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Expressive vs. strategic voters: An empirical assessment☆

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ABSTRACT

Leading theories of how voters choose between candidates are rooted in two very different paradigms, with starkly different behavioral implications. Exploiting the incentive structure of Germany's electoral system, I develop a novel set of empirical tests that pit the canonical pivotal voter model against alternative accounts according to which individuals derive expressive utility from supporting their most preferred candidate. The results show that *neither* paradigm can explain the most-salient features of the data. In addition, the evidence suggests that voters cannot be neatly categorized into sincere and strategic "types".

1. Introduction

Understanding how voters choose between different candidates is essential for understanding the democratic process. One influential school of thought casts voters as strategic agents whose choices are driven by the possibility of casting the decisive vote (e.g Arrow, 1951; Austen-Smith and Banks, 1999, 2005; Satterthwaite, 1975). Others, however, argue that pivot probabilities in large elections are generally so small that tactical considerations cannot possibly affect voters' decisions (see, e.g., Downs, 1957; Green and Shapiro, 1994). According to the leading alternative theory, individuals derive expressive utility directly from how they vote (see Brennan and Lomasky, 1993; Hamlin and Jennings, 2011). Hence, voters sincerely support their most preferred candidate, irrespective of her chances of winning.

How voters behave is ultimately an empirical question. Yet, there exists no consensus. Even the best journals regularly publish articles based on either paradigm (see Gerber et al., 2017 for a similar point). Whether voters are strategic is not only interesting in and of itself, but it is also important for developing accurate theories of electoral politics. *Any* model in which voters face more than two alternatives requires an *assumption* about the tactical sophistication of agents, and the conclusions from otherwise identical theories may depend critically on whether voters are taken to be strategic or sincere.[1]

I address the gap in knowledge by devising a novel set of empirical tests that pit the canonical pivotal voter model against its most prominent alternative. The difficulty in disentangling expressive and strategic behavior is that individuals' true preferences are unobserved. Without any additional structure it is impossible to know whether voters simply selected their most preferred candidate (see Degan and Merlo, 2009). Even if one is willing to postulate that some voters did or did not act strategically—think, for instance, of Floridians voting for Ralph Nader in the 2000 presidential election—short of knowing the number of individuals who had an incentive to cast tactical ballots in the first place, it is unclear whether the observed behavior is quantitatively important. Yet, measuring the extent to which actual conduct violates a particular model's predictions is necessary for assessing the positive content of any theory. All formal models are abstractions from reality and will, therefore, mispredict the behavior of *some* individuals. Only if the deviations are large would we want to reject a paradigm.

To quantify contradictions of either of the two leading theories of voter behavior, I exploit the incentive structure of parliamentary elections in Germany, where individuals have two votes that are cast simultaneously but counted under different electoral rules. As

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[1] Compare, for instance, Besley and Coate (1997) with Osborne and Slivinski (1996).

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explained below, these votes need to satisfy basic consistency properties in order to conform to the predictions of either the pivotal voter model or its expressive counterpart.

My results imply that neither paradigm provides an adequate description of reality. Specifically, I estimate that, on average, almost two-thirds of individuals violate the predictions of the pivotal voter model, while about one-third does not behave expressively. Based on this evidence, I conclude that the two most prominent theories of how voters choose between candidates should both be rejected. I also present evidence to suggest that voters cannot be neatly classified into strategic and sincere "types".

2. Related literature

There exists a large literature concerned with detecting either expressive or strategic voting. Within this literature, laboratory experiments provide typically convincing evidence of tactical behavior by some, but not all, individuals (e.g., Bouton et al., 2016, 2017; Duffy and Tavits, 2008; Eckel and Holt, 1989; Esponda and Vespa, 2014). How well existing results generalize to large, real-world elections, however, remains unknown.

Coate et al. (2008), for instance, argue that the pivotal voter model is unable to replicate winning margins in Texas liquor referenda. Yet, Reed (1990) and Cox (1994) find that the aggregate distribution of votes in Japan's multimember districts does conform to the predictions of canonical rational choice theory. The results of Cox (1997) are suggestive of strategic behavior in some electoral systems but not in others. More recently, Fujiwara (2011) shows that in Brazil third-place candidates are more likely to be deserted in races under simple plurality rule than in runoff elections. Pons and Tricaud (2018) document that, in French parliamentary elections, the presence of a third candidate reduces the vote shares of the two front-runners. Their results support the view that many voters have expressive concerns.

Even less is known about the actual *extent* of expressive and strategic voting. Degan and Merlo (2009) study under what assumptions strategic voting can be detected in observational data. They conclude that the behavior of voters in U.S. national elections is, for the most part, consistent with sincere voting. Spenkuch (2015) exploits a highly unusual by-election in Germany, which allowed a party to gain one seat by receiving fewer votes, to show that about 9% of voters did not behave expressively. Kawai and Watanabe (2013) estimate a fully structural model of voting decisions in Japan's general election, concluding that between 63% and 85% of voters are strategic. Quantifications like these are necessary to truly evaluate the strategic and expressive paradigms.

Recall, the fundamental difficulty in inferring (non)strategic behavior from naturally occurring data is that voters' preferences are not observed. A separate strand of the literature tries to circumvent this problem by using survey data on voting decisions and political orientations (see, e.g., Abramson et al., 1992; Blais et al., 2001; Gschwend, 2007; Niemi et al., 1993; Pappi and Thurner, 2002). Estimates of tactical voting in this tradition are often very low—a few percentage points. Wright (1990, 1992), however, points to important survey biases and raises serious doubts about conclusions based on self-reported votes. Alvarez and Nagler (2000) even show that, depending on the survey design, results differ by as much as a factor of seven. As pointed out by Kawai and Watanabe (2013), another reason for why estimates of strategic voting tend to be low is that some analyses do not account for the fact that the vast majority of voters has no incentive to cast strategic ballots. Kiewiet (2013) is an important exception. Analyzing individual survey responses and aggregate election results for British General Elections from 1983 to 2005, Kiewiet (2013) estimates that, on average, about one-third of the supporters of nonviable parties vote tactically. His results are, therefore, remarkably similar to the estimated extent of strategic voting in this paper.

3. Germany's electoral system

The political landscape in Germany used to be dominated by five major parties: CDU/CSU (conservative), SPD (center-left), FDP (libertarian), Green Party (green/left-of-center), and The Left (far left). The CDU/CSU and the SPD each had nearly as many supporters as the three smaller parties combined. Neither party, however, could govern on the federal level without a coalition partner. Since the mid-1980s, the CDU/CSU's traditional partner has been the FDP, whereas the SPD has typically entered into coalitions with the Green Party. These "preferences" are well-known to voters.

My empirical strategy exploits the incentive structure of elections to the Bundestag, the lower house of the German legislature. Elections are held every four years according to a mixed-member system with approximately proportional representation. Except for minor modifications, the same system has been in place since 1953. In what follows, I describe the exact set rules as of the 2005 and 2009 parliamentary elections, which are the focus of the analysis below.[2]

As mentioned in the Introduction, each voter casts two different votes.[3] The first vote, or *candidate vote* (Erststimme), is used to elect a constituency representative in each of 299 single-member districts. District representatives are determined in a first-past-the-post system. That is, whoever achieves the plurality of candidate votes in a given district is automatically awarded a seat in the Bundestag. Winners are said to hold *direct mandates*, and votes cast for any other candidate are discarded.[4]

The arguably more important vote is the *list vote* (Zweitstimme). It is cast for a party, and the total number of party members who enter the Bundestag is roughly proportional to a party's share of the national list vote among parties clearing a 5%-threshold. To achieve approximately proportional representation despite potentially lopsided outcomes in the candidate vote, the German electoral system awards *list mandates*. First, all list votes are aggregated up to the national level, and a total of 598 preliminary seats are distributed on a proportional basis. Each party's allotment is then broken down to the state level and compared with its number of direct mandates in the same state. Whichever number is greater determines how many seats the party will actually receive.

More formally, let $d_{p,s}$ denote the number of districts that party p won in state s, and let $l_{p,s}$ be the number of mandates it would have received in the same state under proportional representation. The final number of seats that p retains in s equals $n_{p,s} = \max\{d_{p,s}, l_{p,s}\}$, and its total in the Bundestag is given by $n_p = \sum_s n_{p,s}$ (cf. Appendix C).

If $d_{p,s} < l_{p,s}$, then, in addition to the district winners, the first $l_{p,s} - d_{p,s}$ candidates on p's list are elected as well. Otherwise, only holders of direct mandates receive a seat. Parties are said to win *overhang mandates* (Überhangmandate) whenever $d_{p,s} > l_{p,s}$. In such cases, the total number of seats in the Bundestag increases beyond 598. Since the total number of mandates awarded under proportional representation, i.e., $\sum_p \sum_s l_{p,s}$, exceeds the number of districts, $\sum_p \sum_s d_{p,s}$, by a factor of two, situations in which $d_{p,s} > l_{p,s}$ are not as common as one might imagine. For instance, relative to its share of the list vote, the CDU/CSU received an additional seven mandates in 2005, whereas the SPD secured nine extra seats. In 2009, there were 24 overhang mandates, 21 of which accrued to the CDU.[5]

[2] The description borrows heavily from Spenkuch (2015).

[3] In principle, voters can cast only one vote and leave the other one blank. I practice, however, the fraction of ballots with only one valid vote is quantitatively negligible.

[4] Since the introduction of the two-ballot system in 1953, no independent candidate has won a district.

[5] Starting with the 2013 election, the number of list mandates also increases when a party wins more direct than list mandates in a particular state. Given that my analysis focuses on the 2005 and 2009 elections, the 2013 electoral reform has no bearing on the results.