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Storable votes

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Abstract

Motivated by the need for more flexible decision-making mechanisms in the European Union, the paper proposes a simple but novel voting scheme for binary decisions taken by committees that meet regularly over time. At each meeting, committee members are allowed to store their vote for future use; the decision is then taken according to the majority of votes cast. The possibility of shifting votes intertemporally allows agents to concentrate their votes when preferences are more intense, and although the scheme will not achieve full efficiency, storable votes typically lead to ex ante welfare gains over non-storable votes. Welfare gains can be proven rigorously in the case of 2 voters. With more voters, counterexamples can be found, but the analysis suggests that the welfare improvements should continue to hold if one of the following conditions is satisfied: (i) the number of voters is above a minimum threshold; (ii) preferences are not too polarized; (iii) the horizon is long enough.

JEL classification: D7; F33; H4

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1. Introduction

Consider a committee that meets regularly over time to vote up or down proposals that affect all of its members. The committee members are heterogenous and have different

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preferences over the policy to be enacted. Decisions are taken by majority vote, and as always a majority with weak preferences will win over a minority with more strongly held opinions. Think of this simple alternative: although each member continues to accrue one new vote at each meeting, he now has the option of storing his vote for future use. If a member abstains at the first meeting, he will be able to cast either 0, 1 or 2 votes at the second; were he to abstain again, he would have up to 3 votes available for the next meeting. In other words, suppose votes are storable. Would this plausible procedural change improve the efficiency of the committee? If asked at some preliminary constitutional stage, would committee members prefer a system of storable votes? The purpose of this paper is to propose such a mechanism and begin addressing the questions it raises.

Its main results, in the simplified setting the paper studies, are promising. By allowing voters to shift their votes intertemporally, storable votes lead them to concentrate their votes on times when preferences are more intense, and therefore increase the probability of obtaining the desired decision when it is more important. Counterexamples can be found, but under plausible assumptions, ex ante welfare is higher than with standard majority voting with non-storable votes. In addition, storable votes appear to behave well even if voters follow plausible rules-of-thumb, as opposed to fully rational strategies. Finally, at least in the examples analyzed in the paper, storable votes have better welfare properties than tradable votes, besides being more transparent and procedurally simpler and thus less objectionable both ethically and practically.

The research project was motivated by concerns with the mechanisms through which the European Union coordinates (or attempts to coordinate) the policies of its members. The problem of achieving a unified policy while respecting the sovereignty of heterogeneous countries is very difficult, and all reforms of European Union's institutions are caught between the need for the faster decision-making that majority voting provides and the importance of respecting each country's priorities lest the whole process of integration comes to an end. Intuitively, a country should be able to weigh more heavily when a fundamental interest is threatened, but at a price: as in the case of money, the choice to obtain control over one item should come at the cost of smaller disposable resources available in the future. Storable votes fulfill this function. Other mechanisms may do so too, but storable votes have the advantage of being extremely simple: the mechanism is very natural, can be explained in a few words and induces very intuitive behavior. Storable votes are not an optimal mechanism, but they are so simple that they could realistically be implemented.

Of course the importance of preserving strongly felt minority preferences extends much beyond the immediate challenges of the European Union, to the design of most democratic institutions. The paper refers to the specific example of the European Central Bank because it provides a concrete example of a repeated binary voting game with fixed agenda, and it is this simple setting that this first model studies. But it should be clear that there is no reason why storable votes should not be studied eventually for potential applications to generic committees.

The idea of using more resources, here more votes, when a decision is valued more is very natural, but storable votes have no clear precedent in the literature. The two closest relations are vote trading (see, for example, Buchanan and Tullock, 1962; Coleman, 1966; Brams and Riker, 1973; Ferejohn, 1974; Philipson and Snyder, 1996; Piketty, 1994) and cumulative voting (Dodgson, 1884; Sawyer and MacRae, 1962; Brams, 1975; Cox, 1990;