International Economics I

Topics in Trade Policy

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Introduction

- We saw that trade, in general, is beneficial (with exceptions)
- In many of the models, the optimal trade policy is almost always free trade.
- What are the limits of our analysis?
- How this changes the way we think about trade policy?
- What are other elements that are not in the previous theory but could matter in reality?

Introduction

We will consider three examples and illustrate with some empirical analysis

(i) Dynamic gains and losses from trade.

(ii) Alternative trade policy instruments and global value chains.

(iii) Political economy of trade policy.

Outline

1. Dynamic Gains and Losses
2. Global Value Chains and Other Policy Instruments
3. Political Economy of Trade Policy

Dynamic Gains / Losses from Trade

- in all the models we saw, the effects of a trade liberalization unfold right away
- in reality, markets are not frictionless and most of workers/firms' decision are dynamic
  - firms have to make investment decisions (at home and abroad) and it takes to build
  - it is costly to hire and fire workers
  - unemployed individuals cannot find jobs right away (search frictions in the labor market)
  - human capital (e.g. training and experience) is not fully transferable across industries
  - location decisions (e.g. industries gaining are in another region than industries losing)

The China Shock

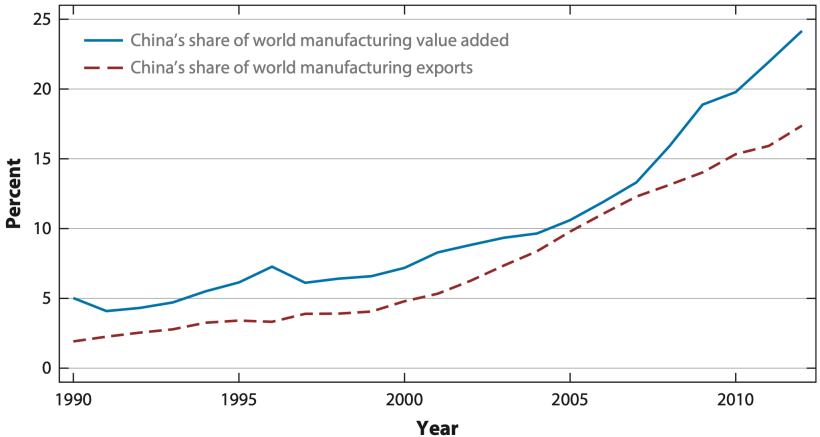
Empirical evidence: China shock (see Autor, Dorn, Hanson)

- The Chinese rise in the 90's $\Rightarrow$ market reforms, urbanization.
- Trade expansion of manufacturing goods $\Rightarrow$ strong comparative advantages in labor-intensive manufactures.
- Trade expansion accelerate in 00's $\Rightarrow$ China enter in WTO (2001).
- China's growth has represented a large positive net global supply shock for manufacturing $\Rightarrow$ regions/countries specialized in manufacturing goods lose.

For the impact of China on Spain see Donoso, Martín, Minondo (2014).

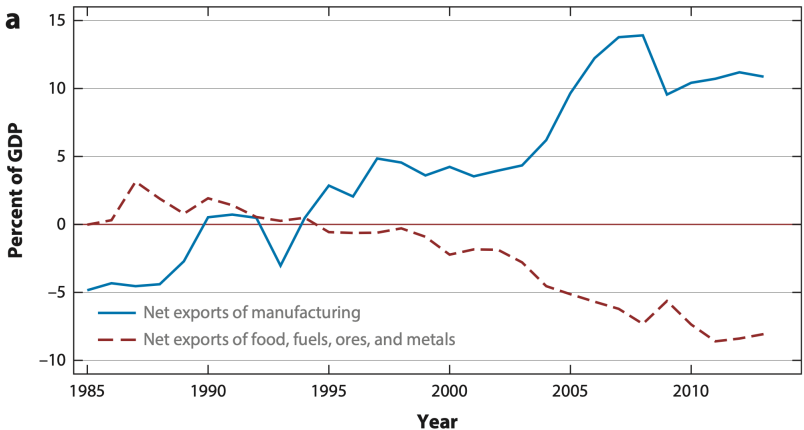
China Shock

China increases production of manufacturing relative to the rest of the world



China Shock

Increase in Chinese exports of manufacturing and imports of raw material



The China Shock

The effect on employment

- Industry level data says that employment in the US decreased in industries that competes with Chinese imports.
- Standard trade theory (i.e. static models) predicts that labor should reallocate from these industries to other industries.
- What really happened to these workers?

Two perspectives

- Regional approach
- Worker level approach (not shown here)

Regional Approach: Identify Affected Regions

- Variable that captures how much the region i is affected by Chinese imports:

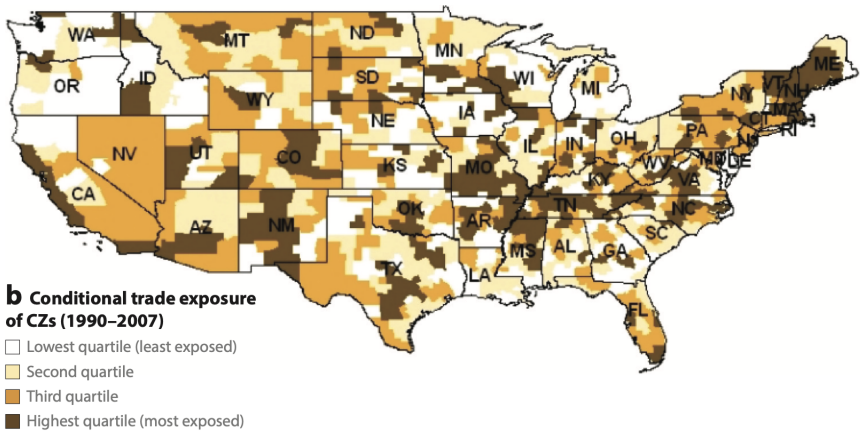
$$\Delta IPW_i = \frac{1}{L_i} \sum_j \frac{L_{ij}}{L_j} \Delta M_j \tag{1}$$

  - ΔM_j increase of US imports from China in industry j between 1990-2007
  - L_i: total employment in region i; L_j: total employment (nationwide) in industry j; L_{ij}: total employment in region i and industry j; in year 1990 (before China).

- More exposed regions have relatively higher employment share (i.e. high L_{ij}/L_j) in industries that suffered from Chinese imports (i.e. high ΔM_j).

China Shock

Regional variation of ΔIPW_i



Impact on Exposed Regions

An increase in USD 1000 of Chinese imports:

Table 4 Import competition and outcomes in US local labor markets (1990–2007)[a]

a. Δ Fraction of working age population in manufacturing, unemployment, and NILF			
Employed in manufacturing	Employed in non-manufacturing	Unemployed	NILF
(1)	(2)	(3)	(4)
−0.60***	−0.18	0.22***[b]	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 points)	Δ Average log weekly wage (log points)	Δ Annual wage/salary income per adult (US$)	Δ Transfers per capita (US$)
(5)	(6)	(7)	(8)
−0.05	−0.76***	−549.3***	57.7***
(0.75)	(0.25)	(169.4)	(18.4)

Exposed regions: increase unemployment, population out of the labor force governmental transfers; decrease wages; no effect on migration.

Dynamic Gains / Losses from Trade

- the cost of adjustment to trade are relevant:
  - In the U.S., regions more exposed to import competition from China are associated to lower wages, higher unemployment, less stable marriages and political polarization
  - Trade liberalization experiences in Brazil and Colombia led to increase in informality in the most affected regions even 10 years later
- sometimes the effects of a trade reform are felt 15-20 years later!
- effects felt beyond the affected industries: the entire region suffers.
- institutional context matters for the adjustment speed: rigid labor markets tend to do worse

Dynamic Gains / Losses from Trade

- recall that there are still gains: consumers benefit from cheap Chinese goods
- there are still a lot of discussion on what are the optimal policies to remedy the adjustment
- theory says that we should speed up adjustment and help the losers
- two examples of policies:
  - US: Trade Adjustment Assistance
  - EU: European Globalisation Adjustment Fund
- it involves some form of retraining/job search assistance for workers and credit/recovery plans for firms

Outline

1. Dynamic Gains and Losses

2. Global Value Chains and Other Policy Instruments

3. Political Economy of Trade Policy

Global Value Chains

- an important trend in international trade is the emergence of global value chains
  - Intermediates inputs account for 2/3 of total trade
  - different stages of a production process (e.g. R&D, design, production of parts, assembly, marketing and branding) are increasingly fragmented across firms and countries
- Tariff on an intermediate good can be very costly
  - If it increases the price of an important input, it increases the price of all goods that use that input!
- But trade policy is often more complex than just tariffs: many countries, many policy instruments $\Rightarrow$ **Preferential Trade Agreements**

Preferential Trade Agreements (PTA)

- types of PTA:
  - (i) **Free Trade Areas:** low tariffs between members, but each country sets its own tariffs with other countries (e.g. NAFTA)
  - (ii) **Custom Unions:** Members set common tariffs with other countries (e.g. MERCOSUR)
  - (iii) **Common Area:** Custom union + free movement of factors (e.g. EU)

- PTA may foster trade but can also have negative consequences:
  - **Trade Creation:** increase trade between member countries
  - **Trade Diversion:** can induce countries to stop importing from countries outside the PTA

- trade diversion can be negative if induces a country to import a good from a less productive country than before

Preferential Trade Agreements (PTA)

- PTA often comes with other trade instrument and interacts with more complex trade policies in non-trivial ways
- **Example:** The recent Regional Comprehensive Economic Partnership (RCEP) have a impact beyond of tariffs: it unifies rules, e-commerce, Rules of Origin..
- **Example:** Rules of Origin (RoO).
  - with so many intermediate inputs how can we define what is produced inside a PTA member and what is not?

Rules of Origins

- Rules of Origins can be of two types
  1. **Value-added requirements**: At least X% of the the value of the final good must be "domestic"
  2. **Change of tariff classification**: Some inputs cannot be sourced (at all) from outside the PTA

- a final good producer located in the PTA has two options:
  1. Comply with RoO: in this case it can export to PTA members at preferential tariff rates
  2. Not comply with RoO: source inputs from the most efficient producers around the world, but faces high tariffs when exporting to PTA members

Rules of Origins

- Theoretically, it is has long been known that RoO **distort sourcing** and lead to **trade diversion** in intermediate goods (e.g. Grossman, 1981)
- In a large survey by the International Trade Centre, RoO emerge as **the most problematic non-tariff** measure faced by manufacturing firms
- Very little empirical evidence since legal complexity of RoO makes extremely challenging to study.
- **Conconi, García-Santana, Puccio and Venturini (AER, 2018)**:
  - Focus on the case of one particular PTA: **NAFTA**
  - In NAFTA, the RoO are written at a very disaggregated (i.e. men's trousers)
  - They are well defined in terms of tariff classification (to produce men's trousers some restricted fabrics must be sourced from within FTA)

Identifying Trade Diversion

- **Triple-difference on Mexican Imports**:
  - Compare changes in Mexican imports between 1991 and 2003 (time difference);
  - Compare treated intermediate goods (subjected to RoO) to non-treated goods (goods difference).
  - Compare treated countries (outside NAFTA) to non-treated (NAFTA partners) (countries difference).
- **Intuition**:
  - An intermediate good subject to RoO (say the fabrics to produce men's trousers) may suffer **trade diversion**.
  - I.e change in Mexican imports from the rest of the world to NAFTA partners.

Results

- **Large effects**:
  - NAFTA RoO decreased the growth rate of Mexican imports from third countries relative to NAFTA partners by around around 45%.
  - Larger when RoO are stricter.
  - Larger when Mexican producers had stronger incentives to comply, i.e. greater importance of North American export market.
- **Summing up**:
  - Trade policy became very complex and tariffs are generally just a small part of the picture
  - Trade policy between two countries can affect trade between other countries (trade diversion).

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Political Economy of Trade Policy

- Why politicians choose "bad" trade policy?
- **Gains are diffused but losses are concentrated**
- Trump's steel and aluminum tariffs:
  - **Winners:** steel/aluminum workers and shareholders
  - **Losers:** pretty much everybody that drink from an aluminum can
  - the increase in the price of a can is negligible relative to a job loss / fall in share prices

Political Economy of Trade Policy

- Why politicians choose "bad" trade policy
- lobby
  - sectors subject to import competition will lobby for protection (i.e. the steel company owners, the steel union)
  - the consumers will likely not waste their time fighting against it (maybe the can producers)
  - for a more complex analysis see Grossman and Helpman (1994) "Protection for Sale"

Political Economy of Trade Policy

- why politicians choose "bad" trade policy
- populism
  - if the "median voter" benefits from these policies $\rightarrow$ politicians will propose it to get elected
  - example: HO with high and low skill workers, foreign is relatively abundant with low skill workers
  - opening to trade leads to a decrease in the wages of low skill workers (Stolper-Samuelson)
  - low skill workers will be against free trade

Empirical Evidence

- **Feigenbaum and Hall (2015)**:
  - Study legislators votes after the increase of Chinese imports in the US (between 1990-2010)
  - Exploit the regional approach of the "China shock" (a la Autor, Dorn, Hanson) and look at the increase in import penetration at congressional districts.
  - Look at roll-call votes: public and recorded votes where legislators can take clear policy positions and communicate them to constituents
  - Usually in roll-call votes legislators take more extreme positions (i.e. left-wing congressman tend to vote more left and vice versa)

Empirical Strategy

- **Construct a District Trade Score**:
  - Focus on past trade bills to construct how the average congressman of the district vote
  - A district trade score of -10 means that the legislator is 10 percentage points less like to vote in favor of free trade bills

- **Empirical Strategy**
  - Regress the ΔIPW_i (how much a region is affected by China) on changes of district trade score.
  - Use as an instrument variable the increase of Chinese imports in other developed countries. Control for the share of the decade that each district was represented by a Democrat.

Results

- Districts affected by Chinese import competition consistent shift toward protectionism on trade bills.
- The Chinese import competition had no effect in the voting of other bills!
- Stronger effects in more electoral competitive districts
- The effect persist no matter the incumbent is Democratic or Republican