

Demand of Direct Democracy

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Abstract

The growing demand for referendum challenges the traditional model of representative democracy. In this paper we study under which conditions voters prefer a system of representative democracy to direct democracy. In direct democracies voters choose a policy among two alternatives, under uncertainty about which policy better fits the realized state of the world; in representative democracies voters select a candidate who, once elected, chooses a policy having observed which is the realized state of the world. Voters and politicians' payoffs depend on a common component which is positive only if the policy fits the state of the world, and on a private ideological bias towards one of the policies. In direct democracies voters are uncertain about the future state of the world, while in representative democracies they are uncertain about the degree of ideological bias of the candidates, even if they know towards which policy each candidate is biased. We show that representative democracy is preferred if (i) the majority of voters are pragmatic (the common component prevails), and (ii) society is ideologically polarized, meaning that the majority of voters are ideological (the private component prevails), but the median voter is pragmatic. Direct democracy is the preferred instrument for collective choices in societies in which the majority of voters and the median voter are ideological, implying that the majority of voters have the same ideological bias, as, for instance, it occurs when the populist rhetoric of people against the elite succeeds.

Keywords: Direct democracy, Representative democracy, Populism, Information, Elections.

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1. Introduction

“We believe that major decisions can and should be legitimised by free and fair referendum - not just at the national level, but also at the regional and local level... We stand for direct democracy for the people. Let the peoples have their say!”

Europe of Freedom and Direct Democracy, a group in the European Parliament, <http://www.efddgroup.eu/about-us/direct-democracy>, April 6, 2019.

For some years now, many social movements asking for a more direct participation of citizens in the political process are emerging in several countries around the world. The idea that decisions should be made by the citizens themselves rather than being delegated to some elected representative is gaining supporters in recent times.

The purpose of this paper is to analyze under which conditions voters prefer representative democracy to direct democracy. In order to achieve our research goal we propose a model in which there are two possible policies, l (left) and r (right), to choose from. One of these two policies is *economically efficient*, that is, it is the one that better fits the realized state of the world. In direct democracy voters choose a policy among the two alternatives, while in representative democracy voters select a candidate who, once elected, chooses a policy having observed which is the realized state of the world. Voters and politicians' payoffs depend on a common component which is positive when the policy fits the state of the world, and on a private ideological bias towards one of the policies. We say that a voter (politician) is pragmatic when the common component prevails, while she is ideological when the private component predominates. In direct democracy voters are uncertain about the economically efficient policy, while in representative democracy they are uncertain about whether candidates are pragmatic or ideological, even if they know towards which policy each candidate is biased.

We find the conditions under which the majority of voters prefer a system of representative democracy. In this system, the economically efficient policy is always implemented with higher or equal ex-ante probability than in direct democracy. Consequently, pragmatic voters always prefer a system of representative democracy. The first case in which a society prefers a representative system is therefore when the majority of voters are pragmatic. Since the majority of voters are interested in the implementation of the economically efficient policy and

politicians have better information about it, voters are willing to delegate the decision making process to representatives. The second case in which a system of representative democracy is preferred is when the majority of voters are ideological but the median voter is pragmatic. This occurs when the electorate is ideologically polarized between left and right. The intuition is the following. In this situation, the policy chosen in a direct democracy is the one that, ex ante, is economically efficient with higher probability because the median voter is pragmatic. Assume, without loss of generality, that such policy is l . Thus, voters who are ideologically biased towards policy r along with pragmatic voters constitute a majority that continues to prefer representative democracy. Overall, ideological voters biased towards the policy that is not chosen in direct democracy prefer that the decision is made by an expert to try to avoid that the outcome of the vote is opposite to the one that they wish: representative democracy thus constitutes a moderating element between both ideologically opposed sides.

On the other hand, societies in which the majority of voters and the median voter are ideological, implying that the majority of voters have the same ideological bias, are inclined to a system of direct democracy. The reason is that the members of this majority group know what is their preferred policy, not needing the superior information available from the experts. These voters have common aspirations that will remain invariant regardless of what that information is. Thus, for this type of electorate a representative system does not suppose any type of advantage against the direct democracy; arguably, quite the reverse. Such majority of ideological voters are not willing to allow politicians to make decisions because there exists the risk that they end up choosing something totally different to their ambitions. This risk follows from the fact that with some positive probability the elected candidate is pragmatic and the policy different from the ideological bias of these voters is economically efficient.

It is noteworthy that this configuration of the electorate is nothing but a society in which there is a majority group of homogeneous voters in terms of their ideals and with interests opposed to the minority group constituted by the rest of the citizens in that society. In this sense, it is easy to directly connect our results with the populist rhetoric, which has traditionally defended the mobilization of a majority (the people) against a minority (the elite). Understanding this electorate as a populist society, we would be offering a theoretical explanation for the growing interest in the use of instruments of direct democracy shown by societies in which populist movements succeed.

Related Literature

Several papers express the benefits of using the instruments of direct democracy. According to Besley and Coate (2008), policy outcomes on specific issues may differ substantially from what the majority desires when citizens have only one vote to cast for candidates who have to decide on a bundle of issues. They show that citizens' initiatives and referendums prevent such problems from occurring. Matsusaka (2005) states that allowing citizens to participate in lawmaking leads to the prevalence of the median voter's preferences along different dimensions and therefore reduces the discretionary performance of the government. Empirical evidence on how direct democracy prevents politicians from increasing spending to favor special interest groups is offered by Santerre (1989) and Sanz (2015).

For its part, another strand in the literature highlights the inability of voters to make decisions due to lack of information. The seminal works of Madison (1787) and Si  y  s (1789) stand up for the establishment of a representative democracy in which politicians with an informational advantage decide. Having politicians better informed than voters is a generally used assumption in the literature. The superior information available for the politicians may be of diverse nature. Roemer (1994) and Cukierman and Tommasi (1998) consider models where candidates are better informed than the electorate about how different policies map into outcomes. Schultz (1996, 2002), Martinelli (2001), and Jensen (2009) assume that politicians are better informed than voters about which is the right policy to adopt depending on which is the realization of the state of the world.

In contrast, there is literature that raises the possibility that politicians do not use this additional information for the benefit of citizens. Kartik and Preston McAfee (2007) propose a model in which only a fraction of candidates are committed to implement the policy that they consider to be the most appropriate to maximize the overall welfare of society, even when such policy may not be the most popular among voters. They denote this type of representatives as candidates "with character". However, candidates "without character" only seek to pander voters by carrying out the most popular policy, even knowing that such policy is not the one that maximizes the social welfare. In this vein, Morelli and Van Weelden (2013) introduce a parameter that measures the informational advantage of politicians over voters about the true state of the world and relate it to the probability of pandering by politicians. They find that

the less informational advantage politicians have, the greater their incentives to pander. This implies that an increase on the information available to the voters can make all voters worse off since politicians are now more likely to pander.

Papers cited above dealing with either direct or representative democracy focus exclusively on the analysis of one of these two systems, but without establishing a comparison between them as we will do. Kessler (2005) proposes a model to study the advantages of each of these regimes. Her findings are in line with the already pointed out benefits of both systems: policies chosen through direct democracy are closer to the preferences of the median voter, while policies chosen through representative democracy fit better to the existing state of the world given the superior information of politicians. As far as we know, Maskin and Tirole (2004) is the only paper in the literature that develops a theoretical analysis investigating the conditions for the suitability of each of these regimes. Assuming that the goal is the maximization of the social welfare they study whether, for that purpose, decisions should be made by the public directly, politicians subject to reelection, or independent judges. In this sense, they develop a normative analysis about the appropriateness of one or the other system. On the contrary, our purpose is to carry out a predictive analysis: we aim to determine which system will be demanded by a majority of voters.

In this sense, our paper also contributes to the literature about populism. There is empirical evidence that shows that individuals who are dissatisfied with the system of political representation are in favor of the use of instruments of direct democracy (Dalton 2004; Pauwels 2014; Hawkins and Rovira Kaltwasser 2017). This disaffection with representative democracy systems is one of the fundamental basis of the rhetoric of populism that repudiates the elite in power acting against the will of the people, demanding consequently for the return of decision-making power to the ordinary citizens (Fieschi and Heywood 2004). Voters with populist attitudes have been recently identified as those sharing preferences for both anti-elitism and people-centrism (Rooduijn 2014; Rooduijn et al. 2014). Mohrenberg et al. (2017) shows empirical evidence that those citizens with populist attitudes support direct democracy more than other citizens. Guiso et al. (2017) offers empirical evidence that the crisis of systemic economic security (mainly motivated by threats of globalization and migration) that Western countries are experiencing in the last decade undermines citizens' confidence in traditional political parties and institutions. Instead, citizens would be prone to vote for a party with a

populist rhetoric that calls for the return of power to the people, which can be understood as a demand for direct democracy. To the best of our knowledge, our paper is the first to offer a theoretical justification about the reasons why a demand for direct democracy among citizens may exist. Furthermore, following well-established arguments in the literature, we are able to equate those societies that promote more direct citizen participation in the decision-making process with societies with populist attitudes, thus providing a theoretical framework for the empirical evidence about the successful of direct democracy among populist societies already existing in the literature.

The remainder of the paper is organized as follows. In Section 2 we set out the model. In Section 3 we derive equilibria under direct and representative democracy determining so the outcome under each system. In Section 4 we carry out an analysis of voters' expected utility in order to determine which of these systems is preferred by the majority of the electorate. Finally, we discuss and conclude in Section 5. Appendix A offers some explanatory notes. Appendix B provides the proofs of the results.

2. The Model

We study two voting systems: direct democracy and representative democracy. In direct democracy, voters directly cast their ballots for an alternative. In representative democracy, voters choose the representative, who will then choose the implemented policy.

Let N be a unitary mass of voters and $X = \{l, r\}$ be the set of policies. Voters' utility has two components: an ideological component, which represents the ideological bias of each voter towards one of the policies, and a monetary component. The ideological component is private while the monetary one is common to every voter and depends on the realization of a random variable $\theta \in X$ which realizes after voters have voted. The monetary utility of a policy $x \in X$ is $v > 0$ if $\theta = x$ and zero otherwise. We then refer to the policy that maximizes the monetary utility of each voter as the policy which is **economically efficient**. Representatives, but not voters, observe the realization of θ . All voters have the same beliefs about which policy is economically efficient: l with probability p and r with probability $1 - p$, where $p \in (0, 1)$.¹

¹These probabilities are exogenous and common knowledge. Note that cases in which representative democracy

Formally, the utility of a voter $j \in N$ is given by:

$$u_j(x, \theta) = z_j(x) + \mathbb{1}\{\theta = x\}v \quad (1)$$

where $z_j(x)$ is the *ideological component* and $\mathbb{1}\{\theta = x\}v$ is the *monetary component* in which $\mathbb{1}\{\theta = x\}$ is an indicator function that takes unit value if the implemented policy is economically efficient and zero otherwise. We impose no restrictions on $z_j(\cdot)$, thereby accommodating many situations.

Let $b_j = z_j(r) - z_j(l)$ for every $j \in N$, so that $b_j < 0$ and $b_j > 0$ reflect ideological bias for l and r respectively. A voter j has no ideological bias if $b_j = 0$. Voters' biases are distributed according to $F(\cdot)$ with a positive density function $f(\cdot)$ and median m . Let $b_m = z_m(r) - z_m(l)$ denote the median voter's bias.

Voters are either *ideological* or *pragmatic*. A voter $j \in N$ is **ideological** if $|b_j| > v$, while she is **pragmatic** if $|b_j| \leq v$. Voter j is ideological if her bias is higher than the utility derived from the economically efficient policy and pragmatic otherwise. An ideological voter is concerned about the implementation of the policy towards which she is biased, regardless of the economically efficient policy. In contrast, a pragmatic voter is interested in the implementation of the economically efficient policy, regardless of her ideological bias. This happens when the difference of utility between l and r is compensated by v .²

Let Λ be the set of voters with $b_j < -v$, *i.e.*, ideological voters biased towards l , and $\lambda > 0$ be the proportion of these voters. Let P be the set of voters with $b_j > v$, *i.e.*, ideological voters biased towards r , and $\rho > 0$ be the proportion of these voters. Let II be the set of voters with $-v \leq b_j \leq v$, *i.e.*, pragmatic voters, and $\pi > 0$ be the proportion of these voters.³ Obviously, $\lambda + \rho + \pi = 1$. We refer to $(\Lambda, \mathsf{II}, \mathsf{P})$ as an electorate.

By abuse of language, we distinguish two types of electorate: *ideological electorate* and *pragmatic electorate*. The electorate is **ideological** if the majority of voters are ideological,

 does not suppose a comparative advantage against direct democracy in terms of available information, *i.e.*, $p = 0$ and $p = 1$, are out of our range of interest since there would be no room for delegation, so direct democracy would be trivially preferred.

²See *Appendix A* for a graphical explanation of both ideological biases and types of voters.

³Note that $\lambda, \rho, \pi > 0$ given that we assume a positive density function $f(\cdot)$.

while the electorate is **pragmatic** if the majority of voters are pragmatic.

Definition 1. *The electorate is **ideological** if $\lambda + \rho > \frac{1}{2}$. Otherwise, it is **pragmatic**.*

An ideological electorate is **polarized** if no ideological group constitutes a majority by itself.

Definition 2. *The electorate is **polarized** if $\lambda + \rho > \frac{1}{2}$, $\lambda < \frac{1}{2}$, and $\rho < \frac{1}{2}$.*

If the electorate is polarized, then it is also ideological but not necessarily the opposite.

In a representative democracy there are two candidates: let $C = \{L, R\}$ denote the set of candidates and $c \in C$ a generic candidate. Both candidates are experts who observe the realization of the random variable θ .⁴ The candidates have the same form of utility functions as the voters.⁵ Candidate c 's utility is:

$$u_c(x, \theta) = z_c(x) + \mathbb{1}\{\theta = x\}v \quad (2)$$

Let $b_c = z_c(r) - z_c(l)$ for both $c \in C$, which is interpreted as in the case of voters. We assume that $b_L < 0$ and $b_R > 0$, so that candidate L is biased for l and candidate R is biased for r . Candidates' ideological bias is common knowledge.

Like voters, candidates can be *ideological* or *pragmatic*. A candidate $c \in C$ is **ideological** if $|b_c| > v$, while she is **pragmatic** if $|b_c| \leq v$. An ideological candidate always prefers to implement the policy towards which she is biased regardless of the economically efficient policy, while a pragmatic candidate always prefers to implement the economically efficient policy. For each candidate $c \in C$, all voters believe that c is pragmatic with the same probability $\mu_c \in (0, 1)$. These probabilities are exogenous and common knowledge. The probability of being pragmatic is not necessarily equal for both candidates.

⁴This is common knowledge.

⁵This assumption might be relaxed without affecting our results.

Direct Democracy

In direct democracy voters choose a policy and the one which is voted by a majority is implemented, regardless of the realization of the random variable θ . Let $x^D \in X$ be the policy implemented in this voting system.

Let $\mathbb{E}u_j(x^D, \theta)$ denote the expected utility of a voter $j \in N$ in **direct democracy** when policy $x^D \in X$ is implemented. Equations (3) and (4) represent the cases $x^D = l$ and $x^D = r$ respectively.

$$\mathbb{E}u_j(l, \theta) = z_j(l) + pv \quad (3)$$

$$\mathbb{E}u_j(r, \theta) = z_j(r) + (1 - p)v \quad (4)$$

Each voter $j \in N$ will cast her ballot for the policy (l or r) which maximizes her expected utility.

Representative Democracy

In representative democracy voters choose a candidate and the one which is voted by a majority is selected. Let $c^I \in C$ be the candidate selected in this voting system.⁶ The winning candidate observes θ and implements the policy that maximizes her utility.

Let $\mathbb{E}u_j(c^I, \theta)$ denote the expected utility of a voter $j \in N$ in **representative democracy** when candidate $c^I \in C$ is selected and such candidate implements the policy that maximizes her utility. Equations (5) and (6) represent the cases $c^I = L$ and $c^I = R$ respectively.

$$\mathbb{E}u_j(L, \theta) = (1 - p)\mu_L(v + b_j) + pv + z_j(l) \quad (5)$$

$$\mathbb{E}u_j(R, \theta) = p\mu_R(v - b_j) + (1 - p)v + z_j(r) \quad (6)$$

Each voter $j \in N$ votes for the candidate (L or R) which maximizes her expected utility.

⁶For notational simplicity, we also refer to representative democracy as *indirect* democracy, so we use letter I in order to avoid confusion with the notation R used for candidates.

3. Equilibria

We consider rational voters who vote for the alternative (a *policy* in direct democracy and a *candidate* in representative democracy) that they prefer. In case of being indifferent, we assume that they vote for the status quo alternative which, without loss of generality, we assume being policy l and candidate L respectively. In order to determine the outcome in each system, we identify an indifferent voter and the median voter whose preference determines the outcome. The indifferent voter in direct democracy, i^D , is the voter who is indifferent between policies l and r , *i.e.*, $\mathbb{E}u_{i^D}(l, \theta) = \mathbb{E}u_{i^D}(r, \theta)$. The indifferent voter in representative democracy, i^I , is the voter who is indifferent between candidates L and R , *i.e.*, $\mathbb{E}u_{i^I}(L, \theta) = \mathbb{E}u_{i^I}(R, \theta)$.

Lemmata 1 and 2 characterize the indifferent voter in both systems. Proofs of these Lemmata are in *Appendix B*.

Lemma 1. *In direct democracy, a voter $j \in N$ is indifferent between l and r if and only if $b_j = v(2p - 1) \equiv b_{i^D}$. Every voter j such that $b_j < b_{i^D}$ ($b_j > b_{i^D}$) votes for policy l (r).*

If $p > \frac{1}{2}$ ($p < \frac{1}{2}$), then $b_{i^D} > 0$ ($b_{i^D} < 0$): if policy l (r) is more likely to be economically efficient, then the indifferent voter in direct democracy must be ideological biased towards policy r (l). Clearly, if $p = \frac{1}{2}$, the indifferent voter has no ideological bias.

Lemma 2. *In representative democracy, a voter $j \in N$ is indifferent between L and R if and only if $b_j = \frac{v(2p-1-p\mu_R+(1-p)\mu_L)}{1-p\mu_R-(1-p)\mu_L} \equiv b_{i^I}$. Every voter j such that $b_j < b_{i^I}$ ($b_j > b_{i^I}$) votes for candidate L (R).*

The indifferent voter in representative democracy depends on the probability of each policy to be economically efficient (as in the case of direct democracy) and the voters' beliefs about candidates, namely whether they are pragmatic or ideological (μ_L, μ_R). A comparative statics analysis reveals that if candidate L is more likely to be pragmatic ($\mu_L > \mu_R$) and policy l is more likely to be economically efficient ($p > \frac{1}{2}$), then a pragmatic voter votes for candidate L since the ex-ante probability of having the economically efficient policy implemented is higher.

Analogous interpretation applies for the case in which $\mu_L < \mu_R$ and $p < \frac{1}{2}$. Suppose that, as before, candidate L is more likely to be pragmatic, but now policy r is more likely to be economically efficient ($p < \frac{1}{2}$). Then, a pragmatic voter votes for candidate R only when the probability of her ideological bias (*i.e.*, policy r) being economically efficient is high enough to offset the risk entailed when voting a candidate who is ex-ante more likely to be ideological.

Understanding the behavior of a pragmatic voter becomes relevant given the fact that the indifferent voters in direct and representative democracy are always pragmatic. Lemma 3 states this result. Its proof is in *Appendix B*.

Lemma 3. *For every $p \in (0, 1)$, $v \geq 0$, and $\mu_c \in (0, 1)$ where $c \in C$, both the indifferent voters in direct and representative democracy are pragmatic.*

A voter who is indifferent between candidates in a representative system may strictly prefer a policy in direct democracy. As we have shown in Lemma 1, a comparison between b_j and b_{i^I} reveals the policy voted by j in direct democracy. By studying the relationship between b_{i^I} and b_{i^D} we can know the policy voted by i^I . Lemma 4 shows that the outcomes of this analysis depend on the voters' beliefs about the pragmatism of candidates. The proof of this Lemma is in *Appendix B*.

Lemma 4. *The indifferent voter in representative democracy i^I votes for policy l (r) in direct democracy if $\mu_L \leq \mu_R$ ($\mu_L > \mu_R$), for every $p \in (0, 1)$.*

By Lemma 3 we know that i^I is pragmatic. Consider the case in which candidate R is more likely to be pragmatic ($\mu_L < \mu_R$). By Lemma 4, we know that i^I votes for policy l in direct democracy (*i.e.*, $b_{i^I} < b_{i^D}$). Figure 1 shows this situation. Here, a pragmatic voter who votes for policy l in direct democracy may end up voting for candidate R in representative democracy even though the ideological bias of such candidate is a policy different from the one that she prefers in direct democracy (see the dotted area in Figure 1). The reason is that selecting a candidate who, ex-ante, is more likely to implement the economically efficient policy generates an increase on the expected utility of pragmatic voters and such increase could be high enough to compensate for the risk that such candidate would eventually be ideological. Analogous interpretation applies to the case $\mu_L > \mu_R$. When $\mu_L = \mu_R$, both candidates are

perceived by voters as equally likely to be pragmatic. Their ideological biases are therefore the only differentiating factor between candidates, so saying that a voter is indifferent between L and R is equivalent to say that such voter is indifferent between l and r .⁷

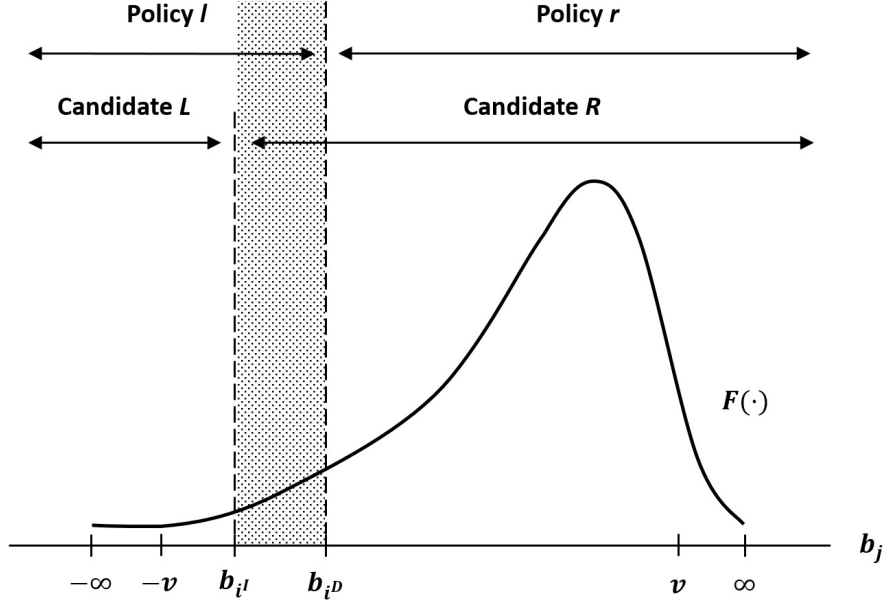


Figure 1: Case $\mu_L < \mu_R$ and $p \in (0, 1)$

It is well-known that in a majoritarian voting system, the most preferred alternative by the median voter is selected. Lemma 5 states, for each possible configuration of parameters b_m , b_{iD} , and b_{iI} , the policy and the candidate that are selected in one and another system respectively. The proof for this result directly follows from Lemma 4.

Lemma 5. *The outcomes in direct and representative democracy are:*

- (i) if $b_m \in (-\infty, \min\{b_{iD}, b_{iI}\}]$, then $x^D = l$ and $c^I = L$,
- (ii) if $b_m \in (\max\{b_{iD}, b_{iI}\}, \infty)$, then $x^D = r$ and $c^I = R$, and
- (iii) if $b_m \in (\min\{b_{iD}, b_{iI}\}, \max\{b_{iD}, b_{iI}\}]$, then:
 - (iii.i) $x^D = l$ and $c^I = R$ if $b_{iI} < b_{iD}$, while

⁷We remind that in case of indifference between policies a voter votes for the status quo alternative in direct democracy, *i.e.*, policy l .

(iii.ii) $x^D = r$ and $c^I = L$ if $b_{iI} > b_{iD}$.

By Lemma 5 we have that if $b_{iD} = b_{iI}$, then the selected candidate in representative democracy is the one whose ideological bias coincides with the policy that would be chosen in direct democracy. By Lemma 4 we know that this happens when voters believe that both candidates are equally likely to be pragmatic. However, this does not necessarily happen when $b_{iD} \neq b_{iI}$. In that case, the selected candidate in representative democracy could be ideologically biased towards the policy that is not chosen in direct democracy. Assume, without loss of generality, that $b_{iI} < b_{iD}$ (case illustrated in Figure 1). Suppose that $b_m \in (b_{iI}, b_{iD}]$. Note that the median voter is pragmatic since $|b_m| \leq v$.⁸ In direct democracy, policy l is chosen, while candidate R is selected in representative democracy. It is not risky to claim that this situation represents a society in which a majority of voters show an interest by the implementation of the economically efficient policy: even though R 's ideological bias is not the policy l , the median voter decides to vote for her since she is more likely to be pragmatic.

4. Electorate's Preference on Systems

Will voters incline towards direct democracy or representative democracy? The purpose of this section is to determine which is the system preferred by the majority of voters given the uncertainty about both the economically efficient policy and the pragmatism of each candidate. The answer hinges on the median voter. We compare the median voter's expected utility under direct democracy (*i.e.*, the utility before a *policy* is selected) with her expected utility under representative democracy (*i.e.*, the utility before a *candidate* is selected). We say that representative democracy is preferred to direct democracy by the majority of voters if $\mathbb{E}u_m(x^D, \theta) \leq \mathbb{E}u_m(c^I, \theta)$. Proposition 1 shows that the preferred voting system depends on both the type of the electorate and the type of the median voter of the distribution of voters' biases. The proof of this proposition is in *Appendix B*.

Proposition 1. *If the electorate is pragmatic, then representative democracy is the system preferred by the majority of voters. If the electorate is ideological, then:*

⁸By Lemma 3 we have that $|b_{iD}|, |b_{iI}| \leq v$, so if $b_m \in (b_{iI}, b_{iD}]$, then $|b_m| \leq v$ trivially holds.

- (i) if the median voter is pragmatic, representative democracy is the system preferred by the majority of voters, while
- (ii) if the median voter is ideological, direct democracy is the system preferred by the majority of voters.

Corollary 1 directly follows from Proposition 1.

Corollary 1. *Representative democracy is the system preferred by the majority of voters if and only if the median voter is pragmatic.*

From Proposition 1 we can distinguish three different situations.

When the electorate is pragmatic, a majority of voters are pragmatic and they prefer that the decision on which policy to implement be made by an expert. In fact, in representative democracy the economically efficient policy is always implemented with higher or equal ex-ante probability than in direct democracy. Note that here the median voter is necessarily pragmatic.

When the electorate is ideological and the median voter is pragmatic, a majority of voters are ideological but neither ideological voters biased towards l nor ideological voters biased towards r constitute a majority by themselves. This is what we call a **polarized electorate**. The fact that a society in which the majority of voters are not concerned about the economically efficient policy ends up preferring to delegate decisions on a candidate may seem, at first glance, counterintuitive. The polarization of the electorate between l and r is playing a key role in this. Since the median voter is pragmatic, in a direct democracy the policy that ex-ante is economically efficient with higher probability is chosen. Note that, due to the ideological polarization of the electorate, there is a group of voters who are dissatisfied with the outcome of direct democracy, that is, those ideological voters who are biased towards the policy that is not chosen in such system. Therefore, these voters prefer to delegate decisions to experts who may select their preferred policy with positive probability. Thus, in this situation there exists a majority coalition of voters supporting the representative democracy composed by the group of pragmatic voters and a group of ideological voters. For its part, the group of ideological

voters who are biased towards the policy that is chosen in direct democracy clearly prefer that system. Such proportion of voters who are satisfied with direct democracy could be interpreted as a measure of the demand of direct democracy in the electorate. Proposition 2 shows how a shift in the distribution of voters' biases can increase the demand of direct democracy.

Proposition 2. *Let (Λ, Π, P) and (Λ', Π', P') be two polarized electorates such that $\Lambda \subseteq \Lambda'$, $P \subseteq P'$ with at least one strict inclusion, and $\min\{\lambda', \rho'\} \geq \max\{\lambda, \rho\}$. Then, the demand of direct democracy from (Λ, Π, P) to (Λ', Π', P') increases.*

Proof of Proposition 2 is straightforward and is omitted. From (Λ, Π, P) to (Λ', Π', P') , a fraction of initially pragmatic voters (*i.e.*, voters in Π) becomes ideological. Since the cardinality of both groups of ideological voters in (Λ', Π', P') is at least as high as the cardinality of the largest ideological group in (Λ, Π, P) and is necessarily one of these two groups that will demand direct democracy, the demand of direct democracy increases. It is noticeable that a shift in the distribution of voters' biases as the one proposed in Proposition 2 is consistent with the definition of polarization increase offered by Esteban and Ray (1994). Corollary 2 directly follows from Proposition 2 and this observation.

Corollary 2. *The demand of direct democracy is increasing in electorate's polarization.*

From Corollary 2 follows that when the electorate is polarized and therefore representative democracy is still the system preferred by the majority of voters, an increase in the polarization of the electorate increases the demand of direct democracy.

Finally, when the electorate is ideological and the median voter is ideological, a majority of voters are ideological and furthermore one of the ideological groups constitutes a majority by itself. Since at least 50% of voters are interested in the implementation of an specific policy regardless of which policy is the economically efficient one, direct democracy is the preferred system. It allows voters to implement whatever policy they desire, thus preventing a candidate from ending up implementing a different policy. This is where our results connect with literature about **populist movements**. Traditionally, populist movements have been understood as the mobilization of a majority (the people) against a minority (the elite). The majority group composed by ideological voters all biased towards the same policy would constitute

the majority that, according to a theory of populism, shares common aspirations and aims at achieving them at all costs (Guiso et al. 2017). For its part, the rest of voters on that society (that is, ideological voters biased towards the opposite policy and pragmatic voters) would constitute the minority that does not present the same ambitions as the majority group, motivating thus the confrontation between both groups and capturing therefore the essence of the populism (Akkerman et al. 2014).

5. Conclusion

When a decision has to be made, voters may prefer to directly decide or delegate to informed representatives. We have proposed a model to study when voters would show a predisposition towards one or another option. We find that the preference of a society to be governed by a system of direct or representative democracy depends on both the type of the electorate and the type of the median voter. As long as the electorate is pragmatic, representative democracy is the preferred system. The informational advantage of representatives is enough for an electorate concerned about the implementation of the economically efficient policy to have incentives to delegate. When the electorate is ideological, though, we have to look at the type of the median voter in order to determine the preferred system. If the electorate is ideological and the median voter is pragmatic, then representative democracy is the preferred system. Since no ideological group has a strict majority in the society, a system of political representation is preferred even when the majority of voters are ideological. Although there is a majority of voters who do not care about what is economically efficient, there is no consensus among all of them on what action should be carried out. Instead, there exists a clear division of the electorate into two groups defending opposing policies. This situation in which neither of these two groups constitutes a majority by itself is what we have identified as a polarized electorate. As a consequence of this polarization, whatever the outcome in direct democracy is, there is always a group of ideological voters who oppose such a policy. Trying to avoid that something opposed to their own ideological bias is chosen, the group of ideological voters biased towards the policy that would not be chosen in direct democracy prefers to delegate their vote to representatives. These ideological voters, along with the existing pragmatic voters in the society, constitute a majority coalition in favour of the representative democracy. Moreover, the demand of direct democracy is increasing in the polarization of the electorate, as long as

no ideological group becomes a majority. On the contrary, when an ideological group becomes a majority, and therefore both electorate and median voter are ideological, direct democracy is the preferred system. This is a society in which there is a majority of voters who do not care about what is economically efficient and agree on what decision should be made. Such an electorate prefers a system that guarantees the implementation of the policy that they desire, rather than running the risk of allowing a representative to choose. This situation is what we have associated with societies in which populist movements have been successful. In this way, our model predicts that an increase in populism will increase the demand for direct democracy.

Appendix A

Figure 2 shows how a voter j who is ideologically biased towards a certain policy could be either pragmatic or ideological depending on whether the magnitude of such bias is greater or less than the monetary utility in absolute terms.

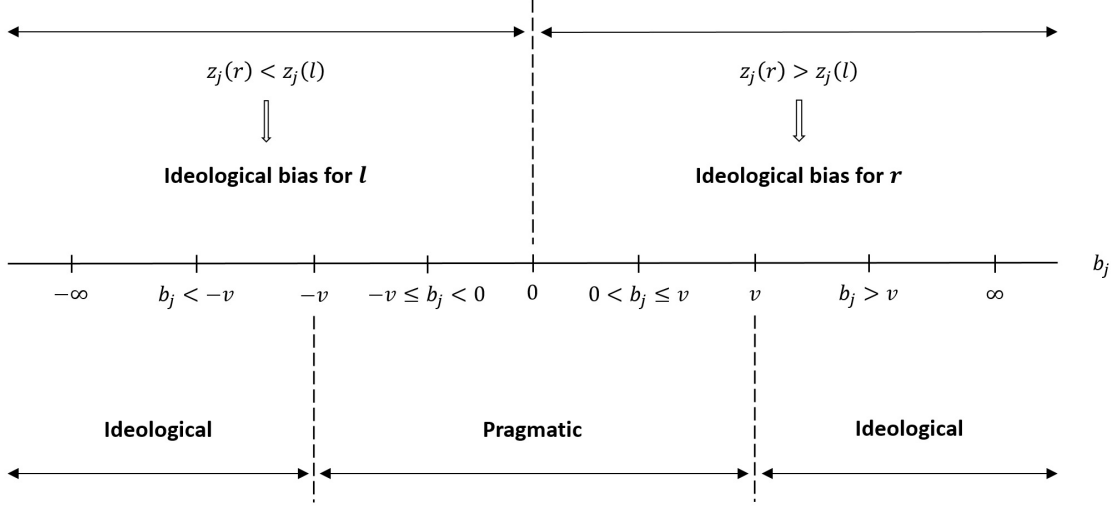


Figure 2: Ideologically biased pragmatic or ideological voter

Consider a voter j such that $b_j < -v$. Since $b_j < 0$ (*i.e.*, $z_j(r) < z_j(l)$), we know that voter j is ideologically biased towards policy l . In addition, when $b_j < -v$, the difference between the ideological component evaluated in l and the ideological component evaluated in r is so large that it cannot be compensated by the monetary component of the utility function. Thus, voter j is concerned about the implementation of policy l , regardless what the economically efficient policy is. Note that, by symmetry, a voter j such that $b_j > v$ will be concerned about the implementation of policy r above all things. For this reason, in both cases we say that voter j is *ideological*. Consider now a voter j such that $-v \leq b_j < 0$. In this case, voter j is still ideologically biased towards policy l . However, here the utility derived from the monetary component when the economically efficient policy is implemented is larger than the difference between the ideological component evaluated in l and the ideological component evaluated in r . This implies that, although voter j is still ideologically biased towards policy l , she ends up preferring policy r when it is the economically efficient policy. By symmetry, a voter j such that $0 < b_j \leq v$ will prefer policy l when it is economically efficient, even though she is ideologically biased towards policy r (*i.e.*, $b_j > 0$). Consequently, we refer to voter j as *pragmatic* voter in both cases.

Appendix B

PROOF OF LEMMA 1. Let i^D be such that:

$$\mathbb{E}u_{i^D}(l, \theta) = \mathbb{E}u_{i^D}(r, \theta) \quad (7)$$

From Equation (3) we have that the expected utility of i^D when policy l is implemented is:

$$\mathbb{E}u_{i^D}(l, \theta) = z_{i^D}(l) + pv \quad (8)$$

and, from Equation (4), the expected utility of i^D when policy r is implemented is:

$$\mathbb{E}u_{i^D}(r, \theta) = z_{i^D}(r) + (1 - p)v \quad (9)$$

By substituting (8) and (9) in (7) such condition can be rewritten as:

$$\begin{aligned} z_{i^D}(l) + pv &= z_{i^D}(r) + (1 - p)v \\ \Leftrightarrow z_{i^D}(r) - z_{i^D}(l) &= v(2p - 1) \\ \Leftrightarrow b_{i^D} &= v(2p - 1) \end{aligned} \quad (10)$$

Consider now a voter $j \in N$ such that $b_j < b_{i^D}$. Note that this condition is equivalent to:

$$\begin{aligned} b_j &< v(2p - 1) \\ \Leftrightarrow z_j(r) - z_j(l) &< v(2p - 1) \\ \Leftrightarrow \mathbb{E}u_j(l, \theta) &> \mathbb{E}u_j(r, \theta) \end{aligned} \quad (11)$$

which implies that the expected utility of j when policy l is implemented is higher than her expected utility when policy r is implemented. Therefore, voter j votes for policy l . By symmetry, if $b_j > b_{i^D}$, then voter j votes for policy r .

■

PROOF OF LEMMA 2. Let i^I be such that:

$$\mathbb{E}u_{i^I}(L, \theta) = \mathbb{E}u_{i^I}(R, \theta) \quad (12)$$

From Equation (5) we have that the expected utility of i^I when the candidate L is elected is:

$$\mathbb{E}u_{i^I}(L, \theta) = (1 - p)\mu_L(v + b_{i^I}) + pv + z_{i^I}(l) \quad (13)$$

and, from Equation (6), the expected utility of i^I when the candidate R is elected is:

$$\mathbb{E}u_{i^I}(R, \theta) = p\mu_R(v - b_{i^I}) + (1 - p)v + z_{i^I}(r) \quad (14)$$

By substituting (13) and (14) in (12) such condition can be rewritten as:

$$\begin{aligned} (1 - p)\mu_L(v + b_{i^I}) + pv + z_{i^I}(l) &= p\mu_R(v - b_{i^I}) + (1 - p)v + z_{i^I}(r) \\ \Leftrightarrow z_{i^I}(r) - z_{i^I}(l) &= \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \\ \Leftrightarrow b_{i^I} &= \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \end{aligned} \quad (15)$$

Consider now a voter $j \in N$ such that $b_j < b_{i^I}$. Note that this condition is equivalent to:

$$\begin{aligned} b_j &< \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \\ \Leftrightarrow z_j(r) - z_j(l) &< \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \\ \Leftrightarrow \mathbb{E}u_{i^I}(L, \theta) &> \mathbb{E}u_{i^I}(R, \theta) \end{aligned} \quad (16)$$

which implies that the expected utility of j when candidate L is elected is higher than her expected utility when candidate R is elected. Therefore, voter j votes for candidate L . By symmetry, if $b_j > b_{i^I}$, then voter j votes for candidate R .

■

PROOF OF LEMMA 3. We divide this proof into two parts:

- First, we prove that $|b_{i^D}| \leq v$, or equivalently, $|v(2p - 1)| \leq v$. Note that this is equivalent to prove that conditions (1) and (2) hold:

$$(1) \quad v(2p - 1) \leq v, \text{ which holds since } p \leq 1 \text{ is always the case.}$$

$$(2) \quad v(2p - 1) \geq -v, \text{ which holds since } p \geq 0 \text{ is always the case.}$$

Hence, we have that $|v(2p - 1)| \leq v$ for all $p \in (0, 1)$ and $v \geq 0$.

- Second, we prove that $|b_{i^I}| \leq v$, or equivalently, $\left| \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \right| \leq v$. Note that this is equivalent to prove that conditions (3) and (4) hold:

$$(3) \quad \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \leq v$$

$$(4) \quad \frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} \geq -v$$

We distinguish three cases depending on the values of μ_L and μ_R . We show that conditions (3) and (4) hold for each of these cases:

- a. Suppose that $\mu_L = \mu_R$. Then, conditions (3) and (4) are equivalent to conditions (1) and (2) respectively. Therefore, they hold for all $p \in (0, 1)$ and $v \geq 0$.
- b. Suppose that $\mu_L < \mu_R$. Then, condition (3) requires that $\mu_L \leq 1$, and condition (4) requires that $\mu_R \leq 1$, which are always the case. Therefore, they hold for all $p \in (0, 1)$ and $v \geq 0$.
- c. Suppose that $\mu_L > \mu_R$. By symmetry to case b., conditions (3) and (4) also hold for all $p \in (0, 1)$ and $v \geq 0$.

Hence, we have that $\left| \frac{v(2p-1-p\mu_R+(1-p)\mu_L)}{1-p\mu_R-(1-p)\mu_L} \right| \leq v$ for all $p \in (0, 1)$, $v \geq 0$ and every $\mu_c \in (0, 1)$ where $c \in C$.

■

PROOF OF LEMMA 4. By Lemma 1 we know that the relationship between b_{iI} and b_{iD} reveals the policy voted by i^I . Let $p \in (0, 1)$. First, notice that $b_{iI} = b_{iD} \equiv v(2p - 1)$ (*i.e.*, i^I is indifferent between l and r in direct democracy) when $\mu_L = \mu_R$. Now assume, without loss of generality, that $b_{iI} < b_{iD}$ (*i.e.*, i^I votes for l in direct democracy). By Lemmas 1 and 2, this condition can be rewritten as:

$$\frac{v(2p - 1 - p\mu_R + (1 - p)\mu_L)}{1 - p\mu_R - (1 - p)\mu_L} < v(2p - 1) \quad (17)$$

which holds when:

$$\mu_L < \mu_R \quad (18)$$

By symmetry, $b_{iI} > b_{iD}$ (*i.e.*, i^I votes for r in direct democracy) when $\mu_L > \mu_R$.

■

PROOF OF PROPOSITION 1. We divide this proof into two parts.

- First, we study which is the system preferred by the majority of voters. We distinguish three cases, which correspond to the cases identified in Lemma 5. For each of these cases, we compare the expected utility of the median voter in direct and representative democracy.

Case 1. Suppose that $b_m \in (-\infty, \min\{b_{iD}, b_{iI}\}]$. Then representative democracy is preferred to direct democracy if:

$$\begin{aligned} \mathbb{E}u_m(l, \theta) &\leq \mathbb{E}u_m(L, \theta) \\ \Leftrightarrow z_m(l) + pv &\leq (1-p)\mu_L(v + b_m) + pv + z_m(l) \\ \Leftrightarrow b_m &\geq -v \end{aligned} \quad (19)$$

Case 2. Suppose that $b_m \in (\max\{b_{iD}, b_{iI}\}, \infty)$. Then representative democracy is preferred to direct democracy if:

$$\begin{aligned} \mathbb{E}u_m(r, \theta) &\leq \mathbb{E}u_m(R, \theta) \\ \Leftrightarrow z_m(r) + (1-p)v &\leq p\mu_R(v - b_m) + (1-p)v + z_m(r) \\ \Leftrightarrow b_m &\leq v \end{aligned} \quad (20)$$

Case 3. Suppose that $b_m \in (\min\{b_{iD}, b_{iI}\}, \max\{b_{iD}, b_{iI}\}]$ and:

(3.1) $b_{iI} < b_{iD}$. Then representative democracy is preferred to direct democracy if:

$$\begin{aligned} \mathbb{E}u_m(l, \theta) &\leq \mathbb{E}u_m(R, \theta) \\ \Leftrightarrow z_m(l) + pv &\leq p\mu_R(v - b_m) + (1-p)v + z_m(r) \\ \Leftrightarrow b_m &\geq \frac{v(-1 + p(2 - \mu_R))}{1 - p\mu_R} \end{aligned} \quad (21)$$

which always holds in the considered interval $(b_{iI}, b_{iD}]$ since $\frac{v(-1 + p(2 - \mu_R))}{1 - p\mu_R} \leq b_{iI}$ for all $p \in (0, 1)$, $v \geq 0$, and $\mu_c \in (0, 1)$ where $c \in C$. Therefore, we have that representative democracy is preferred to direct democracy throughout the interval $(b_{iI}, b_{iD}]$.

(3.2) $b_{iI} > b_{iD}$. Then representative democracy is preferred to direct democracy if:

$$\begin{aligned} \mathbb{E}u_m(r, \theta) &\leq \mathbb{E}u_m(L, \theta) \\ \Leftrightarrow z_m(r) + (1-p)v &\leq (1-p)\mu_L(v + b_m) + pv + z_m(l) \\ \Leftrightarrow b_m &\leq \frac{v(-1 + 2p + (1-p)\mu_L)}{1 - (1-p)\mu_L} \end{aligned} \quad (22)$$

which always holds in the considered interval $(b_{iD}, b_{iI}]$ since $b_{iI} \leq \frac{v(-1 + 2p + (1-p)\mu_L)}{1 - (1-p)\mu_L}$ for all $p \in (0, 1)$, $v \geq 0$, and $\mu_c \in (0, 1)$ where $c \in C$. Therefore, we have that

representative democracy is preferred to direct democracy throughout the interval $(b_{iD}, b_{iI}]$.

Note that, by Lemma 3, $|b_{iD}| \leq v$ and $|b_{iI}| \leq v$. Thus, from *Cases 1, 2, and 3* it is derived that representative democracy is the system preferred by the majority of voters as long as $|b_m| \leq v$. Equivalently, representative democracy is the system preferred by the majority of voters if the median voter is pragmatic, while direct democracy is the system preferred by the majority of voters if the median voter is ideological.

- Second, we study the preference for one or another system depending on the type of the electorate.
 - i. *Pragmatic electorate.* By definition, the electorate is pragmatic if the majority of voters are pragmatic. This is equivalent to say that $\pi \geq 0.5$. Consequently, $\lambda + \rho \leq 0.5$. Given that $\lambda, \rho > 0$, the previous condition implies that $\lambda, \rho < 0.5$. Therefore, the median voter of the distribution will necessarily belong to the proportion of voters denoted by π . In other words, if the electorate is pragmatic, then the median voter is necessarily pragmatic. From *Cases 1, 2, and 3* above we know that representative democracy is the system preferred by the majority of voters if the median voter is pragmatic. Thus, we conclude that if the electorate is pragmatic, then representative democracy is the system preferred by the majority of voters.
 - ii. *Ideological electorate.* By definition, the electorate is ideological if the majority of voters are ideological. This is equivalent to say that $\lambda + \rho > 0.5$. Consequently, $\pi < 0.5$. In this case, the median voter is not necessarily either pragmatic or ideological. The type of the median voter depends on the specific configuration of parameters λ and ρ as follows:
 - Assume that $\lambda + \rho > 0.5$. Therefore, the electorate is ideological. If either $\lambda \geq 0.5$ or $\rho \geq 0.5$, then the median voter belongs to the proportion of voters denoted by either λ or ρ respectively. In other words, the median voter is ideological. From *Cases 1, 2, and 3* above we know that direct democracy is the system preferred by the majority of voters if the median voter is ideological. Thus, we conclude that if the electorate is ideological and the median voter is ideological, then direct democracy is the system preferred by the majority of voters.

- Assume that $\lambda + \rho > 0.5$. Therefore, the electorate is ideological. If $\lambda < 0.5$ and $\rho < 0.5$, then the median voter belongs to the proportion of voters denoted by π . In other words, the median voter is pragmatic. From *Cases 1, 2, and 3* above we know that representative democracy is the system preferred by the majority of voters if the median voter is pragmatic. Thus, we conclude that if the electorate is ideological and the median voter is pragmatic, then representative democracy is the system preferred by the majority of voters.



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References

1. Akkerman, A., C. Mudde, and A. Zaslove (2014). “How Populist Are the People? Measuring Populist Attitudes in Voters”. *Comparative Political Studies* 47 (9), 1324-1353.
2. Besley, T., and S. Coate (2008). “Issue Unbundling via Citizens’ Initiatives”. *Quarterly Journal of Political Science* 3 (4), 379-397.
3. Cukierman, A., and M. Tommasi (1998). “When Does It Take a Nixon to Go to China?”. *American Economic Review* 88 (1), 180-197.
4. Dalton, R. J. (2004). *Democratic Challenges, Democratic Choices: The Erosion of Political Support in Advanced Industrial Democracies*. Oxford; New York: Oxford University Press.
5. Esteban, J. M., and D. Ray (1994). “On the Measurement of Polarization”. *Econometrica* 62 (4), 819-851.
6. Fieschi, C., and P. Heywood (2004). “Trust, Cynicism and Populist Anti-Politics”. *Journal of Political Ideologies* 9 (3), 289-309.
7. Guiso, L., H. Herrera, M. Morelli, and T. Sonno (2017). “Populism: Demand and Supply”. Working Paper.
8. Hawkins, K. A., and C. Rovira Kaltwasser (2017). “The Ideational Approach to Populism”. *Latin American Research Review* 52 (4), 513-528.
9. Jensen, T. (2009). “Electoral Competition when Candidates are Better Informed than Voters”. EPRU Working Paper Series, No. 2009-06.
10. Kartik, N., and R. Preston McAfee (2007). “Signaling Character in Electoral Competition”. *The American Economic Review* 97 (3), 852-870.
11. Kessler, A. S. (2005). “Representative versus Direct Democracy: The Role of Informational Asymmetries”. *Public Choice* 122 (1-2), 9-38.
12. Madison, J. (1787). “Federalist 10” in Alexander Hamilton, James Madison, and John Jay, eds. *The Federalist Papers*. New York, Penguin [1981].
13. Martinelli, C. (2001). “Elections with Privately Informed Parties and Voters”. *Public Choice* 108 (1), 147-167.
14. Maskin, E., and J. Tirole (2004). “The Politician and the Judge: Accountability in Government”. *The American Economic Review* 94 (4), 1034-1054.

15. Matsusaka, J. G. (2005). "Direct Democracy Works". *Journal of Economic Perspectives* 19 (2), 185-206.
16. Mohrenberg, S., R. A. Huber, and T. Freyburg (2017). "Love at First Sight? Populism and Direct Democracy". Conference Paper.
17. Morelli, M., and R. Van Weelden (2013). "Ideology and Information in Policymaking". *Journal of Theoretical Politics* 25 (3), 412-439.
18. Pauwels, T. (2014). *Populism in Western Europe: Comparing Belgium, Germany and the Netherlands*. London/New York: Routledge.
19. Roemer, J. E. (1994). "The Strategic Role of Party Ideology When Voters are Uncertain About How the Economy Works". *American Political Science Review* 88 (2), 327-335.
20. Rooduijn, M. (2014). "The Nucleus of Populism: In Search of the Lowest Common Denominator". *Government and Opposition* 49 (4), 573-599.
21. Rooduijn, M., S. L. de Lange, and W. Van Der Brug (2014). "A Populist Zeitgeist? Programmatic Contagion by Populist Parties in Western Europe". *Party Politics* 20 (4), 563-575.
22. Santerre, R. E. (1989). "Representative versus Direct Democracy: Are There Any Expenditure Differences?". *Public Choice* 60 (2), 145-154.
23. Sanz, C. (2015). "Direct Democracy and Government Size: Evidence from Spain". Job-Market Paper, Princeton University, NJ.
24. Schultz, C. (1996). "Polarization and Inefficient Policies". *Review of Economic Studies* 63 (2), 331-343.
25. Schultz, C. (2002). "Policy Biases with Voters' Uncertainty about the Economy and the Government". *European Economic Review* 46 (3), 487-506.
26. Siéyès, A. (1789). "Dire de l'Abbé Siéyès sur la Question du Vêto Royal". Versailles, Baudoin, Imprimeur de l'Assemblée Nationale.