

The Free Trade Debate with an Example Logistic Regression

POSC 3410 – Quantitative Methods in Political Science

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Goal for Today

Explore public opinions about free trade.

What Do Citizens Think About Free Trade?



Figure 1: Bernie Sanders and Donald Trump have both railed against free trade

The Ongoing Free Trade Debate

Free trade is an integral part of U.S. economic policy.

- Important origins in post-WWII international economic order.
- Promoted through BWIs like the ITO during Cold War.
- Post Cold War: NAFTA, WTO

Free trade is one area of consensus among Republican and Democrat elites.

Arguments for Free Trade

Political scientists/economists tend to agree on free trade too.

- Free trade promotes world peace
- Free trade breaks down cultural barriers
- Free trade promotes economic development in developing world
- Free trade increases total production and efficiency
- Free trade leads to competition and innovation

I'd be hard-pressed to find the political economist or economist that does not support free trade in theory or practice.

Arguments Against Free Trade

- Free trade increases offshoring/outsourcing
- Free trade depresses wages
- Free trade only benefits the wealthy within wealthy countries
- Free trade makes capital “too mobile”
- Developing countries may artificially depress wages (e.g. China)

Free trade, like any policy, creates winners and losers.

- Those who lose want to revise free trade policy/agreements.

Is This an Honest Debate?

Political scientists/economists bemoan that this debate kind of misses the point.

- Drezner: most of the criticism rests on an image that's at least ten years out of date.

Manufacturing Output in the U.S.

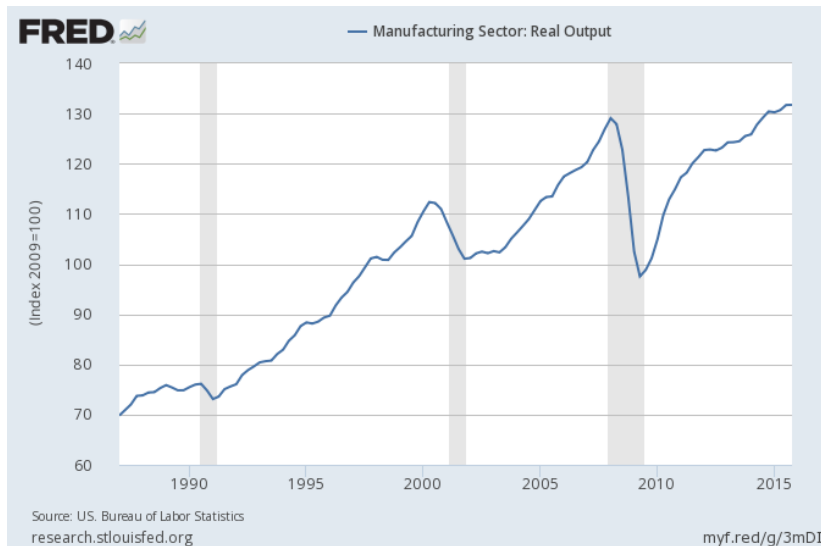


Figure 2: Manufacturing Output Since 1989

Manufacturing Jobs in the U.S.

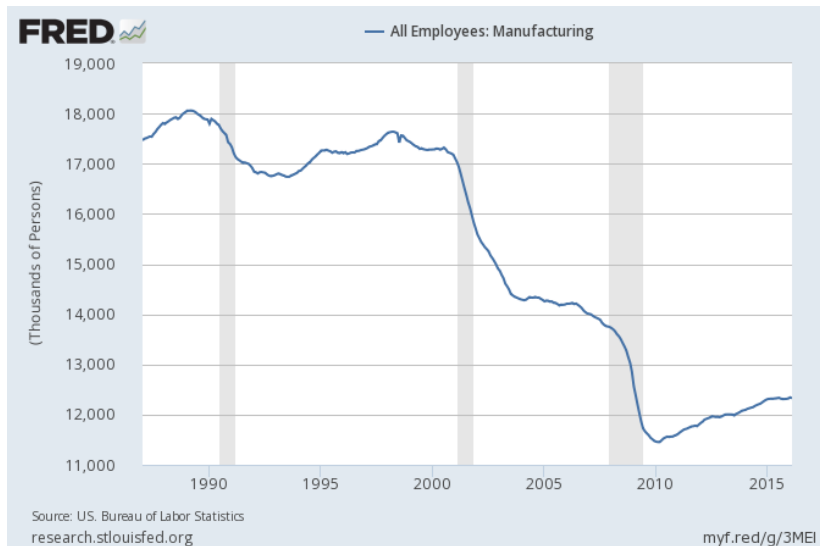


Figure 3: Manufacturing Jobs Since 1989

What About China?

China is a special case for negative externalities of free trade in the U.S.

- Enormous size
- Low income/wages
- Government promotion of exports
- Purposely depressed exchange rate

China Today

However, this is changing.

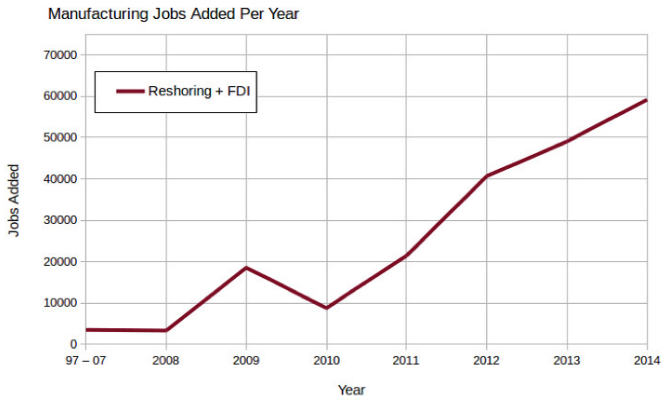
- China's trade level has flatlined
- Its growth has slowed
- Wages have skyrocketed
- Its currency is now *overvalued*

Free Market = Moving Target

Treat it for what it is: a market

- Those who moved early into China/India/Mexico found the best workers.
- Those who could relocate already have.

The Emergence of “Reshoring”



Cases 2007 through 12/31/14.

Sources: Reshoring Initiative Library, December 31, 2014.

Figure 4: Manufacturing Jobs Returning to U.S. Since 2008

Perception != Reality

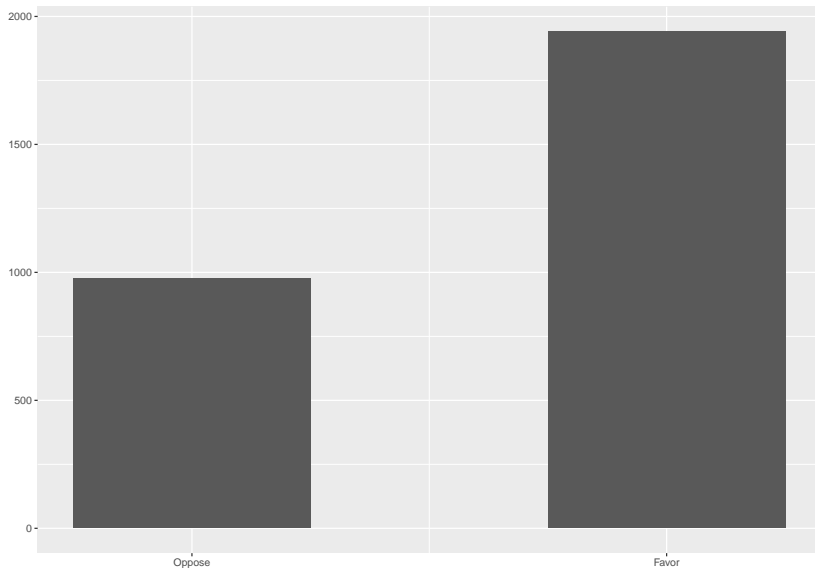


Figure 5: Do you favor/oppose placing new limits on imports? (ANES 2012)

Advancing an Explanation

I propose a simple explanation for variation in support for free trade: education

- Less educated citizens are most vulnerable to globalization.
- The benefits of free trade typically aren't taught in high school.

This makes sense anecdotally:

- Trump: "I love the poorly educated"
- Sanders' support seems to come from "millennials".

A Possible Interaction?

This might be contingent on partisanship. Anecdotally:

- Democrats championed free trade and Republicans don't question it.
- Sanders is nominally still an "independent"
- Trump brings in "Reagan Democrat" and "first-time voters" [which is a bit misleading, but alas].

Hypotheses

Hypothesis 1

Higher levels of education = more support for free trade

Hypothesis 2

Less educated citizens with less affinity to GOP/Dems = more likely to oppose free trade

Research Design

I gathered data from the 2016 pilot study for ANES.

- $n = 1,200$
- Respondents from across the country, including territories.

DV: Do you favor or oppose the U.S. making free trade agreements with other countries?

- Seven-point scale [favor a great deal:oppose a great deal]
- I condense it to a binary measure:
 - 1 = favor a great deal/moderately favor
 - 0 = favor a little/oppose a great deal

I'm sure this could be done better, but this is for illustration.

Research Design

IVs:

- Age (in years)
- Sex (female)
- Race (fixed effects [white, black, hispanic, other])
- Education (high school education or less)
- Unemployed
- Party ID (strong GOP, strong Dem)

Model:

- logistic regression

Code is available in this powerpoint/on my Github

Results

```
summary(M1 <- glm(msupfreetrade ~ z.age + female + factor(race4) +  
                  hsedorless + unemployed +  
                  strongrep + strongdem,  
                  data=Data, family=binomial(link="logit")))
```

```
summary(M2 <- glm(msupfreetrade ~ z.age + female + factor(race4) +  
                  hsedorless + unemployed +  
                  strongrep + strongdem +  
                  hsedorless:strongrep + hsedorless:strongdem,  
                  data=Data, family=binomial(link="logit")))
```

Results

Table 1: Attitudes About Free Trade (ANES, 2016)

	Model 1	Model 2
Age	-0.018 (0.158)	-0.013 (0.159)
Female	-0.650*** (0.151)	-0.660*** (0.152)
Race=Black	0.589** (0.229)	0.508** (0.233)
Race=Hispanic	0.295 (0.260)	0.271 (0.261)
Race=Other	0.161 (0.309)	0.143 (0.310)
HS ed or less	-0.202 (0.157)	-0.486** (0.219)
Unemployed	-0.495 (0.310)	-0.505 (0.312)
Strong GOP	0.524** (0.213)	0.517* (0.270)
Strong Dem	0.380** (0.176)	0.028 (0.226)
HS ed or less*Strong GOP		0.032 (0.437)
HS ed or less*Strong Dem		0.915*** (0.352)
Constant	-1.230*** (0.141)	-1.111*** (0.149)
N	1145	1145

***p < .01; **p < .05; *p < .1

Interpretation of Results

- Women are less likely to support free trade than men
- Black respondents are more likely to support free trade than white respondents
- Strong Republicans/Democrats support free trade more than those in between both ends.

Interpretation of Results

Let's look at the strong Republicans:

- Effect of strong affinity w/ GOP = increase of .524 in natural logged odds of supporting free trade.
- Odds ratio: $\exp(.524) = 1.688$
- Percentage change in odds: $100 * (\exp(.524) - 1) = 68.87\%$

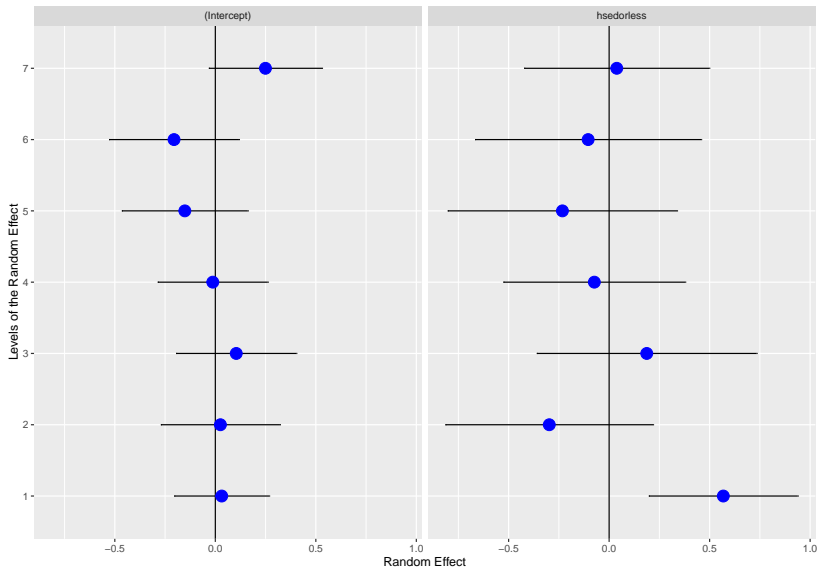
Interpretation of Results

Model 2 tests for a possible interaction.

- Strong Dem no longer significant
 - Actually effect of Strong Dems with more than HS education
- Strong GOP (with HS education or more) still significant

Effect of HS education or less is significant among those w/o strongest affinity to either party.

A Visualization



Conclusion

Free trade is an ongoing policy debate.

- Political scientists/economists support it.
- It's a rare consensus among Democrat/Republican elites.
- However, a large part of the general public isn't sold on free trade's benefits.

I offer an example logistic regression that hints at why.

- Strong GOP/Dems still support free trade.
- Lower education = less support for those in between both ends.

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