The Role of Political Information in Union Certification Elections: Preliminary Evidence from Selected States

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ABSTRACT

This paper focuses a public choice lens on the rationality of voters in U.S. union certification elections in fourteen selected states between 1994 and 2001. These elections are characterized by conditions that are favorable for empirical tests of the rational voter model. The electorates are relatively small, the potential benefits can be significant, and the costs of voting are negligible. The empirical work yields three straightforward results. First, voter participation is negatively related to the size of the electorate. Second, the margin of victory is negatively related to the voter participation rate. Third, as the political climate becomes more liberal, the voter participation rate declines. This suggests that in labor-friendly states, there is less of an incentive to vote either for or against certifying a union to collective bargain on behalf of workers.

Keywords: Rational Voter Model, Union Certification Elections.

1. INTRODUCTION

The basic rational choice model of voting behavior was originally set out by Downs [8] and further refined by Tullock [21] and Riker and Ordeshook [19, 20]. A sizable literature testing the empirical implications of the model with respect to voter participation in American political elections has developed. In particular, general voter turnout in American elections has been studied by Aldrich and Simon [1], while turnout in presidential elections [9, 18, 4], congressional elections [7, 9], and state-level elections have been studied by others.

This paper focuses a public choice lens on the rationality of voters in U.S. union certification elections in selected states between 1994 and 2001. These elections tend to exhibit significantly different characteristics from political elections. In particular, voter participation is much higher and is more sensitive to the closeness of the election. While unique institutional factors in union certification elections most likely account for these differences, previous empirical tests provide strong support for two basic implications of the rational voter model. First, voter participation is negatively related to the size of the electorate. As the probability of casting the deciding vote declines, *ceteris paribus*, the incentive to vote diminishes. Second, the incentive to vote is also eroded as the margin of victory in the election increases. In this case, voters lose the incentive to vote for 'lost causes' or those elections when there is little uncertainty about the outcome.

A third factor explored in the data set is whether or how the political climate in the state affects voter participation rates. The political climate is assessed by the electoral support for relevant U.S. Senators for the county in which the certification election was held. Rather than relying on a binary measure of a legislator's liberal or conservative bent (political party), two readily available indicators of the politicians' preferences for policy are used: the legislators' political ratings as provided by Americans For Democratic Action (ADA rating) and the AFL-CIO (COPE rating.) The ADA score measures the legislator's liberal preferences on general issues, while the COPE scores measure the legislator's inclination to support legislation on labor related issues.

Union certification election data is obtained from the National Labor Relations Board (NLRB) and is from the 1994 through 2000 fiscal year. The NLRB union certification election data set is largely unexplored with respect to the rational voter model. While heavily investigated to ascertain what factors influence certification election outcomes [11, 6, 15, 3], this data set has been left generally unexplored for inquiries regarding the rationality of voting participants.

These elections do exhibit significantly different characteristics than presidential elections, but the basic rational choice calculus applies to these voters as well. Since these elections feature small electorates, have potentially significant job-related pecuniary benefits, and have insignificant costs associated with voting, the Downsian rational voter model suggests that participation rates should be higher than in political elections. This, in fact, is what is observed in the union certification election data.

The exposition of the next section establishes a framework within which specific implications of the rational voter model can be tested. Namely, the influences of the size of the electorate, the winning margin, and the political climate on voter participation are investigated. The third section describes the data, while the fourth section provides a discussion of the results. The fifth section is the conclusion.

2. MODEL

The basic rational choice model posits that if the expected benefits to voting exceed expected costs, then the voter casts a ballot in the election of interest. More specifically, let R be the rewards associated with voting such that

$$R = PB - C \quad (1)$$

where P is the probability of casting the decisive vote, B is the expected benefit of voting, and C is the cost of voting.

The probability of casting the decisive vote (P) is modeled in equation (2) below as a decreasing function of both the ex-ante

expected winning margin (M*) and ex-ante expected number of voters (N*) [14, 5, 10, 9]. As the likelihood of an electoral landslide increases, the voter's likelihood of casting the deciding ballot decreases. Straightforwardly, the larger the electorate, the smaller the probability of casting the decisive ballot.

$$P = f(M^*, N^*) \quad (2)$$

Benefits may be modeled as a function of the importance of the election (IMP) and the desire for change from the status quo as in Cebula, McGrath and Paul [4]. In particular, let

$$B = g(IMP). \quad (3)$$

Finally, the costs of voting include the opportunity costs associated with forgone wages during the time used to go to the polls and cast one's ballot, and the explicit cost of travel to the polling station.

Combining equations 1, 2, and 3 yields

$$R = P(M^*, N^*)*B(IMP) - C \quad (4)$$

The expected signs of the partials in Eq. (4) are as follows:

$$DR/DM^* < 0,\ DR/DN^* < 0,\ DR/DIMP > 0, \text{ and } DR/DC < 0.$$

The model of (4) implies that rational voter is more inclined to vote in elections when the desire for change is greater, in elections with smaller numbers of voters, in elections expected to be close, and those perceived by the voter to be of more importance, e.g. presidential rather than off-year congressional elections. Lastly, voters are less inclined to participate when the costs of voting increase. Thus, the primary implication of the model is that the rational voter chooses to participate in those elections for which the expected benefit of voting exceeds its expected cost.

Given the relatively large size of the electorate in U.S. congressional elections, the model suggests that the expected benefit is so small that voters should rationally choose not to vote. For most voters, the calculation of benefit is nebulous at best. Thus, trivial opportunity costs such as an hour's worth of forgone wages are sufficient to discourage participation.

However, people do vote and we observe behavior that is apparently inconsistent with the model, the so-called paradox of voting. Riker and Ordeshook [19] and Tullock [22] have suggested extensions of the model to account for this problem, but McGarrity [17] counters that the attempts to salvage the model are unnecessary. He argues that the strength of the rational vote model arises from its ability to capture how individuals respond to changes in the incentive structure (P, B, or C) they face.

This study focuses on the rationality of voting in another type of election in which the expected costs and benefits are substantially different than in typical American political contests. As mentioned above, this study examines the rationality of voters in (NLRB) sponsored union certification elections in twelve selected states. The NLRB certification elections are of particular interest since they are characterized by relatively small electorates and may have explicit non-trivial expected benefits accruing to workers that choose to approve union certification. The positive wage differential accruing to unionized workers has been studied by Krueger and Summers [13] and Hirsch and Neufeld [12] among others. The consensus in the literature is that the wage differential is approximately 15 to 20 percent.

The union certification elections studied also generally include relatively small electorates. Over 86 percent of the elections have fewer 150 eligible voters. This implies that the probability of any one voter casting the deciding vote is relatively large as compared to a political election in which the number of voters can number in the hundreds or thousands.

In addition, since the certification votes are generally held on-site during working hours, the costs of voting approach zero. Thus, in union certification elections, the probability benefit (PB) is significantly amplified while the costs are trivialized. Given these conditions, the rational voter model predicts higher voter participation rates in NLRB union certification elections than in typical American political contests.

3. EMPIRICAL MODEL AND DATA

The rational voter framework outlined above suggests that several testable hypotheses about voter participation rates may focus on the M*, N*, and IMP elements of Eq. (4). In practice, since ex-ante estimates of the expected margin and number of eligible voters are not available, the ex-post observations for the margin (M) and eligible number of voters (N) are used. The winning margin (M) is defined as the winner's vote percentage less the loser's vote percentage.

As indicated earlier, one focus of this investigation is the extent to which the political climate influences the voter participation rate. In the theoretical model of Eq. (4) above, the political climate influences the participation rate through IMP, the importance of the election. In localities where the political climate is particularly pro-labor, there may be little additional value to certifying a union to represent workers. In that environment, the importance of the certification election is undermined. Thus, the probability benefit (PB) to any voter is reduced, thereby reducing the likelihood that the eligible voter will cast a ballot.

The empirical model for voter participation rate (VPR) is:

$$VPR = \beta_0 + \beta_1(M) + \beta_2(N) + \beta_3(POL) + \Lambda X + \varepsilon \quad (5)$$

Where the margin of victory (M) and the number of eligible voters (N) are defined as indicated earlier. A vector of binary control variables (X) characterize specific attributes pertaining to the election. These included controls for identity of the union (80), state (12), type of bargaining unit (8), and year (7).

POL describes the political climate in the county where the election was held. It is defined as the voted-weighted COPE or ADA rating of the relevant U.S. Senators given the location of the county. More specifically, POL is defined in Eq. (6) in terms of the COPE (or ADA) rating as follows:

$$POL_{i,t} = \Sigma_n\ (Vote\%_{n,i,t-s})(COPE_{n,t})/20{,}000 \quad (6)$$

A senator's COPE or ADA rating ranges from 0 to 100 with higher ratings indicating senator voting behavior in alignment with the 'liberal' perspective on legislation selected by

Americans for Democratic Action or the AFL-CIO. Vote% is Senator n's (n=1, 2) vote share in the most recent (t-s) senatorial election relevant to county i where the certification election was held, and the current time period is denoted by t. In the case where both senators received a "perfect" liberal score of 100 and were both elected with 100 percent of the vote in the previous election, POL would equal one hundred. At the opposite end of the perspective, POL takes a value of zero regardless of vote share if both senators were rated as 'perfectly' conservative (COPE = 0).

The rational voter model implies that β_1, $\beta_2 < 0$ in equation (5) since the probability of casting the decisive ballot moves inversely with margin and number of eligible voters. Given the definition of POL in Eq. (6), a more liberal political environment with respect to labor issues is reflected in higher values for POL. A more labor-friendly political environment would reduce the importance of the election (reducing PB) to a given voter and would reduce participation. Thus implying that $\beta_3 < 0$.

This data set is a subset of all NLRB union certification elections held in the United States and its territories beginning in the 1994 fiscal year through the end of the 2001 fiscal year. The data set includes single unit elections in which twenty-five or more workers were eligible to vote. The data are available from the NLRB. The information used to form the control variables is included in the NLRB data set along with the number of votes cast for and against certification, and eligible number of voters. Margin and voter participation rate are computed from the number of yes and no votes and the number of eligible voters. COPE is computed as described above.

Screens were applied to remove incomplete records, and multiple unit elections. There are a total of 4,936 observations in the data set for fourteen states. Approximately 50 percent of all certification elections with greater than 25 eligible voters were held in these states during the time period analyzed. Descriptive statistics are provided in Table 1.

Table 1. Descriptive Statistics

	Voter Participation Rate	Number of Eligible Voters	Margin	Vote-weighted COPE
Mean	0.88	117.4	0.385	0.32
Max	1.00	2,543	1.000	0.78
Min	0.04	25	0.000	0.00
Std. Dev.	0.123	173.4	0.264	0.179
Obs	4,936	4,936	4,936	4,936

Table 1 bears out the differences between the union certification elections and typical elections taking place in the political realm. The mean turnout rate in the certification election is 88% and stands in stark contrast with turnout rates in the low fifties for presidential elections and in the low thirties for off-year congressional elections. The typical margin of victory in the union certification elections is 38 percentage points, or a 69% to 31% decision. Although margins of this size are observed in some congressional elections, they are not especially common. Lastly, note that the mean number of eligible voters is relatively low at 117.

4. RESULTS

The model in Eq. (5) was estimated with ordinary least squares regression using White's [23] correction for heteroskedasticity and both with and without the control variables, X. The results for the model excluding the control variables are as follows:

$$\underset{(205.3)}{VPR = 0.95} + \underset{(-16.7)}{-0.14(M)} - \underset{(-4.51)}{0.00007\,(N)} - \underset{(-5.26)}{0.05\,(COPE)} \quad (7)$$

Adj. R-SQ = 0.10, F-stat = 188.9,

where t-statistics are reported in parentheses below the estimated coefficients.

The results for the model with full controls for election characteristics are similar. The estimated parameters and t-statistics are reported next for the variables of direct interest for the rational voter model, but the results for the control variables are suppressed. The results are

$$\underset{(46.6)}{VPR = 0.95} - \underset{(-14.7)}{0.121(M)} - \underset{(-4.48)}{0.00007\,(N)} - \underset{(-4.04)}{0.068\,(COPE)} + .. \quad (8)$$

Adj. R-SQ = 0.17, F-stat = 10.75

The estimated coefficients in the equation have the expected signs as implied by the rational voter model and are significant at conventional levels. The parameter estimates are generally consistent across the two specifications. The parameter estimate for M in Eq. (8) implies that for every ten percentage point increase in margin, there is a 1.2 percentage point decrease in the voter participation rate. An increase of 100 voters in the electorate (N) results in a seven-tenths of a percentage point decrease in turnout.

The political variable (COPE) is negatively related to participation rates and is significant at the one percent level. This suggests that as the political climate in the county of the certification election becomes more labor-friendly (liberal), fewer eligible voters choose not to vote for or against union certification. The parameter estimate for COPE in Eq. (8) implies that when the political climate changes from that of being entirely unfriendly to entirely friendly to labor, the participation rate declines by 6.8 percentage points. The results using ADA scores are virtually identical. These results will be provided upon request.

Tests of coefficient restrictions imposed on the regressors in Eq. (8), suggest that the control variables were generally significant in blocks, while within each block not all binary variables were significant. The blocks tested controlled for the state, type or industry of union, specific union, and year. The only block of control variables found insignificant were controls for the year of the election, thus suggesting the lack of a trend in participation rates. For state control variables, baseline turnout tends to be significantly higher in Connecticut, Illinois, Florida, Ohio, and California. With respect to the type of union petitioning, participation rates are four to seven percentage points lower among Craft and Professional groups. Lastly, approximately half of the controls for each of the 80 petitioning unions were found to be statistically significant at conventional levels. Notable findings among the unions were that participation rates for workers seeking certification of the Auto Workers, Iron Workers, Steel Workers and Oil, Chemical and Atomic Workers unions were between four and seven percentage points higher. This may be reflective of higher probability benefits of certifying the union in this higher wage industries, a point that bears investigation in future research.

5. CONCLUSION

The purpose of this investigation was to apply a test the rational voter model in a largely unexplored data set for this purpose, that of NLRB union certification elections. The Downsian voter model implies that voters in all elections should respond to changes in perceived costs and benefits. The empirical results are consistent with rational voter theory in these elections. The voter participation rate is negatively and significantly affected by increases in the size of the electorate and expected margin of victory.

The investigation also suggests that the political climate in the locality of the certification election is related to the participation rate in the election. As the locality becomes more labor-friendly, the importance of the union certification election is undermined in the eyes of the electorate and the participation rate declines. This result is also consistent with the rational voter model.

Lastly, to the extent that expected benefits are amplified in union certification elections, while voting costs are trivialized, it is reasonable to expect higher voter participation rates in certification elections than in typical political elections. Thus it is not surprising that turnout in the certification elections exceeds that of congressional and presidential elections by forty to fifty percentage points.

6. REFERENCES

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