Downsian competition with assembly democracy*

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Abstract

We study a scenario of political competition between two parties, a traditional downsian party and a party implementing assembly democracy. The later party celebrates a pre-electoral assembly and a post-electoral assembly open to all who wish to take part in which citizens are invited to launch proposals and vote over them. The multiple proposals at the assembly generates a lottery over some policies which is evaluated by voters against the single policy proposed by the traditional party. We show that extremist assembly parties induce the traditional party to locate at the median policy position, whereas centrist assembly parties move the traditional party away from the median just in the opposite direction of the assembly's median. Besides, we find that centrist assemblies, with respect to extremist assemblies, have more chances of winning the elections.

Key-words: Participatory democracy, assembly democracy, median voter, citizen-candidate, ambiguity.
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1 Introduction

In the last decade, small groups of citizens all over Europe and in the U.S. have spread their protests in demand for more civil participation in the process of policy decision making. In Spain, the so-called 15-M inspired in the Arab Spring and in the U.S. the Occupy Wall Street (OWS), are examples of social movements that are protesting against the current democratic systems. On the one hand, internet networks have facilitated the coordination in the action of these groups that have become stronger. On the other hand, the size of these groups does not seem to threaten, up to now, the stability of the current political systems neither in the U.S. nor in the European continent. While the media has widely covered the protests of these groups, politicians and the members of traditional political parties do not have attended these demands so far.

The social movements mentioned above do not agree with the power that political parties have acquired in representative democratic systems. They defend either independent candidates which are not tied by party discipline, or more direct participation of the citizens in the process of policy decision making.

In addition, there is a recent phenomenon in current western democracies by which the autonomy of states has reduced due to the development of supranational political institutions such as United Nations, European Union, IMF, NATO, among others (Held, 1991; Dahl 1994). Many countries in Europe and in the American continent have reduced their decision-making power whereas supranational institutions have increased their competencies. As a consequence, citizens find that the process of policy decision-making is increasingly moving out of their scope. This has generated an extra discontent over the traditional parties which have shown no clear opposition against the process of delegating state power. The pressure of the civil society to recover the state autonomy has become more intense (this is the case of many protests in European countries such as Greece, Italy, Portugal, Belgium, Spain and others across the Atlantic, Canada and U.S.).[1]

As a response to these protests, there is a number of new political parties in many European countries which incorporate, in their policy platforms, the proposals of these social movements. A key aspect of these parties'

[1] See http://www.cbsnews.com/2718-201_162-1290/occupy-wall-street-protests/ for a media coverage of these protests.

manifesto is the promotion of new forms of participatory democracy. The impact of these new parties will have to be tested in the ballot boxes. So far, however, they have shown to be quite successful. This was evidenced in the last 2014 European Elections in which political parties such as "Movimento 5 Stelle" obtained 17 seats out of 73 in Italy, and "Podemos", a three-month-old party in Spain, gained five seats in the European Parliament, being the fourth-largest representation for Spain.[2]

In this paper, we propose a stylized model which tries to deduce the effects derived from the political competition between traditional parties and new parties which promote participatory democracy. Whereas Matsusaka (2005) suggests that assembly democracies has dwindled in importance, we find that, in the last decade, the media has taken the protests of social movements to the front page and voters are showing an increasing and non-negligible interest for alternative forms of democracy among which assembly democracy is one of them.

According to representative democracy, citizens vote to elect their representatives on whom they delegate political decisions. Representative democracy is the most widespread form of democracy. The essence of representative democracy is the competition among candidates which, in most cases, are affiliated to different political parties. Either a plurality system or a proportional system can lead to one or more representatives holding the ultimate power of policy decision making. In every legislature, citizens elect their representatives with their ballot and political accountability is guaranteed by the representatives' incentives to be reelected. Representative democracy is viewed as one of the most effective mechanisms to achieve political stability. This political stability, however, can be threatened when citizens perceive that the interests of the representatives are moving in opposite directions to their own interests (Kalt and Zupan 1984; Peltzman, 1984). As claimed by Budge (2001a, 2001b): "*Representative democracies are deficient in many respects, all of which fundamentally stem from the limited role they allow citizens in government. Most decisions are imposed on those affected without consulting them*".[3]

Assembly democracy is a form of direct democracy in which citizens in an assembly directly vote on initiatives. This type of democracy, that can

[2] http://www.nytimes.com/2014/05/29/world/europe/spanish-upstart-party-said-it-could-and-did-now-the-hard-part-begins.html?_r=0

[3] See also Buchanan and Tullock (1962).

be traced back to the Greek city of Athens, has scarcely been put into practice in our days. The most well-known experience is in Switzerland, in which popular assemblies in each of the cantons approve citizens' initiatives by popular vote. Assembly democracy is not exclusive of Switzerland, but also the towns of the states of New England in the U.S., are governed by periodic meetings that discuss and vote their main issues (the term town corresponds to municipalities in other places).[4] There is no "pure" form of direct democracy as in both, Switzerland and New England, popular assemblies coexist with representative democracy at higher levels of government. Opponents to direct democracy claim that this procedure generates delays, conflicts, and even tyranny of the majority among others.

In this paper, we propose a theoretical exercise which combines elements from both, direct and representative democracy. Our simplified model tries to resemble as much as possible the well-known downsian model of political competition (Downs, 1957; Hotelling, 1929). We consider a unidimensional policy space in which voters endowed with single-peaked preferences are identified with an ideal policy. A political party defends the principles of representative democracy (Party A) and another, defends assembly democracy (Party B). The degree of social protest against the traditional political party is introduced in the form of a valence characteristic. The two parties face each other at a general election that is solved by majority voting rule. Party A is a pure office seeking political party that selects a platform as to defeat its counterpart. Party B cannot commit to certain platforms given that the party manifesto contains those proposals decided in a pre-electoral assembly. In the case of winning the elections, Party B will implement the platform decided in a post-electoral assembly. Both assemblies, the pre-electoral and the post-electoral, we consider, are open to all who wish to take part.

At the pre-electoral assembly of Party B, citizens can launch and defend proposals. We follow the citizen-candidate approach as a rationale to deduce the endogenous location of the proposals at the pre-electoral assembly (Besley and Coate, 1997; Osborne and Slivinsky, 1996). According to this approach, every configuration of proposals at the pre-electoral assembly should be sustained as a Nash equilibrium outcome in which none of the citizens who have launched a proposal at the assembly can benefit from dropping it out, and no other citizen who has not launched a proposal can benefit from presenting one. For the sake of simplicity, we just consider pre-electoral assemblies

[4]There are other experiencies of direct democracy in Italy (see Putnam et al., 1993).

in which just two proposals are launched. Party A selects a platform as to maximize its chances of winning the elections given the common believe on the assembly outcome.

We consider that voters, when casting their ballots at the general election, do evaluate Party B in terms of the proposals launched at the pre-electoral assembly. As a result, voters evaluate Party B in terms of a lottery that assigns probabilities to the assembly-equilibrium proposals. That is, from the point of view of voters, Party B gathers certain degree of ambiguity (in line with Shepsle, 1972; Alesina and Cukierman, 1990), whereas Party A is characterized by a single policy.

Our results suggest that the assembly proposals (of Party B) should be sufficiently moderated as to defeat a traditional party (Party A). Interestingly, competition does not always result in a policy at the median voter's ideal point (similar result to Romer and Rosenthal, 1979). We find that extremist assembly parties induce the traditional party to locate at the median policy position, whereas centrist assembly parties move the traditional party away from the median just in the opposite direction of the assembly's median.

Ours is not the first contribution analyzing the impact of direct democracy. Matsusaka (2005) describes the practice and theory of direct democracy through referenda in some of the states of U.S., and shows that allowing the general public to participate in lawmaking seems to improve the performance of government. In the same line, Gerber (1996) compares states where referenda are available with those in which direct democracy is not available. She shows that the threat of a ballot proposition can cause the elected official to choose policies that more closely reflects the median's voter ideal policy. Maskin and Tirole (2004) highlights some of the negative side effects of direct democracy. They show that this may lead to a worse outcome due to the citizens' lack of access to the expert opinion that is just available to legislators.

Our proposal can also be related to the literature on endogenous selection of electoral rules. Barberà and Jackson (2004) explore this issue from a self-stable type of criteria and more closely related, Aghion et al. (2002) analyze how much society chooses to delegate power to its leaders. According to their approach, different constitutions establish the share of votes needed to block a leader, and this determines the level of "insulation" of a leader. In our simplified framework, voters face two options: delegation of power to a leader, or total insulation of the leader (i.e., assembly democracy). We

show that leaders in our framework are constrained in their decision by the expected proposals at the assembly, that is, the assembly also has a relevant role in controlling political leaders.

The rest of the paper is organized as follows. In Section 2 we introduce the formal model. Section 3 provides the results for the case of full attendance at the assembly. Section 4 analyzes the case in which not all the citizens are expected to attend the assembly. Finally, Section 5 contains some concluding remarks.

2 Model

A general election is going to be held, in which voters will elect one out of two political parties. The two competing political parties are denoted by Party A and Party B. These parties differ in the constitutional structure they support. Party A defends representative democracy and Party B defends assembly democracy.

Let $[0,1]$ be the unidimensional policy space.[5] The continuum of voters have symmetric single-peaked preferences over the policy space. The ideal policies of voters are distributed over $[0,1]$ according to a strictly increasing distribution function F. Let $x_i \in [0,1]$ be the ideal policy of voter i and let $x_M \in [0,1]$ be the ideal policy of the median voter in the population. Preferences of voters over policies are represented by the following von Neumann-Morgenstern utility

$$u_i(x) = -|x - x_i|$$

where the absolute distance between the ideal point and the policy x measures the disutility for the agent.

The two political parties competing to win the elections are denoted by $j \in \{A, B\}$. Party A is a traditional party that offers a single policy $x_A \in [0,1]$. Party B, on the contrary, represents a party which decisions are taken in an assembly. Each party is associated to a characteristic $\beta_A, \beta_B > 0$, where β_A represents the social preference for a traditional structured political party and β_B represents the social preference for a new party which defends the participation of the civil society. Let $\Delta\beta = \beta_B - \beta_A$ be the difference in

[5] All the results also hold if instead of taking $[0,1]$, we take the real line as the policy space.

advantage between the two parties, which we interpret as a measure of the *degree of social protest* against the traditional parties. We assume that both parties are uncertain about the difference in the advantage $\Delta\beta$ and they both consider that the value of $\Delta\beta$ is distributed according to a strictly positive density function.

Party B defends a new form of democracy in which their primary decision making body is an assembly open to all who wish to take part. This is, in fact, in the spirit of the global Occupy Movements. We consider that this party runs two assemblies, one before the general elections in which all those who wish to, can launch policy proposals, and another just after the elections in which all those who want to participate, vote over the pre-assembly proposals. The pre-electoral assembly aims at collecting information about those policy proposals with options to defeat any other proposal in a plurality vote election. The fact that the assembly party organizes two assemblies is inspired by the anecdotal evidence of the Spanish new left-wing party called "Podemos". For the first time participating in an election (European Parliament Elections), the party has organized its program around many assemblies, from which we outline the pre-electoral and the post-electoral assemblies. Besides, the Italian party "Movimento 5 Stelle" also organizes online referendums to take both pre-electoral and post-electoral decisions.

The timing of the proposed electoral game unfold as follows:

Stage 1: Party B organizes the pre-electoral assembly where all who wish to take part, can launch a proposal. Let X_B be the set of proposals made at the assembly.
Stage 2: Party A decides its political platform $x_A \in [0,1]$.
Stage 3: General elections are held.
Stage 4: If Party A wins, platform x_A is implemented. If Party B wins, there is a post-electoral assembly in which all who wish to take part vote over X_B and the policy obtaining more votes is implemented.

Observe that the proposals of Party B come from an assembly whereas the platform of Party A comes from the strategic decision of the members of Party A. In this way, there is an important difference between the two parties given that Party B limits its power to organizing the assembly and executing its decision. We next describe in more detail the stages of the electoral game.

Stage 1: The pre-electoral assembly

In Stage 1, citizens have the option of launching a proposal at the pre-electoral assembly. These proposals are defended by Party B during the

electoral campaign and in the case of Party B winning the general election, the post-electoral assembly will select one of them.

Let $e_i \in \{0,1\}$ be citizen i's strategy where $e_i = 0$ means that agent i is not launching a proposal and $e_i = 1$ means that the citizen is launching a proposal. A profile of strategies e describes the strategy for each of the citizens. If a citizen makes a proposal, we consider that she cannot misrepresent her preferences so that the proposed policy is her ideal policy. Let $X_B = \{x_B^1, ..., x_B^m\}$ be the set of proposals such that each proposal x_B^i is the ideal policy of the citizen i who has launched it at the assembly. We assume that launching a proposal has a small cost $c > 0$. In this way, a citizen has only incentives to launch a proposal when either this has some chances of being selected at the post-electoral assembly, or when this can affect the policy that will be finally implemented if Party B wins the elections.

For each profile of entry strategies e, the *expected voting outcome* at the post-electoral assembly is represented by a lottery $L(e) = \{X_B, p\}$ where X_B is the set of proposals and $p = (p_1, ..., p_m)$ with $p_i \geqslant 0$ is the expected probability of each proposal being selected at the post-electoral assembly. For example, if there are two proposals $\{x_B^1, x_B^2\}$ and $L(e) = \{\{x_B^1, x_B^2\}, (1,0)\}$, then x_B^1 is expected to win. However, if there are two proposals and $L(e) = \left\{\{x_B^1, x_B^2\}, (\frac{1}{2}, \frac{1}{2})\right\}$, the two proposals are expected to tie. Thus, $L(e)$ is a lottery that represents the expected voting outcome at the post-electoral assembly. The expected voting outcome is common knowledge.

Let e_{-i} be the entry strategies for all citizens except for i. We say that a profile of entry strategies e^* is a *pre-assembly equilibrium* if in expected utility terms,

$$Eu_i(L(e^*)) - ce_i^* \geq Eu_i(L(e_i', e_{-i}^*)) - ce_i' \text{ for all } i \text{ and all } e_i' \in \{0,1\}.$$

Hence, a pre-assembly equilibrium requires that, on the one hand, no citizen strictly improves launching a new proposal and, on the other hand, no candidate strictly benefits from dropping her proposal. Note that the pre-assembly equilibrium is a Nash equilibrium. For the sake of simplicity, we just consider pre-assembly equilibria in which just two proposals are launched.

Stage 2: Party A's election of platform

Party A is a pure office-seeking political party. This party selects a platform x_A as to win the general elections. Given the proposals of the pre-electoral assembly and its expected voting outcome, preferences of Party A

are represented by:

$$v(x_A, L(e)) = \begin{cases} 1 \text{ if a strict majority of voters prefers } x_A \text{ over } L(e) \\ 0 \text{ otherwise} \end{cases} \quad (1)$$

The members of Party A are uncertain about the degree of social protest of the electorate. Therefore, they do not know whether they gather some advantage with respect to Party B. Their optimal decision, that we denote by x_A^*, maximizes their expected probability of winning:

$$x_A^* \in \arg\max Ev(x_A, L(e)).$$

Stage 3: General election

Given β_A and β_B, the platform of Party A and the expected voting outcome at the assembly $L(e)$, the optimal decision of a voter is the following:

$$\begin{array}{ll} \text{vote for Party A when} & \beta_A - u_i(x_A) > \beta_B - Eu_i(L(e)) \\ \text{vote for Party B when} & \beta_A - u_i(x_A) < \beta_B - Eu_i(L(e)) \\ \text{abstain from voting when} & \beta_A - u_i(x_A) = \beta_B - Eu_i(L(e)). \end{array} \quad (2)$$

Stage 4: Electoral outcome

If Party A wins, then the implemented policy is x_A. If Party B wins, then the post-electoral assembly takes place and, by plurality rule, one of the proposals in X_B is selected. Ties are broken at random.

Next, we introduce the equilibrium concept that accounts for the strategic behavior of Party A to select its platform, and for the strategic decision of the citizens to launch proposals at the pre-electoral assembly.

Definition: *A political equilibrium is a policy for Party A, x_A^*, and a lottery representing the expected voting outcome at the assembly, $L(e^*) = \{X_B, p\}$, such that:*
i) e^* is a pre-assembly equilibrium and
ii) given $L(e^*)$, policy x_A^* maximizes Party A's expected probability of winning.

Note that, given a pre-assembly equilibrium, the probability with which each pre-assembly proposal can be selected is directly derived from sincere voting behavior at the post-electoral assembly.[6]

3 The assembly with full attendance

We follow the citizen-candidate model proposed by Osborne and Slivinsky (1996) in order to define how endogenous political platforms can be proposed at the assembly. Osborne and Slivinsky (1996) consider a continuum of citizens with single-peaked preferences over the set of policy positions. Citizens can choose to enter or not and if they enter, they propose their ideal policy. After the citizens have made their entry decision, they vote over the proposals and under plurality rule one of them is selected. These authors do neither refer to an assembly, nor they consider that citizens belong to a political party. However, the result (in their Proposition 2) can be directly applied to our setting given that the entry stage in their model resembles our pre-electoral assembly stage. Their Proposition 2 can be rewritten as:

Lemma 1 *In every pre-assembly equilibrium with two proposals, these must be located symmetrically around the position of the median voter, i.e.* $x_B^1 = x_M - \varepsilon$ *and* $x_B^2 = x_M + \varepsilon$, *where* $\varepsilon \in (c, \overline{\varepsilon})$ *and the winning probabilities must coincide* $p_1 = p_2$.

Thus, in every pre-assembly equilibrium with two proposals, these should gather an equal probability of winning. The upper bound $\overline{\varepsilon}$ is defined as to avoid the entrance of a third proposal in between the two others. Thus, $\overline{\varepsilon}$ depends upon the distribution of voters and this is defined as to guarantee that for all $\varepsilon < \overline{\varepsilon}$, there is no citizen that proposing a policy in the interval $[x_M - \varepsilon, x_M + \varepsilon]$ can either defeat one of the policies x_B^1, x_B^2 at the post-electoral assembly, or can give the victory at the post-electoral assembly to one of the policies x_B^1 or x_B^2 that she prefers.[7]

[6] A similar analysis could be made in which participants at the post-electoral assembly vote strategically. None of our results rest on the sincere voting assumption.

[7] Following Osborne and Slivinsky, this basically implies that there is no policy position in the interval $[x_M - \varepsilon, x_M + \varepsilon]$ such that either is strictly preferred by more than 1/3 of the electorate or that it can facilitate the victory of the closest proposal for the voter announcing this policy position.

At Stage 3, given a pre-assembly equilibrium with two proposals, the optimal decision of the voters with ideal policy $x_i \in [0, x_M - \varepsilon]$ and in the case that $x_A > x_M - \varepsilon$ is such that:

$$\begin{array}{ll} \text{when } \Delta\beta < x_M - x_A & \text{they vote for Party A} \\ \text{when } \Delta\beta = x_M - x_A & \text{they abstain from voting} \\ \text{when } \Delta\beta > x_M - x_A & \text{they vote for Party B.} \end{array} \tag{3}$$

where $\Delta\beta = \beta_B - \beta_A$.

When $x_i \in [x_M + \varepsilon, 1]$ and in the case that $x_A < x_M + \varepsilon$ we have that:

$$\begin{array}{ll} \text{when } \Delta\beta < x_A - x_M & \text{they vote for Party A} \\ \text{when } \Delta\beta = x_A - x_M & \text{they abstain from voting} \\ \text{when } \Delta\beta > x_A - x_M & \text{they vote for Party B.} \end{array} \tag{4}$$

where $\Delta\beta = \beta_B - \beta_A$.

We refer to those voters whose ideal policy satisfies that $x_i \in [0, x_M - \varepsilon]$ as **low-outsiders** and to those for whom $x_i \in [x_M + \varepsilon, 1]$ as **up-outsiders**. We refer to the **insiders** as those voters such that $x_i \in (x_M - \varepsilon, x_M + \varepsilon)$.

Regarding the insiders, $Eu_i(L(e^*)) = \beta_B - \varepsilon$. Let $d_i = |x_i - x_A|$, then,

$$\begin{array}{l} \text{those insiders such that } \Delta\beta < \varepsilon - d_i \text{ vote for Party A.} \\ \text{those insiders such that } \Delta\beta > \varepsilon - d_i \text{ vote for Party B.} \end{array} \tag{5}$$

There is no abstention among insiders given that the probability for an agent to satisfy $d_i = \varepsilon - \Delta\beta$ is negligible. Figure 1 represents the provided classification of voters.

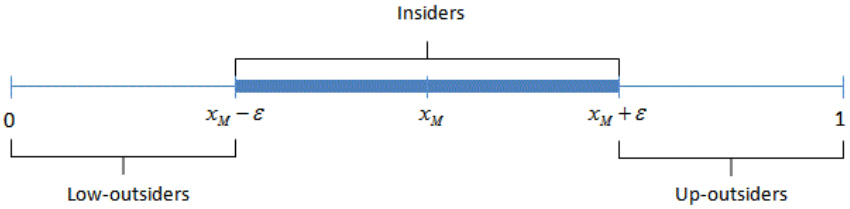

Figure 1: Location of the low-outsiders, the insiders and the up-outsiders with respect to the assembly.

Next, we derive the electoral result at the general election depending on the degree of social protest of the society, $\Delta\beta$. We describe which degree of discontent is favorable for Party B to win the elections.

Proposition 1 *In every political equilibrium with two proposals at the pre-electoral assembly, Party B wins the elections if and only if* $\Delta\beta \geq \frac{\varepsilon}{2}$.

Proof. First, we show that if $\Delta\beta \geq \frac{\varepsilon}{2}$ then, Party B always wins. We consider that $\Delta\beta = \frac{\varepsilon}{2}$.
If $x_A \in [0, x_M - \varepsilon]$, according to (4), the up-outsiders vote for Party B and by (5), for those insiders such that $x_i \in \left(x_M - \frac{\varepsilon}{2}, x_M + \varepsilon\right)$ we have $d_i > \frac{\varepsilon}{2}$, which implies that they also vote for Party B. Thus, Party B obtains a strict majority of votes. By a symmetric type of argument, if $x_A \in [x_M + \varepsilon, 1]$, Party B wins.
If $x_A \in \left(x_M - \varepsilon, x_M - \frac{\varepsilon}{2}\right)$, by (4), the up-outsiders vote for Party B and by (5), for those insiders such that $x_i \in [x_M, x_M + \varepsilon)$ we have $d_i > \frac{\varepsilon}{2}$, which implies that they vote for Party B. Thus, Party B obtains a strict majority of votes. By a symmetric type of argument, if $x_A \in \left(x_M + \frac{\varepsilon}{2}, x_M + \varepsilon\right)$, Party B wins.
If $x_A \in \left(x_M - \frac{\varepsilon}{2}, x_M\right]$, by (3) and (4) all the outsiders vote for Party B. Thus, Party A only obtains the vote of the insiders such that $d_i < \frac{\varepsilon}{2}$. However, in every pre-assembly equilibrium, no subinterval of size ε in between $(x_M - \varepsilon, x_M + \varepsilon)$ can contain more than $\frac{1}{3}$ of the votes and the rest of insiders vote for Party B.[8] Thus, Party B obtains a strict majority of votes. By a symmetric type of argument, if $x_A \in \left[x_M, x_M + \frac{\varepsilon}{2}\right)$, Party B wins.
In the last case, when $x_A = x_M - \frac{\varepsilon}{2}$ by (3), the low-outsiders abstain from voting. However, by (4) the up-outsiders vote for Party B and among the insiders, by (5), those with $x_i \in (x_M, x_M + \varepsilon]$ vote for Party B. Thus, even though Party B may not obtain a strict majority, Party A cannot obtain more than $\frac{1}{3}$ of the votes by the above argument and Party B wins. By a symmetric type of argument, if $x_A = x_M + \frac{\varepsilon}{2}$, Party B wins.
Given that Party B wins when $\Delta\beta = \frac{\varepsilon}{2}$, it also wins when $\Delta\beta > \frac{\varepsilon}{2}$.
Second, we show that when $\Delta\beta < \frac{\varepsilon}{2}$, Party B is defeated.
Suppose that $x_A = x_M - \frac{\varepsilon}{2}$ and let $\Delta\beta = \frac{\varepsilon}{2} - \gamma$ with $\gamma \to 0$. Then, by (3), the low-outsiders vote for Party A and by (5), those insiders such that

[8] Observe that for every $x_i \in (x_M - \varepsilon, x_M + \varepsilon)$, the size of the interval, according to sincere voting in the citizen candidate approach, is given by $\frac{x_i - [x_M - \varepsilon]}{2} + \frac{x_M + \varepsilon - x_i}{2} = \varepsilon$.

$x_i \in (x_M - \varepsilon, x_M]$ also vote for Party A. Thus, Party A obtains a strict majority. Given that Party A wins when $\Delta\beta = \frac{\varepsilon}{2} - \gamma$, it also wins locating at $x_A = x_M - \frac{\varepsilon}{2}$ for every other case where $\Delta\beta \in \left[0, \frac{\varepsilon}{2}\right)$. ■

This result gives a clear prediction of the party winning at the general election as a function of the degree of social protest. If the degree of social protest is sufficiently high, we show, Party A must locate in one of the insiders positions as this will guarantee the votes of two different fractions of the electorate, some insiders and some outsiders. When $\Delta\beta \geq \frac{\varepsilon}{2}$, regardless of the location of Party A, there are no options for Party A to obtain a majority of votes.

Figure 2 shows that the smaller the value of the parameter that defines the proposals of the assembly ε, the higher the chances of Party B to win at the general election.[9] In the horizontal axis we represent the values of ε to which we refer as the degree of polarization within the assembly. We say that the assembly proposals are moderated when ε takes a small value. In the vertical axis we represent the degree of social protest. Thus, we can interpret the first result in Proposition 1 as one showing that the more moderated is the assembly, the higher the probability of the assembly party to win at the general election. Polarization of the assembly, on the other hand, reduces the set of values $\Delta\beta$ for which the assembly party can win at the general elections.

[9] We take $c \to 0$ so that Figure 2 does not account for those values of $\varepsilon \to 0$ for which an equilibrium fails to exist.

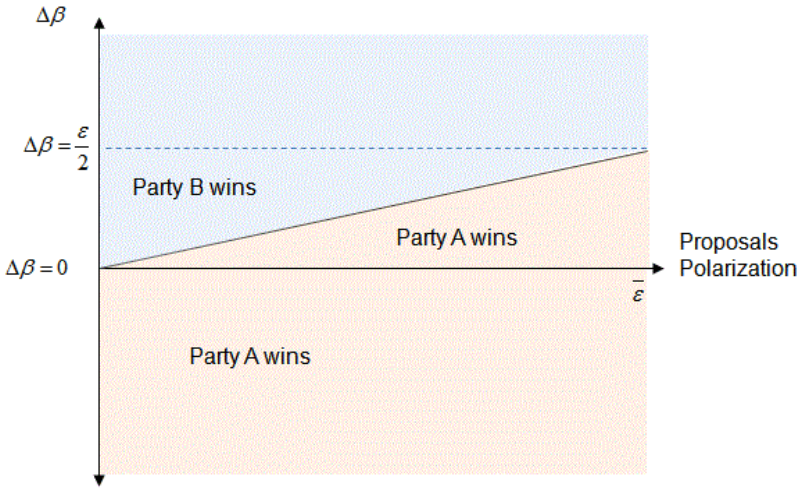

Figure 2: An illustration of Proposition 1.

So far, we have paid attention to describing which party can win at the general election. Next, we describe the equilibrium location of Party A. In Proposition 1, we showed that Party A can only win by supporting certain political positions. We next show that only two symmetric locations will be optimally selected by Party A in every political equilibrium.

Proposition 2 *In every political equilibrium with two proposals at the pre-electoral assembly, Party A sets its political platform either at* $x_A = x_M - \frac{\varepsilon}{2}$ *or at* $x_A = x_M + \frac{\varepsilon}{2}$.

Proof. The objective function of Party A is defined by Expression (1) hence, Party A only derives benefits from winning the elections. By Proposition 1, Party A cannot win the elections when $\Delta\beta \geq \frac{\varepsilon}{2}$. In this case, Party A is indifferent between every policy position. We analyze the case where $\Delta\beta = \frac{\varepsilon}{2} - \delta$, with $\delta \to 0$. As shown in Proposition 1, $x_A = x_M - \frac{\varepsilon}{2}$ guarantees the victory of Party A in this case (similar reasoning for $x_A = x_M + \frac{\varepsilon}{2}$). We proceed by showing the following statements:
i) extremist locations of Party A such that $x_A \in [0, x_M - \varepsilon]$ or $x_A \in [x_M + \varepsilon, 1]$ cannot guarantee the victory of Party A.
ii) every other location $x_A \in (x_M - \varepsilon, x_M + \varepsilon)$ such that $x_A \neq x_M - \frac{\varepsilon}{2}$ or $x_A \neq x_M + \frac{\varepsilon}{2}$ cannot guarantee the victory of Party A.

First, we show i). We consider that $x_A \in [0, x_M - \varepsilon]$. By (3), the low-outsiders vote for Party A. Among the insiders, by (5), those agents with $d_i > \frac{\varepsilon}{2}+\delta$ vote for Party B. Thus, those insiders such that $x_i \in \left(x_M - \frac{\varepsilon}{2} + \delta, x_M + \varepsilon\right)$ vote for Party B. By (4), the up-outsiders vote for Party B. Therefore, Party B obtains a strict majority and wins. By a symmetric type of argument, if $x_A \in [x_M + \varepsilon, 1]$, Party B wins.
Next, we show ii). We distinguish two cases, when $x_A \in \left(x_M - \varepsilon, x_M - \frac{\varepsilon}{2}\right)$ and when $x_A \in \left(x_M - \frac{\varepsilon}{2}, x_M\right]$.
First, we suppose that $x_A \in \left(x_M - \varepsilon, x_M - \frac{\varepsilon}{2}\right)$. If $x_i = x_M$, by (5), the median agent prefers Party B over Party A when

$$\Delta\beta > \varepsilon - (x_M - x_A) \tag{6}$$

Given that $x_M - x_A > \frac{\varepsilon}{2}$, we have that the second term of Expression 6 is smaller than $\frac{\varepsilon}{2}$. If we take $\Delta\beta = \frac{\varepsilon}{2} - \delta$ where $\delta \to 0$, we can always define δ sufficiently close to 0 such that $\frac{\varepsilon}{2} - \delta > \varepsilon - (x_M - x_A)$. Then, an agent located at $x_i = x_M$ votes for Party B as they do those agents located at $x_i \in (x_M, x_M + \varepsilon)$. Besides, by (4), the up-outsiders also vote for Party B.
Second, we suppose that $x_A \in \left(x_M - \frac{\varepsilon}{2}, x_M\right]$. By (3) and (4) and given that $\Delta\beta > |x_M - x_A|$ the outsiders vote for Party B. By (5), Party A only obtains the vote of those insiders such that $d_i < \frac{\varepsilon}{2} + \delta$. In other words, the votes of Party A are those contained in an interval of size $\varepsilon + 2\delta$. Given that in every interval of size ε, there is strictly less than 1/3 of the votes, for δ close to 0, Party A derives strictly less than 1/3 of the votes.
Thus, when $\Delta\beta = \frac{\varepsilon}{2} - \delta$ with $\delta \to 0$ there are only two policies that guarantee the victory of Party A ($x_A = x_M - \frac{\varepsilon}{2}$ and $x_A = x_M + \frac{\varepsilon}{2}$) besides, these two policies also guarantee the victory of Party A when $\Delta\beta < \frac{\varepsilon}{2} - \delta$. Then, this proves that these two policies are the only ones that maximize Party A's probability of winning. This completes the proof. ■

We have shown that locating in a platform too close to the median voter does not allow Party A to defeat Party B. The main argument for this is that in order to obtain votes from insiders as well as from outsider voters, Party A must set its platform at one of the sides of the median voter. In particular, we find that when $\Delta\beta = \frac{\varepsilon}{2} - \delta$, with $\delta \to 0$, the only two locations that guarantee the victory of Party A are $x_A = x_M - \frac{\varepsilon}{2}$ and $x_A = x_M + \frac{\varepsilon}{2}$. Besides, for every other degree of social protest below $\Delta\beta = \frac{\varepsilon}{2} - \delta$, these locations also guarantee the victory of Party A.

Our analysis reveals that Party A must differentiate its policy from the median voter position to attract a majority of the electorate. In a similar vein,

but in a different setting, Ansolabehere and Snyder (2000) and Groseclose (2001) show that when a candidate has an advantage over another, the weaker candidate moves away from the center.[10] In Figure 3, we represent both winning strategies of Party A. The strategy $x_A = x_M - \frac{\varepsilon}{2}$ gives Party A the support of those voters located in the interval $[0, x_M]$ whereas the strategy $x_A = x_M + \frac{\varepsilon}{2}$ assures Party A the votes of those located in the interval $[x_M, 1]$.

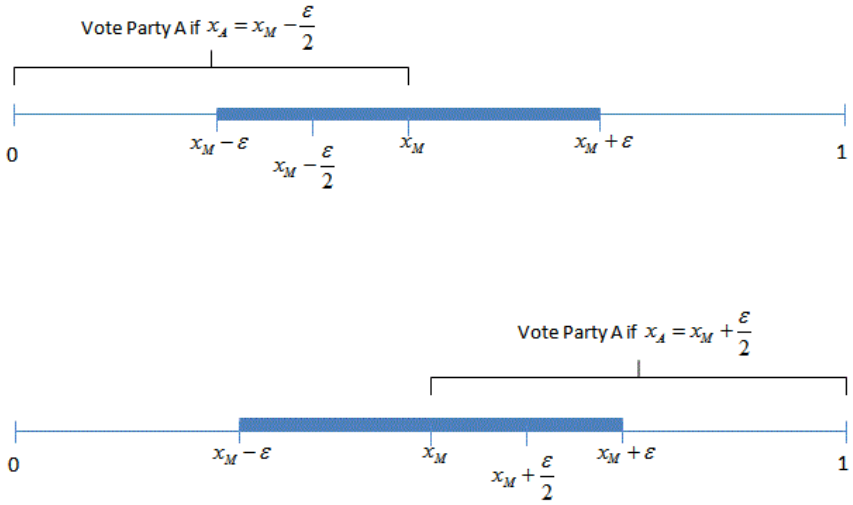

Figure 3: An illustration of Proposition 2.

4 The assembly with partial attendance

In the previous section, we analyzed the case in which two policies symmetrically located around the median voter are proposed at the pre-electoral assembly. In addition, we took for granted that all the citizens attended the pre-electoral and the post-electoral assemblies of Party B.

Now, we want to consider a scenario where just a fraction of voters with close policy positions attend the assembly. We still maintain the pre-assembly equilibrium concept. Hence, the previous section is a particular case in which the median voter position of both the assembly and the electorate coincide.

[10] Observe that our result differs from the one of Shepsle (1972) who shows that when a party stands at the median, the other has incentives to take a lottery stand. See also Page (1976).

We define the *assembly* median voter position as x_M^a and from now on, x_M is the *electorate* median.

Following the pre-assembly equilibrium concept, in every political equilibrium with two expected proposals at the assembly, these are symmetrically located around the assembly median, i.e., $x_M^a - \varepsilon$ and $x_M^a + \varepsilon$, where $\varepsilon \in (c, \overline{\varepsilon})$ and the winning probabilities coincide $p_1 = p_2$.[11]

Next, we derive the electoral result at the general election depending on the location of the *assembly* median voter position x_M^a with respect to x_M. We distinguish two scenarios: a **centrist assembly**, which occurs when the electorate median voter is an *insider*, i.e. $x_M^a - \varepsilon < x_M < x_M^a + \varepsilon$; and a **non-centrist assembly**, which implies that the assembly is either to the left or to the right of the electorate median voter, i.e. $x_M \leq x_M^a - \varepsilon$ or $x_M \geq x_M^a - \varepsilon$. In each situation, we take into account the degree of social protest. Voting decisions as described by (3), (4) and (5) do not change except for substituting x_M by x_M^a.

4.1 The centrist assembly

We study the case where the electorate median voter x_M is among the bounds of the assembly, i.e. $x_M^a - \varepsilon < x_M < x_M^a + \varepsilon$. In Figure 4, we show different locations of the centrist assembly with respect to x_M. The first case shows a centrist-left assembly where $x_M^a < x_M$. The second case shows a centrist assembly where both the assembly and the electorate median voter coincide. This case is similar to the one we have analyzed in the previous section. The last case shows a centrist-right assembly where $x_M < x_M^a$.

[11] Where the bounds $(c, \overline{\varepsilon})$ should be recalculated accounting for the truncated distribution of voters that attend the assembly.

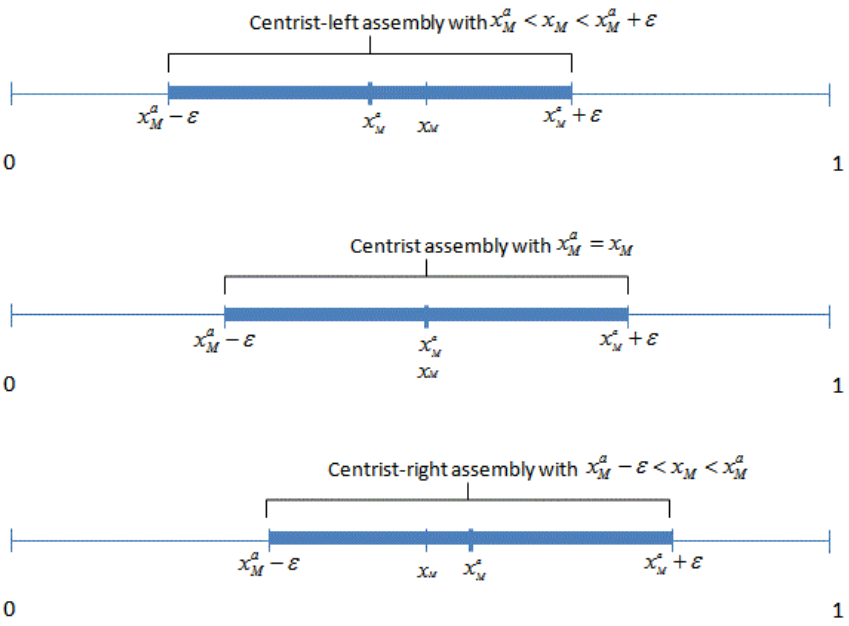

Figure 4: Centrist assemblies' location with respect to x_M.

The party winning the elections in the case of a centrist assembly also depends on the degree of social protest. As we next show, the optimal position of the traditional party is not the electorate median but it is the midpoint between the electorate median and one out of the two proposals of the assembly.

Proposition 3 *Consider that the assembly median differs from the electorate median and that the assembly is centrist. Then, Party B wins the elections if and only if* $\Delta\beta \geq \frac{\varepsilon}{2} + \frac{\gamma}{2}$ *where* $\gamma = |x_M - x_M^a|$. *Besides, in every political equilibrium with two proposals at the pre-electoral assembly, Party A locates at:*
i) $x_A = \frac{x_M + x_M^a + \varepsilon}{2}$ *in the case of a centrist-left assembly* $(x_M^a < x_M)$
ii) $x_A = \frac{x_M + x_M^a - \varepsilon}{2}$ *in the case of a centrist-right assembly* $(x_M^a > x_M)$.

Proof. Following Proposition 1, we know that there is a threshold value $\Delta\beta$ above which Party B always wins the elections. Besides, by Proposition 2, we know that just below the threshold there are two symmetric strategies

for Party A that guarantee its victory, these strategies clearly reduce to one when the assembly moves either to the right or to the left of the median. We calculate the corresponding threshold and the corresponding unique location of x_A in the case of a centrist-left assembly where $x_M^a < x_M$. When the assembly is centrist-left, Party A cannot achieve equal votes locating at symmetric positions around the electorate median. In fact, in this case, it is easier for Party A to achieve a majority of votes among those located to the right of the electorate median, that is, those voters in the interval $[x_M, 1]$. First, we study the agents with ideal policy $x_i = x_M$ and $x_i = x_M^a + \varepsilon$. For agent $x_i = x_M$, she votes for Party A when

$$x_A < -\Delta\beta + \varepsilon + x_M \tag{7}$$

For agent $x_i = x_M^a + \varepsilon$, the utilities derived from voting Party A and Party B are $\beta_A - |x_M^a + \varepsilon - x_A|$ and $\beta_B - \varepsilon$, respectively. Then, she votes for Party A when $\beta_A - |x_M^a + \varepsilon - x_A| > \beta_B - \varepsilon$ which implies that:

$$x_A > \Delta\beta + x_M^a \tag{8}$$

The values $\Delta\beta$ for which Party A can obtain the votes in the interval $[x_M, x_M^a + \varepsilon]$ is deduced from the above two equations and it yields $\Delta\beta < \frac{\varepsilon}{2} + \frac{\gamma}{2}$. Moreover, the only strategy that guarantees that Party A obtains all the votes in the interval $[x_M, x_M^a + \varepsilon]$ when $\Delta\beta = \frac{\varepsilon}{2} + \frac{\gamma}{2} - \delta$ where $\delta \to 0$ is deduced by substituting the value $\Delta\beta = \frac{\varepsilon}{2} + \frac{\gamma}{2}$ in Expression (7) or (8). We deduce that $x_A = \frac{x_M + \left(x_M^a + \varepsilon\right)}{2}$. By (4), this value of x_A also guarantees that the up-outsiders vote for Party A. Finally, if $x_A = \frac{x_M + \left(x_M^a + \varepsilon\right)}{2}$ guarantees the victory of Party A when $\Delta\beta = \frac{\varepsilon}{2} + \frac{\gamma}{2} - \delta$, it also guarantees the victory of Party A for smaller values of $\Delta\beta$. This implies that this strategy of Party A maximizes its expected probability of winning. The symmetric case in which there is a centrist-right assembly follows a similar reasoning. ■

We find that when there is a centrist-right assembly and $\Delta\beta < \frac{\varepsilon}{2} + \frac{\gamma}{2}$ where $\gamma = x_M - x_M^a$, Party A locating at $x_A = \frac{x_M + \left(x_M^a - \varepsilon\right)}{2}$ obtains the support of those voters whose ideal policy is in the interval $(0, x_M^a - \varepsilon)$ plus a fraction of the voters which ideal policy is in the interval $(x_M^a - \varepsilon, x_M^a + \varepsilon)$. Symmetrically, when there is a centrist-left assembly and $\Delta\beta < \frac{\varepsilon}{2} + \frac{\gamma}{2}$ where $\gamma = x_M - x_M^a$, Party A wins the elections locating at $x_A = \frac{x_M + \left(x_M^a + \varepsilon\right)}{2}$ given that voters to the right of the electorate median vote for Party A.

4.2 The non-centrist assembly

We study the case in which the electorate median x_M is either to the left of the assembly $x_M \leq x_M^a - \varepsilon$ or to the right of the assembly $x_M \geq x_M^a + \varepsilon$. We can interpret the assembly in these cases as left-extremist or right-extremist. Figure 5 shows the intervals in which a right-extremist assembly and a left-extremist assembly can be located.

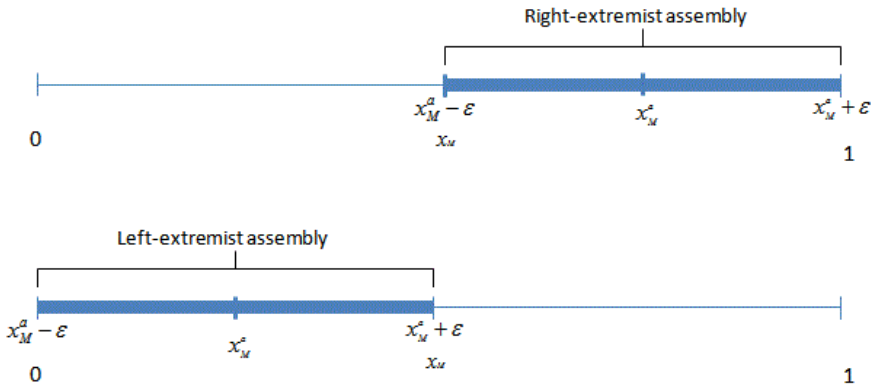

Figure 5: Location of the non-centrist assemblies with respect to x_M.

In both cases, we show that for every degree of social protest, Party A wins the elections and besides, its strategy consists of locating at the electorate median.

Proposition 4 *Consider that the assembly median differs from the electorate median and that the assembly is non-centrist. Then, Party B wins the elections if and only if* $\Delta\beta \geq \gamma$ *where* $\gamma = |x_M - x_M^a|$. *Besides, in every political equilibrium with two proposals at the pre-electoral assembly, Party A locates at* $x_A = x_M$.

Proof. We calculate the greatest degree of social protest for which Party A can defeat Party B. Consider the case of a right-extremist assembly where $x_M < x_M^a$. The easiest way for Party A to win the elections is by obtaining the votes of those located to left of the policy space, that is those in the

interval $[0, x_M]$. If voter $x_i = x_M$ votes for Party A, all the other voters in this interval also vote for Party A. In the best scenario for voter $x_i = x_M$, Party A locates at $x_A = x_M$. Following Expression (3), all the voters in $[0, x_M]$ vote for Party A when $\Delta\beta < x_M^a - x_A$ and substituting $x_A = x_M$ we obtain that $\Delta\beta < \gamma$. Besides, when $\Delta\beta = \gamma - \delta$ where $\delta \to 0$ there is no other value $x_A \neq x_M$ that guarantees a majority of votes for Party A. Thus, $x_A = x_M$ is the unique strategy of Party A that maximizes its expected probability of winning. Finally, if $\Delta\beta \geq \gamma$ the strategy $x_A = x_M$, cannot guarantee a majority of votes for Party A, and it is in fact Party B which wins with the votes of the agents in the interval $[x_M, 1]$. The case of a left-extremist assembly follows a similar reasoning. ■

We have shown that for every $\Delta\beta < \gamma$ where $\gamma = |x_M - x_M^a|$, Party A can always guarantee a majority of voters locating at the electorate median. Thus, the electorate median is the policy that maximizes the expected probability of winning of Party A.

In Figure 6, we summarize the obtained results regarding the optimal location of Party A as a function of the location of the assembly median voter along the policy space. Interestingly, the presence of an assembly party makes the traditional party to move along the policy space.

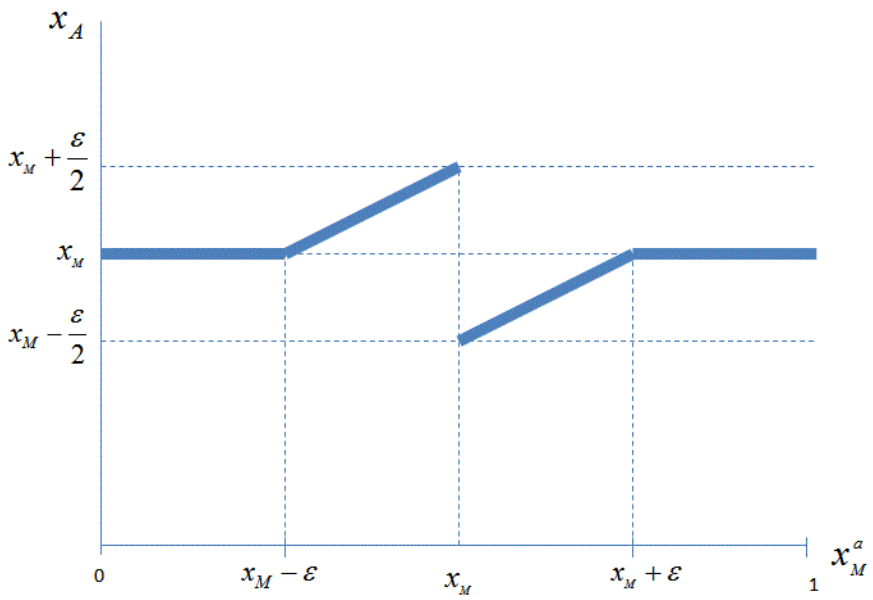

Figure 6: Strategies of Party A with respect to the location of the assembly median voter x_M^a.

On the one hand, in the case of an extremist assembly, regardless of the ideology of the assembly, Party A moderates its policy and it locates at the median voter position, i.e. $x_A = x_M$. On the other hand, in the case of a centrist assembly, Party A locates either to the left or to the right of the median voter location, just in the opposite direction of the assembly median location. This is due to the fact that Party A needs to differentiate from the assembly proposals in order to attract not only centrist voters but also voters to one of the sides of the median. As we have shown, this is the type of strategy that guarantees the victory of Party A when the victory is possible.

5 Conclusions

In this paper, we have studied the consequences of political competition between a party implementing assembly democracy (Party B) and a traditional downsian party (Party A). We have introduced, in terms of a valence characteristic, the social preferences in favor or against new forms of democracy.

Citizens when participating at the assembly are strategic and they want their proposals to achieve a majority at the assembly. Party A is a pure office seeking party which selects its platform as to maximize its probability of winning the general election. We have compared different scenarios regarding the location of the assembly party.

We find that the more centrist the assembly party is, the more chances it has of winning the elections. Interestingly, we also find that the location of the assembly party induces Party A to locate at different platforms.

Surprisingly, due to the competition with an assembly party, when the assembly is centrist, the traditional party moves its platform away from the median voter location in order to attract a larger fraction of voters. In particular, we find that a centrist assembly party located to the left of the overall median, moves the traditional party to the right, whereas a centrist assembly party located to the right of the overall median, moves the traditional party to the left. The centrist assembly party, therefore, generates a centrifugal effect over the traditional party, which moves it in the opposite direction. However, when the assembly party is non-centrist (or extremist), we find that the traditional party moves towards the median of the electorate. In this case, the extremist assembly party leaves an empty center which can be occupied by a traditional party.

Our main message is that extremist assembly parties may have no effect regarding the location of a traditional office-seeking party, whereas moderated assembly parties have an impact by moving away from the median the traditional political party. In equilibrium, the traditional party moves in the opposite direction of the assembly proposals but within the bounds of the proposals made by the assembly. As a result, the assembly party generates divergence between the platforms of the parties which is in close contrast to the convergence prediction of the pure downsian model.

We have shown that new assembly parties may not only have a direct effect when winning the elections and taking the assembly as their policy making body, but also an indirect effect by affecting the policy of its competing parties. This is a testable prediction that is open to empirical scrutiny.

In this study, we only include the results for assemblies with two proposals. We leave the analysis with more than two proposals for further research.

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