

International Trade: China and the USA

Econ 43750

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October 12, 2020

Topics

- A very quick introduction to international trade. What does the conventional (standard, textbook) theory predict about trade between China and the USA
- What are the actual trade consequences for China and the USA?
- Fixing the standard theory.

China and Trade

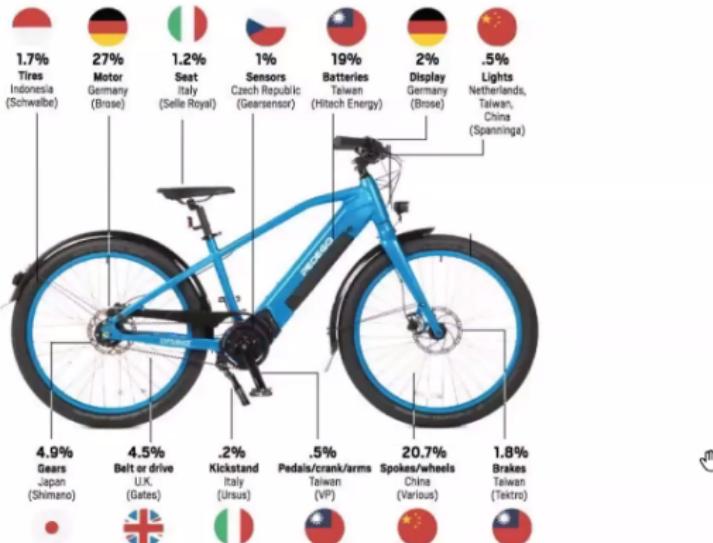
- 1949-GLF: Traded with other communist bloc countries, amounting to around 12% of GDP.
 - Exports textiles and processed food-like items.
 - Imports industrial materials.
- 1978-2000
 - Some trade with Hong Kong and Taiwan. (HK businessperson buys cloth, has a Chinese factory sew into clothes)
- Trade tightly controlled.
 - Certain Foreign Trading Companies (FTCs) had monopoly over trading.
 - Exchange rate fixed to USD to keep exports cheap. Other controls on access to foreign currency in place.
 - High tariffs (averaging 45%) and non-tariff barriers to protect local industry.
- WTO membership (2001) incentivizes China to be an open economy
 - Ease foreign exchange restrictions, reduce tariffs, give up monopoly on trade, grant foreign firms more access to China's economy.
 - Trade surges. We then observe the sorts of adjustments in the US (and China) outlined earlier.
- China assumes important position in global supply chain.
 - Induced by advances in communication, computerized warehouse management, container shipping, just-in-time delivery.
 - Lesson from coronavirus: Supply chain insufficiently diversified.

Global Supply Chain, Illustrated

What a GVC product looks like

Electric bike diversity

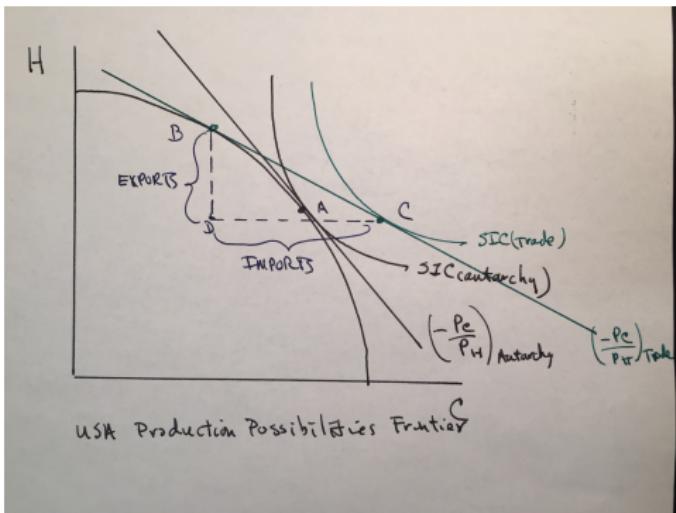
The Pedego Conveyor, a \$4,995 commuter bike, is among the newest of the Fountain Valley company's 12 models. It is manufactured outside Shanghai, with about three-quarters of its 50 components from China and the remainder from other Asian and European countries. Components from outside China account for 60 percent of the bike's cost. With the U.S. imposing tariffs on goods from China, production will move to Vietnam this month using the same components. Here's how the component costs break down.



Is Trade between the USA and China Good or Bad?

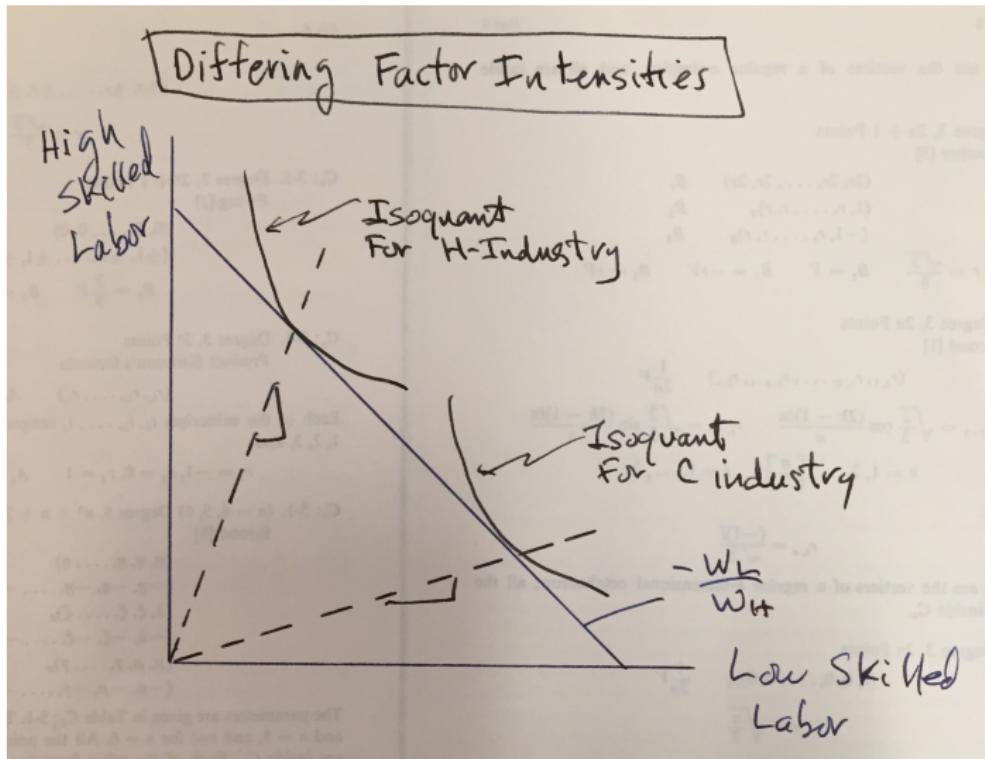
- Thought experiment: Consider the economy in autarchy (i.e., self-sufficiency). Analyze what happens when country opens to trade.
- Ever hear people say there are winners and losers from trade? It's true.
 - If there are losers, then trade cannot be Pareto improving.
 - If there are winners and losers, trade must worsen income inequality.
- If the above are true, how can people (especially economists) say that trade is good?
 - The argument for trade is the winners **could** compensate the losers and be left with a net gain.
 - Compensation to those who are damaged is an ethical and moral issue.
 - Do the winners ever **want** to compensate the losers? **NO!** In fact, the compensation hardly ever occurs. It is a political failure
- Note: Trade isn't the only reason for rising income inequality. It's about 1/3 of the reason. The other 2/3 is from advancing labor-saving (labor eliminating) technology.

The Trade is Good Argument

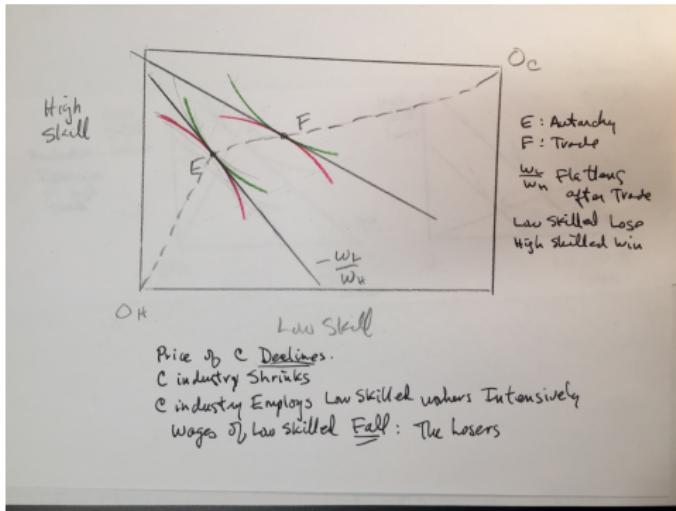


- Two goods: Sophisticated machinery (call it High Tech, or H for short), and some low-skilled labor intensive good like textiles (clothes or C for short).
- Develop argument from the US perspective (For China, the argument just goes in reverse).
- A: Autarchy. Slope of tangency at A is (negative) of price ratio, $-P_C/P_H$.
- China clothes cheaper than US. China H-goods more expensive. Open to trade, P_C in US goes down, P_H goes up.
- B: US production point.
- C: US consumption point.
- B-D: US exports. H industry expands (winners).
- D-C: US imports. C industry contracts (losers).
- US consumers benefit from low price imports.
- US social welfare is shown to be higher under trade, but **this assumes the losers are being compensated by the winners.**

High and Low Factor Intensity in Production across Industries



Winners and losers



- This is what happens **in the USA** when industry H expands and industry C contracts upon opening up to trade.
- This is the Edgeworth box in production space.
- There are 2 factors of production: High-skilled and low-skilled labor.

- E: Production in autarchy.
- Open to trade. $\uparrow P_H, \downarrow P_C \Rightarrow \uparrow H, \downarrow C$
- H is intensive in high-skilled, C in low-skilled. That means for given w_L/w_H , H uses a higher ratio of high-skilled to low-skilled labor than C .
- As C contracts and H expands, C sheds more low-skilled than H wants to pick up. Also H wants more high-skilled than C is releasing.
- Result: $\downarrow w_L/w_H$.
- Low-skilled are losers. High-skilled are winners
- Obviously, this is not cool for income equality
- As I said, they way to sell this is to say the winners could compensate the losers and still be left with higher income, but they never do this.
- Note: In China, $\uparrow C, \downarrow H, \uparrow w_L/w_H$.

Extensions

- Okay, so China exports goods like clothes and toys. These labor intensive industries expand.
- The simple model here assumes China money from exports to buy US exports. In real world is not like that.
- IRL, China sells its exports for US dollars (USD) and deposits in an interest bearing account, i.e., buys US Treasury bonds.
- The US exports bonds and imports clothes etc. from China. Hence the US runs a trade deficit and a capital surplus. **DJT is upset about the trade deficit because he doesn't understand economics**
- Trade balance (exports-imports) is (roughly speaking) national saving. China is a saver (BOT positive). USA is a borrower (BOT negative).

How has the USA Benefited?

- FRBNY Staff Report by Amiti, Dai, Feenstra, and Romalis (posted on the course website) finds a sizable (7.6 percent from 2001-2006) decline in manufactures prices.
- Lower prices means higher real income. Consumer welfare gain.

A look at Skill Premium in USA

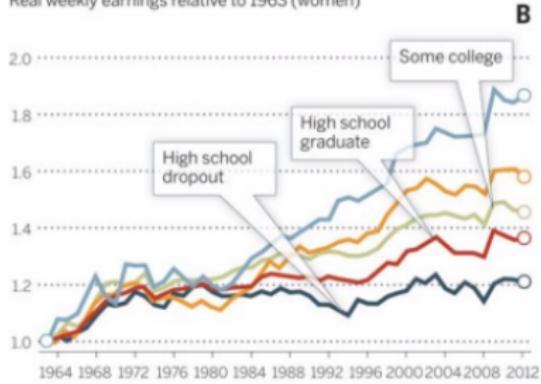
Real wages indexed at 1963 by education and gender, 1963-2013 - Autor (2014)⁴

Changes in real wage levels of full-time U.S. workers by sex and education, 1963–2012

Real weekly earnings relative to 1963 (men)



Real weekly earnings relative to 1963 (women)



(Source: the link to U.S. Skill Premium on course web site)
This conforms to predictions of the theory? Yes or no?

Skill Premium in China

(Mincerian) regression of log annual wages on education dummy, and controls (experience, experience squared, gender). Completed college, completed high school, or high-school dropouts. The plots are of coefficients on the dummies, from Han, Liu, and Zhang article posted on course web site. (exposure is in relation to trade)

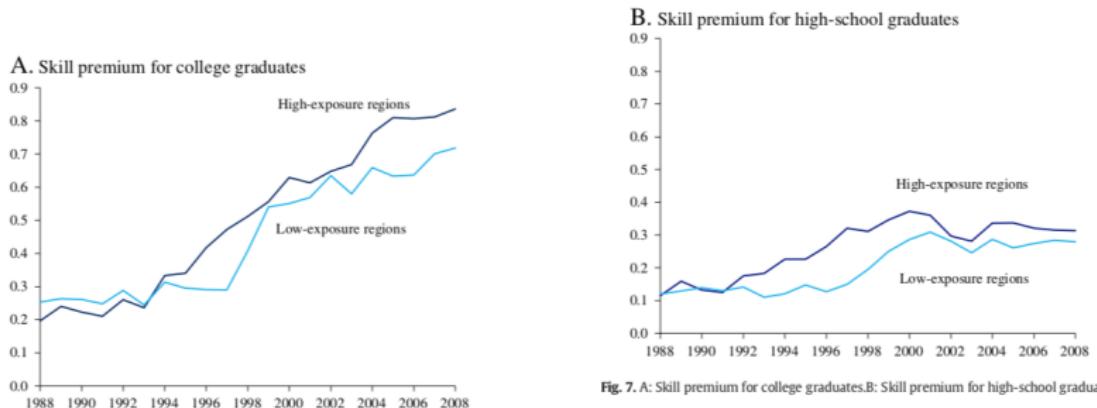


Fig. 7. A: Skill premium for college graduates.B: Skill premium for high-school graduates.

Heyyyy, what's going on? (BTW, the same thing has happened in Mexico)

Explanation

- The standard theory is static. Assumed static industrial structure.
- Technology transfer expands high-skilled intensive industries in China.
- Mexico: US FDI-US firms moving high-skilled intensive factories and plants to Mexico.