
Individual Attitudes Toward Free Trade

Beyond the Economics

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INTRODUCTION

Understanding voters' attitudes toward international free trade is essential to understanding the origins of trade policy in democratic states. Recently, more studies have used survey data to understand how voter demographics affect attitudes towards trade. Many of these studies involve testing main models of trade theory, such as the Heckscher-Ohlin and Ricardo-Viner models. Heckscher-Ohlin's factor endowments theory dictates that individuals owning factors of production abundant in supply prefer free trade as they benefit from the increased business, whereas free trade harms those that own factors of production relatively scarce in supply.¹ Alternatively, Ricardo-Viner's specific factors approach claims that the industry in which individuals work determines their attitudes towards trade.² Despite the usefulness of these models in explaining preferences for free trade at the firm level, there is little evidence that either model accurately predicts attitudes towards free trade at the individual level. Few studies have tested the strength of these models in this regard, but University of Pennsylvania professors Mansfield and Mutz, for instance, find that "the revealed comparative (dis)advantage of the industry in which an individual is employed does not influence his or her opinions in the way that this approach predicts."³ This would suggest that the Heckscher-Ohlin model fails to explain individual attitudes toward international free trade. Moreover, they claim that "education has no direct effect on trade attitudes, thus suggesting that its effects represent out-group anxiety rather than economic self-interest."⁴

Studies of voters' attitudes towards trade point to one universal finding: that in democracies, those with higher levels of education are more likely to support free trade. Some scholars see this phenomenon as representative of significant traction in the Stolper-Samuelson theorem, which states that an increase in the price of a good will lead to an increase in the price of the factor used to produce it.⁵ These scholars claim that education is a form of endowment of skills, so the Stolper-Samuelson theorem is verified by the fact that people with more education do indeed prefer free trade. The possible argument here is that education level can be viewed as an individual's skill level; therefore their competitiveness in exporting/importing industries is higher than an individual with inferior education, making their chances of profitability with international trade higher and their preferences more pro-trade. In addition, individuals with lower levels of education are more likely to work in industries producing goods that are cheap to import, and suffer from the foreign competition as a result. These studies have found that education is consistently indicative of pro-liberalization trade policy attitudes and that left-leaning individuals tend to be pro-liberalization, which is congruent with an evidence that higher levels of education tend to have a correlation with democratic attitudes in the United States.

However, not all agree that this is sufficient to verify the economic model. Harvard and Stanford professors Hainmueller and Hiscox also find that "effects of education on individual trade

¹ Leamer, Edward E. "The Heckscher-Ohlin model in theory and practice." (1995).

² Rodrik, Dani. "Political economy of trade policy." *Handbook of international economics* 3 (1995): 1457-1494.

³ Mansfield, Edward D., and Diana C. Mutz. "Support for free trade: Self-interest, sociotropic politics, and out-group anxiety." *International Organization* 63, no. 03 (2009): 425-457.

⁴ *Ibid.*, 452.

⁵ Hoffman, Michael ES. "What explains attitudes across US trade policies?." *Public Choice* 138, no. 3-4 (2009): 447-460.

preferences are not primarily a product of distributional concerns linked to job skills."⁶ They show that attitudes towards free trade among the highly educated are almost uniform, as are attitudes among the lower educated regardless of employment or industry. However, unlike supporters of the Stolper-Samuelson concept, Hainmueller and Hiscox theorize that higher levels of education are instead representative of greater exposure to ideas about trade and globalization.⁷

Apart from these economic theories, scholars have recently found an evidence that social factors may be strong determinants of attitudes towards trade as well. For instance, Mansfield and Mutz found evidence that national media coverage can shape voters' perceptions of how well the economy is doing and how trade influences their lives — which in turn can shape how their policy attitudes are formed.⁸ Similarly, Naoi and Kume have found that the reason why protectionism may be supported in specific industries might be related to whether an individual is close to someone who has experienced net loss from free trade, even if he or she has not.⁹

Finally, an interesting new phenomenon that has recently gained attention in the United States specifically is anti-foreigner sentiments. The most prominent example is the rise of Donald J. Trump. His capitalization on these anti-foreigner sentiments by promoting ideas like barring immigration and criticism of Mexicans and Muslims has been part of a successful campaign and victory of the presidency. While the Republican party has traditionally been the party of free trade, Trump represents a changing face of the US ideologies in that he has openly supported renegotiating trade deals with the intention of raising trade barriers. Trump's victory helps to accentuate a question that I pose in this paper: Is anti-foreigner sentiment and/or lack of exposure to immigrants a direct determinant of attitudes towards trade? In their working paper, Rothwell and Diego-Rosell help to scratch the surface of this question by studying who actually supports Trump and what kinds of individual factors can help us to predict why. Their study shows that Trump supporters are less educated and more likely to work in blue collar occupations, but are financially no worse or better off than the average citizen.¹⁰ However, Trump supporters are much more likely to live in predominantly White communities or rural areas. While these are interesting results as determinants of being a Trump supporter, I go a step further and investigate whether these geographic and sociological factors directly influence US voters' attitudes towards trade rather than Trump specifically.

Mansfield and Mutz also take on this issue in their study on "out-group anxiety."¹¹ They conclude that "incorporating the effects of sociotropic perceptions, isolationism, and out-group anxiety substantially increases the explanatory power of models of such attitudes."¹² However, I caution against taking their results as granted because Mansfield and Mutz's methods of operationalizing their measures of out-group anxiety are questionable. Without directly asking the respondents questions about sentiments towards foreigners, but instead categorizing their responses to other questions as broadly in/out group thinking, their measure of these sentiments have uncertain accuracy. Both studies attempt to measure how nationalism and sociological factors can directly affect voter attitudes. Rothwell and Diego-Rosell link a favorable view of Trump from respondents with, at least to some extent, a strong attitude in favor of nationalism as this is a centerpiece of Trump's campaign. Similarly, Mansfield and Mutz's measurement of out-group

⁶ Hainmueller, Jens, and Michael J. Hiscox. "Learning to love globalization: Education and individual attitudes toward international trade." *International Organization* 60, no. 02 (2006): 469-498.

⁷ *Ibid.*

⁸ Mansfield and Mutz, "Support for free trade: Self-interest, sociotropic politics, and out-group anxiety." 425-457

⁹ Naoi, Megumi, and Ikuo Kume. "Explaining mass support for agricultural protectionism: Evidence from a survey experiment during the global recession." *International Organization* 65, no. 04 (2011): 771-795.

¹⁰ Rothwell, Jonathan T., and Pablo Diego-Rosell. "Explaining nationalist political views: The case of Donald Trump." (2016).

¹¹ Mansfield and Mutz, *Support for Free Trade*, 425.

¹² *Ibid.*, 453.

anxiety broadly attempts to detect respondents' belief of whether the United States is culturally superior to other countries.

The focus of this paper is not necessarily to verify one model over another, but rather to clarify which individual factors from the available data are most significant in affecting voters' attitudes towards trade in the United States, amidst the changing social environment of Trump and growing anti-foreigner sentiments. Using data from 2015, I help to explain the relationship between attitudes towards trade and these sociological factors, as well as improve on some aspects of previously researched models using a similar kind of survey data.

DATA AND VARIABLES

Using data from the Pew Research Center Political Survey, I go beyond the economic models previously investigated, and instead delve into the societal- and individual-level characteristics that may affect one's opinion of free trade. Interviews were conducted from May 12, 2015 to May 18 by randomly calling telephone numbers of registered voters. Calls were staggered over times of days and days of the week to maximize the chance of making contact with potential respondents.¹³

I focus on the attitudes of Americans for two reasons. First, there exists previous research conducted in the United States providing comparability for my analysis, and a basis to improve on.¹⁴ Second, the United States currently exhibits an emphasis on voters' attitudes towards immigrants and, consequently, foreigners in general.¹⁵ I find evidence that exposure to ideas about trade is not the only determining factor, but also that individuals' attitudes towards foreigners in general have significance.

I use multivariable probit regression as a baseline method, to estimate how various factors correlate with the binary probability of seeing Free Trade Agreements (FTAs) as a good thing. I select this method as the most straightforward way to obtain estimations of the marginal effect of each variable on the probability of liking free trade.

The Dependent Variable

My dependent variable is designed to measure the probability of a given individual seeing FTAs as a good thing, to represent their attitude towards free trade. The survey question I use is as follows: *In general, do you think that free trade agreements between the US and other countries have been a good thing or a bad thing for the United States?* I turn the respondents' answers to this question into a dummy variable where 1 = FTAs are a good thing and 0 = FTAs are a bad thing. Although this question is specifically about Free Trade Agreements, FTAs are highly representative of the United States' involvement with international trade, so a measure of support for FTAs is indicative of that individual's support/opposition of free trade in general. Existing studies have used similar surveys to measure individual support for international trade, or alternatively records of their voting decisions on FTAs.

The Independent Variables

The key independent variables I investigate fall into four categories: (1) level of education, (2) respondents' perceptions of the effects of free trade, (3) attitudes towards foreigners, and (4) the respondent's location of residence.

¹³ Pew Research Center, May 2015 Political Survey, <http://www.people-press.org/category/datasets/>.

¹⁴ Hoffman, "What explains attitudes across US trade policies?", 447-460.

¹⁵ Fussell, Elizabeth. "Warmth of the Welcome: Attitudes toward Immigrants and Immigration Policy." *Annual review of sociology* 40 (2014): 479.

1 Education Variables

With the educational variables in mind from the previous studies, it is evident that more well-educated individuals tend to favor a more active role of the United States in foreign affairs, and have a more favorable view of free trade. It has been hypothesized that this could be the case for three reasons: (1) their tendency to be more open to foreign contact in general and less ethnically based prejudice; (2) they've had more exposure to economists' ideas about free trade through education directly; or (3) their education is a factor endowment by nature of being a skill.¹⁶

To measure the effect of education on attitudes toward free trade, I include three dummy variables for the levels of education attained at various points which are Some College, College Graduate, and Postgraduate Degree to include in the probit model. This is a replication of Mansfield and Mutz's methods to identify at what level education matters with respect to views on FTAs. Education is a categorical variable where a high school diploma or less as the highest level of education attained for respondents is omitted as a baseline comparison.¹⁷

2 Perceived Effects of Free Trade

For variables to represent perceptions of the effects of FTAs, the first is a variable to measure respondents' perceptions of how free trade affects their personal situations labeled Perceived Effects of Trade on Self. This is taken from the question "Thinking about the financial situation of you and your family. . . Do you think free trade agreements have definitely helped, probably helped, probably hurt, or definitely hurt the financial situation of you and your family?" This variable is a dummy variable coded as 1 = FTAs helped and 0 otherwise to indicate whether the respondent had a positive view of FTAs with respect to their family or not. The second variable measures respondents' perceptions of how free trade affects the nation, labeled Perceived Effects of Trade on US. This variable is based on the question "Do free trade agreements make the American economy grow, slow down the economy, or not make a difference?" Similarly, responses are coded into a dummy variable where 1 = Make the Economy Grow and 0 otherwise.

Looking at respondents' perceptions of the effects of FTAs on their personal situations, we can see from Figure 1 that although the distribution is skewed right, Americans have a generally positive view of FTAs. About 51% of respondents said that FTAs definitely helped or probably helped their families whereas only 40% said that they hurt. Looking at the distribution of responses for the perceived effect of FTAs on the nation as a whole in Figure 2, again the opinions are tipped in a slightly positive direction; however, generally the sample is split on this issue. In fact, the responses are split almost completely evenly with 37% of respondents saying that FTAs make the national economy grow and 37% saying that they cause the economy to slow down. The comparison of these two questions is interesting as it seems that respondents had a better reaction to FTAs with respect to their own families as opposed to the economy as a whole. This seems to imply that respondents may not feel as strongly about the effects of FTAs on their families personally as much as they feel witness to an economic downturn of the nation instead. However, contrary to Mansfield and Mutz's findings, a much smaller portion of respondents said that FTAs have no effect on their families (only 10%).

¹⁶ Hainmueller, Jens, and Hiscox. "Learning to love globalization: Education and individual attitudes toward international trade." 469-498.

¹⁷ Mansfield and Mutz. "Support for free trade: Self-interest, sociotropic politics, and out-group anxiety." 442.

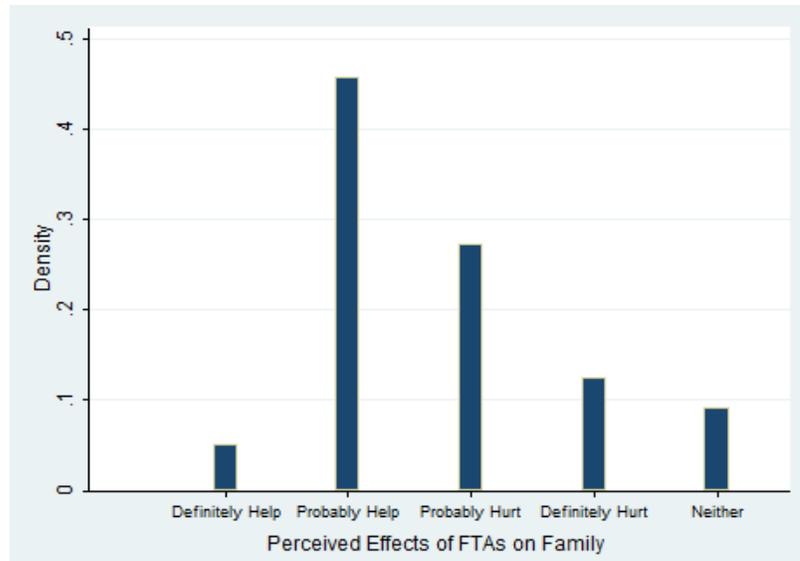


Figure 1: Distribution of perceptions of free trade with respect to individual families.

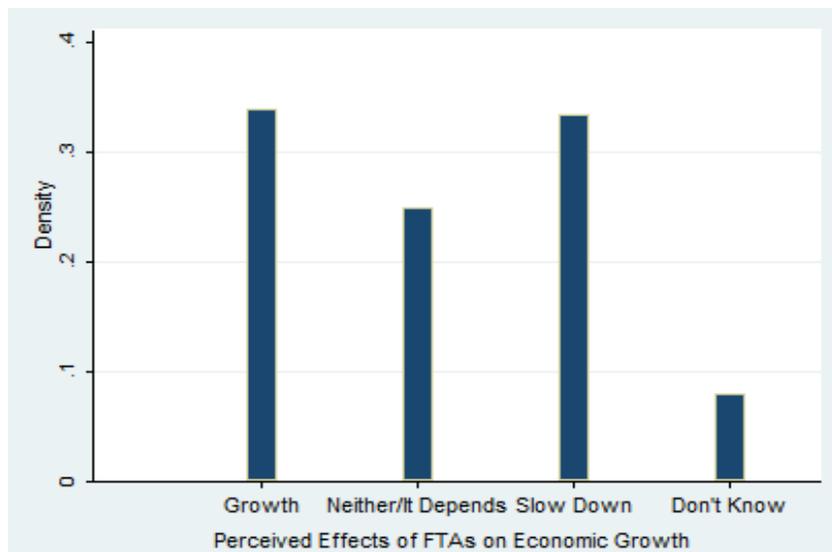


Figure 2: Distribution of perceptions of free trade with respect to national economic growth.

3 Attitudes Toward Foreigners

To test noneconomic influences on people's opinions of free trade, I use variables representing respondents' attitudes towards foreigners and variables detailing characteristics of the area they reside in. Previous studies' attempts to measure attitudes towards foreigners have not been satisfactory. For instance, Mansfield and Mutz touch on the idea of "nationalism" and "ethnocentrism" in their paper, but provide an unsatisfactory measure that simply "draws on three previously used questions to assess whether respondents believe that the United States is culturally superior to other countries" without providing a firm indicator of this concept.¹⁸

Admittedly, directly asking people if they hold suspicions or negative feelings towards foreigners would not likely lead to very honest or usable results. Instead, similar to the way some have used the Central America Free Trade Agreement (CAFTA) as a case issue to measure people's attitudes towards free trade, I use survey questions on two key issues in US politics to determine attitudes towards foreigners: immigration policy and war.¹⁹ The first variable, labeled Opinion of Immigrants, uses people's perceptions of immigrants in the United States to represent their attitudes towards foreigners. This variable is drawn from the question "Here are some pairs of statements. Please tell me whether the first statement or the second statement comes closer to your own views—even if neither is exactly right. Immigrants today strengthen our country because of their hard work and talents OR Immigrants today are a burden on our country because they take our jobs, housing and health care." I use the responses to this question to code Opinion of Immigrants as a dummy variable where 1 = agrees that "immigrants strengthen our country," and 0 = otherwise to represent whether someone has inherently positive views of foreigners or not.

The second variable, labeled Drone, uses a question about US drone strike tactics to measure respondents' benevolent feelings towards foreigners or lack thereof as another representation of attitudes toward foreigners. This variable is drawn from the question "How concerned are you, if at all, about whether US drone strikes endanger the lives of innocent civilians? Are you very concerned, somewhat concerned, not too concerned or not at all concerned?" Again, this is coded into a dummy variable where 1 = somewhat concerned or very concerned and 0 = otherwise.

4 Geographic Indicators

Previously, studies have found that individuals living in more rural areas tend to have more nationalistic attitudes, implying that they would be more inclined to be against free trade.²⁰ However, those studies have not yet directly tested how this variable affects individuals' attitudes toward free trade. The first set of variables I use to investigate the direct relationship is a measure of population density using the respondents' area codes, derived from 2010 Census data according to their responses.²¹ These are categorized into five categories of density, from lowest to highest in people per square mile (Very Low, Low, Medium, High, and Very High Density). Similar to income, this measure is represented by a series of categorical variables where the first category of Very Low Density is omitted as a baseline comparison. The second variable of my geographic variables is a classification of the region that the respondent resides in using the 2010 Census Urban Rural Classification, assigning each respondent a number from 1 to 3 where 1 = Urban Region, 2 = Suburban Region, and 3 = Rural Region. This is a categorical variable represented by a series of indicator variables where the third category of Rural Region is omitted as a baseline comparison.

5 Control Variables

Finally, all of the models include control variables representing other personal characteristics correlated with attitudes toward free trade including income, party identification, gender, and age.

¹⁸ Ibid, 439-440.

¹⁹ Guisinger, Alexandra. "Determining trade policy: Do voters hold politicians accountable?" *International Organization* 63, no. 03 (2009): 533-557.

²⁰ Rothwell and Diego-Rosell. "Explaining nationalist political views: The case of Donald Trump." 2016.

²¹ US Census Bureau. 2010 Census Data. 2010. Distributed by US Census Bureau. <http://www.census.gov/2010census/data/>.

Income is measured by each respondent's total family income for the year of 2014. Income is a categorical variable separated into four categories: (1) Under \$30,000, (2) 30 to Under \$50,000 (3) 50 to Under \$100,000 and (4) \$100,000 and above. Since income is a categorical variable, it is represented by a series of indicator variables where each coefficient represents the marginal effect of earning an income in that category's range compared to the previous category, and so on. The first category of Under \$30,000 is omitted as a baseline comparison. Gender is a simple dummy variable where 1 = male and 0 otherwise, and Age is a continuous variable. Party identification is treated as a categorical variable where Democrat and Republican are each dummy variables coded as 1 if the respondent identifies with that party and 0 otherwise. Independent political affiliation and other political affiliations are omitted as a baseline comparison.

MODELS AND RESULTS

I start with a baseline multivariate probit model to measure the correlation of education with attitudes toward free trade, solely using my variables for education and control variables. Then in each model after, I add another set of factors to test — starting with perceptions of the effects of free trade, then attitudes towards foreigners, and finally geographic indicators about where the respondent resides. The results are shown in Table 1. The models are designed to measure how each factor affects the binary probability of holding a favorable view of Free Trade Agreements. While I primarily look at marginal effects of each variable for the most useful interpretation, original unmodified coefficients from the models can be found in Table 3 of the Appendix. The multivariate probit models can be expressed as follows:

$$P[F_i] = E_i + C_i + \varepsilon_i \quad (1)$$

$$P[F_i] = E_i + P_i + C_i + \varepsilon_i \quad (2)$$

$$P[F_i] = E_i + P_i + F_i + C_i + \varepsilon_i \quad (3)$$

$$P[F_i] = E_i + P_i + F_i + G_i + C_i + \varepsilon_i \quad (4)$$

where the numbers correspond to the number of the model in Table 1. The probability $P[F_i]$ of individual i perceiving FTAs as a "Good Thing" is dependent on their highest level of education attained (E); their perceptions of the effect of FTAs on the national economy and on their personal financial situation (P); their attitudes towards foreigners (F); geographical characteristics of their zipcode (G); and control variables including income, political affiliation, gender, and age (C); with remaining error ε .

From Model 1, we can see that whether someone has a postgraduate degree is the strongest indicator of his or her attitude toward free trade; but as I add in other variables of interest, it loses significance. This is likely because the other factors I add in have much stronger statistical power and diminish the significance of the education variables. On the other hand, whether someone holds a college degree does become significant in

Table 1: Marginal Effects of Multivariate Probit Models — Significance of Perceived Effects of FTAs on View of FTAs

	(1)	(2)	(3)	(4)
		-	-	-
		0.0	0.0	0.0
Some College	0.00	13	14	20
	729	0	9	5
		(0.	(0.	(0.
	(0.03	04	04	04
	94)	16)	16)	16)
		-	-	-
	-	0.0	0.0	0.0
College Grad	0.03	83	88	91
	57	4	1	3
		(0.	(0.	(0.
	(0.03	04	04	04
	83)	10)	10)	11)
	0.	0.0	0.0	0.0
Postgrad	12	57	44	46
	9	1	5	2
		(0.	(0.	(0.
	(0.03	04	04	04
	40)	01)	12)	13)
		-	-	-
	-	0.0	0.0	0.0
Income [30 to Under \$50,000]	0.01	18	16	16
	14	9	1	1
		(0.	(0.	(0.
	(0.03	04	04	04
	79)	08)	07)	08)
		-	-	-
		0.0	0.0	0.0
Income [50 to Under \$100,000]	0.00	18	18	18
	905	0	8	5
		(0.	(0.	(0.
	(0.03	03	03	03
	61)	92)	92)	95)
		-	-	-
		0.0	0.0	0.0
Income [\$100,000 and Above]	0.03	33	38	46
	94	9	6	0
		(0.	(0.	(0.
	(0.03	04	04	04
	86)	38)	41)	47)
	-	0.0	0.0	0.0
Republican	0.00	01	11	20
	173	03	3	4

		(0.0318)	(0.0342)	(0.0346)	(0.0346)
			-	-	-
			0.0	0.0	0.0
		0.0134	113	196	284
Democrat			(0.0330)	(0.0333)	(0.0338)
			-	-	-
		-	0.0	0.0	0.0
		0.0248	399	421	429
Male			(0.0260)	(0.0279)	(0.0280)
			-	-	-
		0.0042	015	0136	0118
Age			(0.00724)	(0.00806)	(0.00815)
			0.379	0.376	0.379
Perceived Effects of Trade on US			(0.0237)	(0.0239)	(0.0239)
			0.444	0.446	0.448
Perceived Effects of Trade on Self			(0.0246)	(0.0247)	(0.0248)
				0.064	0.055
Opinion of Immigrants				20	0
				(0.0295)	(0.0299)
				-	-
				0.090	0.091
Drone				40	4
				(0.0307)	(0.0307)

				0.0
				47
Low Density				4
				(0.
				04
				44)
				0.0
				85
Medium Density				9
				(0.
				04
				76)
				0.1
High Density				11
				(0.
				04
				66)
				0.0
				99
Very High Density				1
				(0.
				04
				84)
				-
				0.0
				13
Urban Region				9
				(0.
				03
				27)
				0.0
				24
Suburban Region				7
				(0.
				05
				03)
<hr/>				
N	1487	14	14	14
		87	87	87
	0.02	0.3	0.3	0.3
pseudo R ²	5	54	60	64
<hr/>				

p < 0.05, p < 0.01, p < 0.001 Standard errors in parentheses

the latter models. This implies that after holding more things constant, such as perceptions of trade or attitudes towards foreigners, whether someone attended college has a greater impact on his or her attitude towards trade. Similar to studies in precedence, no level of income is a significant explanatory variable of attitudes toward free trade. If we are looking at education as a part of the factor endowments model, then taking into account the coefficients for income, there does not seem to be strong evidence for the Stolper-Samuelson theorem.

While there is little evidence that individuals' level of income affects their attitudes toward trade, from Model 2, we can see that perceptions of how trade affects respondents' families and/or the nation are highly correlated with their opinions on FTAs overall. In Table 1, the marginal effects of the variables Perceived Effects of Trade on US and Perceived Effects of Trade on Self are highly statistically significant. Respondents who feel that FTAs have a positive effect on their families are much more likely to think that FTAs are a good thing overall, and the same goes for perceptions of the effects of FTAs on the US. Including the perceived effects of FTAs on respondents' families and the nation substantially strengthens the model's explanatory power, increasing the R^2 value from only about 3% to 35%. Each adjusted model consequently also increases the explanatory power, but only by a marginal amount.

Surprisingly, the gender and political affiliation (Democrat or Republican) of respondents do not have a significant correlation with attitudes toward FTAs. Controlling for more variables, those who identify as Democrats tend to be more protectionist than those who do not and vice versa for Republican, but the coefficients are not significant. In Model 1, age is highly significant showing that older individuals are much more likely to have protectionist attitudes towards FTAs than the younger individuals.

Next, looking at the measures of attitudes toward foreigners in Models 3 and 4, I find that the measurement of compassion towards foreigners is actually more significant than the immigration indicator of positive attitudes toward foreigners. However, the coefficient is negative and statistically significant meaning that those with concerns for civilians in US drone strikes are actually about 9% more likely to be protectionist. This is surprising and gives cause to reevaluate my theory on how this variable relates to attitudes towards FTAs and free trade. Rather than an indication of positive or negative attitudes toward foreigners as I thought before, it seems that a more plausible explanation is that this variable is representative of attitudes towards US foreign affairs and whether the US should be more or less involved with other countries' politics. Regardless, these two variables verify that opinions about foreigners and US involvement in foreign affairs in general, not just in an economic sense, significantly correlate with American's attitudes toward FTAs and free trade.

Finally, in Model 4, I add my two variables to account for geographic considerations about the respondent's environment, specifically the idea that those in rural or less populated areas are more likely to have a nationalistic or isolationist attitude, and consequently, more protectionist attitudes and vice versa. We can see that population density is statistically significant at two of the classification levels, but region type does not have a strong relationship with attitudes toward trade. This tells us that individuals living in more densely populated areas are more likely to have a favorable outlook on free trade or FTAs, at least on some levels.

ACCURACY OF THE MODEL

One apparent concern in replicating Mansfield and Mutz's model is that while it is plausible to theorize that one's perceptions of how FTAs affect their personal financial situation and the national economy will help determine their view on whether FTAs are a good thing, it is more likely that these two variables are simply alternative measures of the same thing—respondents' favorable or unfavorable views of FTAs. Especially when these questions are asked in immediate succession,

respondents are likely inclined to answer similarly. Thus, I think an alternative variable should be estimated in order to truly test the relationship between an individual's perceived financial situation and attitudes toward free trade. Rather, a more valuable variable to look at would be individuals' perceptions of their personal financial situations overall and the national economy overall, to see if these general economic conditions are reflected in their opinions of free trade agreements.

Secondly, in light of the coefficient that I found for the drone variable, it seems that it would be useful to further investigate the effect of attitudes towards the United States' general involvement with foreign affairs on attitudes toward free trade, in addition to positive or negative attitudes toward foreigners themselves.

Revised Models

According to findings from the above models, I revise my models to include the respondents' perceptions of the United States' economy overall and their personal financial situation overall, as opposed to perceived effects of FTAs. I believe this to be a better representation of a possible causal relationship, because asking about perceived effects of FTAs is very close to variations on the same question of how respondents feel about FTAs overall. To operationalize these variables, I utilize three survey questions. Each are coded as binary indicators where 1 = excellent or good and 0 otherwise. The first variable, labeled Perceived State of US Economy, is a measure of respondents' perceptions of the US economy overall worded as follows: "How would you rate economic conditions in this country today. . . as excellent, good, only fair, or poor?" Next, is a variable to indicate how respondents perceive their own current financial situation, labeled Perceived State of Personal: "How would you rate your own personal financial situation? Would you say you are in excellent shape, good shape, only fair shape or poor shape financially?" Finally, the third variable is a measure of respondents' optimism for the future of their personal financial situation, labeled Optimism: "Over the course of the next year, do you think the financial situation of you and your family will improve a lot, improve some, get a little worse or get a lot worse?" The indicator for this variable is coded as 1 = Improve Some, 0 = Get Worse. The revised Model 4 can be expressed as follows:

$$P[F_i] = E_i + S_i + F_i + G_i + C_i + \varepsilon_i \quad (4)$$

where I replace the variables for individuals' perceptions of the effects of FTAs on the nation and their personal situations (P) in the previous Models 2-4, with the three new variables representing respondents' perceptions of the general state of the national economy and their personal situations (S). The results of these revised models are in Table 2; the unmodified coefficients of these models can be found in Table 4 of the Appendix. The results shown in Table 2 are mostly similar for the variables that remained constant throughout the models; however, for the new indicator of perceptions of the US economy, I do find an extremely statistically significant marginal effect for people's perceptions of the state of the US economy and their attitudes toward free trade. Such a high marginal effect would imply that those who are more satisfied with the health of the nation's economy overall, are more likely to support free trade and FTAs than individuals who perceive the nation's economy as doing poorly. Moreover, I do not find significant results for the other two new indicators pertaining to personal financial situations. This seems to suggest that people's attitudes toward free trade are directly linked to their perceptions of the national economy overall, regardless of their personal situation or perceptions of their immediate community. Interestingly, in Model 4 with the previous perceived effects indicators, my measurement of compassion for foreigners measured by the "drone" survey question had highly significant effects; but with these new indicators, I find the opposite — my variable for perceptions of immigrants is statistically significant but my variable for the question about drones is not.

Table 2: Marginal Effects of Revised Models — Using Perceived General State of the US Economy and Personal Financial Situation as Opposed to Perceived Effects of FTAs.

	(1)	(2)	(3)	(4)
Some College	0.00747 (0.0396)	0.0137 (0.0399)	0.00970 (0.0401)	0.00406 (0.0401)
College Grad	-0.0399 (0.0385)	-0.0576 (0.0387)	-0.0584 (0.0389)	-0.0638 (0.0390)
Postgrad	0.126 (0.0343)	0.113 (0.0351)	0.0947 (0.0362)	0.0929 (0.0364)
Income [30 to Under \$50,000]	-0.0117 (0.0381)	-0.0231 (0.0387)	-0.0196 (0.0388)	-0.0168 (0.0389)
Income [50 to Under \$100,000]	0.0135 (0.0363)	-0.0174 (0.0384)	-0.0116 (0.0384)	-0.00362 (0.0386)
Income [\$100,000 and Above]	0.0438 (0.0387)	0.00660 (0.0421)	0.00430 (0.0423)	0.00788 (0.0426)
Republican	-0.00134 (0.0319)	0.00853 (0.0320)	0.0341 (0.0323)	0.0406 (0.0323)
Democrat	0.0117 (0.0301)	-0.00914 (0.0309)	-0.0196 (0.0313)	-0.0264 (0.0316)
Male	-0.0253 (0.0262)	-0.0233 (0.0263)	-0.0238 (0.0264)	-0.0223 (0.0265)
Age	-0.00428 (0.000725)	-0.00382 (0.000758)	-0.00335 (0.000768)	-0.00317 (0.000775)
Perceived State of US Economy		0.126 (0.0287)	0.107 (0.0295)	0.107 (0.0296)
Perceived State of Personal Optimism		0.0561 (0.0290)	0.0447 (0.0293)	0.0447 (0.0294)
Opinion of Immigrants		0.0440 (0.0282)	0.0301 (0.0285)	0.0287 (0.0285)
Drone			0.121 (0.0282)	0.114 (0.0285)
Low Density			-0.0373 (0.0313)	-0.0373 (0.0313)
Medium Density				-0.00331 (0.0439)
High Density				0.0302 (0.0486)
Very High Density				0.0440 (0.0492)
Urban Region				0.0243 (0.0511)
				-0.0649 (0.0305)

Suburban Region				-0.0548 (0.0500)
pseudo R ²	0.025	0.041	0.051	0.055
N	1487	1487	1487	1487

p < 0.05, p < 0.01, p < 0.001 Standard errors in parentheses

CONCLUSION

In any democratic model of government, it is obvious that the preferences of the masses are essential to our understanding of policymaking for any issue, including free trade.²² Despite this fact, our understanding of what shapes individual's attitudes toward free trade are still limited. The strong implication of my study is not only that standard political economy models are very limited in how much of the variation in preferences they can account for, but also that noneconomic factors can play a significant role in shaping individuals' preferences over trade. Most research until now emphasizes the economic factors that affect trade preferences including factor endowments, specific factors, and other standard models of trade. However, this evidence shows that on the contrary, individual prosperity or economic endowment does not actually correlate strongly with protectionist or liberalization preferences. As the United States is a highly developed country, theoretically highly skilled individuals will benefit economically from open trade and should therefore prefer trade liberalization such as Free Trade Agreements. While there is limited support for this hypothesis, stronger evidence exists for other factors such as attitudes toward foreigners or opinions about the state of the US economy in general.

Moreover, in fixing Mansfield and Mutz's key oversight of using alternate measures of the dependent variable rather than unique separate independent variables, I was able to identify more accurate sources of trade preferences going past the obvious correlations. In an age of expanding globalization and trade liberalization, individuals likely tend to associate the financial well-being of the nation overall with the growing trend of free trade, whether globalization is truly the cause or not. Individuals observe this phenomenon and the current situation, and link them together to form their opinions. This is especially represented in my new models with different variables directly measuring the marginal effect of people's perceptions of the state of the national economy overall, rather than the perceived effects of free trade. Regardless of personal situations or perceptions of their local community, this measure was significant in predicting individuals' attitudes toward free trade. This has significant implications for future research on the roots of voters' opinions on not just trade issues, but also economic issues overall.

Finally, in a year when illegal immigration is one of the most controversially relevant topics, noneconomic factors such as individuals' opinions about foreigners and the unfamiliar are more and more salient. Finding that these perceptions, although not economically rational to link to trade, have a significant effect on trade preferences provides a step forward in getting to the true causes of preference distribution on trade issues at the individual level.

²² Funk, Patricia, and Christina Gathmann. "Estimating the effect of direct democracy on policy outcomes: preferences matter." Stanford Center for International Development Working Paper 248 (2005).

APPENDIX

Table 3: Unmodified Coefficients for Models 1-4

	(1)	(2)	(3)	(4)
Some College	0.0198 (0.105)	-0.0312 (0.124)	-0.0372 (0.125)	-0.0561 (0.125)
College Grad	-0.106 (0.102)	-0.264 (0.123)	-0.279 (0.124)	-0.286 (0.124)
Postgrad	0.351 (0.102)	0.151 (0.128)	0.112 (0.130)	0.116 (0.130)
Income [30 to Under \$50,000]	-0.0309 (0.100)	-0.0671 (0.118)	-0.0593 (0.119)	-0.0586 (0.120)
Income [50 to Under \$100,000]	0.0359 (0.0967)	-0.0515 (0.115)	-0.0539 (0.115)	-0.0502 (0.116)
Income [\$100,000 and Above]	0.117 (0.105)	-0.0869 (0.126)	-0.0995 (0.127)	-0.117 (0.128)
Republican	-0.00355 (0.0845)	0.00188 (0.101)	0.0355 (0.104)	0.0600 (0.104)
Democrat	0.0312 (0.0800)	-0.0299 (0.0972)	-0.0566 (0.0983)	-0.0813 (0.0992)
Male	-0.0673 (0.0698)	-0.109 (0.0837)	-0.117 (0.0843)	-0.119 (0.0846)
Age	-0.0113 (0.00192)	-0.00514 (0.00234)	-0.00390 (0.00238)	-0.00343 (0.00241)
Perceived Effects of Trade on US		1.292 (0.105)	1.286 (0.106)	1.297 (0.107)
Perceived Effects of Trade on Self		1.377 (0.0863)	1.390 (0.0873)	1.397 (0.0878)
Opinion of Immigrants			0.195 (0.0875)	0.169 (0.0887)
Drone			-0.280 (0.102)	-0.281 (0.102)
Low Density				0.128 (0.139)
Medium Density				0.246 (0.158)
High Density				0.333 (0.163)
Very High Density				0.274 (0.165)
Urban Region				-0.0582

Suburban Region				(0.0975)
				0.0534
				(0.154)
N	1487	1487	1487	1487
pseudo R ²	0.025	0.359	0.365	0.368

p < 0.05, p < 0.01, p < 0.001 Standard errors in parentheses

Table 4: Unmodified Coefficients for the Revised Models

	(1)	(2)	(3)	(4)
Some College	0.0198 (0.105)	0.0362 (0.106)	0.0258 (0.106)	0.0108 (0.106)
College Grad	-0.106 (0.102)	-0.153 (0.104)	-0.156 (0.104)	-0.170 (0.104)
Postgrad	0.351 (0.102)	0.314 (0.103)	0.261 (0.104)	0.256 (0.105)
Income [30 to Under \$50,000]	-0.0309 (0.100)	-0.0610 (0.102)	-0.0519 (0.102)	-0.0444 (0.103)
Income [50 to Under \$100,000]	0.0359 (0.0967)	-0.0462 (0.101)	-0.0309 (0.102)	-0.00963 (0.103)
Income [\$100,000 and Above]	0.117 (0.105)	0.0176 (0.112)	0.0115 (0.113)	0.0210 (0.114)
Republican	-0.00355 (0.0845)	0.0227 (0.0853)	0.0914 (0.0873)	0.109 (0.0878)
Democrat	0.0312 (0.0800)	-0.0242 (0.0820)	-0.0519 (0.0826)	-0.0700 (0.0834)
Male	-0.0673 (0.0698)	-0.0619 (0.0703)	-0.0634 (0.0706)	-0.0593 (0.0709)
Age	-0.0113 (0.00192)	-0.0101 (0.00202)	-0.00892 (0.00204)	-0.00843 (0.00206)
Perceived State of US Economy		0.345 (0.0822)	0.294 (0.0836)	0.294 (0.0839)
Perceived State of Personal Optimism		0.149 (0.0775)	0.119 (0.0782)	0.119 (0.0785)
		0.116 (0.0743)	0.0797 (0.0752)	0.0762 (0.0755)
Opinion of Immigrants			0.320 (0.0750)	0.302 (0.0758)
Drone			-0.100 (0.0851)	-0.100 (0.0852)
Low Density				-0.00880 (0.117)
Medium Density				0.0811 (0.132)
High Density				0.119 (0.135)
Very High Density				0.0651 (0.138)
Urban Region				-0.173 (0.0813)
Suburban Region				-0.144

				(0.130)
N	1487	1487	1487	1487
pseudo R ²	0.025	0.041	0.051	0.055

p < 0.05, p < 0.01, p < 0.001 Standard errors in parentheses