

Who Speaks for Free Trade: Elite Communications and Public Support for Free Trade

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Abstract

Elites and voters simultaneously influence each other. Despite the well-established evidence on both bottom-up and top-down influences in preference formation, the literature on trade policy preferences has disproportionately focused on bottom-up models while rarely paying attention to potential top-down influence. I address this deficiency by examining how political elites communicate their trade policy positions to their constituents, and how such communications shape public attitudes toward trade. Utilizing a unique dataset constructed from an original collection of press releases along with a survey of a large sample of American workers, I offer new evidence on the effect of elite communication on trade policy attitudes. My analysis finds that representatives' pro-free trade messages are systematically associated with a decrease in protectionist attitudes of co-partisan constituents in their districts. Exploiting the difference in political information environment across the states, created by different senator electoral cycles, I further demonstrate that this association is mainly driven by elite influence. This study provides important implications for trade policy by illuminating an overlooked mechanism of how voters develop their trade policy preferences.

1 Introduction

Elites and voters simultaneously influence each other. Electoral accountability compels politicians to respond to constituent preferences. Politicians, at the same time, affect how voters understand policy issues and how they form their policy preferences. While both bottom-up and top-down mechanisms are theoretically and empirically grounded, the literature on trade policy has disproportionately focused on bottom-up models (e.g. Caves, 1976) and rarely paid attention to top-down influences. How do political elites publicly position themselves on the issue of international trade? How does elite position influence voter preferences over trade policy? The literature remains comparatively silent on these questions.

The lack of attention to elite influence reflects the assumptions about voters often made in the existing trade policy literature. On the one hand, voters are assumed to understand the distributive consequences of international trade. Individual voters are able to infer the likely impact of international trade on their wellbeing, and take positions that are consistent with their material interests (Scheve and Slaughter, 2001; Beaulieu, Yatawara, and Wang, 2005). As voters form their policy preferences based on their own calculation, according to this view, there is little room for political elites to shape voter preferences. On the other hand, voters are viewed as ignorant and apathetic about trade policy. In this view, voters are not well informed about the material consequences of international trade on the economy and on their own welfare (Rankin, 2001; Guisinger, 2009). Again, the role of political elites is limited because voters do not pay attention to politicians' trade-related legislative activities.

Contrary to these expectations, the effects of elite communications can be strong especially when it comes to the formation of individual trade preferences, given the highly politicized nature of trade policy. A wide range of trade issues are often at the center of political debate, and politicians offer strikingly different interpretations of the effect of a given trade policy. For instance, on the signing of free trade agreements, Senator Dianne Feinstein

publicly supported it on the Senate Floor, saying that “export growth as a result of these trade agreements will mean more jobs.” Representative Daniel Lipinski took an opposite stance calling the agreements as the “job-killing trade bill”.¹ If elite communications indeed shape public attitudes, voters’ views on trade would look very different depending on whose statements voters are exposed to and influenced by. The question is whether and to what extent elite communications exert influence over the public attitudes toward trade.

Answering this question has proven to be a difficult task, in part due to the paucity of systematic data on trade-related communications by politicians, and in part due to empirical challenges of addressing the issues of endogeneity and omitted variable bias. First, investigating the effect of elite communication requires information about the intensity and the contents of trade-related messages that legislators transmit to their constituents. Since such information is not readily available, empirical studies on the linkage between elite and public trade preferences have instead examined the influence of party as a whole (Hicks, Milner, and Tingley, 2014) or focused on the roll-call voting records of legislators (Guisinger, 2009). These measures, while informative, do not capture the varying intensity of trade-related communications by legislators. Second, one needs to disentangle top-down and bottom-up influences in order to identify the effect of elite communications on public attitude. The relationship between elite and public is subject to an obvious concern about endogeneity because legislators have electoral incentives to communicate messages that are in line with their constituent preferences. There is also an issue of omitted variables that may account for both elite and public attitudes.

I address these empirical challenges by combining an original measure for expressed pro-free trade positions of representatives, constructed from an original collection of press re-

¹Full transcripts of floor speeches by Sen. Feinstein and Rep. Lipinski on October 12, 2011 are available at <http://votesmart.org/public-statement/644494/united-states-korea-free-trade-agreement-implementation-act> and <http://votesmart.org/public-statement/645805/united-states-korea-free-trade-agreement-implementation-act>, respectively.

leases, and a survey of a large sample of American workers. I classify the collected trade-related press releases into a set of categories and create a new metric of each representative's trade policy position that is based on the share of pro-free trade and protectionist press releases among all press releases issued in a given congressional term. I find that representatives' pro-free trade messages are systematically associated with a decrease in protectionist attitudes of co-partisan constituents in their districts. Yet, the messages appear to have little impact on other constituents. This finding remains robust to an inclusion of a series of demographic controls and fixed effects for employed industry and district.

Exploiting the difference in political information environment across the states, I further demonstrate that this association is mainly driven by elite influence. Taking advantage of the timing of the survey that took place during the months preceding and following the 2010 mid-term election, I show that this association appears stronger in states without reelection-seeking senators and/or governors where voter attention is relatively focused on incumbent representatives. The association appears much weaker in other states where voter attention is diverted to reelection-seeking senators and/or governors. As senate and gubernatorial electoral cycle is not systematically related with the communication strategy of representatives or other characteristics of districts, which I empirically demonstrate below, the difference in the informational environment, created by the different electoral cycle, helps disentangle top-down and bottom-up influences. As additional evidence for the informational mechanism underlying elite influence, I also show that voters are fairly well informed about their representatives' position on trade when they are extensively exposed to messages from their representatives.

The findings presented in this study contribute to our understanding of how voters develop their trade policy preferences. Although voters are not fully guided by their material interests, it is misleading to conclude that voters are completely apathetic about trade policy. It is fair to say that voters do not have sophisticated economic knowledge about distribu-

tional effects or efficiency gains of trade liberalization (Rho and Tomz, 2015). It is also probably true that voters do not actively seek out trade-related information and pay little attention to trade-related voting records of their politicians (Guisinger, 2009). However, my findings suggest that individual citizens are better informed and more politically aware than typically assumed. When exposed to messages from political elites, individual voters are able to use such information as policy heuristics and update their preferences. This implies that voters are potentially able to form trade preferences that are reasonably aligned with their self-interested consideration as long as political elites serve the interests of voters.

This study also contributes to an extensive literature on elite communications. First, my analysis utilizes actual legislator messages communicated to voters, and demonstrates the effects of such messages on actual policy preferences of voters. This adds to the literature by showing that the findings from the experimental studies (e.g. Broockman and Butler (2015); Bullock (2011)) generalize to the natural political settings. Second, my findings highlight the importance of how legislators explain their policy positions to their constituents. My analysis of press releases by representatives reveals a significant variation with regard to whether and how representatives explain their policy positions. Together with the findings by Grose, Malhotra, and Van Houweling (2015) that legislators strategically tailor their messages to their constituents, my findings suggest that one needs to consider the effect of actual *elite messages* rather than elite policy positions *per se* in examining the effects of elite communications.

The rest of the chapter is organized as follows. The next section reviews the main insights from the literatures on elite communications and trade policy preferences, followed by the discussion of the factors that may account for congressional position taking on trade and its effects on public attitudes. Sections 4 and 5 describe my data, empirical approach, and the findings. The final section discusses the broader implication of my findings for trade policy making.

2 Elite Communication and Individual Preference Formation

Questions on how voters form their policy preferences have motivated political scientists for decades and continue to draw important attention from scholars (for reviews, see e.g. Druckman and Lupia (2000, 2016)). One strand of research on the sources of policy preferences addresses whether and how political elites influence public opinion. While elites and the public simultaneously influence each other, accumulated evidence in the literature suggests that political elites indeed shape public attitudes by providing policy-relevant information (Zaller, 1992; Chong and Druckman, 2007). As average voters are not well equipped to gather and process relevant information, they defer to legislators' policy judgement and take positions endorsed by the elites. Legislators can shape voters' preferences with persuasive appeals, yet even without sophisticated reasoning, they can influence voters' views merely by announcing their own positions (Broockman and Butler, 2015).

Despite the well-established evidence for elite influence over a range of policy issues (e.g. wartime public opinion, public support for European integration, or social security policy preferences (Gabel and Scheve, 2007; Lenz, 2009; Kriner and Shen, 2014)), existing studies of trade policy preferences have rarely paid attention to potential top-down influence in preference formation. Much of the scholarship focuses instead on bottom-up models of trade policy, thereby suggesting that individual trade preferences are largely shaped by the material consequences of international trade on one's own well-being (O'Rourke and Sinnott, 2001; Scheve and Slaughter, 2001). The implicit assumption made in the literature is that voters are able to calculate how their economic interests are affected by international trade, and that political elites then take voter preferences into account in the process of trade policy making.

A focus on trade policy constrained to bottom-up influences not only presents an incomplete picture of trade preference formation, but it also leaves the literature at odds with the

mounting evidence regarding voter ignorance on trade policies. Contrary to the expectations of a bottom-up approach, an increasing number of studies suggest that ordinary citizens are not well informed about how trade affects their material interests. For instance, Rankin (2001) asserts that individuals pay little attention to trade policies and do not know whether the U.S. generally and they as individuals benefit or lose from trade. In a similar vein, Guisinger (2009) questions the tacit assumption regarding voter knowledge of the effects of trade. Her study shows that voters place less importance on trade-related voting records in evaluating legislators, and that they lack knowledge of how their legislators voted on trade agreements. Rho and Tomz (2015) further advances this discussion. From their assessment of voter knowledge on the economic effects of trade, they surmise that average citizens are economically ignorant: they have not thought carefully about trade and know little about efficacy and distributional effects associated with international trade.

It is against this backdrop that scholars of international political economy have begun to recognize the important roles of information and of political elites as information providers. Given low levels of information among average citizens, how would individual trade preferences change when provided with more information? Motivated by this question, Rho and Tomz (2015) explore the effect of information via a series of survey experiments. Their finding suggests that learning about the distributional consequences of trade, on average, makes individuals more selfish (i.e., more supportive of policies advancing their own material interests). As Rho and Tomz (2015) conclude, the substantial effects of information imply that politicians and the media can shape public opinion through the strategic use of rhetoric. This conjecture, albeit indirectly, is supported by Hicks, Milner, and Tingley's (2014) finding of party influence on trade preferences. Their analysis shows that parties played a critical role in affecting how the public voted in the referendum on a trade agreement in Costa Rica.

While these recent studies point to the important role of political elites as information providers, no prior studies offer direct evidence regarding the effect of elite communication on

trade preferences. Evidence from survey experiments demonstrate the effect of informational cues on individual trade preferences (Hiscox, 2006; Murillo, Pinto, and Ardanaz, 2013; Rho and Tomz, 2015), yet it remains unexplored whether the results generalize to real political environments and how trade issues are communicated and framed by political elites. A study by Hicks, Milner, and Tingley (2014) provides new evidence of top-down influence, but systematic data are still lacking on the contents and the intensity of communication by political elites.

This deficiency in the literature is striking not only due to the accumulated evidence of elite influence regarding other issue domains, but also because trade policy is one of the areas where the effects of elite communication are expected to be strong. First, individual views on trade policy might be more easily swayed by political elites than other policy domains. The fact that average citizens have low levels of knowledge on trade issue means that they may have weaker priors, which would thereby make their trade policy preferences more malleable. Second, trade policy is a frequently politicized issue. When political elites strategically put the trade issue on the agenda, awareness on the issue may improve among uninformed and apathetic citizens (McKibben and Taylor, 2014). Yet again, to date, little systematic evidence has been provided to document the effects of elite communication on trade policy preferences.

In this chapter, I offer new evidence that helps to address this deficiency. By analyzing legislators' trade-related messages and the corresponding public opinion in their districts, I seek to provide new insights on (i) how frequently and in what way legislators communicate information on trade issues to their constituents, (ii) what determines such communication strategy by legislators, and (iii) whether and in what way trade-related messages from legislators shape the views of their constituents.

3 Congressional Position Taking on Trade and Its Effects

Before moving to discuss the empirical approach of this study, I draw here a set of expectations on congressional position taking and its effects on public attitudes. Building on the literature on trade policy, I discuss what factors are likely to be associated with elite positions on trade. I then discuss the possible effects of elite communication on public attitudes, paying particular attention to the conditions under which elite communication can be more influential in shaping the views of individuals.

3.1 Congressional Position Taking on Trade

In explaining who tends to take positions as pro-free traders or protectionists in Congress, the first factor I consider is legislators' ideology, which has been consistently found to shape their foreign economic preferences (Noël and Thérien, 2008; Milner and Tingley, 2011). Since conservatives emphasize the importance of the market, as opposed to liberals who are more supportive of government intervention in the economy, legislators with more conservative ideology tend to be more likely to express views in favor of free trade.

Another factor to consider is the socio-economic characteristics of districts. As legislators wish to explain that their congressional activities serve their constituents' interests, they take into account the economic effects of international trade on their districts. When their districts gain from trade liberalization, legislators tend to emphasize their pro-free trade stance. When many of their constituents lose from trade, on the other hand, legislators are likely to express more protectionist views. This leads to the following expectations. First, districts abundantly endowed with human capital are likely to benefit from more trade according to the predictions from the Stolper-Samuelson models (Rogowski, 1989; Scheve and Slaughter, 2001). Legislators serving those districts, therefore, are more likely to be pro-free trade in their communications with their voters. Second, districts where export-oriented (import-competing) industries are concentrated are expected to win (lose) from international

trade. Legislators from these districts have more (less) incentive to position themselves as pro-free traders.

These expectations may raise the question of why legislators would consider districts' interests while their voters are ignorant and apathetic to the issue of international trade. Two mechanisms may explain this. First, legislators have incentives to support economic policies that serve their constituents. Even when their constituents do not pay attention to legislators' records on specific policies, they may evaluate their legislators based on the outcome (i.e. job creation, economic growth, etc). As trade policy may affect the long-term economic performance of legislators, it is in their interests to support policies that are conducive to their districts. Second, districts with a substantial stake in international trade are likely to have at least some voters and organized groups (i.e. labor unions, or agricultural interest groups) who are highly attentive to the issue. Legislators respond to these interests and emphasize their positions on the issue when explaining their work to constituents.

3.2 Effects of Elite Position Taking on Public Attitudes

Elite position taking on international trade is expected to have downstream effects on public attitudes, as suggested from the literature, but when is such communication more influential in shaping individual preferences? Individuals take cues from political elites because their attentive capacity is limited, compared to the amount of political and non-political information (Druckman and Lupia, 2016). Yet, given that individuals are exposed to cues from diverse political actors, not all of the information transmitted from political elites can reach to the public. Furthermore, individuals may not internalize all of the information delivered to them. For these reasons, one must pay close attention to when elite-provided information exerts more influence on the public.

Partisanship is a key factor that determines whether and to what extent elite communication shapes individual trade preferences. While it is widely known that individuals tend

to base their decisions on party cues rather than detailed issue descriptions (Cohen, 2003), that tendency may appear even greater in the context of trade policy, due to its complexity. As the effects of international trade constitute a contentious issue even among experts, it is not reasonable to expect average citizens to gauge the effects of trade policy on their own. Even when provided with detailed policy-relevant information, individuals may not be able to understand and critically evaluate such information. In such contexts, individuals may tend to rely more on simple heuristics such as party cues than other types of complex and technical information (Lau and Redlawsk, 2006).

This discussion implies that legislators' messages are likely to shape the attitudes of their co-partisans, but other individuals are unlikely to be influenced. When exposed to messages on the views of their legislators, individuals may focus more on *who* their legislators are, and less on *why* their legislators endorse such policy positions. Co-partisan voters are likely to assume that their legislators' views are in line with their interests and take the same positions as their legislators. However, individuals may not buy the messages when they come from legislators of other parties. In short, pro-free trade messages from legislators are likely to move co-partisan constituents in a more pro-trade direction, but they are expected to have little impact on the views of other constituents.

4 Data and Empirical Strategy

My analysis utilizes an original dataset constructed from press releases from the U.S. representatives along with survey data from approximately 4,000 American workers. Using these datasets, I examine congressional position taking on international trade and its effects on individual trade preferences. This section describes the data and outlines my empirical strategy.

4.1 Measuring Congressional Position Taking on Trade

In order to measure how legislators take positions on trade and communicate their positions to constituents, I focus on their press releases, which a number of prior studies have examined to study legislators' communications with their constituents (Grimmer, Messing, and Westwood, 2012; Grimmer, 2013). Focusing on the 111th Congress (2010-11), I collected press releases by the U.S. representatives and selected a total of 2,159 press releases relevant to international trade. I classified the selected documents into a set of categories using a supervised learning method, and constructed measures for each representative's expressed pro-free trade or protectionist position.

I collected press releases from *voxgov*, the website that provides all official announcements from all government sources. From among the press releases, which cover a diverse range of topics, I selected documents that contain a carefully chosen set of 127 key phrases related to international trade (e.g. trade agreement, export promot, export opportun, or import surge).² This procedure results in the selection of 2,159 press releases. A detailed description of the document selection procedure and a list of key phrases are available in Section A1 in the appendix.

I then classified the selected documents using a supervised learning method: human coders first categorize a set of documents manually, and the algorithm learns how to classify the documents using the manually coded sets.³ I first decided on the number of categories after systematic reading of 25% of randomly selected documents and manually classified those documents into i) pro-free trade, ii) protectionist, iii) trade adjustment assistance, iv) export assistance, v) foreign countries' trade barrier against the U.S., vi) other trade-related, and vii) unrelated. A document is classified as i) pro-free trade if it contains a legislator's view in

²All texts were "stemmed" through the Porter Stemming Algorithm (stemming refers to a process for reducing words to their root). I choose to select on key phrases instead of keywords because selecting on keywords (e.g. trade, import, or export) results in the inclusion of many irrelevant documents.

³For details about the supervised learning method, see Grimmer and Stewart (2013).

favor of free trade policy reducing U.S. trade barriers, and as ii) protectionist if a legislator advocates restrictions of U.S. trade through protectionist measures. Other documents that do not contain a legislator’s view on trade policy, but that are still relevant to international trade, include those announcing the funds for districts through iii) trade adjustment assistance or iv) export assistance programs. A document that calls for the reduction of trade barriers by foreign countries is classified as v) trade barriers of foreign countries. Other trade-related documents and documents that are only marginally relevant or unrelated to trade are classified as vi) others and vii) unrelated, respectively. After manual coding of 25% of the documents based on this coding rule, the rest of the documents were classified by three supervised learning algorithms - maximum entropy, support vector machine, and generalized linear models.⁴ When the three algorithms all made the same prediction for the classification of a document, I followed the machine-coded classification.⁵ When the three algorithms failed to agree on the classification, the documents were manually coded to improve the accuracy of classification.

The classification results are summarized in Table 1. Focusing on press releases that are directly relevant to the issue of international trade, the table shows that a fair proportion of documents (13.5%) are pro-free trade while the majority of press releases (57.6%) show a protectionist tone. In pro-free trade press releases, legislators express their support for signing free trade agreements or reducing trade barriers and articulate the economic benefits from trade (i.e. expansion of exports, new markets for firms, or job creation). In press releases classified as protectionist, legislators criticize free trade agreements or call for protectionist policies (i.e. increasing tariffs, or buy American), generally with an explanation of the harmful effects of trade on workers. As hinted at from the most frequent stemmed words

⁴The supervised learning was conducted using *RTextTools*. See Jurka et al. (2013) for details.

⁵When tested with a training dataset of manually coded documents, the three selected algorithms make the same prediction for 77% of the documents and its recall rate of 0.94 is comparable to manual-coding. See Section A2 in the appendix for details about the supervised learning method.

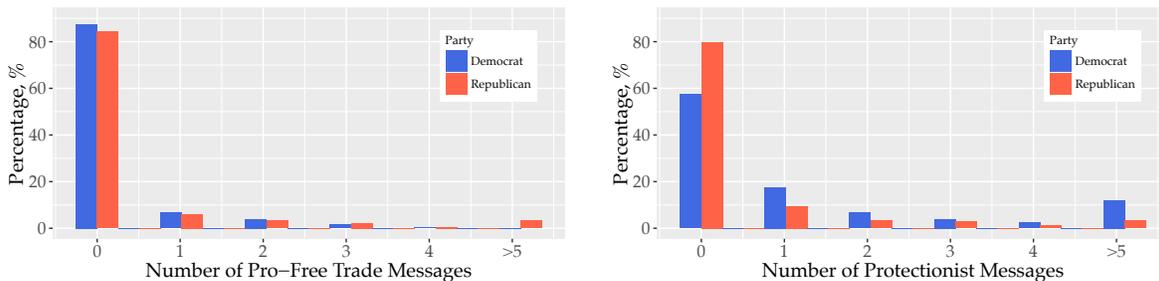
appearing in each classification, congressional critiques of trade often focus on the negative effects of trade with China on American workers. The 20 most frequent bigrams (two-adjunct words) in each category are fully described in Figure A2 in the appendix.

Table 1: Results from Supervised Text Classification

Classification	Most Frequent Stemmed Words	House
Pro-Free Trade	trade, agreement, will, american, export, job, presid	146 (13.5%)
Protectionist	trade, china, american, job, manufactur, currenc, worker	622 (57.6%)
TAA	worker, assist, job, trade, taa, program, adjust	90 (8.3%)
Export Assistance	export, busi, small, program, trade, help, will	55 (5.1%)
Trade Barrier	senat, trade, beef, market, export, poultry, product	55 (5.1%)
Others	trade, product, drywal, will, import, export, senat	112 (10.4%)
All Trade-Related		1025

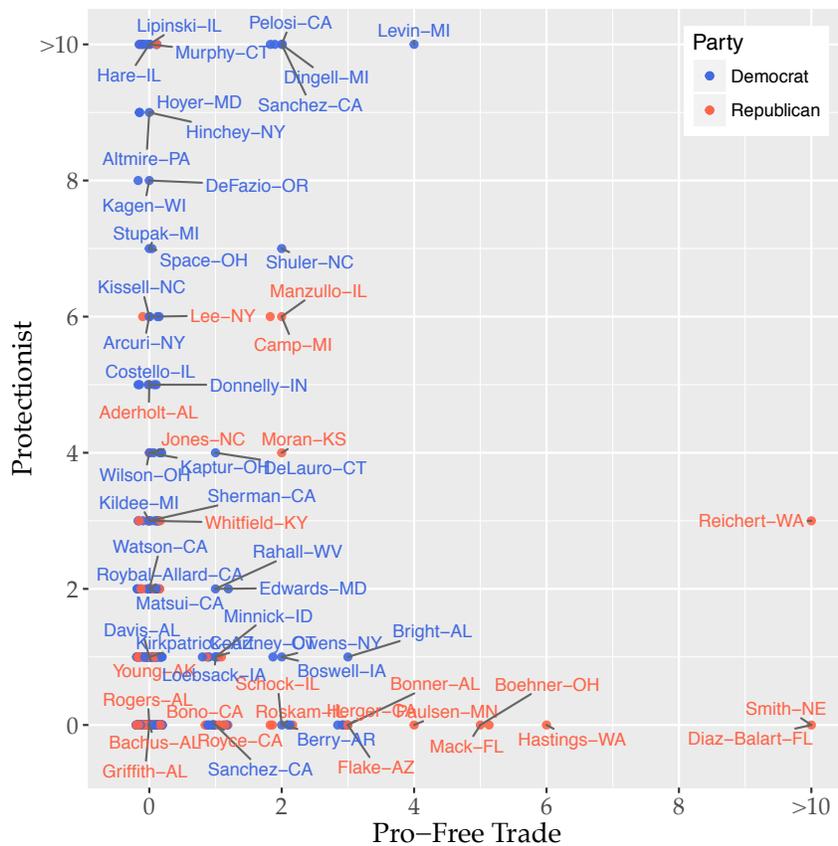
I focus on the first two categories (pro-free trade and protectionist) because they explicitly demonstrate the views of legislators on trade policy while the other categories do not. I explore the variation in the frequency of pro-free trade and protectionist messages in Figure 1. The figure presents the distribution of the number of press releases with pro-free trade and protectionist messages; it illustrates that the vast majority of legislators rarely make public announcements for or against free trade, while only a small proportion of legislators actively announce their views on international trade. Not surprisingly, Republican legislators tend to advocate for free-trade, and Democratic legislators tend to demonstrate protectionist stances. Yet, even among legislators from the same party, there is significant variation in individual members' propensities to publicly announce their views on international trade.

Figure 1: Frequency of Press Releases with Pro-Free Trade and Protectionist Stance



This pattern is more clearly illustrated in Figure 2, which contrasts the number of press releases with pro-free trade and protectionist stances. Clearly, Democratic legislators seldom communicate pro-free trade messages to their constituents, but not all of them publicly advocate for protectionist policies. A few Democrats including Dan Lipinski from Illinois and John Dingell from Michigan sent protectionist messages ten times or more during the period of two years. Ten Republican legislators including Chris Lee from New York and Robert Aderholt from Alabama made multiple protectionist announcements.

Figure 2: Frequency of Press Releases with Pro-Free Trade and Protectionist Stance



Note: The number of protectionist press releases (y-axis) is plotted against the number of pro-free trade press releases by each representative (x-axis). Data points with a value of 10 and higher are collapsed as 10. Overlapping data points are horizontally jittered. Labels for data points are displayed only up to two points to make the labels legible due to too many overlapping values.

Based on this dataset, I constructed measures for expressed pro-free trade and protectionist stances. The main measures I use are (i) the share of press releases with pro-free trade messages out of all press releases; (ii) the share of protectionist messages; and iii) the difference between the two, which measures the degree of a pro-free trade stance relative to a protectionist stance. I consider the share of press releases instead of the raw number of press releases in order to account for the total number of press releases issued by legislators within a given period. Given the significant variation in these measures, I examine what accounts for the variation in the intensity of pro-free trade and protectionist communications and what impact this has in terms of individual trade preferences.

4.2 Measuring Individual Attitudes toward Trade

In order to examine how trade-related information transmitted from legislators influences their constituents' trade preferences, I link the legislator-level dataset of trade-related communications to survey data from more than 4,000 American workers. The survey data is a part of the Harvard Globalization Survey that was designed to examine workers' attitudes toward various aspects of globalization.⁶ In my analysis, I mainly rely on responses to three questions on individual views of trade policy: whether a respondent thinks that (i) trade with other countries should be expanded, reduced, or kept at its current level; ii) trade with other countries is good or bad for the individual and the family; and iii) trade with other countries is good or bad for the U.S. as a whole. Using the five-point response scales to these questions, I construct three binary measures that use the bottom two categories to assess respondents' opposition to trade.

In addition to having a series of questions on individual views regarding trade policy, this dataset is particularly well-suited for examining the effect of elite communications on trade views for two reasons. First, the survey was fielded between July 2010 and February 2011, a period that coincides with the mid-term election campaign, when individuals are particularly

⁶A more detailed description of the survey is presented in Hainmueller, Hiscox, and Margalit (2015).

attentive to the activities and the views of legislators. Second, the survey contains a question on how respondents assess their representatives' view on trade: "Overall, do you think your district's Representative in Congress, [*name of Representative*], shares your views about trade with other countries?" Responses to this question allow me to examine the degree of information that individuals have about their representatives' view as well as the alignment between the public stance of legislators and the views of individuals on the issue.

4.3 Disentangling Top-Down Influence from Bottom-Up Influence

The reciprocal relationship between elites and voters poses a major empirical challenge for this analysis. While political elites exert down-stream influence over public opinion, they also respond to public attitudes. This endogeneity issue raises an empirical problem in determining whether an observed empirical pattern is due to top-down or bottom-up influence. Furthermore, it is also possible that both elite and public opinion are jointly influenced by other common factors that are hard to capture through observational data. This second issue of omitted variables is relatively easy to address with the inclusion of district fixed effects, as discussed later in the empirical analysis section. Yet, my empirical strategy for addressing the endogeneity issue requires a more comprehensive discussion, to which this section is devoted.

My empirical strategy takes advantage of two things: (1) the timing of the survey that was conducted during the mid-term election period and the preceding months in 2010, and (2) the different electoral cycles of senators and governors. The survey was conducted from July 2010 to February 2011, a period during which the primary and general elections took place for all House seats, the Senate seats of class III and 37 governorships. In each congressional election, only one of three senate classes (that were originally determined randomly in 1789) are up for re-election. In 2010, seats of class III were contested and 25 incumbents from 24 states ran for reelection (including special elections), with 12 other incumbents retiring. The

fact that only a proportion of incumbent senators were seeking reelection for an exogenous reason is unlikely to be related to position taking or the communication strategies of House Representatives. However, voters in those states with reelection-seeking senators were likely to be less exposed to information about their representatives due to more media coverage devoted to incumbent senators running for reelection. Due to limited attentive capacity, voters themselves in those states may also pay relatively less attention to their representatives than do other voters whose incumbent senators do not run for reelection and who can thus pay more attention to their representatives.

This suggests that voters in two types of states (states with reelection-seeking senators or governors and the rest of the states) find themselves in very different informational environments for an exogenous reason.⁷ Voters in states with reelection seeking senators are likely to be relatively less informed about their representatives, compared to voters in the other states who are more extensively exposed to information about their representatives (either due to media coverage or their own information-seeking behavior).

I support this claim empirically with an analysis of individual information-seeking behavior on the web and a comparison of socio-economic and political characteristics of districts in the two types of states. First, my analysis of the Google trend index shows that individuals indeed express the least degree of interest toward representatives in the states with reelection-seeking senators. This indicates that individuals are less likely to seek information about their representatives especially when their senators run for reelection, probably due to the diversion of media attention toward senators. (See Table A4 in the appendix for the

⁷States with retiring senators are considered as “the rest of the states” because retiring senators presumably do not attract much media and voter attention, creating more room for attention to representatives. In particular, considering the fact that most of respondents participated in the survey in July (61%) and August (14%), a few months before the election period, my focus on the presence of reelection-seeking incumbents (not on the presence of contested senate seats) is warranted. While voter attention can be diverted to senate candidates as the election approaches in those states with retiring senators, the empirical focus here is on the period preceding the survey (up until June 2010), which is used to study the effect of elite-provided information communicated prior to the survey.

empirical results). Second, I also show that districts in the two types of states are comparable with respect to various pertinent factors. They are on average very similar with regard to representatives' trade-related communications, the skill-level of the population, the importance of the agricultural industry, media income, and Republican candidate's vote share in the previous House election, among others. (See Table A5 in the appendix for empirics). An overall news consumption pattern of individuals also appears to be comparable in the two types of states. This suggests that the electoral cycle of senators is not systematically related to other factors that could be associated with elite and public trade preferences.

From this discussion, the following expectation can be drawn. If an observed empirical association is driven by top-down influence from representatives, the association should appear much stronger in states where voters are more highly exposed to information from representatives, i.e. in states without reelection-seeking senators. If the association is mainly driven by bottom-up influence, conversely, the difference in the informational environment should not affect the level of association between elite and public influence, because the difference in the informational environment has little influence on how representatives respond to the public. Exploiting the difference in the political informational environment, I thus seek to disentangle top-down influence from bottom-up influence.

5 Empirical Analyses

5.1 Who Speaks for Free Trade in the US Congress?

I begin by exploring the factors associated with congressional position taking on international trade. With three different measures for revealed stance on trade as dependent variables, I estimate a linear regression model with each legislator i in state j as the unit of analysis:

$$Y_{ij} = \alpha + \beta \text{Legislator Characteristics}_i + \gamma \text{District Characteristics}_i + \theta \text{State}_j + \epsilon_{ij},$$

where *Legislator Characteristics* is a set of legislator-specific variables and *District Characteristics* is a set of socio-economic characteristics for a district that legislator i represents.

For *Legislator Characteristics*, I include the DW-Nominate score as a measure for ideology, and additionally include the trade-related committee membership and gender of legislators. Specifically, I include a binary indicator for whether legislators belong to the Ways and Means Subcommittee on Trade, because those legislators serving in the committee may be more active in disseminating information on trade policy-related legislation. I also include an indicator for female legislators because women have consistently been found to be less favorable toward free trade than men (O'Rourke and Sinnott, 2001; Mansfield, Mutz, and Silver, 2015).

For *District Characteristics*, I include the share of high-skill (executive and managerial) workers in the district, which measures the capital endowment of the district as in Broz (2005) and Broz and Hawes (2006), as well as the agricultural production of the district in order to examine the effect of the export-oriented sector. Additional variables included in the analysis are the share of the population that is foreign born, the logarithm of median income, the unemployment rate, the share of Republican votes in the previous House election, the African American share of the population, and the share of the population over 65.⁸ All district-level variables take the values for 2009.

Table 2 presents the estimation results. The dependent variable is the share of press releases with pro-free trade messages in the first two models, the share of protectionist messages in the next two, and the difference between the two measures (with higher values indicating a stronger pro-free trade stance) in the last two. Representatives included in the

⁸Data for agricultural production by districts are from the 2007 Census of Agriculture, published every five years and available at http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Congressional_District_Profiles/index.asp. Data for the vote share of Republican candidates in the previous House election come from the CQ voting and election collection. Other data on the share of high skill workers, median income, unemployment rate, black population, and population over 65 at the district-level are from the 2009 American Community Survey collected from http://factfinder.census.gov/faces/nav/jsf/pages/download_center.xhtml.

Table 2: Pro-Free Trade and Protectionist Communication by Representatives

	Free Trade		Protectionist		Difference	
	(1)	(2)	(3)	(4)	(5)	(6)
DW-Nominate Score	0.220*	0.197	-0.928**	-0.938*	1.148**	1.135**
	(0.097)	(0.140)	(0.255)	(0.368)	(0.277)	(0.399)
Trade-related Committee	1.712**	1.714**	1.343*	1.401*	0.370	0.312
	(0.256)	(0.256)	(0.675)	(0.672)	(0.733)	(0.729)
Female	-0.147	-0.148	-0.304	-0.274	0.157	0.126
	(0.093)	(0.093)	(0.245)	(0.244)	(0.266)	(0.265)
High Skill, %	0.002	-0.002	-0.055**	-0.057**	0.057*	0.055*
	(0.008)	(0.008)	(0.020)	(0.022)	(0.022)	(0.023)
Agriculture Products, \$1B	0.085*	0.082*	-0.155 ⁺	-0.183*	0.241*	0.265**
	(0.034)	(0.034)	(0.089)	(0.089)	(0.096)	(0.097)
Foreign Born Population, %	0.014**	0.015**	-0.029*	-0.018	0.043**	0.033*
	(0.004)	(0.005)	(0.012)	(0.013)	(0.013)	(0.014)
Median Income, Log	0.173	0.241	0.373	0.668	-0.199	-0.428
	(0.278)	(0.289)	(0.734)	(0.757)	(0.796)	(0.822)
Unemployment Rate, %	0.011	-0.006	-0.105 ⁺	-0.047	0.116 ⁺	0.041
	(0.021)	(0.026)	(0.056)	(0.068)	(0.061)	(0.073)
Republican Vote Share, %		0.001		-0.002		0.003
		(0.003)		(0.007)		(0.008)
Black Population, %		0.006		-0.007		0.012
		(0.004)		(0.010)		(0.011)
Population over 65, %		0.009		0.104*		-0.095*
		(0.017)		(0.044)		(0.047)
Observations	433	433	433	433	433	433

Standard errors in parentheses; ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$
All models include state fixed effects.

analysis are those who served the district as of June 2010.⁹

Legislators' ideology appears to be substantially associated with congressional position taking on trade. Consistent with the expectation that conservatives are more likely to be supportive of free trade than liberals, the measure of liberal-conservative ideology (DW-Nominate), ranging from -1 for liberal to 1 for conservative, appears to be positively associated with a pro-free trade stance. Specifically, a 1-point increase in the measure is associated with a 0.2 percentage-point increase in the share of pro-free trade press releases and a -0.9

⁹Dependent variables for two representatives who served in the House only for a short period by the cutoff point are thus missing.

percentage-point decrease in the share of protectionist press releases. Given that representatives on average devote only 0.2 percent of their press releases to pro-trade contents and 0.7 percent of them to protectionist contents, the association between a representative's ideology and her trade-related stance is fairly substantial.

The economic characteristics of districts are also substantially associated with the expressed pro-free trade and protectionist stances of representatives. The coefficient on *High Skill* is close to 0 in the first two models but is negative and statistically significant at conventional levels in the next two; it is positive and also statistically distinguishable from zero in the last two models. This suggests that legislators from districts abundant with human capital tend to send less protectionist messages. An increase of high-skilled workers by 1 percent is associated with a 0.05 percentage-point decrease in the share of protectionist messages. A district's agricultural production appears to be positively associated with a pro-free trade stance and negatively associated with a protectionist stance, meeting conventional levels of statistical significance across all the estimated models. This suggests that legislators from export-oriented districts are more likely to advocate free trade policies and less likely to call for protectionist policies. Another factor worth discussing is the share of the population that is foreign born, which is positively and systematically associated with a pro-free trade stance.

The results suggest that legislators respond to the interests of their districts, but at the same time, that the ideological predisposition of legislators also plays a significant role in how they position themselves on trade issues. This suggests important implications regarding whether and how elite communication influences public attitudes toward trade.

First, the significance of ideology implies that legislators are not merely influenced by voter interests but are also guided importantly by their own beliefs. Legislators from districts with similar socio-economic and political characteristics may have markedly different beliefs about free trade policy. As they communicate their beliefs to their constituents, individuals

in different districts are exposed to different messages about how trade influences the U.S. or the local economy, as well as their own well-being.

Second, legislators may serve as information providers for their constituents. Average individuals, even when their local economy is negatively affected by international trade, may need additional information to understand the connection between the expansion of trade and increasing job loss, for example. In a similar vein, individuals who potentially gain from free trade policy may not have a sophisticated enough understanding of the benefits that free trade may bring to their own wellbeing. For these individuals, the information provided by legislators may serve as a heuristic for understanding how a given policy influences their interests. In this sense, legislators are not merely representing their voters' interests but are also proactively providing information to their constituents about the potential gains and losses from policy implementation. The following section turns the focus to examining whether such information indeed shapes public views toward international trade.

5.2 Do Constituents Internalize Messages from Legislators?

I next examine whether pro-free trade messages from legislators increase public support for free trade in their districts. As individuals rely on party cues, I expect pro-free trade messages from legislators to exert influence over the trade-related views of co-partisan constituents in their districts but not the views of other constituents. To test this expectation, I estimate the following binary probit model with each individual i in district j as a unit of analysis:

$$\begin{aligned} \text{Probit}(Y_{ij}) &= \alpha + \beta_1 \text{Pro-Free Trade}_j + \beta_2 \text{Co-Partisan}_{ij} \\ &+ \beta_3 \text{Pro-Free Trade} * \text{Co-Partisan}_{ij} + \gamma \text{Industry}_i + \theta \text{Controls}_i + \epsilon_i, \end{aligned}$$

where Y_i is a binary measure of respondents' protectionist attitudes, *Pro-Free Trade* is a measure for pro-free trade stance of representatives, and *Co-Partisan* is a binary indicator

taking the value 1 if i shares the same party affiliation with her representative.¹⁰ The model also includes *Industry* fixed effects along with *Controls*, a vector of individual characteristics (income, gender, race, age, education, marital status, and union membership). I also include district-fixed effects in some models to account for any unobservable district-level characteristics that influence both elite and public attitudes toward trade.

The key parameter of interest here is the coefficient β_3 on the interaction term *Pro-Free Trade*Co-Partisan*. A finding of sizable and significant coefficient would indicate an association between the expressed stance of representatives and co-partisan attitudes toward trade in their districts. In order to probe whether such association is driven by top-down influence, I estimate the model separately for (1) states with no reelection seeking incumbent senators or governors where voters are more extensively exposed to information about representatives (high information environment) and (2) states with reelection seeking senators or governors where voters are relatively less exposed to the views of representatives (low information environment). Leveraging the different electoral cycles of senators and governors, which creates the difference in the political information environment for voters, I examine whether the effect of elite communication appears to be stronger in “high information environment” than in “low information environment.”

The estimation results with all three dependent variables are presented in Table 3. For each dependent variable, I begin with a base model without an interaction term. In the base models, *Pro-Free Trade by Representative* and *Copartisanship* appear to have little meaningful effect on individual attitudes toward trade as the coefficients are indistinguishable from 0 at the conventional level of significance. However, the interaction term included in the next two models appear to be negative in all the estimated models, suggesting that pro-free

¹⁰*Pro-Free Trade* is calculated as the difference between the proportion of press releases with pro-free trade and protectionist messages. As one only wants to consider press releases issued before the survey, the measure is based on the number of press releases distributed from January 2009 to June 2010. *Co-Partisan* is based on respondent i 's 3-point party identification. It takes the value of 0 for all those who identify themselves as independent.

Table 3: Pro-Trade Messages from Representatives and Public Attitudes toward Trade

High Information Environment									
	Trade Reduction			Trade on Self			Trade on US		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pro-Free Trade by Representative	-0.009 (0.009)	0.010 (0.013)		-0.004 (0.009)	0.010 (0.012)		-0.003 (0.009)	0.003 (0.012)	
Copartisanship w/ Representative	-0.020 (0.029)	-0.031 (0.029)	-0.028 (0.033)	-0.055* (0.024)	-0.062* (0.024)	-0.058* (0.028)	-0.050+ (0.026)	-0.053* (0.027)	-0.042 (0.030)
Pro-Free Trade * Copartisanship		-0.052* (0.021)	-0.074** (0.025)		-0.031+ (0.016)	-0.037* (0.016)		-0.013 (0.018)	-0.027 (0.021)
State FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
District FE	No	No	Yes	No	No	Yes	No	No	Yes
Observations	1184	1184	1084	1175	1175	1031	1173	1173	1080
Low Information Environment									
	Trade Reduction			Trade on Self			Trade on US		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pro-Free Trade by Representative	0.001 (0.006)	0.008 (0.007)		0.007 (0.005)	0.015** (0.006)		0.004 (0.006)	0.008 (0.007)	
Copartisanship w/ Representative	0.010 (0.019)	0.003 (0.020)	0.013 (0.022)	0.017 (0.016)	0.010 (0.016)	0.011 (0.020)	0.032+ (0.017)	0.028 (0.017)	0.041* (0.020)
Pro-Free Trade * Copartisanship		-0.025+ (0.013)	-0.026+ (0.015)		-0.026* (0.011)	-0.032* (0.014)		-0.015 (0.012)	-0.017 (0.013)
State FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
District FE	No	No	Yes	No	No	Yes	No	No	Yes
Observations	2495	2495	2317	2492	2492	2072	2495	2495	2195

Marginal effects; Robust standard errors in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

All models include fixed effects for Industry as well as *Controls* (income, gender, race, age, education, marital status, and union membership).

trade messages by representatives are negatively associated with protectionist attitudes of their co-partisan constituents.

A more important pattern to be noted is the difference of the coefficient on the interaction term between high and low information environment. Where individuals are more extensively exposed to messages from representatives or pay more attention to their representatives (high information environment), the interaction term is substantively meaningful and statistically significant in five out of six estimated models. In low information environment where individual attention is diverted toward senators, the coefficient is consistently negative, but statistically significant at the 0.01 level in only one out of six estimated models

while the substantive effect of the interaction term is far less meaningful. This finding is consistent with the expectation of elite-driven influence in trade preference formation.

Specifically, for the subsample of individuals in high information environment, one percentage point increase in the share of pro-free trade messages is associated with about 4-7 percentage points decrease in the probability that a co-partisan individual supports the reduction in trade level. Given that about 30 percent of surveyed respondents show protectionist attitudes with regard to trade-level reduction, this effect translates into an 18-24% reduction from the baseline. Substantively, the effect is more pronounced with respect to individual support for trade reduction, yet relatively less pronounced with respect to individual perception of trade on the US. For the case of low information environment, the messages from legislators are not likely to reach to the public and have very little influence on their co-partisan voters. To be specific, for the case of individual support for trade reduction, one percentage point increase in the share of pro-free trade message is on average associated with about -0.25 percentage points decrease in the second and third models, respectively. The difference in the effect of representative messages between the two information environments is also observed from another set of estimations where a binary indicator for *High Information* is interacted with *Pro-Free Trade* and *Copartisanship*. The results are presented in Table A6 in the appendix.

While the overall evidence points toward a considerable role of elite communication in shaping trade-related attitudes, one should consider the possibility that the observed pattern can also be attributed to bottom-up influence. If representatives are merely being responsive to their co-partisan voters in high information environment, but not in low information environment, the finding presented here can be also consistent with the bottom-up influence.

Yet, this alternative explanation is unlikely. First, it is not reasonable to assume that representatives adjusted their responsiveness to constituents and their communication strategy taking into account of senate electoral cycle. This possibility is highly unlikely especially

because my press releases for this analysis cover the period prior to the survey, from January 2009 to June 2010, at a time far preceding the election. Especially during the earlier period, representatives could not predict whether senators in their states would retire or seek reelection, which makes it difficult to predict political information environment in advance and adjust their strategy accordingly. Second, districts of the two types of states are very similar in their socio-economic and political characteristics, as described earlier, and representatives in the two types of states appear to be very similar in their communications with their constituents. During the given period, representatives on average sent 179 and 186 press releases in the states with and without reelection-seeking senators or governors, respectively. Among the issued press releases, 0.1% are pro-free trade in both types and 0.4% and 0.3% are protectionist, respectively. Overall, two types of states do not systematically differ in a series of pertinent dimensions.

6 Conclusion

This study has investigated how legislators communicate their trade policy positions to their constituents and whether such messages have any impact on the views of their constituents. I first documented that the majority of legislators are relatively silent on the issue of international trade while a few legislators actively explain their positions to their constituents. The position taking of legislators is found to be associated with their ideological beliefs as well as the economic characteristics of districts. By linking the legislator-level dataset to survey data of individuals, I examined the impact of legislators on the views of constituents and uncovered the considerable effects of elite communications on co-partisan constituents' attitudes toward trade.

These findings provide important implications for trade policy by underscoring the role of legislators as information providers. Evidence that voter preferences are shaped by legislators raises a question of whether the interests of voters are represented in the process of trade

policy making. If legislators can sway the views of voters with persuasive appeals or an announcement of support for a given policy, this may imply that politicians are not strongly constrained by public opinion and may not serve the interests of voters as a consequence. Nevertheless, other types of constraints are placed on legislators even when they are only weakly constrained by public opinion. For instance, legislators are still incentivized to serve the constituent interests because voters may reward or punish them according to the policy outcomes. My findings of the association between the economic characteristics of districts and legislators' positions indeed suggest that the policy positions of legislators are largely in line with the economic interest of districts. This implies that legislators can serve as information providers who evaluate the likely outcome of trade policy on their constituents, on behalf of voters, and inform them about why a given policy would or would not serve their interests. However, it should be also noted that this hinges on to what extent legislators take voter interests into account. If legislators respond more to the concentrated interests such trade associations, or corporations than the diffuse voter interests, and try to sway voters toward the position in line with the concentrated interests, the end result may reflect more of those concentrated interests.

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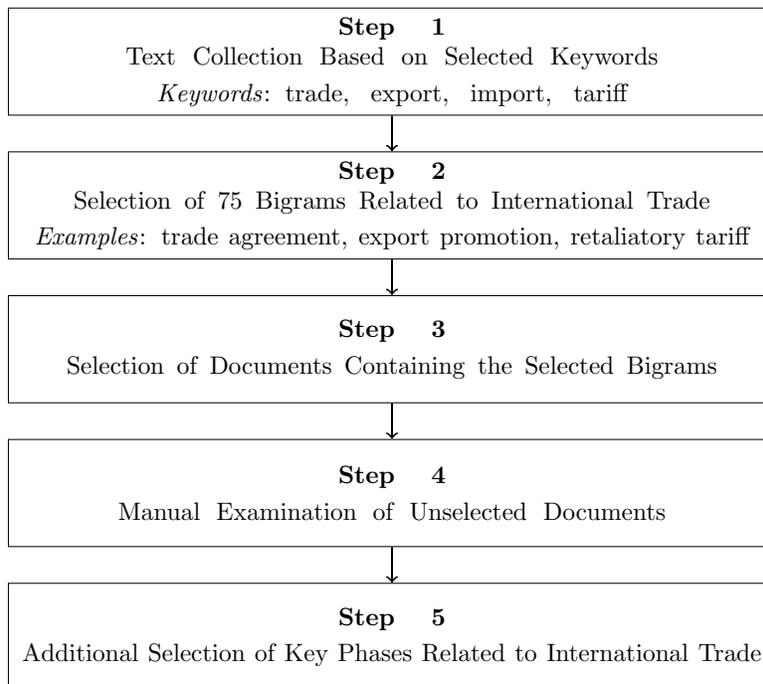
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Supplementary Appendix

A1 Data Selection Procedure

This section provides a detailed description on the data selection procedure. Figure A1 summarizes the procedure.

Figure A1: Summary of Text Collection Procedure



First, I collected press releases containing trade(s), export(s/ing/ed/ation), import(s/ing/ed/ation), and tariff(s) anywhere in the documents. Second, I selected a set of bigrams that are directly related to international trade to exclude irrelevant ones (e.g. cap-and-trade, world trade center). After all texts are stemmed through the Porter Stemming Algorithm, I selected a set of bigrams among the top 50 bigrams associated with trad, export, import, and tariff (Table A1). Third, I narrowed down the set of documents to those containing the selected 116 bigrams. Fourth, I examined a random selection of excluded documents (25%) to see whether any relevant documents are excluded from the collection. Fifth, I additionally selected 11 key words (ag export, agricultur trade, promot trade, trade repres, import product, import catfish, import steel, restrict export, rare earth export, drywall, drug import), and included the documents that contain these phrases.

Table A1: Top 50 Bigrams Associated with Selected Keywords

Trade	Export	Import	Tariff
trade agreement	us export	import from	tariff on
trade commiss	export promot	on import	retaliatori tariff
intern trade	export market	chines import	miscellan tariff
free trade	export council	import oil	ethanol tariff
world trade	agricultur export	import of	mexican tariff
trade adjust	export assist	import into	import tariff
unfair trade	export control	import food	impos tariff
trade practic	dairi export	increas import	these tariff
trade deficit	export opportun	tire import	tariff suspens
fair trade	export initi	subsid import	tariff relief
trade polici	increas export	poultri import	invert tariff
trade center	export to	oil import	tariff bill
trade repres	chines export	foreign import	percent tariff
trade partner	poultri export	import surg	elimin tariff
us trade	export incent	import deterr	tariff prefer
trade organ	export good	import ethanol	centpergallon tariff
feder trade	export subsidi	paper import	high tariff
and trade	and export	import water	tariff benefit
proprietary trade	beef export	radioact import	limit tariff
trade act	largest export	import or	harmon tariff
trade barrier	doubl export	beef import	secondari tariff
futur trade	export seminar	import terrorist	smoothawley tariff
frequenc trade	american export	import drywal	steep tariff
trade law	nation export	octg import	feedin tariff
trade the	promot export	import duti	the tariff
our trade	pork export	casein import	tariff impos
trade pact	export of	import fossil	tariff rate
trade imbal	presid export	food import	to tariff
commerc trade	export and	tube import	tariff schedul
trade to	busi export	import tariff	addit tariff
trade enforc	export financ	import seafood	fabricyarn tariff
trade deal	export their	import gasolin	tariff would
trade of	our export	current import	tariff reduct
pend trade	export cheaper	import 20000	colombian tariff
deriv trade	their export	drug import	suspend tariff
trade prefer	export the	import relief	unnecessari tariff
publicli trade	boost export	import assault	korean tariff
drug trade	export strategi	import good	tariff equiti
trade associ	state export	import fdaapprov	includ tariff
trade relationship	wine export	ethanol import	tariff the
trade remedi	export enhanc	safe import	tariff invert
trade agenda	expand export	import lowerpr	tariff shrank
trade subcommitte	subsid export	import the	tariff concess
trade a	export over	import chines	magnesium tariff
trade system	export restraint	to import	preliminari tariff
highfrequ trade	paperboard export	import wood	gallon tariff
trade and	ash export	dump import	tariff mexico
global trade	potato export	grape import	averag tariff
trade mission	arm export	import quota	advalorem tariff
trade issu	export abroad	ban import	tariff are

Note: The table lists the 50 most frequent bigrams associated with each term (trade, export, import, and tariff). I reviewed the top 50 bigrams from the initial selection of documents, and selected the ones that are closely related to trade. Selected ones are written in bold.

A2 Supervised Learning Method

I classified the collected press releases using the supervised learning method. I first decided on the number of categories through a systematic reading of randomly selected documents (25% of documents), and manually coded those documents into a set of categories. I then tested five algorithms with the coded documents to compare the performance of each algorithm. The coded documents are partitioned into 10 sets. Each algorithm learns the classification rule from 9 of 10 sets (training sets) and classifies the rest of documents (testing set).

I then assess the performance of each algorithm by comparing the machine coding and the human coding. Table A2 summarizes the overall algorithm accuracy of five tested algorithms. Precision refers to a proportion of correctly classified documents among the documents that an algorithm classifies as a given category. Recall refers to a proportion of correctly coded documents among the documents within a given category. F-scores produce a weighted average of both precision and recall, which could range from 0 to 1 with a higher value indicating better performance (Jurka et al. 2013). Table A2 shows that three algorithms (maximum entropy, support vector machine, and general linearized models) outperform the other two (random forests and decision trees).

Table A2: Overall Algorithm Accuracy

Algorithm	Precision	Recall	F-score
Maximum Entropy	0.77	0.75	0.75
Support Vector Machine	0.80	0.71	0.73
General Linearized Models	0.80	0.65	0.69
Random Forests	0.73	0.49	0.53
Decision Trees	0.49	0.48	0.47

I therefore decided to classify the rest of documents relying on the three mechanisms (maximum entropy, support vector machine, and general linearized models). Table A3 shows that at least two out of three algorithms agree on the classification for 98 percentage of documents, yet in such casees, recall rate is 0.86. When all three mechanisms make the same prediction, the coverage is down to 0.77 but the recall rate reaches 0.84, which is comparable to human coding. To enhance the accuracy of classification, I follow the machine classification only when the three algorithms agree on the classification. The rest of documents where the three algorithms make a different prediction, I recoded documents manually for the accuracy of classification.

Table A3: Ensemble Agreement Coverage and Recall

	Coverage	Recall
n>=2	0.98	0.86
n>=3	0.77	0.94

A3 Document Classification Results

With the supervised learning methods, the documents are classified into seven categories: i) pro-free trade, ii) protectionist, iii) trade adjustment assistance, iv) export assistance, v) trade barriers of foreign countries against the US, vi) other trade-related, and vii) unrelated. Figure A2 describes the 20 most frequent bigrams in each of category, excluding the unrelated category. Bigrams are listed in the order of their frequency with their size proportional to the frequency as well. The figure shows that press releases in the pro-free trade category frequently use the terms such as “trade agreement,” “free trade,” “create job,” “us export,” and “new market,” while press releases in the protectionist category frequently use the terms such as “currency manipulation,” “buy american”, “level playing field,” and “trade deficit.”

Figure A2: Most Frequent Bigrams in Each Classified Category

trade agreement	currenc manipul	adjust assist	small busi	us beef	rare earth
free trade	trade agreement	trade adjust	clean energi	trade repres	chines drywal
south korea	buy american	depart labor	energi technolog	clunker program	nation secur
presid obama	american worker	assist taa	export assist	market access	northern border
creat job	play field	us depart	manufactur export	cash clunker	trade agreement
member congress	american job	lost job	clean tech	presid obama	share border
american job	american manufactur	worker lost	export promot	member congress	us trade
colombia panama	unfair trade	job search	creat job	us trade	border manag
small busi	fair trade	taa program	us export	market us	consum product
agreement colombia	member congress	increas import	depart commerc	trade agreement	product safeti
way mean	trade deficit	help worker	technolog manufactur	us potato	trade repres
us export	trade practic	separ employ	increas export	congressmemb congress	intern trade
work group	trade act	elig appli	will help	member congressmemb	foot mouth
new market	level play	shift product	export initi	obama administr	immedi releas
us manufactur	intern trade	total partial	us clean	south korea	presid obama
will help	manufactur job	two year	dairi product	ecocar program	congressman melancon
korea free	currenc reform	lose job	help small	trade partner	foreign manufactur
korus fta	china currenc	reemploy servic	washington state	us auto	toxic chines
open new	trade polici	assist worker	intern trade	play field	mouth diseas
pend free	us manufactur	job result	good servic	ron kirk	said rep
Pro-Free Trade	Protectionist	TAA	Export Assistance	Trade Barrier	Others

Note: The figure lists the 20 most frequent bigrams in each classified category. The bigger the size of a given bigram in the column, the more frequently it appears in each category.

A4 Supporting Evidence for Empirical Strategy

A4.1 Senate Electoral Cycle and Voter Attention to Representatives

My empirical strategy exploits the different electoral cycles of senators, which creates the difference in the degree of voter attention to incumbent representatives. In the states where incumbent senators seek for reelection, media and voter attentions are diverted to senators while representatives receive a relatively lesser degree of attention. In other states where incumbent senators retire or have more time in their electoral cycles, incumbent representatives receive relatively more attention from media and voters.

In order to empirically validate this claim, I analyze the web-searching pattern of individuals in different states using the Google trend data. I collected the weekly index for all senators and representatives who were in the office as of June 2010 in each state. Specifically, I have an index value for House Representative Don Young, Senator Mark Begich, and Senator Lisa Murkowski from the Google-searching data of individuals living in Alaska. I collected all the weekly index values from July to December 2010 (when the survey was being conducted) for representatives and senators for all the states. As Google does not provide an absolute value for index, all the values are relative to each other. As only five terms are allowed to be directly compared, I set a reference value for one senator in each state and adjusted the value for other senators and representatives in the same state. The original value ranges from 0 to 100, but the adjusted value ranges from I averaged the weekly values. With this value as a dependent variable, I estimate the following model:

$$Y_{ij} = \alpha + \beta \text{House Representative}_i \\ + \gamma \text{House Representative} * \text{Reelection-Seeking Senator in State}_{ij} + \theta \text{State}_j + \epsilon_{ij}.$$

House Representative is coded 1 if i is a member of House and 0 if a senator. *Reelection-Seeking Senator in State* is a binary indicator for whether state j had a senator seeking for reelection in the 2010 mid-term election, and this variable is interacted with *House Representative*. As I include state fixed effects for the model, *Reelection-Seeking Senator in State* _{j} is not included. The estimation results are presented in Table A4. The result suggests that representatives receive less attention in general, compared to senators, but this tendency becomes stronger when incumbent senators seek for reelection in a given state, as indicated by the coefficient on the interaction term.

Table A4: Googling Senators and House Representatives

	(1)
House Representative	-4.017 (4.149)
House Representative * Senate Election in 2010	-15.797** (5.263)
State FE	Yes
Observations	535

Standard errors in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

A4.2 Electoral Cycle and District Characteristics

I also examine whether the socio-economic and political characteristics of districts are similar across the two types of states – one type with reelection-seeking senators or governors and another type without such senators or governors. As presented in Table A5, the two types of states appear to be comparable across a series of pertinent dimensions. High information environment denotes the states without reelection-seeking senators or governors, where representatives receive more attention, and low information denotes the states where incumbent senators seek reelection, where voter attention is diverted to senators or governors. As the shares of press releases with pro-free trade and protectionist messages indicate, the communication strategy of representatives appears to be comparable. Districts also appear to be similar in terms of the share of high-skill population, foreign born population, agriculture production, and the overall income level.

Table A5: Political Information Environment and District Characteristics

	High Information			Low Information		
	mean	sd	count	mean	sd	count
Free Trade Press Releases, %	0.09	0.55	132	0.11	0.44	301
Protectionist Press Releases, %	0.33	1.22	132	0.33	1.10	301
Difference in Free-Trade and Protectionist Measure	-0.24	1.36	132	-0.22	1.19	301
High Skill, %	34.71	6.16	132	35.32	7.52	303
Foreign Born Population, %	9.90	10.18	132	13.65	11.31	303
Agriculture Products, \$1B	0.67	1.38	132	0.69	1.30	303
Median Income, Log	10.79	0.26	132	10.84	0.25	303
Unemployment Rate, %	10.45	3.26	132	9.80	2.45	303
Republican Vote Share, %	44.24	20.94	132	41.42	24.43	303
Black Population, %	12.38	14.53	132	11.77	14.52	303
Population over 65, %	14.05	3.17	132	12.45	2.62	303

Note: High information denotes the states without reelection-seeking senators where voter attention is focused on representatives; Low information denotes the states with reelection-seeking senators where voter attention is diverted to senators.

A5 Additional Test

I further explore the effect of elite communications conditional on the presence of reelection-seeking senators by including a three-way interaction term of *High Information*, *Pro-Free Trade*, and *Copartisanship*. The estimation results are presented in Table A6. The coefficient on the three-way interaction term is consistently negative across the estimated models. While the coefficient is less substantial with respect to individual perception on self/family and the US, the difference in the effect is more clearly demonstrated for individual support for trade reduction as shown in the estimation results of the first two models.

Table A6: Pro-Trade Messages from Representatives and Public Attitudes toward Trade

	Trade Reduction		Trade on Self		Trade on US	
	(1)	(2)	(3)	(4)	(5)	(6)
Pro-Free Trade by Representative	0.008 (0.007)		0.016** (0.006)		0.008 (0.007)	
Copartisanship w/ Representative (d)	0.003 (0.020)	0.012 (0.022)	0.010 (0.017)	0.012 (0.020)	0.028 (0.018)	0.042* (0.021)
Pro-Free Trade * Copartisanship	-0.024+ (0.014)	-0.024 (0.015)	-0.027* (0.011)	-0.032* (0.014)	-0.015 (0.012)	-0.016 (0.013)
High Information * Pro-Free Trade	0.000 (0.014)		-0.006 (0.012)		-0.005 (0.012)	
High Information * Copartisanship (d)	-0.030 (0.033)	-0.033 (0.038)	-0.064** (0.023)	-0.066* (0.029)	-0.065* (0.026)	-0.066* (0.030)
High Information * Pro-Free Trade * Copartisan	-0.030 (0.025)	-0.054+ (0.031)	-0.004 (0.018)	-0.009 (0.021)	-0.002 (0.020)	-0.015 (0.023)
State FE	Yes	No	Yes	No	Yes	No
District FE	No	Yes	No	Yes	No	Yes
Observations	3679	3401	3667	3103	3668	3275

Marginal effects; Robust standard errors in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

All models include industry FE and *Controls* (income, gender, race, age, education, marital status, and union membership).