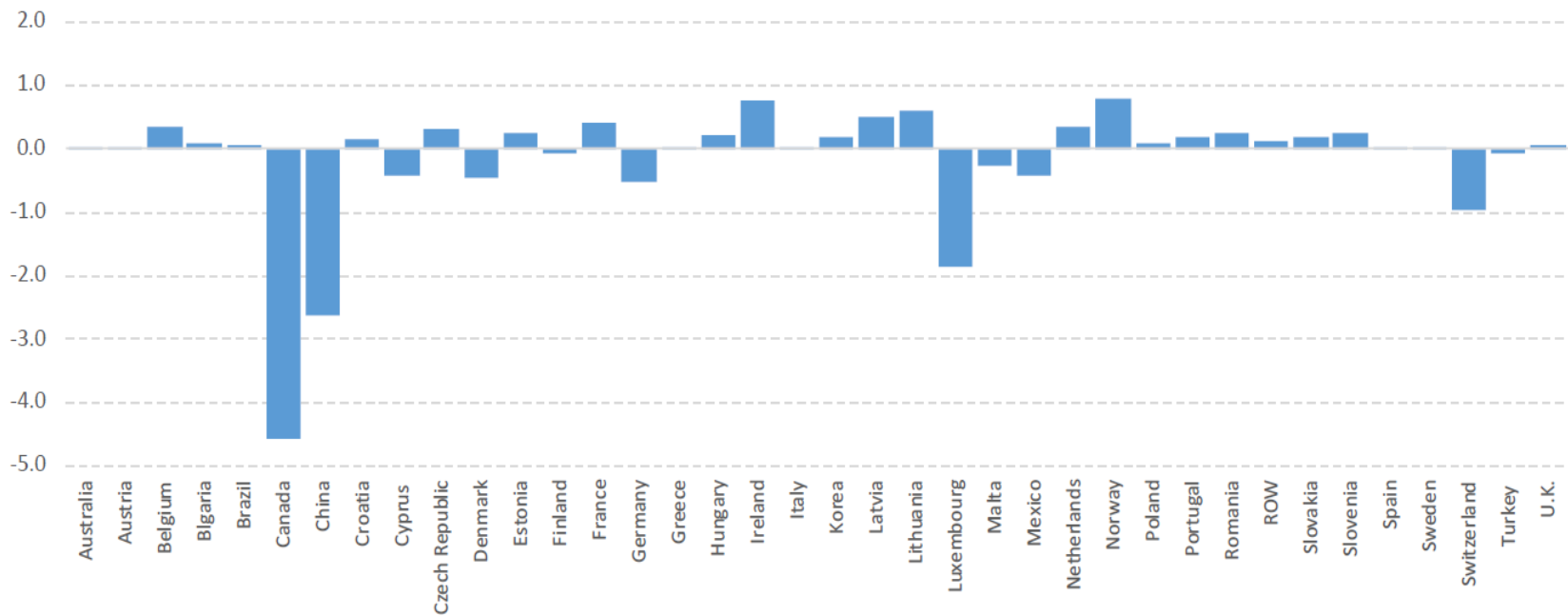


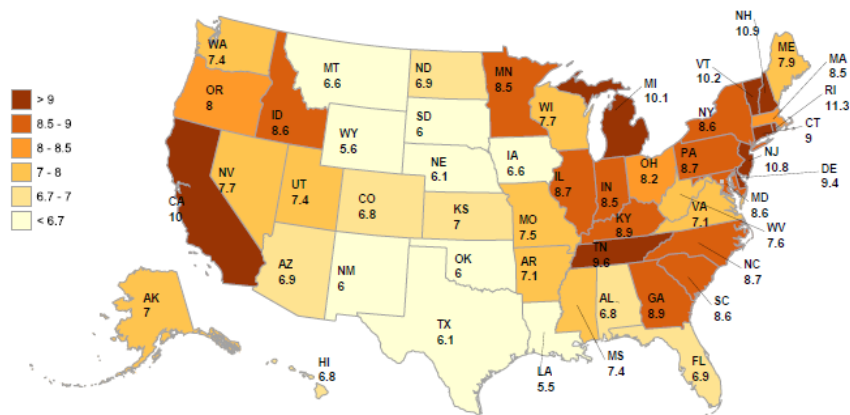
Figure: Changes in the mass of firms in other countries (%)

Effects of trade protectionism on industrial location

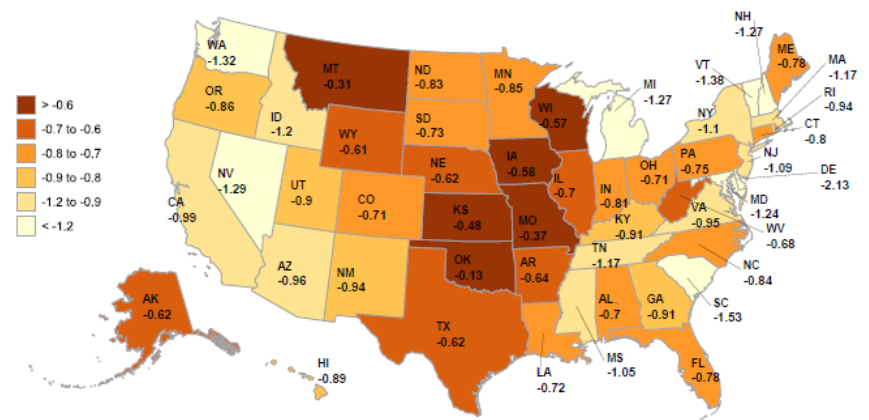
Takeaways:

- Positive location effect, but relocation of labor and production takes time
 - The magnitude of the location effect depends on how well-prepared they are to receive industries
 - Capital structures
 - Location comparative advantage
- Positive effects of bringing industries back home does not offset the increased in cost of purchasing intermediate and final goods from other countries
- There could be adverse distributional consequences

Long Run effects on Prices and real wages



(a) Change in price index (%)



(b) Change in welfare (%)

- U.S. real wages decline by 0.87%!
- U.S. aggregate price index increases by 7.9%!

Summary

- Protectionism and Industrial re-location is not the tool to redistribute the gains from trade
 - Might bring industries back, but does not guarantee an increase in the life standard
 - The increase in prices due to higher barriers may more than offset the positive effects of increasing local firms

どうもありがとうございます