

THE ROLE OF THE MEDIAN LEGISLATOR IN U.S. TRADE POLICY: A HISTORICAL ANALYSIS

WENDY L. HANSEN and THOMAS J. PRUSA*

In this historical analysis of U.S. trade policy, we apply the median voter model to explain legislative decision making. In this model, the level of tariff protection is expected to change with changes in the median legislator. We show that this simple model does a remarkable job of explaining trade policy until the mid-1930s, when it breaks down. We offer several possible explanations for the breakdown of this model, focusing particularly on the impact of domestic and international institutional changes that may have altered the role of the median legislator in trade policy formation.

I. INTRODUCTION

Tariff and trade policies have an interesting and dynamic history in the United States. Of critical importance to this history is the role played by the U.S. Congress. For most of U.S. history Congress was very active in setting levels of protection for U.S. firms, passing new tariff legislation on average every five or six years. As we will show, tariff rates shifted, sometimes dramatically, following a very specific change in the makeup of the U.S. Congress, namely a change in the median legislator.

We offer a simple, well-known model of decision making to explain the behavior of Congress. Assuming unidimensionality of voters' preferences, Black's [1958] Median Dominance Theorem predicts that, under majority rule, decisions will be determined by the preferences of the median voter. In this paper, we apply the median voter model to study legislative decision making. In particular, the median voter model suggests that tariff levels should

change on a regular basis as demographic, economic, technological, and electoral forces, as well as interest group lobbying, alter the preferences of the median legislator in the Congress.

We find that this simple median legislator model does an excellent job of explaining trade policy till the 1930s. However, following passage of the Reciprocal Trade Agreements Act of 1934, and particularly during the post-World War II era, levels of protection no longer shift as a result of changes in the median legislator. Trade bills are enacted with no apparent change in the median, and changes in the median legislator are not followed by the passage of a new trade bill.

Our analysis of pre- and post-1934 legislation provides strong evidence that the nature of trade policy has changed substantially. There are several possible explanations for the change, due at least in part to the growing relative prosperity of the U.S. in the world economy and to institutional changes in trade policy making. In particular, the passage of the 1934 Reciprocal Trade Agreements Act, which led to a shift of power from the legislative to the executive branch of government, followed by the creation of the General Agreements on Tariffs and Trade (GATT) and the rise of bureaucratic powers all likely impacted the nature of trade policy making in the U.S. We discuss these and other possible

* Political Science, University of New Mexico and Department of Economics, Rutgers University, and NBER. We would like to thank Judy Goldstein, Joel Kaji, and Paul Teske, Tom Willett, and the anonymous referees of this journal for their comments and suggestions. The paper also benefited from the suggestions of the participants at the Western Economic Association meetings in Vancouver. We are grateful to Keith Poole for providing us with his data on House and Senate members' D-NOMINATE scores.

reasons for the breakdown of the median voter model after 1934.

II. MEDIAN-VOTER DETERMINED TARIFF

In this section we briefly review the standard endogenous tariff voting model wherein the level of protection is determined by the preferences of the median voter (Mayer [1984]; Shepsle and Weingast [1984]; Weingast, Shepsle and Johnsen [1981]).¹ In Mayer's [1984] version of this model, a uniform tariff is determined via a majority vote referendum. Each individual is endowed with capital and labor and the individuals are ordered in decreasing, relative capital-labor abundancy. Each good is produced using capital and labor under constant returns to scale, and there is perfect interindustry factor mobility. Finally, all individuals have identical homothetic preferences. Under these conditions, each individual's relative endowment of factors will determine his or her preferences toward protection. Specifically, according to the Stolper-Samuelson theorem, capital-abundant (labor-abundant) individuals will prefer policies that increase the price of products that are capital intensive (labor intensive). Moreover, an individual's approval of protection for capital-intensive industries increases with his or her capital abundancy. Within this framework, Mayer shows that the equilibrium tariff will be determined by the median voter, whose preference is determined by his or her particular endowment of factors. Mayer's model predicts that as the population changes, the tariff will change.

While the Shepsle-Weingast [1984] model does not provide the formal link between economic incentives (i.e., the return to factor ownership) and preferences for protection, they extend the standard median voter model to allow the tariff to be determined via legislative decision making. Shepsle and Weingast's analysis

highlights the fact that the preferences of the median voter from the entire population may not be reflected by the vote in the legislature. In their model, individuals do not vote for the tariff level itself, but rather vote for their district's representative, who in turn votes on their behalf for the tariff. The tariff is then determined by the median vote in the legislature. They show that the preferences of each district's legislator are determined by the preferences of the median voter in each district. In this model it is unlikely that individuals will be distributed across districts in such a way that the preferences of the legislator in the median *district* reflect the *population's* median voter. However, Shepsle and Weingast do find that changes in demographics across districts will indirectly (through the legislators) lead to changes in the tariff.

Thus, the same key implication for empirical analysis emerges from both models: changes in tariff levels should follow change in the median legislator's (or voter's) preferences toward protection. As population demographics change, the average tariff level should change. We should observe higher tariffs when the median legislator becomes more protective and lower tariffs when the median legislator's preferences shift toward promoting foreign trade. For instance, during the nineteenth century industries in Northern and Southern states had vastly different capital intensities. If local population endowments were related to industrial needs, then these models predict that the tariff would change as demographics changed. Increases in the population of Northern states (relative to Southern states) or the admission of Northern states to the Union, for example, would change the median legislator, shifting the desired tariff level toward the preferences of Northern industrialists.

III. EVIDENCE OF THE MEDIAN LEGISLATOR MODEL: TARIFF SETTING 1820-1934

The above discussion suggests that tariff levels should change on a regular basis

1. See Magee, Brock, and Young [1989] for an alternative model of tariff formation. Nelson [1988] provides an excellent summary of this literature.

as demographic, economic, technological, and electoral forces, as well as interest group lobbying, alter the preferences of Congress (or, in particular, the median legislator). And in fact, tariff revisions were quite common for most of the nineteenth and early twentieth centuries. Between the National Tariff Act in 1789, for instance, and the Reciprocal Trade Agreements Act of 1934, Congress revised the tariff schedule on average about every five or six years. Congress's seemingly chaotic behavior during this period has puzzled many; major tariff bills were passed only to be superseded just a few years later. After reviewing this erratic behavior, Schattschneider [1935] claimed that "in tariff making, perhaps more than in any other kind of legislation, Congress writes bills which no one intended" (p. 13), while Dobson [1976] writes that during this period "the tariff bills that finally reached the President's desk for signature seldom reflected any rational scheme" (p. 11).

It is our belief, however, that this seemingly random behavior in setting tariff rates simply reflects changes in the preferences of the median legislator. If the models discussed in the previous section are a good description of trade policy, major trade acts should follow changes in the median legislator's preference toward protection. An important issue, then, is how one identifies the median. It seems reasonable that any definition of the median should capture the fact that trade acts must be approved in both houses and also receive presidential approval.² If party affiliation is correlated with a legislator's position on trade, the median legislator can clearly be identified during periods of single-party control. Under this identification scheme, for example, the 1840 election brought about a change in the median voter. The Democratic Party had controlled the presidency and both houses

since 1828 but was roundly defeated by the Whigs in the 1840 elections, losing control of both branches of government. By this "party control" identification scheme, the median legislator shifted from being a Democrat to being a Whig in 1840. And, since the Whigs were far more protectionist than the Democrats, the median voter model predicts a change in trade policy, as transpired with the Black Tariff in 1842.

According to our "party control" definition there are fourteen periods from 1820 to 1934 where there is an identifiable median voter.³ These fourteen periods accounted for 78 of the 115 years during this period. In order to give an idea of how well the model describes trade policy changes, in Figure 1 we graph the average tariff rates and indicate the timing of major trade legislation. We also have indicated periods of time where there is single-party control. The darkly shaded areas reflect periods of Democratic Party control, the lightly shaded areas represent periods of Republican Party control, and the unshaded areas denote periods without any identifiable median.

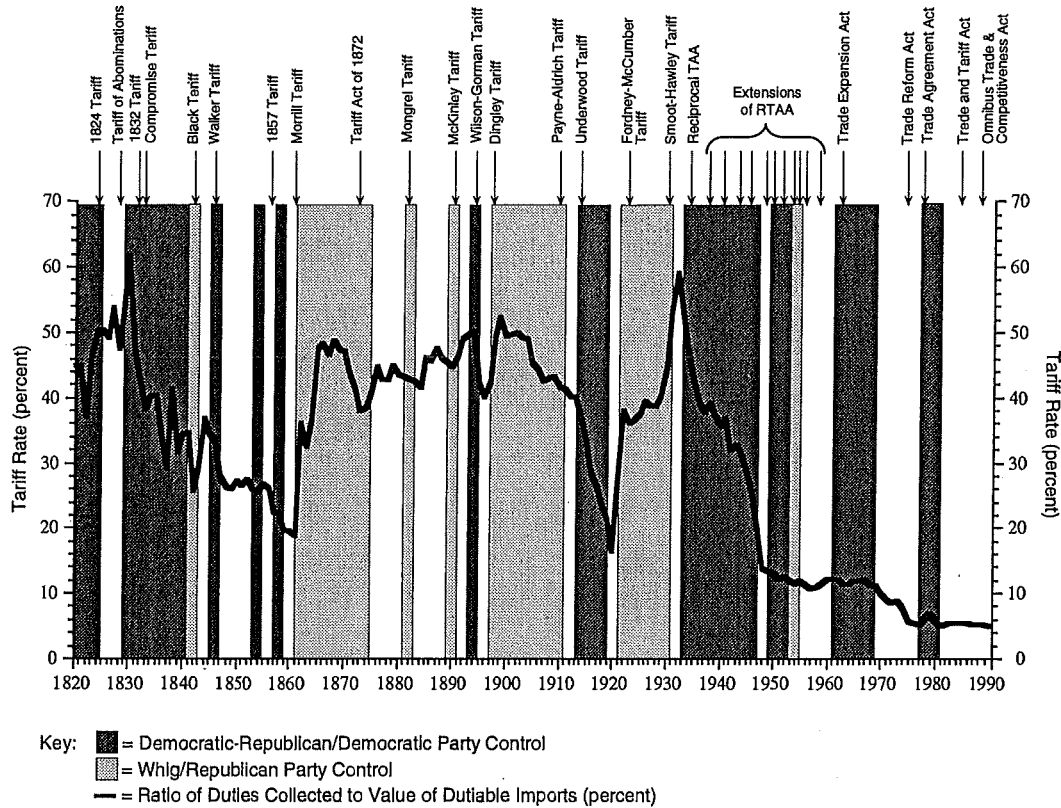
As the figure shows, the median voter model seems to describe U.S. tariff policy quite well, especially during the period 1820-1934 where sixteen of the eighteen (89 percent) major legislative bills involving tariff changes were passed during periods of single-party control. More importantly, *changes* in the preferences of the median legislator (as proxied by changes in party control) generally precede *changes* in the level of protection: ten of the sixteen acts enacted during periods of single-party control were done so within two years of the change in party control.⁴

However, if party affiliation is a poor indicator of a legislator's preference toward protection, then we should be con-

2. We also allowed for periods when a single party had a veto-proof majority in both houses but was not the party of the president. However, there were no periods when this occurred.

3. We begin our analysis in 1820 because the 1824 tariff act is frequently cited as the first instance where the tariff was used as a protectionist tool, rather than merely to raise revenue (Taussig [1931]; Pincus [1975]).

FIGURE 1
Tariff Levels, Major Trade Acts, and Changes in the "Median" Legislator



Sources: Tariff rates from Historical Statistics of the United States (1975) and Statistical Abstract of the U.S.; Dates of trade acts from Dobson (1976); Political Parties from Wilson (1992)

cerned whether the "party control" definition really identifies changes in the median legislator. An alternative scheme for identifying the median legislator is to use Poole and Rosenthal's [1991] D-NOMINATE scores of Senate and House legislators from the First Congress (1789-91) through the One-hundredth Congress

4. The 1857 tariff bill, which appears to be inconsistent with the model, is arguably consistent with our median legislator hypothesis. Although passed without single-party control, the 1857 tariff bill was passed by a lame-duck Congress following a decisive election where a new Democratic median had been defined.

(1885-86). Poole and Rosenthal derive these scores from scaling almost all roll-call votes taken during a session of Congress using a Dynamic Nominal Three-Step Estimation (D-NOMINATE) procedure. These scores identify a member's location along a conservative-liberal dimension. As discussed by Poole and Rosenthal [1991], their procedure typically identifies two (or more) dimensions that characterize legislators' relative positions. However, the first dimension accounts for virtually all the variance.⁵

As an alternative to our party control measure, we define the median voter in each house to be the legislator with the median D-NOMINATE score. An identifiable median legislator can be defined if the median legislator in both houses, along with the president, are from the same party. According to the D-NOMINATE definition there are fifteen periods from 1820 to 1934 where there is an identifiable median voter, accounting for fifty-six years of this time span. With this more refined measure of legislator preferences, the median voter model does an even better job of describing trade policy changes. As shown in Table I, during the period 1820-1934, fifteen of the eighteen major legislative bills involving tariff changes were passed during periods with a D-NOMINATE-identified median legislator. More importantly, as predicted by the model, changes in the median legislator are promptly followed by changes in tariff rates: thirteen of the fifteen acts passed during a period with a D-NOMINATE-identified median were enacted within two years of the change in party control.⁶

While both methods of defining the median suggest that the voting model described in the previous section is an excellent description of tariff policy formation during the period 1820-1934, the D-NOMINATE scores appear to be a superior method of identification. This is not terribly surprising since a legislator's D-NOMINATE score is based on hundreds of roll-call votes and hence is a more finely

tuned measure of his or her preferences. The Tariff Act of 1824 is a fine example of the advantage of using the D-NOMINATE scores. According to the "party control" definition, this bill did not follow a *change* in party control since the Democratic-Republican Party had been in control for more than twenty years when the bill was passed. However, according to the D-NOMINATE definition, the bill was passed only months after a *change* in the median. Two important events occurring between 1820 and 1824 highlight how the D-NOMINATE scores more precisely capture changes in the legislature's preferences. First, Maine and Missouri were admitted to the Union. All four of the new senators from these states voted in favor of the 1824 tariff bill, and three of the four had D-NOMINATE scores larger than the Senate's D-NOMINATE median score. Second, the 1820 census led to a reapportionment of representatives, giving more votes to the "tariff states" of New York, Pennsylvania, Ohio, and Kentucky (Pincus [1975]). Seventy of the eighty-five representatives from these states had D-NOMINATE scores larger than the House's D-NOMINATE median score. Interestingly, as suggested by the median voter model, small changes in the makeup of the legislature can lead to significant changes in policy, as demonstrated by the 1824 Tariff Act which significantly increased the overall level of protection.

In Table II we present statistical evidence verifying the descriptive power of the median voter model during the 1820-1934 period. We consider two alternative models regarding tariff formation: the "random" trade bill enactment hypothesis and the "party dominance" hypothesis. First, consider the null hypothesis that trade bills are enacted according to the random enactment model. Under this hypothesis, a trade bill is equally likely to be enacted during any of the 115 years spanned by this period. Since an identifiable median existed during 68 percent of the years in the 1820-1934 period (using

5. Poole and Rosenthal [1991] find that not only can legislators' relative positions be almost completely identified by one dimension but also that legislators' D-NOMINATE scores are highly stable over time.

6. The 1861 tariff was passed only after seven Southern states seceded from the Union, giving the Republicans control of the Senate. All fourteen Senators and thirty of the thirty-three Representatives from these states were Democrats. Once they resigned, Republicans controlled the Senate 26-22 and the House 114-62. The mean D-NOMINATE score in the Senate changed from -0.11 to 0.02 and in the House from 0.04 to 0.12 with the secession, reflecting the shift in preferences.

TABLE I
Trade Acts and Changes in the Median Legislator

Trade Act	<i>Definition of Median Legislator</i>			
	Party Affiliation		D-NOMINATE Scores	
	Identifiable Median	Number of Years Since New Median	Identifiable Median	Number of Years Since New Median
1824	Yes	22.50	Yes	0.50
1828	No	—	No	—
1832	Yes	2.50	Yes	0.50
1833	Yes	3.25	Yes	1.25
1842	Yes	1.25	Yes	1.25
1846	Yes	0.67	Yes	0.67
1857	No	—	No	—
1861	Yes*	0.17**	Yes*	0.17**
1872	Yes	11.00	Yes	11.00
1883	Yes	1.25	Yes	1.25
1890	Yes	0.75	Yes	0.75
1894	Yes	1.00	Yes	1.00
1897	Yes	0.33	No	—
1909	Yes	12.00	Yes	8.75
1913	Yes	0.50	Yes	0.50
1922	Yes	1.50	Yes	1.50
1930	Yes	9.00	Yes	1.00
1934	Yes	1.25	Yes	1.25
1937	Yes	4.00	Yes	4.00
1940	Yes	7.00	Yes	7.00
1943	Yes	10.25	Yes	10.25
1945	Yes	12.25	Yes	12.25
1948	No	—	No	—
1949	Yes	0.75	Yes	0.75
1951	Yes	2.50	Yes	2.50
1953	Yes	0.75	Yes	0.75
1954	Yes	1.75	Yes	1.75
1955	No	—	No	—
1958	No	—	No	—
1962	Yes	1.75	No	—
1974	No	—	No	—
1979	Yes	2.50	Yes	2.50
1984	No	—	No	—
1988	No	—	No	—

*Passed in March 1861. By February 1861 seven Southern states seceded from the Union giving the Republicans a majority in both houses leading to the passage of the bill. The Southern secession also led to a change in the median legislator according to Poole and Rosenthal's [1991] measure.

**Number of years since Southern secession.

the party affiliation definition), the random enactment theory predicts that due to chance 68 percent of the tariff acts would be enacted while there was an identifiable median. That is, under this null hypothesis we could expect 12.21 trade acts to be enacted during the periods when there is an identifiable median. But in fact we observe sixteen (89 percent) tariff bills enacted while there was an identifiable median, which has less than a

5 percent chance of occurring under the null.⁷ If we use the D-NOMINATE scores to define the median, the random enactment theory predicts that we should observe only 8.77 bills being enacted during a period with an identifiable median. In fact, we observe fifteen trade bills enacted

7. According to the Bernoulli distribution, the probability of observing sixteen (or more) successes out of eighteen observations when the probability of a success is 0.68 is 0.0406.

TABLE II
Significance of Median Legislator Results, 1820-1934

	Party Affiliation	D-NOMINATE Scores
<i>General Information</i>		
Number of years	115	115
Number of trade acts enacted	18	18
Years with identifiable median	78	56
% years with identifiable median	68%	49%
% years without identifiable median	32%	51%
Trade acts enacted		
with identifiable median (% of total)	16 (89%)	15 (83%)
without identifiable median (% of total)	2 (11%)	3 (17%)
Conditional on identifiable median: number of trade acts enacted within first two years of being elected	10	13
beyond first two years of being elected	6	2
Conditional on identifiable median: number of years within first two years of median being elected	26	28
beyond first two years of median being elected	52	28
<i>"Random" Trade Act Hypothesis</i>		
Expected number of trade acts enacted during identifiable median	12.21	8.77
Probability of observed number of trade acts enacted	0.0406	0.0027
<i>Party Dominance Hypothesis</i>		
Conditional on identifiable median: Expected number of trade acts enacted within first two years of median	5.33	7.5
Probability of observed number of trade acts enacted within first two years of median	0.0159	0.0037

during a period with an identifiable median—an outcome that is extremely unlikely under the null hypothesis.

Second, consider the null hypothesis that trade bills are enacted according to a party dominance model. Under this hypothesis, it is not a change in the median that gives rise to the new level of protection, but rather that a single party dominates the legislature. Using party affiliation to define the median, there were seventy-eight years of single-party dominance, but many of these periods of dominance lasted only two years. In fact, one-third of the seventy-eight years of control (twenty-six years) correspond to the first two years of a period where a single party dominated. If all that matters for tariff

legislation to pass is that a single party controls the legislature, then we should observe one-third of the trade acts (that were enacted during single-party dominance) being enacted during the first two years of control. But, in fact ten of the sixteen trade bills (62.5 percent) were enacted during the first two years of a new median. There is less than a 2 percent chance that we would observe such a high proportion of bills being passed during this period if the party dominance hypothesis were correct. If we use the D-NOMINATE scores to define the median, twenty-eight of fifty-six years correspond to the first two years of a period of single-party control. However, we observe that thirteen of fifteen trade bills were enacted

during the first two years of a new median—an outcome that has less than a 1 percent chance of occurring under the null hypothesis.

All in all, the evidence from this period strongly suggests that the median voter model (using either definition of the median legislator) is able to explain very well the seemingly erratic swings in tariff rates between 1820 and 1934. Changes in tariff rates almost always followed shifts from a pro-protection to a pro-free trade median (or vice versa). Moreover, even the two tariff acts (1872 and 1909) that were passed only after a long period of single-party control, and are seemingly more consistent with a “party dominance” notion of tariff-making are, after closer examination, consistent with the median voter hypothesis.⁸ Both the 1872 and the 1909 bills were passed following a split in the ruling Republican Party over high-tariff policies and thus are arguably consistent with a strict interpretation of the median voter model.

IV. BREAKDOWN OF THE MEDIAN VOTER MODEL: 1935–1990

As seen in Figure 1, there is little relationship between shifts in the median and changes in tariff levels following World

8. The Tariff Act of 1872 was passed eleven years into a Republican-controlled era. A huge federal revenue surplus provoked the Democratic Party and a splinter group of liberal Republicans to seriously criticize the Republican tariff policy. In order to deflect criticism and prevent a shift in party control in the upcoming election, the Republicans passed the 1872 Tariff Act, cutting tariffs across the board by 10 percent. However, a major depression that began in 1873 depleted federal revenues and led the Republicans to cancel the tariff reductions in 1875. Similarly, the 1909 tariff act was passed some twelve years into a Republican-controlled era. This act was largely the result of the panics of 1904 and 1907, and the public's general dissatisfaction with high prices. The Progressive Republicans, a faction of the Republican Party, joined the minority Democrats to protest existing tariff policy and advocate change. In the 1908 elections, both parties pledged tariff reform. The Republicans, who maintained control in the election, kept their promise by pushing through the 1909 Payne-Aldrich Act. But the attempt at reform led by the House was thwarted when the Senate appended 847 amendments to the House bill, nearly all of which raised tariffs, leaving the overall average tariff rates largely unchanged.

War II—average tariff rates have steadily decreased during the postwar era. Of the sixteen major trade bills passed after 1934, the first eleven bills—all passed between 1937 and 1958—did little more than extend the negotiating authority granted to the executive branch in the Reciprocal Trade Agreements Act of 1934. These extensions always contained a time limit on the negotiating authority granted to the president and thus renewal was often rather perfunctory.⁹ Though eight of the first eleven bills were passed during periods with an identifiable median, renewal was granted during periods with a Democratic median as well as during periods with a Republican median. In other words, changes in the median legislator no longer seem to precede changes in the level of protection: six of the eleven renewals of the Reciprocal Trade Agreements Act occurred without a new median being defined. In contrast, prior to 1934, passage of almost all trade legislation coincided with shifts to a new median. Finally, from 1959 through 1990 only two of five trade acts were passed during a period of a single-party median.

Overall from 1935 to 1990, ten of sixteen trade acts were passed during periods with an identifiable median, and only four of these were enacted during the first two years of a new median (using the party definition). This is not strong evidence in favor of the median voter model. In Table III we present statistical tests that provide evidence that the alternative hypotheses cannot be rejected. Under the random enactment hypothesis we expect 8.57 acts to be enacted during a period with an identifiable median, and we observe ten. There is over a 30 percent chance that under this naive hypothesis we would observe at least ten acts, strongly suggesting that the

9. O'Halloran [1993] points out that the extensions occasionally limited the scope of tariff changes and constrained presidential negotiating authority. Destler [1992] argues that the time limits on presidential authority were used by Congress as a means of rationalizing to its members and constituents this delegation of power.

TABLE III
Significance of Median Legislator Results, 1935-1990

	Party Affiliation	D-NOMINATE Scores
<i>General Information</i>		
Number of years	56	56
Number of trade acts enacted	16	16
Years with identifiable median	30	24
% years with identifiable median	54%	43%
% years without identifiable median	46%	57%
Trade acts enacted		
with identifiable median (% of total)	10 (63%)	9 (56%)
without identifiable median (% of total)	6 (38%)	7 (44%)
Conditional on identifiable median: number of trade acts enacted within first two years of being elected	4	3
beyond first two years of being elected	6	6
Conditional on identifiable median: number of years within first two years of median being elected	8	8
beyond first two years of median being elected	22	16
<i>"Random" Trade Act Hypothesis</i>		
Expected number of trade acts enacted during identifiable median	8.57	6.86
Probability of observed number of trade acts enacted	0.3233	0.2026
<i>Party Dominance Hypothesis</i>		
Conditional on identifiable median: Expected number of trade acts enacted within first two years of median	2.67	3
Probability of observed number of trade acts enacted within first two years of median	0.2643	0.6228

median voter model (i.e., that trade acts only follow a change in the median) does not explain the tariff level after 1934. Under the party dominance hypothesis, we expect 2.67 trade acts to be enacted during the first two years following the election of a new median. The fact that we observe four acts has more than a 25 percent probability of occurring.

When we use D-NOMINATE scores to define the new median there is even stronger evidence in support of the alternative hypotheses. We observe nine of sixteen trade acts during periods with an identifiable median. Under the random enactment hypothesis there is more than a 20 percent likelihood that we would observe at least nine enactments. In addition, we observe three of the nine acts being

enacted during the first two years following the election of a new median—an outcome that is more than 60 percent likely to occur under the party dominance hypothesis. The evidence clearly suggests a breakdown of the median legislator hypothesis in this period.

V. EXPLANATIONS FOR THE CHANGE IN TRADE POLICY

The striking change in trade policy formation after 1934 and the changing nature of trade policy have several possible explanations. For example, Goldstein [1986] argues that the change in U.S. tariff policy following 1930 is primarily due to the catastrophic effect that the Smoot-Hawley Tariff had on the U.S. economy. Following this act, "the flow of international trade

shrank drastically... and the U.S. economy staggered toward paralysis," (Dobson [1976, 35]). The damage resulting from this act was due not only to its driving up import prices, but more importantly because sixty countries retaliated with their own protective acts within the following two years. This massive retaliation punished the U.S. economy and served as an important lesson for future trade policy. Goldstein argues that the severe economic consequences of this act created a liberal trade bias in U.S. policymaking that continues to shape U.S. policy today. In other words, shifts in the median no longer resulted in shifts in policy preferences on trade matters because of this liberal bias.

Supplementing Goldstein's emphasis on the power of ideas, Haggard [1988] argues that major institutional changes in the politics of U.S. trade policy took hold with the passage of the Reciprocal Trade Agreements Act of 1934. In particular, he argues that by delegating its authority to the executive branch, Congress allowed broader international economic and political considerations to develop and shape the policy agenda. In addition, the balance of power shifted, allowing interest groups that favored free trade to play a larger role in policy formation. It could be argued that with the strengthening of executive power, the preferences of the median legislator, in effect, became much less important.

However, while Goldstein and Haggard may convincingly explain why Congress moved away from providing direct protection to U.S. firms, they cannot completely explain why the simple median legislator model breaks down, especially in recent decades when trade has re-emerged as a highly partisan and salient issue in American politics. Additionally, one might consider the institutional constraints imposed on trade policymaking when the U.S. became a member of the General Agreement on Tariffs and Trade in 1947. While Congress cautiously allowed the executive branch to negotiate

reductions in tariff rates after the Smoot-Hawley disaster, it was the creation of GATT, and United States' membership in GATT, that largely tied the hands of the U.S. Congress and changed the nature of U.S. trade policy.

There are several ways in which the GATT has altered the political economy of tariff making, each of which has de-emphasized the role of the median legislator. First, tariff concessions are negotiated by the executive branch bilaterally, multilaterally, and in formal GATT rounds, and members commit themselves to refrain from raising tariffs on specified items above the levels established in these agreements. Second, GATT members commit themselves to the most favored nation clause, which makes deviating from tariff concessions quite difficult politically. Third, there is a formal enforcement mechanism built into the GATT structure that discourages departures from tariff obligations by allowing trading partners to suspend obligations and retaliate against countries that deviate from concessions in GATT agreements. In effect, the threat of retaliation can alter the preferences of the median legislator, leading to a breakdown in the median legislator model of trade policy making.

Alternatively, a combination of factors such as the lessons learned from Smoot-Hawley and domestic and international institutional changes may have led Congress to rely more on bureaucratic agencies to obtain their desired policy outcomes, diminishing the relevance of the median legislator model in explaining major trade legislation. In effect, Congress has maintained the appearance of a liberal bias and has avoided GATT-sanctioned retaliation by increasingly relying on industries' ability to use bureaucratic channels, such as antidumping and countervailing duty actions. Antidumping and countervailing duty laws were designed to allow countries to counter the injurious effects of dumping (e.g., price discrimination or sales below cost) and subsidiza-

tion, respectively. Protection granted under these laws is provided for by GATT; therefore, countries using these laws are not obliged to compensate affected countries, and affected countries are not able to directly retaliate in kind. Furthermore, since Congress established and can change the rules under which the bureaucracy operates, it can indirectly maintain control over policy outcomes while maintaining its distance and appearing to support free trade. With this more subtle and indirect form of control, the median legislator model appears irrelevant.

Finally, the breakdown of the median legislator model may simply be due to the fact that our method for identifying the median may not be appropriate in the modern era. Party affiliation may mean less than it did during the 1820–1934 period. While our D-NOMINATE identification should help control for this problem, a legislator's D-NOMINATE score is largely composed of votes on non-trade issues. If legislators' preferences with respect to trade issues systematically differ from their D-NOMINATE score, our scheme for identifying the median would suffer.

VI. CONCLUDING REMARKS

Though the early history of tariff policy in the United States appears, at least on the surface, to be quite chaotic, the degree of order before 1935 is remarkable. Tariff rates shift, dramatically at times, upward and downward. But these seemingly random changes are easily explained with a remarkably simple model. In particular, the median voter model, as applied to legislative behavior, explains over 80 percent of the trade acts passed before 1935; changes in tariff levels follow changes in the median legislator and his preferences toward protection.

The interesting question for further research is why this model breaks down after 1934. Changes in the international economy, international and domestic po-

litical institutions, and the norms of behavior of legislators may all have contributed to the changes in the decision-making behavior of Congress.

REFERENCES

- Black, Duncan. *The Theory of Committees and Elections*. Cambridge: Cambridge University Press, 1958.
- Destler, I. M. *American Trade Politics*. Washington, D.C.: Institute for International Economics, 1992.
- Dobson, John M. *Two Centuries of Tariffs*. Washington, D.C.: U.S. Government Printing Office, 1976.
- Goldstein, Judith. "The Political Economy of Trade: Institutions of Protection." *American Political Science Review*, March 1986, 161–84.
- Haggard, Stephan. "The Institutional Foundations of Hegemony: Explaining the Reciprocal Trade Agreements Act of 1934." *International Organization*, 42(1), 1988, 91–119.
- Magee, Stephen P., William A. Brock, and Leslie Young. *Black Hole Tariffs and Endogenous Policy Theory*. Cambridge: Cambridge University Press, 1989.
- Mayer, Wolfgang. "Endogenous Tariff Formation." *American Economic Review*, December 1984, 955–67.
- Nelson, Douglas. "Endogenous Tariff Theory: A Critical Survey." *American Journal of Political Science*, August 1988, 796–837.
- O'Halloran, Sharyn. *Politics, Process and American Trade Policy*. Ann Arbor, Mich.: University of Michigan Press, 1993.
- Pincus, Jonathan J. "Pressure Groups and the Pattern of Tariffs." *Journal of Political Economy*, August 1975, 757–78.
- Poole, Keith T., and Howard Rosenthal. "Patterns of Congressional Voting." *American Journal of Political Science*, February 1991, 228–78.
- Schattschneider, E. E. *Politics, Pressures and the Tariff*. New York: Prentice-Hall, 1935.
- Shepsle, Kenneth A., and Barry R. Weingast. "Political Solutions to Market Problems." *American Political Science Review*, June 1984, 417–34.
- Taussig, Frank. *A Tariff History of the United States*, 8th ed. New York: A. M. Kelley, 1931.
- Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen. "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics." *Journal of Political Economy*, August 1981, 642–64.
- Wilson, James Q. *American Government*, 5th ed. Lexington, Mass.: D. C. Heath & Company, 1992.