TRADE PROTECTIONISM AND ELECTORAL OUTCOME

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In the 2004 U.S. elections, the dispute on trade policy was one of the important issues between the Democrats and the Republicans. The Democratic Party emphasized that the U.S. government should link multinational trade agreements to labor and environmental issues. Conversely, the Republican Party advocated free trade and pledged to make the expansion of trade a consistent priority. This dispute over trade policy raises an interesting question: Does a party's tariff platform affect its electoral outcome? It is recognized that, in the late 20th century, the Democratic Party was labeled as a promoter of protectionism (Magee, Brock, and Young 1989). Simultaneously, the Democrats lost their longtime majority in the House of Representative with the election of the 104th Congress in 1994. Hence, it is natural to ask: Did the high Democratic tariff platform translate into its falling vote share?

Previous studies have recognized that campaign contributions and lobbies affect trade policy. The related theoretical models on the political economy of trade policy have two different approaches. The first one is the median-voter approach, developed by Mayer (1984), Mayer and Li (1994), and Magee, Brock, and Young (1989).

According to the first two studies, trade policy is determined by majority voting, while political parties maximize their probability of winning the election by choosing a tariff platform. Similarly, Magee, Brock, and Young (1989) considered a political model of endogenous policy formation. Under their framework, two parties set their trade platforms and then interest groups contribute funds in order to increase the probability that their preferred party will be elected.

The second theoretical approach is called political support. This approach rationalizes that tariffs are granted in response to demands made by special interest groups such as industries and unions. The government then weighs the increased political support it generates from pursuing policies beneficial to a particular industry against the support it loses from firms and consumers (Hillman 1989). Grossman and Helpman (1994) developed this idea and found the optimal tariff formation for the government. Models with the political-support approach explicitly present the relationship between campaign contributions and optimal tariffs, yet they do so at the expense of ignoring political competition between parties.

On the empirical side, previous works have focused mostly on the factors that determine congressional roll-call vote patterns on American trade policy. These works include those of Baldwin (1985), Irwin (1996), and Beaulieu (2002). The Stolper-Samuelson theorem implies that trade policy is independent of industry and depends only on the type of factor ownership. Based on this prediction, Baldwin (1985) published the pioneering work that examined the determinants of congressional vote patterns on trade legislation for the Tokyo Round of GATT. Shortly thereafter, Irwin (1996) investigated this issue using data from the British general election of 1923, where trade policy was the primary issue. Both papers suggested that stronger labor unions are likely to be associated with a higher level of trade protectionism.

Two more findings are important in understanding the vote pattern from the political science perspective. First, labor unions are a strong electoral base for the Democratic Party. In addition, the Democrats also maintain a strong influence on groups such as African-American voters and metropolitan residents. Second, campaign contributions play an important role in the voting pattern. For example, Snyder (1990) found evidence of a positive relation between a political candidate's probability of winning and the

amount of money the candidate collects from campaign contributors. Levitt (1994), meanwhile, found that challenger spending is marginally more productive than incumbent spending. Baldwin and Magee (2002) also found evidence that voting behavior on recent trade bills can be explained by campaign contributions from special interest groups. In particular, financial contributions from labor groups were associated with votes against free trade, while contributions from business groups were associated with votes against protectionism.

However, whether or not a party's *ex ante* tariff platform has any effect on its congressional vote pattern still deserves careful study. To address this question, we first consider a theoretical model with two parties (the Democratic Party and the Republican Party) in this article. The Democratic Party is assumed to be a protectionist party and has traditionally shown a preference for high tariffs. Each party has some *ideological* voters in the election. Therefore, the aim of each party is to maximize its vote share within the *non-ideological* voters by choosing a tariff platform. By doing so, campaign contributions are collected from *decided* non-ideological voters and such funding influences the vote of some of the *undecided* non-ideological voters. Therefore, a high tariff platform has two opposite effects on a party's (say, the Democratic Party's) vote share. On the one hand, a high tariff platform implies more contributions to the Democratic candidates which, therefore, could lead to a larger vote share. On the other hand, such a high tariff harms the relative capital-abundant (i.e., wealthy) owners according to the Stolper-Samuelson theorem. Therefore, some of these owners (i.e., those relatively wealthy voters) could switch their positions and vote against the Democratic Party. The net effect of the Democratic tariff platform on its vote share still remains an empirical question.

In this article, I estimate the impact of the Democratic tariff platform on its electoral outcome using congressional district data on election to the House of Representatives from the years 1982 to 1994. I control for many other financial, historical, and social factors that could affect the voting outcome. Aside from this, I also address the endogeneity issue using the instrumental variable (IV) approach. The estimation results clearly suggest three points. First, a higher Democratic tariff platform results in a higher Democratic vote share by increasing campaign contributions. Second, a higher tariff platform may also lead to a lower Democratic vote share due to the lost

support from its decided non-ideological voters. These two findings are consistent with the theoretical predictions. Finally, the *net effect* of the Democratic tariff platform on its election outcome is shown to be significantly negative. Indeed, a high tariff platform cannot help the Democrats win more seats in House elections, though it does help them collect more campaign funding from protected industries and labor unions.

The Theoretical Model

Consider a 3x2x2x2 model: three types of voters, two parties, two goods, and two factors. A capital-abundant country produces a capital-intensive commodity and a labor-intensive commodity using capital and labor. Two political parties—the Democratic Party (D) and the Republican Party (R)—compete for office via their trade policies. Parties are *partially* ideological in the sense that the Democratic Party historically prefers protectionism whereas the Republican Party inclines toward a pro-trade policy. Correspondingly, each party maintains some ideological supporters. Hence, I model $\tau^D > \tau^R$, where τ^D is the Democratic tariff platform while τ^R is the Republican one. I assume that each party also tries to maximize its vote share within the *non-ideological* voters to win the election by choosing tariff platforms.[1]

There are three types of voters in the model: decided, undecided, and ideological voters. Decided voters prefer a particular party while undecided voters do not. One example is that some voters may spend more money on imported goods and therefore care more about the import tariff. For this reason, they have the inclination to make campaign contributions to their preferred party and get benefits from their preferred trade policy if their preferred party wins the election.[2]

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[1]This setup makes the present article different from the assumption of "citizen candidates" by Besley and Coate (1997) and Osborne and Slivinski (1996). In their works, parties cannot commit to policy announcements and will simply implement their most preferred policies after winning the election.

[2]Here, one voter is assumed to make contributions to a single party only according to the campaign-contribution-specialization theorem introduced by Magee, Brock, and Young (1989). Furthermore, by applying the theories of Grossman and Helpman (1996, 2001), it is assumed that the primary objective of making a contribution is to affect the election outcome while the secondary objective is to buy the policy. Note that this setup is also different from the unique "influence motive" adopted in Grossman and Helpman (1994) in order to take into account the role of political competition between parties.

In contrast, undecided voters do not have a prior preference for a specific party, and their position is easily swayed by political advertisement. Finally, ideological voters may have some ex ante ideological preference for a specific party, but their position cannot be affected by either a party's tariff platform or its political advertisement.

Decided voters $j \in \{1,...J\}$ share the same additively separable quasi-linear preferences and maximize their utilities, $U_j = y_{1j} + u(y_{2j})$, subject to their budget constraints $y_{1j} + py_{2j} = E_j$ where p is the relative import price, y_1 is a capital-intensive good, y_2 is a labor-intensive good, and E_j is voter j's income. Each voter has the same labor endowment, which is normalized as a unit but with different capital endowments (K_j). The import tariff income (T) is also redistributed with a lump sum subsidy. Thus, voter j's indirect utility function is:

(1) $v_j(p) = CS(p) + w(p) + r(p) \cdot K_j + T(p)/\bar{L}$,

where $CS(p)$ is the consumer surplus, w is wage, r is capital return, and $\bar{L}$ is the aggregate labor endowment for the whole labor force.

A voter would support the Democratic Party if and only if that voter's indirect utility under a Democratic tariff platform is higher than that under a Republican tariff platform. Otherwise, the voter would vote for the Republican Party. With the Metzler paradox ruled out, the import tariff (τ) is assumed to be a specific one, $p = \tau + p^w$, where p^w denotes the world price. This implies that the set of decided non-ideological voters for the Democratic Party, Ω_D, is $\{K_j | v_j(\tau^D) - v_j(\tau^R) > 0\}$. From (1), we have:

(2) $\Omega_D = \{K_j | [CS(\tau^D) - CS(\tau^R)] + [w(\tau^D) - w(\tau^R)]$
$\qquad K_j \cdot [r(\tau^D) - r(\tau^R)] + [T(\tau^D) - T(\tau^R)]/\bar{L} > 0\}$.

The supporting set of the Democratic Party is $\Omega_D = \{j | K_j < \widetilde{K}(\tau^D, \tau^R)\}$, where the cutoff capital level $\widetilde{K}$ is defined as:[3]

$$\widetilde{K}(\tau^D, \tau^R) \equiv \frac{[CS(\tau^D) - CS(\tau^R)] + [w(\tau^D) - w(\tau^R)] + [T(\tau^D) - T(\tau^R)]/\bar{L}}{r(\tau^R) - r(\tau^D)}$$

The economic rationale behind this expression is that decided non-ideological voters are separated into two groups. The relatively

[3]The cutoff capital-labor ratio coincides with the median voter's capital-labor ratio provided that $\tau^D = (\tau^R)$.

labor-abundant voters vote for the Democratic Party, while the relatively capital-abundant voters vote for the Republican Party.

Decided non-ideological voters make campaign contributions in order to affect the electoral outcome. Conversely, undecided non-ideological voters do not, yet they cast their ballots after being exposed to the different advertisements of each party, which in turn comes from the financial contributions of the decided non-ideological voters.

The fractions of decided, undecided, and ideological voters are presumed to be ρ_1, ρ_2, and $1 - \rho_1 - \rho_2$, and each party's vote share includes these three types of supporters. Out of the entire decided group, the portion of decided voters who support the Democratic Party is $\int_0^{\bar{K}(r^D, r^R)} f(K_j) d(K_j)$, where $f(K_j)$ is the corresponding probability density function for voter j. For example, one could imagine the uniform distribution as a motivated example. However, we do not need to restrict the specific probability density functional form for the purpose of our estimations.

Following Jacobson (1987), the vote share from the undecided non-ideological group is directly proportional to the advertisement expenditure share of both parties. Specifically, a functional form $C^D/(C^D + C^R)$ is used to characterize the behavior of undecided non-ideological voters, where C^D, C^R denote the aggregate campaign contributions that the Democratic Party and the Republican Party could collect, respectively. Moreover, many empirical evidences such as Baldwin (1985) and Beaulieu (2002) suggest that campaign contributions collected by the Democratic Party from labor unions are positively related to trade protection. Accordingly, the campaign contribution is modeled as an increasing function of the Democratic tariff platform, $\partial C^D/\partial \tau^D > 0$. By the same token, money collected by the Republican Party is a decreasing function of its tariff platform, $\partial C^R/\partial \tau^R > 0$.[4]

Meanwhile, there are also some ideological voters for each party, and such voters have an ideological preference for the specific party. For example, in the United States, almost all the Irish immigrants have voted in favor of the Democrats over the last 200 years to reward the generosity that their first American-generation ancestors

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[4]Of course, one can consider a model to derive such relationships endogenously. However, based on the empirical evidence as mentioned, I believe the assumptions here reasonably fit with the reality.

received from the Democrats (Polsby and Wildavsky 2000). Such voters' behaviors are affected neither by a party's tariff platform nor by its campaign contributions. Political advertisement to them is therefore just a dress. The ideological content could indeed include many other historical, geographical, and social factors. We will specialize on a functional form to characterize their behavior in the next section when we turn to the empirical part. Here, in readers' convenience we simply use Z to denote the fraction of Democratic partisan voters, whose voting decisions are independent of the tariff policy.

Hence, the vote share of the Democratic Party, π^D, is described as follows:

$$(3)\ \pi^D = \rho_1 \int_0^{\bar{K}(r^D,\ r^R)} f(K_j) d(K_j) + \rho_2 \frac{C^D(\tau^D)}{C^D(\tau^D) + C^R(\tau^R)} + (1 - \rho_1 - \rho_2)Z$$

In the present paper we do not aim to characterize the Nash equilibrium for the two parties since this is not our main interest.[5] Instead, in order to offer a theoretical guidance for our estimations, we are more interested in how an increase in a party's platform (e.g., the Democratic tariff platform) affects its vote share. To shed light on this point, we take the partial derivative of π^D with respect to τ^D to obtain:

$$(4)\ \frac{\partial \pi^D}{\partial \tau^D} = \rho_1 f(\tilde{K}) \frac{\partial \tilde{K}}{\partial \tau^D} + \frac{\rho_2 \cdot C^R}{(C^D + C^R)^2} \frac{\partial C^D}{\partial \tau^D}$$

Note that the signs of each term in the right hand side of (4) are positive except for the term $\partial \tilde{K}/\partial \tau^D$, which is ambiguous and depends on the cut-off capital level $\tilde{K}$ as shown in Appendix A. Therefore, we have the following proposition:

> The two parties, the Democratic Party and the Republican Party, maximize their vote shares within the non-ideological voters by choosing their trade platforms, respectively. If the Democratic Party has a vote share function like (3), then an increase of its tariff platform has two effects on its vote share:
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> (i) an increase of its tariff platform leads to a higher vote share via an increasing support from the undecided non-

[5]It is easy to show that the existence and uniqueness of the Nash equilibrium in such a model. The proof is available upon request.

ideological group. (ii) an increase of its tariff platform leads to a diminishing decided non-ideological group $(\partial \widetilde{K}/\partial \tau^D < 0)$ provided that the cutoff line is sufficiently high $(\widetilde{K} > \bar{K}/\bar{L})$.[6]

The economic rationale is as follows. The decided voters for the Democratic Party are relatively skewed toward the labor groups. A rise in tariffs would benefit workers who, in turn, would cast their ballots in favor of the protectionist party. However, such a relationship is nonlinear: when the Democratic Party announces a very high tariff platform, it collects more money from the decided non-ideological group and hence gets more votes from the undecided non-ideological group. However, it will do so at the expense of losing some decided voters because some of them (i.e., those who are relatively wealthy) would be inclined to vote for the Republican Party. This switching phenomenon occurs especially when the Democratic Party announces a tariff platform which makes its original most wealthy decided supporter $(\widetilde{K})$ richer than the decided voter with mean capital level $(\bar{K}/\bar{L})$.[7] In such a case, less people will contribute to the Democratic Party though they will contribute more.

Therefore, whether or not an increase in the Democratic tariff platform leads to a higher vote share in the election depends on the net effect of the two kinds of changes already mentioned. Without a doubt, an increase of its tariff platform always leads to more campaign contributions, which, in turn, bring more votes from the undecided non-ideological group. However, when an increase of its tariff platform causes a decrease in its decided group, the net effect of an increasing Democratic tariff platform on its vote share is uncertain, and hence remains an empirical question. Finally, note that the ideological voters play no role in (4) since their behaviors are not contingent on a party's trade policy.

Empirical Methodology

The simple theoretical model presented above suggests that the Democratic vote share depends on tariffs, campaign contribution funding, and various ideological issues. It hypothesizes that a higher Democratic tariff platform, on the one hand, leads to a higher

[6]See Appendix A for a proof of this proposition.
[7]Such a particular trade platform level is also described in Appendix A.

Democratic vote share via a channel of increasing campaign contributions. On the other hand, a higher Democratic tariff platform could simultaneously lead to a lower Democratic vote share due to a decrease in the number of its decided non-ideological voters. I therefore provide an extensive empirical investigation to determine the effect of the Democratic Party's tariff platform on the electoral outcome using the House election data. In this section, I first introduce a way of constructing tariffs that allows them to vary across congressional districts, followed by the measurement of the ideological voters. Finally, I specify the empirical methodology used in this article.

Industrial Weighted Tariffs

There is a potential limitation to using average tariffs as a proxy for tariff platform. One concern is that passing a new trade bill to alter the tariff structure is challenging not just because of the intricacies of the legislative process, but probably mainly because the U.S. rates are affected at the multinational level via the GATT/WTO or other international trade agreements. Therefore, one would recommend using various non-tariff barriers (NTBs), and particularly coverage ratios, to measure trade policy instead. However, there are several severe problems of using NTBs to measure trade policy as well.

First, the coverage ratio is a very imprecise proxy for the actual quantities restrictiveness of import barriers like import quotas. As pointed out by Trefler (1993), the coverage ratio is defined as the product of an indicator (i.e., 1 if the product is covered by NTBs and 0 otherwise) and the weight of a commodity (i.e., the import share of that commodity relative to total imports in the industry). However, both components of this ratio have some deficiencies. For example, it is possible to wrongfully measure the protection when one incorrectly attaches high weights to commodities that are lowly protected given these industries are more likely to have high imports (Goldberg and Maggi 1999).

Second, the NTBs cannot be compared across different years since the import restrictiveness in different years are different. For example, import quotas might differ over time but the coverage ratio cannot capture such differences. Therefore, the coverage ratio for NTBs is good for cross-sectional analysis but not for panel regressions. This problem could be a severe shortcoming here given that our main interest is to investigate the effect of trade policy on vote

outcome over time. But even if we restrict our scope to cross-sectional analysis, the coverage ratio is still problematic. This is because such data vary by industries but not by congressional districts, which is exactly what we need in regressions.

Finally, some NTBs like Voluntary Export Restraints (VERs) are also set by international cooperation. In this sense, one cannot avoid such a shortcoming when replacing tariffs with NTBs as a proxy for trade policy. Due to such shortcomings, in this article I abandon the use of NTBs coverage ratio to measure trade policy and, instead, stick to tariffs. In particular, a production-weighted tariff can serve as a good proxy for trade policy for the following reasons.

First, both tariffs and some kind of NTBs, without a doubt, are affected by GATT/WTO and other international trade agreements. However, such trade agreements merely set the *bounded* tariffs for commodities. The actual tariffs are still determined by the House of Representatives and the Senate. Congress can set any level of tariffs once it is lower than the bounded tariffs suggested by the GATT/WTO. Historically, Congress even violated the rule of GATT/WTO to set a strikingly high tariff line, though such behavior induces trade retaliation from other countries.[8]

Second, it is also true that using *average* tariffs to measure protectionism encounters the same problem of understating/overstating the degree of actual protection as using NTBs (Goldberg and Maggi 1999). However, we can address this problem by constructing the production-weighted tariffs (Lee and Swagel 1997). In particular, the industrial weighted tariff (τ_i) at district i is defined as $\Sigma_n w_n^i \varsigma_n$, where w_n^i is the industrial share of SIC 2-digit sector n relative to its gross district product for all tradable sectors at the congressional district i, and ς_n is the SIC two-digit tariff rate in industry n. The SIC two-digit tariffs are aggregated from the SIC four-digit tariffs across countries and industries, which in turn, are calculated using the duties value divided by the customs value.[9]

It is understood that each congressional district faces an identical national-line tariff for a commodity given a specific year. Different

[8]One good example is that the Bush administration set ordered tariffs of 8 percent to 30 percent on most imported steel in 2002 (see www.trilla.com/Consumers_Cite_Tariffs.htm).
[9]Appendix B includes a more detailed description of tariff manipulation.

states, however, have different industrial structures. For example, Alaska has a higher weight in the agricultural sector, while Massachusetts has a higher weight in the manufacturing sector. Even in the same state, different congressional districts may have quite different industrial structures. For instance, data from the Bureau of Economic Analysis (BEA) show that the California bay area (Congressional District 8) has a very large weight on electronic machinery, while Imperial County (Congressional District 51) has a very large weight on forestry products. Figure 1 presents examples that production-weighted tariffs vary by states and districts. Note that the variation in district-level production-weighted tariffs is completely driven by differences in the production structure across districts. Because of this, we are able to avoid the possible imprecise measurement based on calculations of sectors' import shares (Lee and Swagel 1996, Goldberg and Maggi 1999).
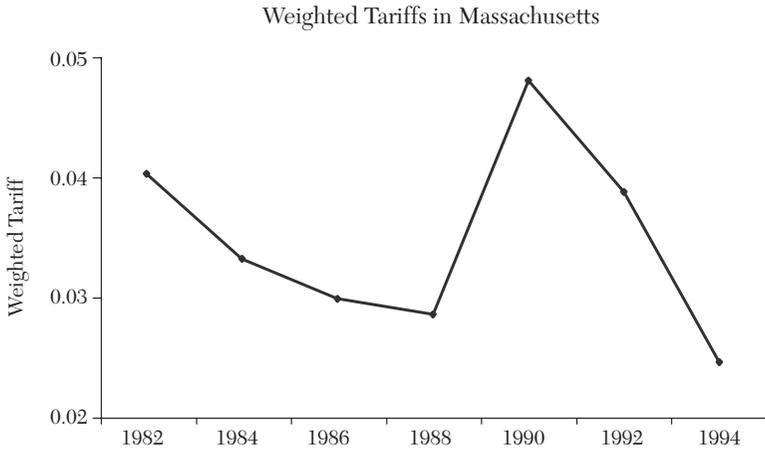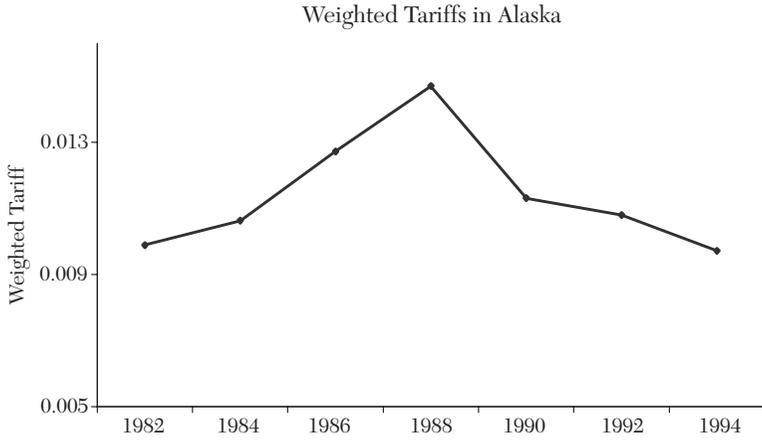
Ideological Measurement

Aside from supporters from decided and undecided non-ideological voters, the Democratic Party still maintains an electoral base from ideological groups. The sources of such groups include suburbanization, immigaration, race, and labor unions.

Suburbanization. Traditionally, the Democratic Party has a strong electoral base from metropolitan residents (Polsby and Wildavsky 2000). For example, 58 percent of metropolitan residents voted for the Democratic Party in the 1992 presidential election. The percentage increased to 68 percent in the 1996 presidential election (*New York Times* 1996). With others remaining constant, metropolitan residents are likely to cast their ballots in favor of the Democratic Party. We therefore used district-level rural ratio (*rural*) to measure the strength of ideological supporters for the Democratic Party from the rural area. It is hypothesized that the Democratic Party's vote share is negatively associated with this variable.

Immigration. As stated earlier, each party maintains their ideological supporters from specific immigrants. For instance, in the past two centuries Irish immigrants almost always supported the Democratic Party. In contrast, German immigrants mostly voted for the Republican Party due to the political distortion raised by World War II (Germond and Witcover 1981). Here, we used the foreign

FIGURE 1
WEIGHTED TARIFFS IN DIFFERENT STATES AND
CONGRESSIONAL DISTRICTS

Weighted Tariffs in Alaska

Weighted Tariffs in Massachusetts

Weighted Tariffs in Bay Area, CA

Weighted Tariffs in District 51, CA
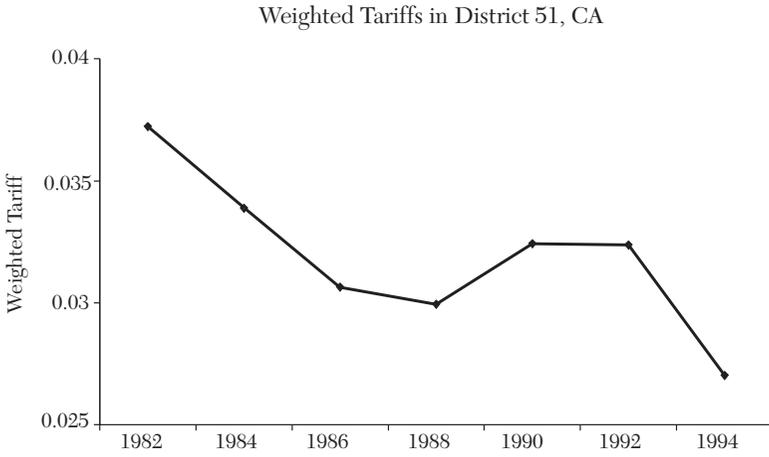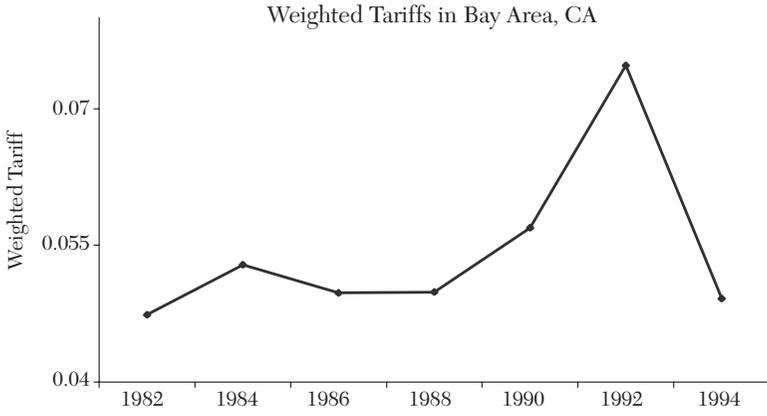
born ratio (*foreign*) as a proxy to measure the ideological skewness from immigrants.[10]

Race. It is understood that most African-American people are in favor of the Democratic Party historically (Polsby and Wildavsky 2000). In each presidential election the Democratic Party can earn more than 80 percent votes out of black voters (*New York Times* 1996). We thus used the black ratio (*black*) in each district to measure this issue.

Labor Unions. The Democratic Party, historically speaking, is a labor-friendly party. For example, John Kerry, the Democratic candidate, emphasized in the 2004 presidential campaign that the United States should have "an immediate 120-day review of all existing trade agreements to ensure that our trade partners are living up to their labor and environment obligations, and that trade agreements are enforceable and are balanced for America's workers."[11] As a reward, stronger labor unions imply a larger electoral base for the Democratic Party. I used the state unionized ratio (*union*) to measure the strength labor unions.

Blue-collar Ratio. Traditionally blue-collar workers who are relatively poor are for the Democratic Party. In fact, even in those years when the Democrats lost in the presidential elections, they still maintained a strong electoral base with the blue-collar workers. For instance, the Democrats won 51 percent, 55 percent, and 62 percent of the blue-collar votes in the 1980, 1984, and 1988 presidential election years, respectively (*New York Times* 1996). I therefore used the district-level blue-collar ratio (*blue*) to measure the density of blue-collar workers in each district.

Empirical Specifications

Turning to the estimations, we consider a specification based on our theoretical framework mentioned above:

$$(5) \quad \pi_{it}^D = \alpha_i + \lambda_t + \beta_i \tau_{it}^D + \beta_2 (\tau_{it}^D x_{it}^D) + \beta_3 x_{it}^D + \beta_4 \, rural_{it} + \beta_5 \, foreign_{it} + \beta_6 \, race_{it} + \beta_7 \, union_{it} + \beta_8 \, blue_{it} + \varepsilon_{it}.$$

[10]Admittedly, the foreign-born ratio is not equivalent to the immigration rate. However, the state/district immigration data are unavailable; hence, the foreign-born ratio is used as a proxy (Adler 2002).

[11]See www.pbs.org/newshour/vote2004/issues/issue_trade.html.

The dependent variable (regressand) is the Democratic vote share (π_{it}^D) in each congressional district i in year t. The independent variables (regressors) include the Democratic weighted tariff platform (τ_{it}^D), the Democratic campaign contribution share (x_{it}^D), and other controllable variables such as rural ratio (*rural*), foreign-born ratio (*foreign*), black ratio (*race*), unionized ratio (*union*), and blue-collar ratio (*blue*). In addition, α_i captures the unobserved district-specific time-invariant fixed effects while λ_t represents the time-specific fixed effects (i.e., year dummies). All other factors unspecified here are treated as random variables with heteroskedastic variance, $\varepsilon_{it} \sim N(0, \sigma_{it}^2)$.

It is understood that a party's tariff platform is difficult to observe directly. However, when a party wins the election, its announced prior trade platform is equivalent to the tariff, which is directly observable.[12] To investigate the effects of the Democratic tariff platform on its electoral outcome, we therefore restrict our scope to those periods when the Democrats control the House. According to our specification (estimate), the effects of the Democratic tariff platform on its vote share are captured by:

$$(6)\ \partial \pi_{it}^D / \partial \tau_{it}^D = \beta_1 + \beta_2 x_{it}^D.$$

Clearly, a Democratic tariff platform has two channels to affect its vote share. First, the term β_1 considers the direct effect of the tariff platform on its vote share. Comparing with the theoretical setup above, it corresponds to the term $\rho_1 f(\bar{K}) \frac{\partial \bar{K}}{\partial \tau^D}$ in (4). Put in another way, the coefficient β_1 measures effects of the platform on the share of the Democrats among the decided non-ideological voters. To shed light on this point, let us consider an extreme case where the Democratic Party collects no money to sway the undecided non-ideological group, $x_{it}^D = 0$. Even if this happens, a tariff platform will still affect the electoral outcome because it changes the density of the decided non-ideological group. As mentioned above, we do not know whether or not the announced tariff platform in the election is sufficiently high according to our theoretical model (i.e., if the platform is high enough, then β_1 is negative; otherwise it is positive). Hence, the sign of β_1 relies on estimations.

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[12]One possible exception is that the party does not carry on with its commitment. This might cause some measurement error problem. However, it can be addressed using the IV approach.

Second, the term $\beta_2 x_{it}^D$ suggests that, if $\beta_2 > 0$, then the effect of tariffs on votes is greater in districts where contributions are higher. Linking toward (4) in the theoretical model, this term could be interpreted as an indirect channel for the effect of tariffs on votes. That is, tariff platform indirectly affects electoral outcome via the campaign contribution channel. It is expected that the coefficient of the interaction term, β_2, would have a significant positive sign. The economic rationale here is that a high tariff causes the Democrats to collect more campaign contributions, which in turn, leads to a high vote share. Finally, we also consider a term $\beta_2 x_{it}^D$ to control for other non-trade factors that could possibly affect the contributions.

Data and Estimates

Data Descriptions

Data from the House of Representatives during the period 1982–94 are used to perform estimations for two reasons. First, the number of members of the House of Representatives is larger than that of the Senate. Hence, the striking advantage of using a large sample data from the House of Representatives is the reduction of possible multicollinearity among the regressors. Second and more importantly, in order to use tariffs as a proxy for the Democratic platform, we drop the election years when the Democrats lost the majority in the House. As shown in Table 1, the Republicans gained control of the House with the election of the 104th Congress in 1994. Also, some of the vote share data before 1982 are missing. As a result, this article focuses on the period 1982–94 to investigate the effects of the Democratic tariff platform on vote share.

Disaggregated tariff data can be accessed from Feenstra, Romalis, and Schott (2002). I describe the steps used to construct the production-weighted tariffs in Appendix B. Aside from the data on tariffs, we also need the campaign contribution data. The contributions' share is measured as the share of money that the Democrats collect relative to the sum collected by both Democrats and Republicans. Following the analysis of Snyder (1990), candidates defeated in the primaries and minor candidates in the general election are excluded in our estimations. Moreover, we also discard the races in which a third-party candidate received more than 10 percent of the vote. In other words, the scope is restricted to Democratic and Republican

TABLE 1
Historical House Elections: 1980–1998

Party Division	97th	98th	99th	100th	101st	102nd	103rd	104th	105th	106th
Democrats (D)	242	269	253	258	260	267	258	204	206	211
Republicans (R)	192	166	182	177	175	167	176	230	228	223
Independent	1	0	0	0	0	1	1	1	1	1
Party Won	D	D	D	D	D	D	D	R	R	R

Source: Data are from http://clerk.house.gov/art_history/house_history/index.html.

candidates who ran in the general election. Based on this considera-tion, the number of observations is reduced to 2,921.

Table 2 summarizes the basic statistics of the data set where we report mean and standard error, as well as minimum and maximum level for each variable. On average, the Democrats maintained a 56 percent vote share in the elections during the period 1982–94 when they controlled the House. Meanwhile, the mean of the Democratic contribution share is 59 percent, which implies that the campaign contributions they collected were also more than those collected by the Republicans. By considering the role of the industrial structure in each district, the production-weighted tariffs vary greatly from 0.4 percent to 8.2 percent. This serves as evidence that the same nation-al-line tariff has much different effects on the economics of different districts, which in turn would affect district-level electoral outcomes. Data sources and detailed descriptions of all of the variables are reported in Appendix A.

Effects of Tariff Platform on Electoral Outcome

Our theoretical model suggests two different ways that the Democratic tariff platform could affect its vote share. On the one hand, a low tariff platform harms the interests of labor unions, which, in turn, contribute less to the Democratic Party. Accordingly, the Democratic Party will be unable to spend more money on the cam-paigns to sway the public. On the other hand, such a low tariff plat-form could directly change the density of the Democratic Party's decided non-ideological voters. It is possible that some decided non-ideological voters will switch their prior positions due to the change of relative wealth within their group. As a result, the effect of Democratic tariff platform on decided voters is ambiguous and the net effect on its vote share is also uncertain. Here, we empirically investigate the magnitude of these two different channels using the specification (estimate) mentioned above.

Table 3 reports the main results of our two-way fixed-effect esti-mations.[13] As seen from column (1), we estimate effects of the Democratic tariff platform on its vote share, controlling for the con-tribution share and various ideological factors. The estimated coeffi-

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[13]The related Hausman tests for all specifications highly reject the null hypothesis of the random-effect estimators and are favorable to the fixed-effect estimators. Such results are not reported here to save space but are available upon request.

TABLE 2
SUMMARY STATISTICS, 1982–1994

Variables	Mean	Standard Error	Minimum	Maximum
Democratic Vote Share	0.560	0.215	0	1
Production Weighted Tariffs	0.035	0.009	0.004	0.082
Contribution Share	0.590	0.355	0	1
Unionized Ratio	0.229	0.089	0.058	0.800
Black Ratio	0.110	0.145	0	0.801
Rural Ratio	0.049	0.090	0	1
Foreign-born Ratio	0.066	0.076	0	0.585
Blue-collar Ratio	0.193	0.084	0.040	0.578
CUSFTA Dummy	0.419	0.494	0	1

NOTE: Data sources are listed in Appendix B.

cient of the interaction term between tariff platform and contribution share, $\tau_{it}^D x_{it}^D$, is $\hat{\beta}_2 = 1.076$, which is statistically significant at the 1 percent level. This result is consistent with our theoretical prediction that a high tariff platform is translated into a high Democratic vote share via an increase of its campaign funding.

The estimated coefficient of the tariff platform itself, $\hat{\beta}_1$, which measures the effect of Democratic tariff platform on its vote share via the change of decided non-ideological voters, is shown to be negative, though insignificant at the statistical conventional level. The interpretation is intuitive. Suppose the Democratic Party announces a high tariff platform that could harm some wealthy decided voters, such voters will then switch their positions to the Republican Party. In such a case, a high tariff platform will cause the Democrats to lose some supporters in the decided non-ideological groups and vice versa. Moreover, we expect that the statistical insignificance of the coefficient is caused by the endogeneity problem, which will be addressed shortly.

In some districts, the electoral competition in the House of Representatives is between two challengers (i.e., open-seat competition). However, in other districts, the competition is between an incumbent and a challenger. The incumbent may have some extra advantages like easier access to useful information (Levitt 1994). To consider the role of incumbency advantage, we include a dummy (coded one for incumbency) to capture the incumbent effect on district elections. The positive significant estimated coefficient of the incumbency dummy in column (2) suggests that the incumbency for Democrats brings extra votes in elections while keeping others constant. By comparing the results in columns (1) and (2), the effects of tariff platform on election outcome are revealed to be quite stable. This also serves as a robustness check for our estimations.

In reality, other economic platforms such as fiscal policy and monetary policy could affect campaign contributions. We therefore include the contribution term separately to control for money collected from non-trade issues. As shown in Table 3, for whatever reason, the higher the Democratic campaign contribution share, the higher the Democratic vote share is, ceteris paribus. The rest of Table 3 includes a variety of robustness checks, presented in columns to the right of column (2). The first perturbation drops the labor union variable because its estimated coefficient is insignificant in column (1). By the same token, we perform stepwise estimations in the

TABLE 3
EFFECTS OF DEMOCRATIC TARIFF PLATFORM ON ITS VOTE SHARE

Democratic Vote Share	(1)	(2)	(3)	(4)	(5)
Tariffs	-.461	-.436	-.464	-.466	-.463
	(-1.19)	(-1.17)	(-1.20)	(-1.20)	(-1.20)
Tariffs*Contribution Share	1.076**	1.075**	1.076**	1.078**	1.071**
	(2.14)	(2.23)	(2.14)	(2.15)	(2.13)
Contribution Share	.293**	.233**	.293**	.293**	.293**
	(14.15)	(11.53)	(14.15)	(14.16)	(14.22)
Foreign-born Ratio	.324**	.222**	.325**	.325**	.326**
	(4.18)	(2.97)	(4.19)	(4.19)	(4.23)
Blue-collar Ratio	.110*	.109**	.112*	.112*	.110*
	(1.66)	(1.72)	(1.70)	(1.69)	(1.68)
Rural Ratio	-.012	-.009	-.011	-.011	
	(-0.29)	(-0.23)	(-0.28)	(-0.28)	
Black Ratio	.005	.009	.005		
	(0.21)	(0.37)	(0.20)		
Unionized Ratio	.029	.047			
	(0.36)	(0.61)			

TABLE 3 (*cont.*)
Effects of Democratic Tariff Platform on Its Vote Share

Democratic Vote Share	(1)	(2)	(3)	(4)	(5)
Incumbent Dummy		.095**			
		(14.83)			
District Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
R-square	.648	.691	.650	.650	.649

NOTES: Numbers in parenthesis are t-values. * indicates significance at the 1 percent level and ** at the 5 percent level.

rest of the table, dropping the black ratio and the rural ratio, respectively. One of our key results—Democratic tariff platform leads to an economically and statistically significant increase of its votes within the undecided non-ideological group via the channel of campaign contribution—is robust in all specifications. Similarly, the effect of another channel also seems stable: Democratic tariff platform negatively affects its votes within the decided group insignificantly at the conventional statistical level.

Finally, estimated coefficients of all other variables have the predicted signs. High foreign-born ratio and blue-collar ratio are both statistically significant and associated with a high Democratic vote share. A similar case occurs for labor union though its effect is statistically insignificant. In contrast, a high rural ratio harms the Democratic vote share, because the Democratic Party has a strong electoral base in metropolitan areas. The African-American ratio is also positively associated with the Democratic vote share though it is statistically insignificant.

Endogeneity Issues

Admittedly, it is possible that districts that are more heavily Democratic may have supported more protectionism policies toward local industries historically. Put in another way, previous electoral outcomes could play a significant role in the formation of a future tariff platform. Moreover, if the Democratic Party does not carry on its commitment after it wins the election, then the *ex post* trade policy is different from its *ex ante* tariff platform. In this case, we may encounter a measurement error problem. Therefore, the possible reverse causality and the potential measurement error problem will both make our empirical specifications face typical endogeneity issues.

It is well recognized that the IV approach is a powerful approach to control the endogeneity problem (Wooldridge 2002). However, the challenge of using such an approach is to choose an appropriate instrument which, ideally, is exogenous to the instrumental variable and affects the regressand only through the instrumental variable. Here, we adopt an accession dummy of the Canada-U.S. free trade agreement (CUSFTA) as the instrumental variable. That is, since the CUSFTA is formed in year 1989, we consider a dummy variable, which is coded 0 for those years before 1989 before and 1 after

1989.[14] We believe this is a good IV candidate for the following reasons.

First, it makes good sense economically. The formation of CUSF-TA removed all bilateral trade barriers between the two countries. Traditionally Canada has been the largest trading partner of the United States. As reported by the Department of Commerce, bilateral trade with Canada (the sum of exports and imports) in 2002 accounted for nearly 20 percent of total U.S. trade. With regard to Canada, the United States accounted for 65.6 percent of Canadian imports and 72.8 percent of Canadian exports before the formation of the CUSFTA (Townsend 2007). Therefore, the phase-out of bilateral tariffs implies a deep reduction of U.S. average tariffs on many commodities, which, in turn, imposes an upper bound for the Democratic tariff platform and affects its vote outcome. Clearly, the CUSFTA dummy is exogenous to the Democratic tariff platform because a party's tariff platform cannot determine the CUSFTA formation.

We report the IV estimates and their related first-stage results in Table 4, using the CUSFTA dummy as an instrumental variable.[15] Technically, the CUSFTA dummy is a valid instrument as shown by various statistical tests. First, the F-test and the t-test for the CUSF-TA dummy are highly significant at the 1 percent level. Second, to check whether or not the instrumental variable is correlated with the endogenous tariff platform, Anderson's canonical correlation likelihood-ratio test is used to verify the null hypothesis that our specification is under-identified. The rejection at the 1 percent level for each specification again shows that our specifications are well identified. Third, we take a step forward to see whether or not such an instrument is merely weakly correlated with the endogenous tariff platform. If so, then the estimates will perform poorly in such estimations. However, the Cragg and Donald F-statistics provide strong evidence for rejecting the null hypothesis that the first stage is weakly identified at a highly significant level.

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[14]Of course, the CUSFTA dummy also captures many other events or differences before and after 1989 which can be correlated with things that affect votes. However, this is not a problem once one can show that the instrument (the CUSF-TA dummy) affects the regressand (the Democratic vote share) through and only through the instrumented variable (tariffs), as we do in Table 5.
[15]To avoid the multicolinearity problem, it is not recommended using year-specific fixed-effect estimation here since our instrument is a year dummy. Therefore, we include a time trend variable to capture the time effect instead.

TABLE 4
IV REGRESSIONS OF DEMOCRATIC VOTE SHARE

Democratic Vote Share	Second-Stage		First-Stage	
	(1)	(2)	(1')	(2')
Tariffs	-7.149*	-5.772		
	(-1.78)	(-1.5)		
Tariffs*Contribution Share	9.136*	7.445*	1.170**	1.170**
	(1.93)	(1.64)	(65.96)	(65.77)
Contribution Share	.130	.0727	-.043**	-.043**
	(0.75)	(0.44)	(-54.16)	(-50.34)
CUSFTA Dummy			.002**	.002**
			(4.63)	(4.62)
Foreign-born Ratio	.152**	.139**	-.001	-.001
	(3.96)	(4.05)	(-0.83)	(-0.81)
Blue-collar Ratio	.262**	.223**	.017**	.017**
	(3.02)	(2.67)	(5.92)	(5.93)
Rural Ratio	-.020	-.006	-.007**	-.007**
	(-0.49)	(-0.16)	(-3.41)	(-3.41)
Black Ratio	.136**	.143**	.001	.001
	(6.21)	(6.92)	(1.38)	(1.36)

continued

547

TABLE 4 (cont.)
IV REGRESSIONS OF DEMOCRATIC VOTE SHARE

Democratic Vote Share	Second-Stage		First-Stage	
	(1)	(2)	(1')	(2')
Unionized Ratio	-.057	-.047	-.006**	-.006**
	(-1.47)	(-1.28)	(-3.27)	(-3.27)
Incumbent Dummy		.120**		-.001
		(15.25)		(-0.71)
Time Trend	-.010**	-.011**	-.001**	-.001**
	(-6.31)	(-7.04)	(-5.26)	(-5.25)
First Stage F-statistics			515.57†	513.40†
Anderson Likelihood-ratio Statistic	19.99†	19.88†		
Cragg-Donald Test Statistic	20.06†	19.95†		
R-square	.622	.677	.789	.789

NOTES: This table reports both stages of estimation results of effects on Democratic vote share, using the CUSFTA dummy as the instrumental variable. Numbers in parenthesis are t-values. * indicates significance at the 1 percent level and ** at the 5 percent level. † indicates p-value of the statistic is less than 0.01.

Finally, we also provide an extra easy-to-interpret evidence for its validity. We add the CUSFTA dummy as an exogenous regressor. If the CUSFTA dummy has a direct effect on Democratic vote share, then we would expect the estimated coefficient to be negative and significant because the Democrats are promoters of protectionism during this period. However, as seen in Table 5, it is small and statistically *insignificant* in all specifications. These again confirm that the CUSFTA affects the Democratic electoral outcome only through the channel of the Democratic tariff platform.

Turning to the economic meaning of the estimated magnitude, as shown in column (1) of Table 4, the effect of the Democratic tariff platform on its vote share is significantly positive within the undecided non-ideological group, whereas it is significantly negative within the decided group. How about the net effect of a Democratic tariff platform on its vote share? The magnitude of our estimations offers a suggestive answer. According to (6), we can calculate such an average net effect, using estimates reported in column (1) of Table 4: $\partial \pi_{it}^D / \partial \tau_{it}^D = -7.15 + 9.14*0.59 = -1.76$ given that the average contribution share in our samples is 0.59. This therefore implies that, on the average, a one-point increase in tariff platform leads to a decrease of the Democratic vote share by 1.76 percentage points, ceteris paribus.

The findings are particularly interesting. First, they recognize the fact that unions will contribute more funding to support the Democrats when the Democratic Party announces a high tariff platform. Accordingly, the party can use contributions to sway the undecided non-ideological voters. Second, such findings also confirm that high tariff protection harms the Democrats because they will lose some supporters from the decided non-ideological voters who might get hurt from the announced platform. After controlling for the endogeneity issues, our findings also suggest that, on the average, the net effect of high trade protectionism is to harm the interests of the Democratic Party.

At first glance, the findings might be counterintuitive. If the Democrats understand that a high tariff platform will make them lose support, why do they still prefer the high tariff? To address this question, let us recall the implication from our theoretical model. The reason that the Democratic Party loses its supporters within the decided group is because the announced platform is too high to keep

TABLE 5
VALIDITY OF IV REGRESSIONS

	(1)	(2)	(3)	(4)	(5)
Democratic Vote Share					
Tariffs	-.437	-.404	-.439	-.441	-.439
	(-1.13)	(-1.09)	(-1.13)	(-1.14)	(-1.14)
Tariffs*Contribution Share	1.048**	1.043**	1.047**	1.050**	1.045**
	(2.08)	(2.16)	(2.08)	(2.09)	(2.08)
Contribution Share	.293**	.234**	.293**	.293**	.293**
	(14.16)	(11.57)	(14.15)	(14.15)	(14.21)
Foreign-born Ratio	.310**	.201**	.309**	.309**	.310**
	(4.04)	(2.73)	(4.03)	(4.02)	(4.05)
Blue-collar Ratio	.191**	.206**	.214**	.214**	0213**
	(3.74)	(4.20)	(4.54)	(4.55)	(4.55)
Rural Ratio	-.010	-.010	-.009	-.009	
	(-.24)	(-.25)	(-0.22)	(-0.21)	
Black Ratio	.009	.013	.008		
	(.37)	(.54)	(0.34)		
Unionized Ratio	.089	.117			
	(1.16)	(1.58)			

Time Trend	.033**	.035**	.030**	.030**	.031**
	(4.94)	(5.54)	(4.81)	(4.84)	(4.89)
Time-square	-.005**	-.005**	-.005**	-.005**	-.005**
	(-6.57)	(-7.12)	(-6.48)	(-6.49)	(-6.61)
Incumbent Dummy		.095**			
		(14.75)			
CUSFTA Dummy	-.003	-.004	-0.001	-.001	-.001
	(-.27)	(-.41)	(-0.12)	(-0.13)	(-0.11)
District Fixed Effects	Yes	Yes	Yes	Yes	Yes
R-square	.647	.694	.654	.653	.670

NOTE: I include the instrument (CUSFTA dummy) into specifications introduced in Table 3 to check whether it is significant. As one can observe, its coefficients in all specifications are insignificant. These serve as extra evidence that the CUSFTA affects the Democratic vote share only through its tariff platform. Since the instrument, the CUSFTA dummy, is a year-specific variable, I drop the year-specific fixed-effect, but include both time trend and square of time trend variables. I also keep the district-specific fixed effects for all estimations.

those borderline wealthy voters. In other words, it is still possible that Democrats could choose a modest, but not very high tariff platform in each election to keep its decided supporters while simultaneously enjoying the extra campaign funding support by the unions. If this is the case, then the Democratic Party could still win the election when it chooses a high tariff platform, ceteris paribus.[16] Therefore, the policy implication is that the Democrats have wrongfully chosen a tariff platform that is too high to keep their voters from previous elections, especially given that the lowering of tariffs is an inevitable trend in global trade liberalization today.

Conclusion

Previous studies have recognized that campaign contributions and the strength of labor unions affect election outcomes. However, whether or not tariff platform affects electoral outcome is far less discussed. Based on a simple theoretical model, this article presents evidence that the Democratic tariff platform has an important impact on its House election outcome.

The main contributions of this article are threefold. First, I argue that a high level of trade protection has complex effects on an economy and also on the election outcome. High protection clearly causes some people losses while causing other people gains. Voters who get hurt from the high protection are against such a tariff platform, and respond by casting their ballots in favor of the party's political rivals. In contrast, voters who benefit from the platform show their favor to the party by making campaign contributions. Based on our theoretical model, we are then able to capture such different effects and make predictions for different channels of influence. On the one hand, the Democratic Party can get more votes from the use of higher campaign funding donated by industries and unions. On the other hand, it may lose some supporters, especially when it announces a sufficiently high tariff platform.

Second, the findings from our empirical specifications strongly support our two theoretical predictions. A high tariff platform increases the Democratic vote share via the channel of enriching campaign contributions whereas it decreases its vote share via the

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[16]The 110th House election might be a good example for such a scenario. The Democrats were still promoters of trade protectionism, yet they won the election.

channel of cutting its original electoral bases. We also take a step forward to estimate the *net effect* of a high tariff on its vote share. Briefly speaking, a high tariff platform cannot help the Democrats win more seats in the House election, though it does help them collect more campaign funding from the industries and unions.

Finally, our findings also have policy implications. It is true that announcing a high tariff platform can help the Democrats collect more money for campaigns. However, money does not mean everything. Instead, they need to consider the trade-off between the collection of campaign funding and the density of their original electoral bases. The critical point is that they need to find an "optimal" tariff platform to balance the losses and the gains during the election. Put in another way, the tariff platforms that the Democrats have chosen are, on average, not helpful to their elections. It seems that all things being equal, a more modest trade protection platform might be more beneficial to their success in future House elections.

Appendix A: Effects of Tariff Platform on the Democratic Vote Share

Consider the effect of tariffs on voters who support the Democratic Party within the decided non-ideological group:

$$(A1) \quad \frac{\partial}{\partial \tau^D} \left[\int_0^{\widetilde{K}(\tau^D, \tau^d)} f(K_j) d(K_j) \right] = f(\widetilde{K}_j) \; \frac{\partial \widetilde{K}(\tau^D, \tau^R)}{\partial \tau^D} \; ,$$

where $\widetilde{K}(\tau^D, \tau^R) \equiv \frac{[CS(\tau^D) - CS(\tau^R)] + [w(\tau^D) - w(\tau^R)] + [T(\tau^D) - T(\tau^R)]/\bar{L}}{r(\tau^R) - r(\tau^D)}$ Note that the first order condition of utility's maximization implies $CS'(\tau^D) = -d(\tau^D)$, where $CS'(\tau)$ is the derivative of consumer surplus and $d(\tau)$ is the import good's consumption function. Given the tariff revenue, $T(\tau^D) = \tau^D \cdot m(\tau^D) = (p^D - p^w) m(\tau^D)$. We have $T'(\tau^D) = m(\tau^D) + \tau^D \cdot m'(\tau^D)$. Furthermore, since $d(\tau)$ is the individual level of consumption of the import good, we have $m(\tau^D) = d(\tau^D)\bar{L} - y_2$. Hence,

$$(A2) \quad \frac{\partial \widetilde{K}}{\partial \tau^D} = \frac{w'(\tau^D) - CS'(\tau^D) - y_2 / \bar{L} + \tau^D \cdot m'(\tau^D)/\bar{L} + \widetilde{K} \cdot r(\tau^D)}{r(\tau^D) - r(\tau^R)} .$$

In this two-sector economy, we can use the GDP function, namely, $GDP = y_1 + p^D y_2 = w\bar{L} + r\bar{K}$ to simplify A(2). It turns out $y_2/\bar{L} = w'(\tau^D) + \bar{K}/\bar{L} \cdot r'(\tau^D)$, taking the partial derivative with respect to p^D, and using the Envelope theorem. Now plug it into (A2),

$$(A3) \quad \frac{\partial \widetilde{K}}{\partial \tau^D} = \frac{[\widetilde{K} - \bar{K}/\bar{L}] r(\tau^D) + \tau^D \cdot m'(\tau^D)/\bar{L}}{r(\tau^D) - r(\tau^R)} .$$

Since $r(\tau^R) > r(\tau^D)$ given that $\tau^R < \tau^D$ by assumptions, the denominator is positive. However, without more information, we cannot determine the sign of the nominator. If $\widetilde{K} - \bar{K}/\bar{L} > 0$, then $\partial \widetilde{K}/\partial \tau^D < 0$; otherwise, $\partial \widetilde{K}/\partial \tau^D > 0$.

Appendix B: Data Sources

Variables	Data Sources and Descriptions
Democratic Vote Share	Data are directly from Federal Elections Committee via ftp://ftp.fec.gov/FEC/ .
Campaign Contributions	Data are directly from Federal Elections Committee via ftp://ftp.fec.gov/FEC/ .
Foreign-born Ratio	Ratio of persons identifying as foreign born relative to labor force in its district. Data from E. Scott Adler via http://sosci.colorado.edu/~esadler/districtdatawebsite.
Race Percentage	Ratio of number of black relative to number of population. Data source is the same as above.
Blue-collar Ratio	Number of "blue collar" workers in district. Data source is the same as above.
Rural Ratio	Defined as the difference between one and the urban ratio, which is the ratio of population living in urban areas relative to the labor force in district. Data are from various years Census.
Unionized Ratio	Percentage unionized in state. Data are from the *U.S. Union Sourcebook.*
Production Weighted Tariffs	Data are Robert Feenstra et al. (2002). The weighted tariffs are constructed via 4 steps: (1) Obtain SIC 4-digit tariffs using the duties value divided by the customs value; (2) Aggregate SIC4-digit tariffs across countries and industries to obtain SIC 2-digit tariffs. (3) Calculate the weighted county-level tariffs, using the industrial structure provided by Bureau of Economic Analysis. (4) Harmonize the county level tariffs data and congressional district level data.

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