

Re-Examining the Factors Shaping the U.S. Individuals' Trade Policy Views

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The general purpose of this research project is to analyze the role of U.S. consumers' preferences, along with other potential determinants indicated by international trade theories, on citizens' trade policy views in 2016. Specifically, this project aims to examine the association between U.S. individual- and household-level consumption and citizens' perception of trade policy, in particular, whether additional import restrictions should be placed by the United States on foreign products. This project utilizes both American National Election Studies (ANES) public survey data and the Consumer Expenditure (CE) Public Use Microdata from the Bureau of Labor Statistics (BLS). ANES restricted data is expected to be used in the future in order to access survey respondents' employment information on the county level instead of the Congressional District level in the current analyses. Statistical matching is performed to impute individuals' consumption patterns in the ANES survey from the CE survey, based on common demographic characteristics observed in both datasets. Additional variables are accessed via the BLS and the United States International Trade Commission (USITC). My hypothesis is that individuals whose consumption bundles largely consist of globally-imported goods are less likely to favor additional import restrictions. A binary response model is employed to estimate the marginal effect of each potential factor associated with trade policy views. Categorizing the survey respondents by income quintiles and Census regions, I find that a higher expenditure-weighted import penetration ratio is associated with a lower likelihood of support for the government to impose import limits. However, the expenditure-weighted applied tariff rate is not a statistically significant determinant of trade policy preferences.

Understanding the policy preferences of individuals is crucial for improving the political-economy model of trade policy, especially in the time of globalization. The conventional open-economy politics approach relies on economic theory to explain the rationale of individual trade policy formation, with the assumption that economic self-interest is embodied in such policy preferences. In the conventional international trade theories, both Heckscher-Ohlin (H-O) model and the Ricardo-Viner (R-V) model provide a theoretical framework on how trade policy impacts factor income, which would vary by factors of production (as suggested by the H-O model) or by industries of employment (as suggested by the R-V model). However, one limitation of these works is that individuals develop their policy preferences by considering their welfare from a worker's or producer's perspective only; in reality, individuals are also exposed to international trade as consumers when making purchasing decisions. Trade facilitated by globalization increasingly impacts the prices consumers pay and the variety of tradeable goods in the consumption bundles. Therefore, it is crucial to improve the existing model by highlighting the role of consumer interests.

This project closely follows the strand of political-economy literature on the determinants of trade views emerging since the 1990s. Scheve and Slaughter (2001a) and Blonigen (2011) find that a worker's level of education, rather than industry of employment, is significant in explaining support for trade restrictions. With a combination of survey and experiment, existing literature finds little significant evidence that voters are systematically aware of the consumption benefits brought by trade liberalization. According to Bearce and Moya (2020), the U.S. citizens are unaware of the trade-induced consumption benefits due to a lack of training as well as being in an economy of stable prices. The absence of inflation shocks since the 1980s makes the U.S. individuals unable to acknowledge the rising prices and lack of varieties which would have been caused by tariffs and other trade restrictions. When presented with factual information regarding the positive benefits of trade, individuals react positively to the employment benefits rather than the consumer benefits. Rho and Tomz (2017) suggests that the disconnection between individuals' policy preferences and personal interests can be explained by two opposing forces when citizens are educated on the distributional impact of trade barriers. People are more likely to develop policy preferences exhibiting economic self-interest, but they also become more responsive to the interest of others. The self-serving responses are found to outweigh the altruistic ones; thus, informing people on the impact of trade would tighten the correlation between policy preferences and personal interests. Few empirical studies directly estimate the impact of consumer welfare on trade policy

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preferences, partially due to the data constraint that surveys on individuals' consumption patterns and expenditures do not include information on their policy preferences, and vice versa. My research project seeks to address this issue by combining the ANES election survey with the BLS CE survey and imputing ANES survey respondents' consumption expenditures through statistical matching.

The ANES, a collaboration of Stanford University and the University of Michigan, produces data from its own surveys on voting, public opinion, and political participation.² The dependent variable used to capture survey respondents' trade policy preferences comes from a question in the 2016 ANES survey. I used two measures, *Relative Occupation Wage* and *Education Years*, to control for a survey respondent's skill level, which is a crucial determinant of the welfare impact of trade liberalization according to the H-O model. The ANES reports the annual mean wage of a respondent's current or past occupation, and I obtained the annual mean wages by occupation from the BLS 2016 National Occupational Employment and Wage Estimates.³ This relative measure thus reflects how each occupation compares to the average of all occupations in terms of salary in 2016. *Education Years* is a variable included in the ANES.

As previously mentioned, the R-V model provides a theoretical justification for industry of employment as a determinant of trade policy formations. Two measures, *Sectoral Applied Tariff Rate* and *Sectoral Net Export Share*, were included in the model. The former was constructed using the calculated duties and customs value data from the USITC. The latter, which is defined as $(\text{Export} - \text{Import}) / (\text{Value of Shipments})$, was constructed using data from the USITC, the 2016 U.S. Census' U.S. International Trade in Goods and Services report,⁴ the Census' Annual Survey of Manufacturers,⁵ and the Bureau of Economic Analysis.

Two measures were used to capture the exposure of a respondent's local region is to imports: *High Tariff Employment Share* and *Net Import Employment Share*. The former is defined as the percentage of working-age population in the respondent's county employed in the industries with higher-than-median U.S. sectoral applied tariff rate. The latter defines industries vulnerable to imports as industries which are net importers. Both measures were constructed from the Census' County Business Patterns.⁶

Lastly, I constructed two measures to proxy for the extent to which a respondent's consumption bundle is composed of imported consumer goods: the *Expenditure-Weighted Import Penetration Ratio* and the *Expenditure-Weighted Applied Tariff Rate*. The expenditure data were accessed from the 2016 BLS CE Public Use Microdata (PUMD) survey. The PUMD is a population-representative dataset which contains detailed demographic characteristics and expenditures statistics for goods and services, which makes it possible to estimate the U.S. individuals' expenditure shares based on various combinations of demographic traits. Thus, the PUMD was used to construct out-of-sample expenditure shares, which was imputed to the ANES survey respondents based on common characteristics. Several other control variables included in the specifications were from the 2016 ANES public dataset.

The dependent variable *Import Limits* captures the respondent's attitude towards the U.S. import policy, with "1" indicating being in favor of additional import restrictions, and "0" otherwise. Due to its binary nature, I estimated the determinants of the probability of supporting import restrictions using a logit binary response model. The marginal effect of the determinants of trade policy preferences thus shows the change in the likelihood of supporting additional import restrictions when an independent variable increases by one unit.

Due to the fact that the ANES dataset does not include information on respondents' consumption patterns, I estimated the ANES respondents' consumption patterns by matching them to consumers in the 2016 CE PUMD survey using various demographic characteristics. My preliminary analyses below were based on statistical matching using cells, meaning that the observations in the ANES survey and the observations in the BLS CE survey were grouped according to some identical characteristics in both datasets, such as geographical location, income quintile, age, and etc.

A number of results are consistent with the findings in Blonigen (2011). Firstly, among the two skill measures and the two industry of employment measures, education is the only consistently intuitive

² <https://electionstudies.org/>

³ https://www.bls.gov/oes/2016/may/oes_nat.htm#11-0000

⁴ https://www.census.gov/foreign-trade/Press-Release/2016pr/final_revisions/final.pdf

⁵ <https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html>

⁶ <https://www.census.gov/programs-surveys/cbp.html>

and robust indicator: Years of education is negatively correlated with the likelihood of favoring protectionism, and it is significant at the 1% level. On average, an additional year of education reduces the likelihood of a respondent favoring protectionism by 3.3%. All levels of educational attainment dummies in this regression exhibit positive and significant coefficients. *Relative Occupation Wage* as the other proxy for worker's skill level is not a significant indicator. Secondly, neither *Sectoral Applied Tariff Rate* nor *Sectoral Net Export Share* is a significant determinant, as in Blonigen (2011). This indicates that workers do not associate strongly with their industry of employment as the SFM suggests. Thus, the SS theorem provides a theoretical justification for trade policy preferences in the 2016 sample. Thirdly, coefficients on the two C.D. trade exposure measures and the *Home Ownership* dummy are either insignificant or have counterintuitive signs, but the interaction term between *High Tariff Employment Share* and *Home Ownership* is positive and significant at the 5% level. This suggests that individuals' trade views are closely tied to the changes in asset prices caused by the region's trade exposure: If a Congressional District is highly exposed to foreign competition and the local economy is therefore depressed, the reduced asset prices would make homeowners more likely to support trade protection.

The section below describes the marginal effects of the determinants of trade policy preferences, with Expenditure-Weighted Import Penetration Ratio and Expenditure-Weighted Applied Tariff Rate included in the specifications. Firstly, although both consumption trade exposure measures have the hypothesized sign, only *Expenditure-Weighted Import Penetration Ratio* is statistically significant. When individuals are categorized by income quintile and Census region, one standard deviation (0.015) increase in *Expenditure-Weighted Import Penetration Ratio* reduces the likelihood of favoring protectionism by 2.68% ($1.786 * 0.015$). When the sample is further categorized by housing tenure, one standard deviation increase of the variable decreases the likelihood by 2.71%. These results suggest that consistent with the hypothesis, individuals whose consumption bundles largely consist of globally-imported goods are less likely to support additional import restrictions. However, no significant correlation is found between *Expenditure-Weighted Applied Tariff Rate* and support for protectionism.

In conclusion, this project re-examines the potential determinants of individual trade policy preferences by revisiting the empirical evidence using data from 2016 and measuring the impact of consumption trade exposure on trade views. Baseline specifications indicate that respondent's level of education is the only significant and robust determinant, while industry of employment is not a significant factor. Characterizing respondents by income quintile and Census region, I find that individuals who rely on globally-imported goods more in the consumption bundles are less likely to support protectionism. Building on the established literature, this project has several policy implications. First of all, this project finds empirical evidence of consumer welfare as a potential determinant of individuals' trade policy views, bridging a gap in the existing literature. Secondly, it suggests that heterogeneities in demographic characteristics contribute to individuals' consumption patterns, welfare, and trade policy formation, which challenges some of the unrealistic assumptions in the neoclassical trade theories. The Heckscher-Ohlin model requires that consumers across countries should have identical and homothetic preferences, meaning that the percentage of income spent on a consumer good should remain the same across all income levels. However, this project shows that consumers in different income quintiles would spend different expenditure shares on imported products, which is associated with heterogeneous trade policy views.

References

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