Consequences of voting when no vote is decisive

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Abstract

A person may cast a vote, which imposes a cost on him, even if his vote will not affect the result of an election or the decision of a committee. Motives for such voting are expressing views for emotional reasons, building a reputation by voting with the majority, influencing the beliefs of the public about the wisdom of the policy the majority favors, and gaining favors from a special interest which takes advantage of the non-decisiveness of a vote to buy votes cheaply. A person need not therefore vote for the policy he prefers be adopted.

Keywords: voting, policy effectiveness. *JEL classification:* D72, D78.

Resumen

Algunas personas pueden decidir votar, con el coste que implica, incluso aunque su voto no afecte al resultado de la elección o a la decisión del comité del que forman parte. Los motivos para votar en esos casos pueden ser expresar un punto de vista por razones emocionales, construir una cierta reputación de votar junto a la mayoría, influir en las creencias sociales sobre la conveniencia de la política que la mayoría apoya, o ganarse el favor de grupos de interés, que, a su vez se aprovecharían de los electores cuyos votos no son decisivos para comprar votos a bajo coste. En definitiva, una persona no necesariamente votará a favor de aquellas políticas que prefiera que sean adoptadas.

Palabras clave: voto, efectividad de las políticas públicas. Clasificación JEL: D72, D78.

1. Introduction

In *A Theory of Democracy*, Downs laid out the paradox of voting: a rational, selfinterested voter should realize that the chance that the election would be tied without his vote, so that his vote decides which side wins, is minuscule. Therefore, the cost of voting (say the time required to go to the polling place) will exceed any individual's expected benefits of voting. Therefore, few people would vote, in contrast to the millions that we often see in national elections.

Much of the analysis of voting follows Downs in supposing that a person votes as if his vote determines policy: if his vote is not decisive then it doesn't matter how he votes, and he may as well vote the same way as he would were his vote to determine policy; if his vote is decisive, then he does best by voting for the policy he prefers. Furthermore, much of the analysis supposes that a decisive voter can ignore how others voted when deciding how he should vote. This paper explores some ideas concerning voting when no one person's vote affects which side wins. Much of the discussion will concern informational effects — a change in the number of votes cast with the majority can affect beliefs of voters, firms, and so on, thereby affecting how they behave, and so affecting outcomes even if no one vote affects policy. The discussion will also consider the opportunities for a special interest to affect policy, at low cost to itself.

2. Expressive voting

One explanation for why and how people vote comes under the name of expressive voting. It posits that people vote not to affect outcomes, but for emotional reasons. The emotional motives can take several forms. Brennan and Buchanan (1984) posit that people vote for the same reasons they attend sporting events: they enjoy cheering and booing one side or the other. Another emotional reason for voting can arise from a feeling of moral obligation to do so; empirical evidence for this motivation is given by Blais and Young (1999) and by Blais (2000). Schuessler (2000) proposes that identity is confirmed by association with specific groups—voting for candidate X or for policy X identifies a person with others who vote for X.

The identity benefit may arise from signaling to others a person's type. Consider advertisements for Calvin Klein jeans, in which Brooke Shields said that nothing comes between her and her jeans. Presumably the point of the advertisement is to sell an image, rather than sturdy constructions of jeans. One would think that a consumer buys Calvin Klein jeans (with the label prominently displayed) to project an image of sexiness or youth (see Erfle 1983). The same can hold for elections. A person may support a young candidate to show his friends that he likes fresh ideas, is part of a new generation, or that he is not yet solidly middle class. Similarly a person may say he supports quotas on imports not because he believes that automobile workers are deserving, but to project an image of patriotism.

The emotional behavior of voters may be clearer in the behavior of union members. It has long been recognized that though union members may vote for strikes to increase wages, emotional considerations can also be important. In 1921 Hansen claimed that strike decisions are motivated primarily by a sense of grievance about wages. Ashenfelter and Johnson (1969) write that union leaders may call a strike because "under strike conditions the leadership may at least appear as adversaries against management in a crusade which may even raise their political 'stock' and will unify the workers." Newspapers tell of strikes that appear to have little economic rationale. For example, the *Wall Street Journal* (March 17, 1989) reported that "with the Eastern [airlines] walkout now nearly two weeks old, ... what boils to the surface ... is an intense, highly personal anger, a feeling that their self-respect, honor, and dignity have been undercut by a management obsessed with pinching pennies..." The *New York Times* (April 23, 1989) reported that four years after the end of a strike against United Airlines, union pilots were harassing non-

union pilots; the harassment ranged from verbal abuse and refusal to shake hands, to more serious breaches like not advising a pilot that he is approaching an altitude assigned by air traffic controllers. Work by Getman, Goldberg, and Herman (1976) suggests that a worker in union representation elections is more likely to favor unionization the more effectively the company threatened the loss of jobs following unionization.¹ So even if the costs of a strike are sufficiently large so that no union member (or perhaps only very few of them) prefers to strike, if workers receive a non-infinitesimal benefit from voting for a strike, then a majority may vote for a strike that they prefer not occur.

The evidence on expressive compared to instrumentalist voting is mixed. Tyran (2004) tests a model of expressive voting by experimentally investigating a proposal to tax everyone and to donate tax revenues, finding little support for the theory, instead finding that voters tend to approve the proposal if they expect others to approve, too. Experimental subjects who could vote on having some cash given to themselves or instead to charity were more likely to vote for the charity the less likely their votes were decisive; the effect is weak, but consistent with expressive voting (Carter and Guerette 1992). Survey data from the United States finds that people who earmark tax payments to the presidential election fund and who display campaign buttons, stickers and/or signs are also more likely to vote. Because the earmarks and the displays are often seen as expressive, the finding suggests that some voting is also expressive (Copeland, and Laband 2002). Lastly, instrumentalist theory claims that a person is more likely to vote the more strongly he believes that his vote will make a difference. This hypothesis is not supported by the available data (see Ashenfelter and Kelley, 1975).

2.1. Votes influence behavior

So far I considered voting which affects the decision of a committee or of an electorate. But voting can affect outcomes without affecting the decision. Informational effects may be important. One approach considers a committee (which can be a legislature) which chooses between policies, with all committee members having the same preferences, but different information about which policy is best. In turn, the effectiveness of the policy may increase with the confidence of consumers and firms that the committee chose the right policy. For example, consumers may be more willing to buy electric cars the more confident they are that electric cars will perform well. That also means that a legislator's vote can matter even if his vote is not pivotal.

This idea appears in the legal literature, under the name of an "attitudinal" theory of the expressive function of law, claiming that democratically enacted legislation

¹ This discussion is based on GLAZER (1992).

can change behavior by signaling what others approve or disapprove of (McAdams 2000, and Dharmapala and McAdams 2003).

To see how votes can affect beliefs, consider a numerical example. Suppose a committee of five members must decide whether a policy under consideration (say reducing the speed limit to 100 km/h) is good or bad. Each member of the committee gets some information about the benefits or costs of the policy. Suppose that each forms the correct conclusion with probability 0.8, and that each forms his estimate independently of the others. Then probability theory shows that with five voters, if the majority has three members, the probability that the majority decision is correct is 80%; but if the majority consists of four voters, the probability the majority is correct rises to 98%.² Now consider one committee member, L. He may independently think that the policy is bad. But given that three other members think it is good, he should update his beliefs, and realize that he is likely wrong. Moreover, if he now thinks the policy is good, then he may want the public to know that, and so change his vote in favor. Put differently, his independent view is likely wrong; there is a 98% chance that the majority is correct. So if the committee member cares about his reputation, not wanting to be viewed as wrong, he will vote with the majority. The incentives to vote with the majority are particularly strong if the results of the policy take a long time to be realized, so that reputation depends not on whether the legislator voted for a good or for a bad policy, but instead on the pattern of votes within the committee; a legislator who differs from a large majority can be viewed as likely wrong.³

Such behavior may cause a problem. The public may realize that the committee is biased towards unanimity. So when they see a unanimous vote, they may believe that either all three members independently thought the policy is good, or else that two independently thought so, and the third switched his vote.

The informational content of votes can affect not only how a person votes, but also whether he votes. Now suppose that the committee members do not attempt to influence the behavior of the public, but instead want to make the correct decision. The committee has three members, A, B, and C. Everyone knows that A always makes the correct decision, but that B and C may err. Then if only A votes, the committee will make the correct decision. If B and C also vote, then with some probability they will both agree on the wrong decision, outvoting A, and so the committee would make the wrong decision.

3. Electoral considerations

I so far considered votes as affecting beliefs about the quality of a policy. I now turn to electoral considerations.

² The probability is calculated by Bayes' Theorem as $\frac{\binom{5}{3} * 0.8^3 * 0.2^2}{\binom{5}{3} * 0.8^3 * 0.2^2 + \binom{5}{3} * 0.2^3 * 0.2^3 * 0.8^2}$.

³ See SCHARFSTEIN and STEIN (1990) and OTTAVIANI and SORENSEN (2001).

3.1. Why the opposition opposes

The informational effects of voting can also explain why the opposition party so often votes against the majority's proposals, even when it appears that the opposition would benefit from adoption of the policy, and though by definition, the opposition party is in the minority, and votes by its members are not decisive. Consider first some data.

Snyder and Groseclose (2000) show that partisanship had a large influence on voting decisions in the U.S. House of Representatives. Roberts and Smith (2003) find that since the 100th Congress, Democratic party cohesion was about 75 percent. Republican cohesion reached 90 percent by the 106th Congress.⁴

Note, however, that cohesion can arise when members of both parties vote the same way. A more interesting pattern arises when one party's support for a policy induces the other party to oppose it. Indeed, the stronger was President Carter's support for a bill, the greater the opposition to it by congressmen outside his core partisans.⁵

An additional measure that shows party polarization in the U.S. is developed by Theriault (2005). He uses the 12,756 roll-call votes on the 742 most important pieces of legislation from 1967 to 2004 to compute a party disparity value; this value is the absolute difference between the percentage of Republicans and the percentage of Democrats who vote the same way on a particular roll-call vote. In the late 1960s and early 1970s, the measure hovered around 33 percent. By the congresses in the early 2000s, it had more than doubled.

Sharp differences between the government and the opposition parties are also found in France. Wilson and Wiste (1976) analyze 357 roll calls in the National Assembly between 1958 and 1973. Parties were more cohesive during the Fifth Republic than during earlier periods. The pattern of dissent in each party suggests that this higher cohesion was based not on ideological homogeneity, but largely on the importance of governmental-opposition considerations. The emergence of a stable and durable majority led to the majority usually voting with the government, and the minority against it. Party-line voting appears even on issues that have no identifiable ideological content, such as institutional rules and procedures, or space exploration (Lee 2005). Similar partisan effects appear on the distributive politics of military procurement (Rundquist and Carsey 2002).

One incentive for the minority to vote against the majority arises from the informational effects discussed above. To see this, let us return to our numerical example. Suppose the majority on a committee consists of three members and the minority of two members. Each member independently evaluates whether a policy is good or bad. Suppose that among the three members of the majority, two think

⁴ Party cohesion is calculated for each party as the mean absolute value of the difference between the percentage voting yes and the percentage voting no.

⁵ See FETT (1994). But the effect is not universal. President Reagan experienced a positive effect outside his core opponents.

the policy under consideration should be adopted, leading the majority to favor the policy, and imposing party discipline to have all three members vote for it. Suppose further that both members of the minority think the policy is bad. Then if members of the minority voted against, the majority might revise its beliefs about the wisdom of the policy, and decide not to implement it. That would make the incumbent majority more effective, increasing its chances of re-election, thereby hurting the minority.

One might think that the opposition party should vote for policies that hurt the governing party, and vote against policies that would benefit the governing party. But if the opposition so behaved, the governing party could figure out that negative votes by the opposition party means that the policy benefits the governing party, and vice versa. An opposition party which wants the governing party to fail therefore has to hide its own information.⁶ It can do so in three ways: never voting, always voting for the governmental policy, or always voting against.

The opposition will especially avoid pointing out mistakes the incumbent made early in the incumbent's term, because that information would give the incumbent an opportunity to correct the problem before the next election. In contrast, at the end of the term, the incumbent has little opportunity to take corrective action, and so the opposition gains from showing that the incumbent did bad. Such behavior by the opposition would create a honeymoon effect.

3.2. Expectations about policy

The effectiveness of a policy, and the behavior of firms and consumers depends not only on what policy is adopted. It also depends on expectations about the durability of the policy, and expectations about future policy.

A firm concerned that policy will be reversed may avoid investing now, but rather wait until the uncertainty about future policy is resolved (for a model illustrating the result, see Rodrik 1991). Or, as Bernanke (1983) points out, when investment projects are expensive to cancel or workers are costly to hire and fire, high uncertainty induces firms to delay investment and employment decisions. Moreover, if many firms delay investing or hiring, the economy contracts, generating a recession. Data support these theories. For example, the program of trade liberalization undertaken by Mexico after 1985 was undermined by lack of credibility (Ibarra 1995). Similarly, in sub-Saharan Africa, trade, fiscal, savings, and financial policy reversals reduced investment and economic growth: fiscal policy reversals reduced private investment by about 1% of GDP, and trade policy reversals reduced private investment by about 2% of GDP (Yago and Morgan 2008). In the United States, uncertainty about taxes, government spending and other policy matters deepened the recession of 2007-2009 and slowed the recovery (Baker, Bloom, and Davis

⁶ Or the party induces a babbling equilibrium.

2012). In a study of firm-level data for 48 countries from 1980 to 2005, Julio and Yook (2010) find that corporate investment falls by an average of nearly 5 percent in the year leading up to national elections. Dumev (2010) finds that the sensitivity of corporate investment to the firm's own stock price is 40 percent lower in election years than in other years.

Suppose then that the majority wants investors or outsiders to believe that the current majority will continue as the majority. Then the greater the turnout by the majority, the greater the likelihood that they will also be the majority in the future. For example, suppose voters N_1 and N_2 will vote no in this election and the next one. In the current election, voters Y_1 , Y_2 , Y_3 , and Y_4 will vote yes. But with some probability voters Y_1 and Y_2 will not vote in the next election. Consider a seventh voter, Smith, whose preferences are unknown. His vote in the current election cannot affect the outcome. But if he votes, that will indicate the likely outcome of the next election, and therefore can affect migration, investment, and the like.

A minority may have related motives for voting. For instance, a voter who knows that A will win anyway might vote for B to narrow A's margin of victory and to demonstrate his preference for an intermediate policy between A and B that the voter would want implemented in the future (Piketty 2000).

4. Bribery

The last topic to be considered is how a special interest can take advantage of a committee when each member realizes that his vote is not decisive.

Dal Bó (2007) analyzes how a special interest can use bribes that are conditional on the realized voting profile to influence committee decisions. He shows that a special interest group can generate unanimous approval, although in equilibrium payments are very small. His insight is that if a strong majority of legislators can be induced to vote for the special interest's policy, then no legislator is decisive, and therefore each is indifferent between voting for and against the policy. The special interest can induce legislators to support it by committing to pay a legislator if and only if he casts a *decisive* vote in its favor. This approach requires the special interest to make only a very small payment in equilibrium. Like previous approaches, however, it suffers from the problem that special interests must commit to contingent payments.⁷

An example shows how this works. Consider three legislators. Passage of the bill requires two votes. If the bill is passed, then each of the three suffers a loss of 1 million euros. The special interest commits to the following payments. If all three legislators vote for the bill, then the special interest pays each 1 euro. If only one person votes for the bill, he is paid 1 euro. If two people vote for the bill, then each

⁷ The model is extended by CONSOLE-BATTILANA and SHEPSLE (2009), who consider payments that either the president or lobbying groups can make to induce legislators to confirm the appointment of a supreme court justice.

is paid 2 million euros. Note first that if any legislator (say L) expects the two others to vote for the bill, then he too will vote for it. For in voting for it, L does not change the outcome (regardless of how he votes the bill will pass and he will suffer a million euro loss), but in voting for the bill he gets 1 euro more than in voting against the bill. Therefore, it is rational for each of them to vote for the bill, and for each to suffer a large loss. The special interest pays in total only 3 euros.

Are other outcomes possible? It cannot be that no one votes for the bill, for then any one legislator, say L, gains 1 euro by voting for it, without changing the outcome.

And it cannot be that only 1 legislator votes for the bill. For then some other legislator, say L, would want to vote for—the bill would pass, but the 2 million euro payment would more than cover the 1 million euro loss. In short, the special interest, if it can commit to payments, can induce unanimous passage of a bill, though each legislator would prefer that it fail.

Such behavior can explain the puzzle of the surprisingly small rent-seeking expenditures by special interest groups, first noted by Tullock (1972), who asked why campaign contributions, then amounting to about \$200 million, were so small compared to the hundreds of billions of public spending and regulatory costs supposedly at stake.⁸

Consider later data. In 1998 total contributions by political action committees (PACs) were only \$220 million, of which corporate PACs accounted for 35% (Milyo, Primo and Groseclose 2000). Limited importance of PAC contributions are found by McCarty and Rothenberg (1996), who analyze contributions from the largest PACs operating during the 1978-1986 election cycles; the mean of non-zero contributions was only \$700 for corporate PACs.

Spending has of course increased over time. Across all US elections in 2004, total spending was about \$4 billion (Stratmann 2005). Total spending in the 2010 midterm elections in the United States, including spending by political parties, congressional candidates, and independent groups, was about \$4 billion.⁹

But not all this spending is by firms seeking special benefits, and this spending is trivial compared to federal spending on rescuing firms during the Great Recession, such as the more than \$500 billion committed under the Troubled Asset Relief Program.¹⁰

Nor does evidence show that contributions consistently influence how legislators vote. Some evidence for an effect is given by Stratmann (2005), who finds that an extra \$10,000 in banking contributions increases by approximately eight percentage points the likelihood of a House member voting in favor of the banking industry. The timing of interest group contributions, with some coming just before important roll-

⁸ This discussion of evidence is based on DAHM, DUR, and GLAZER (2013).

⁹ Danielle Kurtzleben "\$4 billion in election spending a drop in the bucket." *http://www.usnews. com/news/articles/2010/11/09/4-billion-in-election-spending-a-drop-in-the-bucket.html*. Downloaded December 29, 2010.

¹⁰ Nor is the size of illegal contributions large. Investigations following the Watergate scandal found that 21 companies made illegal contributions in 1972, totaling only \$968,000; the largest one was made by Northrop for a mere \$150,000 (ALEXANDER 1980).

call votes, also suggests that special-interest groups attempt to influence legislative voting (Stratmann 1998).

Other evidence is in sharp contrast. A review of nearly 40 studies by Ansolabehere, de Figueiredo, and Snyder (2003) finds the estimated effects of campaign contributions to be either statistically insignificant or to have the wrong sign in roughly 75% of the cases. The regressions they estimate show thin evidence that campaign contributions much influence congressional votes.

If giving cash to legislators gives firms little influence on legislation, firms may want to use different mechanisms. Moreover, the bribery story told above suffers from time-inconsistency—why should a legislator believe that the special interest will make the bribe payments it had promised? Under some conditions, however, the information effects of a vote allows a special interest to get its way, inducing the legislature to adopt a policy that each legislator opposes. The behavior considered here was well captured by Lawrence O'Brien, who had served as Special Assistant to presidents Kennedy and Johnson, as Postmaster General of the United States, and as National Chairman of the Democratic Party. In an oral interview¹¹ he said

"The NFL [National Football League] enjoyed an excellent relationship with the Congress. Some of it was, however, on the basis of NFL expansion where the NFL might locate in the future and the constant quest on the part of some members for a franchise location in their state... Over the course of time, expansion was effectively played off against legislation, to the benefit of the NFL...This was an internal matter in the Congress. The league operated directly with the Congress. They could pick their spots and they effectively utilized this leverage that they had... [They held off] decisions on franchises, because if you had a half a dozen to a dozen possible sites and that involved ten or twelve states, you were in a pretty good position."

The analysis below, summarizing Dahm, Dur, and Glazer (2013), illustrates this idea. Consider a legislature that votes on a policy that benefits a firm and is costly to citizens. The policy can be a tax break for the firm, an increase in a regulated price, a grant of monopoly power (such as by an anti-trust exemption or an extension of a patent), a protective tariff, and so on. For concreteness, think of a tariff. The tariff increases the firm's profits by some amount, say 10 million euros, at a cost of, say 1 million euros to each of 100 districts. Clearly this is a bad policy. The firm contemplates an investment, say a new factory. In each district, voters, or their legislator, may view the investment as either good (giving a benefit to the district of 100,000 euros), or as bad, giving no benefit or imposing a loss on the district. Residents of a district may favor the investment because it creates jobs or increases

¹¹ Transcript, LAWRENCE F. O'BRIEN ORAL, History. Interview XVII, 12/17/86, by Michael L. Gillette, Internet Copy, LBJ Library.

incomes; some residents may oppose the investment because of environmental concerns.

Suppose now that a majority of districts, say 60 out of 100, want to attract the investment. The firm, however, does not initially know which districts favor the investment and which oppose it, and the firm would prefer to invest in a district that favors the investment. Then a vote by a legislator for the tariff can inform the firm that the legislator's district favors the investment. Therefore, the following behavior is rational by everyone. Each of the 60 legislators who favors the investment votes for the tariff. Each of the 40 legislators who opposes the investment in his district votes against the tariff. The firm chooses to invest in one of the 60 districts whose legislator voted for the tariff; we may think that the firm is equally likely to invest in any one of them. Note that a legislator who votes for the tariff does not affect the majority vote—if 59 other legislators vote for the tariff, it will be adopted regardless of any one legislator's vote. But a legislator who votes for the tariff gives his district a 1 in 60 chance of getting the investment and benefiting his district by 100,000 euros. He thus does better by voting for the tariff than by voting against. And this occurs although the net benefit to each legislator who votes for the tariff is (1/60)(100,000) - 1,000,000 = -998,333.

Notice that though the firm gets the tariff it wants, its behavior differs from offering bribes. We usually think of a bribe as costly to the briber, whereas here a firm take an action (investing in a district that favors it) from which it benefits.

5. Conclusion

We usually view the instrumentalist motive for voting as arising from the difference one vote will make on which policy is adopted. This paper showed that a vote can have real effects even if it does not affect the adoption of policy. Some of the effects are limited to the voter, such as his reputation, or payments he may receive from a special interest. Other effects are more general, affecting the implementation and effectiveness of a policy, and the likelihood that it will be continued. For these reasons, the opposition party, which is always outvoted, can affect policy. And because of these effects, a voter need not vote for the policy he prefers be adopted. Indeed, people may cast a vote for policies that they prefer not be adopted. In the face of such behavior, it can be unwise to view elections or roll-call votes as expressing the preferences of the voters. Nevertheless, votes will better reflect preferences under some institutional arrangements, such as secret balloting, than under others.

These ideas suggest further empirical and theoretical work. We saw that some data bear on expressive voting, with mixed support for that theory. And though the theory of expressive voting can explain why people vote and how they vote, it does not explain why people use elections to express their emotions, rather than expressing them in other ways, such as talking to their friends or posting on blogs. Nor do models of expressive voting explore what positions candidates will adopt.

Interesting questions arise about the effects of different institutions on the types of policies adopted and on the effectiveness of policy. For example, does a secret vote in a legislature reduce the influence of special interest to groups. Does the effectiveness of a policy differ depending on whether the size of the majority supporting it is made public or not? The informational arguments would suggest, for example, that if the public does not know that a policy got many votes, then the policy may be less effective.

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