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Expressive Voting and Its Cost: Evidence from Runoffs with Two or Three Candidates

Vincent Pons
Clémence Tricaud

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Expressive voting and its cost: Evidence from runoffs with two or three candidates

Vincent Pons* Clémence Tricaud†

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Abstract

In French parliamentary and local elections, candidates ranked first and second in the first round automatically qualify for the second round, while a third candidate qualifies only when selected by more than 12.5 percent of registered citizens. Using a fuzzy RDD around this threshold, we find that the third candidate's presence substantially increases the share of registered citizens who vote for a candidate and reduces the vote share of the top two candidates. It disproportionately harms the candidate ideologically closest to the third and causes his defeat in one fifth of the races. These results suggest that a large fraction of voters value voting expressively over voting strategically for the top-two candidate they dislike the least to ensure her victory; and that absent a party-level agreement leading to their dropping out, many third candidates value the benefits associated with competing in the second round more than influencing its outcome.

Keywords: Expressive voting, Strategic voting, Regression discontinuity design, French elections

JEL Codes: D72, K16

*Harvard Business School; BGIE group, Soldiers Field, Boston, MA 02163; vpons@hbs.edu; +1 617 899 7593

†CREST, Ecole Polytechnique, Université Paris-Saclay; Route de Saclay, 91128 Palaiseau, France; clemence.tricaud@polytechnique.edu; +33 (0)1 70 26 68 07

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1 Introduction

In an indirect democracy – the form of government prevalent across the West today – representatives rule on behalf of the people. In theory, their representativeness comes from being elected. In practice, it depends on the extent to which voters' choices reflect their true preferences, and on the way in which the voting rule translates vote choices into election outcomes. These two conversions determine who is elected and which policies are enacted.

Under plurality rule, when more than two candidates are running, citizens who support lower-ranked candidates face a difficult tradeoff: voting for their favorite candidate, or for another candidate with higher chances of winning. By expressing their true preference, voters may split their support over multiple candidates and nominate less-preferred leaders. Hence, the result of the election depends on the extent to which voters are "expressive" – voting based on their preference among candidates only – or "strategic" (or "instrumentally rational") – voting based on likely outcomes of the election.

In his groundbreaking work on strategic behavior, Duverger (1954) posits that voters do not want to waste their vote and will thus, in most cases, exclusively vote for two front-runners. Models by Palfrey (1989), Myerson and Weber (1993), Fey (1997), and Cox (1997) formalize this intuition: under plurality rule, when voters are instrumentally rational, an election with multiple candidates usually boils down to a two-candidate race, and of these two, the candidate who is preferred by the majority wins the election.[1]

The division of the American political landscape between Republicans and Democrats is a famous illustration of Duverger's law. Yet in other countries, third and lower-ranked candidates frequently receive large fractions of the votes. General elections in the United Kingdom are a case in point: since the Liberal Democrat party emerged in the 1990s, it has regularly split the vote share with the Labour and Conservative parties in many constituencies. In addition, the presence of lower-ranked candidates can have a major impact on the outcome of the election even when they receive only a small fraction of the votes. In the 2000 US Presidential election, third-party candidate Ralph Nader earned 3 percent of votes in the crucial state of Florida, enough to sway the election in favor of George W. Bush.

To assess the extent to which voters behave strategically, existing studies usually compare people's preferences and vote choices and count the number of voters who vote for a front-runner instead of their favorite. But voters' underlying preferences are difficult to observe, so these studies depend on the reliability of survey responses (e.g., Blais, Nadeau, Gidengil, and Nevitte, 2001;

[1] This result applies to a number of settings. The model of Myerson and Weber (1993) applies to a wide range of single-winner electoral systems such as plurality rule, approval voting, and the Borda system. Cox (1994) extends the model to a multimember context. The case of dual ballot rule is studied in Bouton (2013) and Bouton and Gratton (2015).

Hillygus, 2007) or on assumptions regarding the mapping between voters' preferences and vote choices (e.g., Kawai and Watanabe, 2013; Spenkuch, 2015).

This paper uses a different approach: instead of estimating preferences, we focus on vote choices. We take electoral results when two candidates are competing, and compare them to races in which three are competing. While the number and types of competing candidates is in general endogenous, French local and parliamentary elections, which are held under a two-round plurality voting rule, provide us with a chance for exogenous variation. In most districts, no single candidate obtains the majority of votes in the first round, and a second round takes place a week later. The top two candidates (the two who obtain the highest vote share in the first round) automatically qualify for the second round; other candidates also qualify if they receive a number of votes higher than 12.5 percent of registered citizens. The candidate who obtains the highest vote share in the second round wins the election.

Our identification strategy exploits the discontinuity generated by the qualification rule for the second round. Using a regression discontinuity design (RDD), we compare second-round results in districts where the third candidate obtains a vote share just above or below the 12.5 percent threshold and, as a result, just passes or misses the qualification requirement. This strategy enables us to estimate the impact of electoral offer on voter behavior and, in particular, examine whether voters adjust expressively or strategically to the presence of a third candidate. The second-round races we study can be thought of as first-past-the-vote elections in which first-round results provide voters with a large amount of information on the chances of the remaining competitors. If anything, this information should stack the odds in favor of coordination and strategic voting (Cox, 1997).

The threshold is defined as a fraction of registered citizens rather than actual votes: this makes it particularly hard to manipulate and results in a very diverse set of districts close to the threshold. The set includes competitive districts where the third candidate obtained a large vote share in the first round but turnout was relatively low, as well as districts where she obtained a lower vote share but turnout was high. This makes the external validity of our local average treatment effect estimates unusually high and enables us to compare treatment effect size across different settings. The number of elections we consider and the hundreds of districts at each election translate into a large number of observations, securing high statistical power while facilitating treatment effect heterogeneity analysis.

The presence of the third candidate in the second round increases voter turnout by 4.0 percentage points and reduces the share of blank and null votes by 3.7 percentage points, resulting in an overall increase of the share of people casting a ballot for any of the candidates by 7.8 percentage points (14.2 percent). In addition, the presence of the third candidate decreases the vote share of the top two candidates (expressed as a fraction of registered citizens) by 6.9 percentage points (12.5 percent).

Our key results relate to the impact of the third candidate's presence on the outcome of the elections. We find that the vote shares of the top two candidates decrease in proportion to their proximity with the third on the left-right ideological axis. The impact remains equally strong and significant in subsets of elections where first-round results indicate that the third candidate is very unlikely to be a "front-runner" (to rank first or second) in the second round. As a consequence, in 19.2 percent of the elections, the presence of the third candidate causes the loss of the candidate among the top two that is ideologically closest to her.[2] This candidate is the likely Condorcet winner of the second round: she would have won a two-candidate race against the other top-two candidate, absent the third, and she would most likely also win a two-candidate race against the third. Thus, the presence of the third candidate often results in an outcome that harms a majority of her supporters (those with a preference for the closest over the furthest top-two candidate) and a majority of voters.

Additional evidence suggests that our aggregate results are primarily driven by the behavior of two types of third candidate's voters: "loyal" supporters (whom we also designate as "loyals"), who abstain or vote blank or null when the third candidate is absent and vote for her when she is present, leading to increased participation; and "switchers", who vote for the top two candidates when the third is absent but switch to the third when she is present, explaining the decreased vote share of the top two candidates and the impact on winner identity. We argue that these behaviors are difficult to rationalize within rational voter and group-rule utilitarian models, in particular when the third candidate appears to have slim chances of being a front-runner in the second round, and even when allowing for imperfect information, aggregate uncertainty, or dynamic strategic motives. Instead, our results suggest that voters' choice of candidate, as well as their decision whether to vote or abstain, can only be satisfactorily explained by taking into account expressive benefits independent of the result of the election.

Because third candidates have the possibility to drop out of the race between the first and second rounds, our results also shed light on the motives underlying their behavior. We compare third candidates' likelihood to drop out across different settings and gather additional descriptive evidence from press articles. When third candidates have the same political orientation as one of the top two candidates, party-level agreements internalize the cost that staying in the race would generate for the candidate of the sister party and result in an overwhelming majority of dropouts. Instead, when third candidates have a different orientation than both top two candidates, they tend

[2]This estimate is obtained by restricting the analysis to elections where the three candidates are from different political orientations, where the third candidate is located either to the right or to the left of both top two candidates (since in these elections the candidate ideologically closest to the third is clearly identified), and where first-round results indicate that the third candidate's chances of becoming a front-runner in the second round are low (so that the impact is not mechanically driven by the third candidate winning the election). More information in Sections 4.4 and 4.5.

to take the decision on their own, independently from any party's instructions, and only drop out in rare circumstances. The fact that their decision to stay in the race decreases the chance of victory of the top-two candidate closest to them suggests that they often value the benefits associated with competing in the second round more than influencing its outcome.

1.1 Contribution to the literature

A large literature studies how voting rules shape electoral outcomes and, in turn, how they affect voter behavior. Social choice theory has shown that no electoral system or voting rule is uniformly best under all criteria (Arrow, 1951),[3] and that in any voting system, some voters have an incentive to misrepresent their true preferences in order to affect the outcome of the election (Gibbard, 1973; Satterthwaite, 1975). Building on this result, a normative literature has sought to identify voting rules that deliver outcomes best representing voters' preferences by most resisting strategic manipulation (e.g., Laslier, 2009; Balinski and Laraki, 2011). Under existing rules, electing leaders who best correspond to voters' preferences may actually require that a sufficiently large fraction of them engage in strategic manipulation. If too many people vote according to their true preference instead of behaving strategically, the plurality rule may fail to choose the Condorcet winner, when one exists, thus decreasing the representativeness of the electoral outcome (Nurmi, 1983; Myerson and Weber, 1993).

A large empirical literature examines whether voters behave strategically or expressively. Small-scale laboratory experiments have provided direct evidence of the existence of strategic behaviors (e.g., Forsythe, Myerson, Rietz, and Weber, 1993; Van der Straeten, Laslier, Sauger, and Blais, 2010). Outside of the lab, Cox (1997) documents patterns consistent with strategic voting across electoral systems. Using RDD on population thresholds, Fujiwara (2011) and Eggers (2015) find that the top two candidates tend to get more votes under simple plurality than under runoff or proportional elections, in line with Duverger's prediction (but see Bordignon, Nannicini, and Tabellini, 2016). Consistent with Myatt (2007)'s prediction that the amount of strategic voting increases with the level of information, Hall and Snyder (2015) find that higher levels of information in US primary elections decrease the number of votes and donations "wasted" on candidates unlikely to win. An important piece of information used by voters to coordinate comes from candidates' rankings in previous elections: second-place candidates are substantially more likely than close third-place candidates to run in, and win, a subsequent election (Anagol and Fujiwara, 2016).

To determine the actual proportion of voters voting for a candidate other than their preferred one, existing studies compare people's preferences and voting choices. Estimates based on sur-

[3] Arrow's impossibility theorem states that when there are more than two alternatives, there is no social welfare function that satisfies the Pareto property and the Independence of Irrelevant Alternatives and which is not a dictatorship.

veys are typically low, below 20 percent (e.g., Alvarez and Nagler, 2000; Blais, Nadeau, Gidengil, and Nevitte, 2001; Hillygus, 2007; Kiewiet, 2013), but potentially biased by misreporting. For instance, overreporting voting for the winner (Wright, 1993; Atkeson, 1999) may lead to overestimate strategic behavior. Alternatively, to avoid cognitive dissonance (Festinger, 1962), people may adjust their stated preference to their voting choice, which would lead to underestimating it.

A second strand of the literature relies on aggregate electoral results and studies strategic voting by imposing assumptions on the mapping between voters' preferences and vote choices. Kawai and Watanabe (2013) and Myatt and Fisher (2002) calibrate structural models to estimate the number of voters who did not vote for their preferred candidate and the impact of strategic voting on the number of seats won by a party, respectively. In the context of the German split-ticket voting system, Spenkuch (2017) compares votes cast for party lists under a proportional rule with votes cast for individual candidates under plurality rule, and reports that about one third of voters behave strategically (also see Spenkuch, 2015).

Instead of estimating voter preferences and comparing them with their actual choices, this paper focuses on vote choices only. We compare electoral outcomes when two versus three candidates are competing.[4] Methodologically, we draw on other studies that exploit vote-share thresholds to estimate the incumbency effect and other causal effects of interest (e.g., Lee, 2008; de la Cuesta and Imai, 2016). Our strategy allows us to make three important contributions to the literature. First, we estimate the impact of the presence of the third candidate on both participation and vote shares and demonstrate that the third candidate obtains votes both from voters who would have voted for the top two had she been absent and from supporters who would have abstained or voted blank or null. Second, we can precisely estimate the fraction of races whose final outcome changes as a result of these behaviors. Third, in addition to studying voters' behavior, we highlight the main factors affecting candidates' own decision to stay in the race or drop out.

We further contribute to the theoretical literature on strategic voting by exploring the extent to which our results can be explained by rational voter models (e.g., Myerson and Weber, 1993), and group-rule utilitarian models (Coate and Conlin, 2004; Feddersen and Sandroni, 2006; Bouton and Ogden, 2017), in which the individual or group's utility is only affected by who wins the election.

The remainder of the paper is organized as follows. We describe the data we use in Section 2 and our empirical framework in Section 3. Section 4 presents our empirical results. We interpret and discuss our results in Section 5. Section 6 concludes.

[4]Similarly to our setting, Blais, Dolez, and Laurent (2017) and Kiss (2015) study runoff elections in France and Hungary, respectively, in which more than two candidates can qualify. Differently from our strategy, they compare electoral outcomes in the first and second rounds, assuming that voters reveal their true preference in the first round. For a discussion of this assumption, see Piketty (2000) and Bouton and Gratton (2015).

2 Research setting

2.1 French parliamentary and local elections

Our sample includes parliamentary and local elections. Parliamentary elections elect the representatives of the French National Assembly, the lower house of the Parliament. France is divided into 577 constituencies, each of which elects a Member of Parliament every five years. Local elections determine the members of the departmental councils. France is divided into 101 départements, which have authority over education, social assistance, transportation, housing, culture, local development, and tourism. Each département is further divided into small constituencies, the cantons, which elect members of the departmental councils for a length of six years. Until an electoral reform in 2013, each canton elected one departmental council member; after the reform, each elected a ticket composed of a man and a woman. This new rule applied to the 2015 local elections, which are included in our sample. We consider a ticket as a single candidate in our analysis, since the two candidates organize a common electoral campaign, run in the election under the same ticket, and get elected or defeated together.

Both parliamentary and local elections are held under a two-round plurality voting rule. In order to win directly in the first round, a candidate needs to obtain a number of votes greater than 50 percent of the candidate votes and 25 percent of the registered citizens. In the vast majority of districts, no candidate wins in the first round, and a second round takes place one week later. In the second round, the election is decided by simple plurality: the candidate who receives the largest vote share in the second round wins the election.

The two candidates who obtain the highest vote share in the first round automatically qualify for the second round. Other candidates qualify only if they obtain a first-round vote share higher than 12.5 percent of the registered citizens. This threshold does not have any other implication. All candidates qualified for the second round can decide to drop out of the race between rounds.

Our sample includes all parliamentary and local elections using the 12.5 percent qualification threshold: the eight parliamentary elections which took place since 1978 as well as the 2011 and 2015 local elections.[5] The fact that this threshold is at a relatively high percentage means at most three candidates qualify for the second round in all but a handful of districts, which is ideal for our study design. In the elections we consider, the third candidate received more than 12.5 percent of votes in 1,215 districts (16.7 percent of our sample).[6]

[5] Each of the 10 elections we consider took place at a different date. Moreover, the local and parliamentary elections we study were never held at the same date as other types of elections such as presidential, mayoral, or regional ones.

[6] In local elections, the required vote share was 10 percent of the registered citizens until 2010, when the threshold was increased to 12.5 percent. The lower threshold resulted in more than three candidates qualifying in a large number of constituencies. One exception was made after the change: in the 2011 local elections, the threshold remained at 10 percent in the 9 cantons belonging to Mayotte département (0.6 percent of the 2011 observations). The threshold in

2.2 Data

Our sample includes a total of 7,257 observations: 3,458 (47.7 percent) from local elections and 3,799 (52.3 percent) from parliamentary elections. Official results of local and parliamentary elections were digitized from printed booklets for the 1978, 1981, and 1988 parliamentary elections and obtained from the French Ministry of the Interior for all others. We exclude districts where only one round took place or those with fewer than three candidates in the first round.[7] Table A1 in the Appendix gives the breakdown of the sample data by election type and year.

Table 1 presents some descriptive statistics on our sample. In the average district, 7.78 candidates competed in the first round, and turnout was 58.2 percent. On average, 56.2 percent of the registered citizens cast a valid vote for one of the candidates. Valid voting for a candidate entails inserting a ballot pre-printed with the candidate's name in an envelope and putting this envelope in the ballot box. We term these "candidate votes". The difference between turnout and candidate votes arises from voters who cast a blank vote (putting an empty envelope in the ballot box) or a null vote (writing something on the ballot or inserting multiple ballots in the envelope). Turnout in the second round was slightly higher than in the first (58.8 percent on average), but the fraction of candidate votes was slightly lower (55.4 percent on average) due to an increased share of blank and null votes. The average number of candidates in the second round was 2.04, and there were three candidates in the second round in 453 districts (6.2 percent of the sample).

Table 1: Summary statistics

	Mean	Sd	Min	Max	Obs.
Panel A. 1st round					
Registered voters	45,964	30,882	883	189,384	7,257
Turnout	0.582	0.124	0.134	0.908	7,257
Candidate votes	0.562	0.122	0.132	0.890	7,257
Blank and Null votes	0.019	0.011	0.001	0.094	7,257
Number of candidates	7.78	4.08	3	29	7,257
Panel B. 2nd round					
Turnout	0.588	0.131	0.128	0.928	7,257
Candidate votes	0.554	0.136	0.124	0.907	7,257
Blank and Null votes	0.035	0.022	0.002	0.278	7,257
Number of candidates	2.04	0.28	1	3	7,257

We further use the political label attributed to the candidates by the French Ministry of the

parliamentary elections was increased from 5 to 10 percent in 1966 and from 10 to 12.5 percent in 1976.

[7] We also exclude three elections where the second and third candidates in the first round obtained exactly the same number of votes. Here, the 12.5 percent threshold rule did not apply. Both candidates were allowed to move on to the second round, regardless of the number of votes they had obtained in the first.

Interior to allocate them to six political orientations: far-left, left, center, right, far-right, and other. In the elections we consider, the candidate who ranked third in the first round was on the left in 37.1 percent of the districts, on the right in 19.6 percent, on the far-right in 36.7 percent, and from another political orientation in the remaining 6.6 percent of the districts.[8]

2.3 Vote share of the third candidate

In most cases, candidates who came in third in the first round should be expected to have lower chances of winning the second round or finishing second than the candidates who ranked first and second in the first round, and voters casting a ballot for the third candidate should expect their vote to be "wasted". Strikingly, however, third candidates who qualify and compete in the second round garner more votes than in the first round and get a remarkably high vote share on average, in elections in which all three candidates stay in the race: 25.6 percent of the candidate votes, against 33.2 and 41.2 percent for candidates who ranked second and first. This result is not driven by any particular configuration: the vote share obtained by the third candidate in the second round is large when she is on the left (30.6 percent), the right (28.9 percent), and the far-right (21.5 percent).

Voters who vote for the third candidate when she is present may either vote for the top two candidates or instead abstain or vote blank or null when she is absent. Thus, using a regression discontinuity design framework, we estimate the impact of the presence of the third candidate both on voter participation and on the top two candidates' vote share. We then test whether her presence ultimately affects who wins the election.

3 Empirical strategy

3.1 Evaluation framework

We exploit the 12.5 percent vote share threshold, which determines whether the third-highest-ranking candidate qualifies for the second round, to estimate the impact of her presence on electoral outcomes.

Qualified third candidates can drop out of the race between the two rounds, making our regression discontinuity design fuzzy. Formally, we define the running variable X as the qualifying margin of the third candidate in the first round (the difference between her vote share, expressed as a fraction of the number of registered citizens, and the 12.5 percent threshold), the assignment

[8]The Ministry of the Interior attributes political labels based on several indicators: candidates' self-reported political affiliation, party endorsement, past candidacies, public declarations, local press, etc. We mapped political labels into the six political orientations, mainly based on the allocation chosen by Laurent de Boissieu in his blog "France Politique": http://www.france-politique.fr/. We also used public declarations made by the candidates. Appendix I shows the mapping between labels and political orientations for each election.

variable D as a dummy equal to 1 if the third candidate qualifies for the second round ($X \geq 0$) and 0 otherwise ($X < 0$), and the treatment variable T as a dummy equal to 1 if the third candidate is present in the second round and 0 otherwise. We call compliers the districts in which the third candidate qualifies ($D = 1$) and runs in the second round ($T = 1$). We evaluate the impact of the presence of the third candidate in complier districts with the following specification:

$$Y_i = \alpha_1 + \tau T_i + \beta_1 X_i + \beta_2 X_i T_i + \mu_i \tag{1}$$

where Y_i is the outcome of interest in district i and T_i is instrumented with D_i as shown in the following first-stage equation:

$$T_i = \alpha_0 + \gamma D_i + \delta_1 X_i + \delta_2 X_i D_i + \varepsilon_i \tag{2}$$

Following Imbens and Lemieux (2008) and Calonico, Cattaneo, and Tiriunik (2014), our main specification uses a non-parametric approach, which amounts to fitting two linear regressions on districts respectively close to the left, and close to the right of the threshold. We test the robustness of our results to a quadratic specification, including X_i^2 and its interaction with T_i as regressors in equation [1] and X_i^2 and its interaction with D_i in equation [2]. Our estimation procedure follows Calonico, Cattaneo, and Tiriunik (2014), which provides robust confidence interval estimators. Our preferred specification uses the MSERD bandwidths developed by Calonico, Cattaneo, Farrell, and Titiunik (2017), which reduce potential bias the most. We also test the robustness of the main results to using the optimal bandwidths computed according to Imbens and Kalyanaraman (2012).[9] The bandwidths used for the estimations are data-driven and therefore vary depending on the outcomes we consider. Instead, when we provide descriptive statistics on districts "close to the threshold", we consider districts in which the vote share of the third candidate was within exactly 2 percentage points from the threshold. Thanks to our large sample size (7,257 districts), the number of districts close to the threshold is higher than 1,800.

3.2 Identification

The 2SLS estimates obtained from equations [1] and [2] can be interpreted as a local average treatment effect conditional on the assumptions of the LATE theorem being satisfied (Imbens and Angrist, 1994).

First, *independence of the instrument* comes from the discrete rule of qualification. The identification assumption is that the distribution of potential confounders changes continuously around

[9]Figure A5 in the Appendix shows the robustness of our main results to bandwidth choice, both for linear and quadratic specifications.

the 12.5 percent vote share threshold, so that the only discrete change occurring at this threshold is the shift in assignment status. Sorting of candidates across the threshold only threatens the validity of this assumption if it occurs at the cutoff, with potential losers pushed just above the threshold or potential winners pushed just below (de la Cuesta and Imai, 2016). Generally, this is unlikely, as it requires the ability to predict election outcomes and deploy campaign resources with extreme accuracy, and given that weather conditions on Election Day and other unpredictable events make the outcome of the election uncertain (Eggers, Fowler, Hainmueller, Hall, and Snyder, 2015).

In our setting, manipulation of the threshold is perhaps even more unlikely than in other RDDs using vote share thresholds. First, candidates have very limited information available about voters' intentions in the first round of French parliamentary or local races. District-level polls are very rare during parliamentary elections, and nonexistent during local elections, due to small district size and limited campaign funding. In addition, the threshold is defined as the share of registered citizens. Manipulating it would thus require accurately predicting and manipulating *both* the fraction of registered citizens turning out and the share of candidate votes going to the third candidate.

To bring empirical support for the identification assumption, we check if there is a jump in the density of the running variable at the threshold (McCrary, 2008). As Figure A1 in the Appendix shows, we do not observe any. Figures B1 and B2 and Table B1 in Appendix B further show the lack of any significant jump at the cutoff for first round outcomes and for the assignment status predicted by these baseline variables, bringing additional support for the identification assumption.

Second, the *first stage* is strong. Figure 1 plots the treatment against the running variable, and Table 2 provides the formal estimates for the first stage. Columns (1) and (2) show the results obtained under the MSRED and IK optimal bandwidths, using a local linear regression. Columns (3) and (4) present the results using a quadratic specification. All four estimates are significant at the 1 percent level. In our preferred specification (column 1), we find that the probability that the third candidate stays in the race jumps from 0 to approximately 55.2 percent at the threshold.

The third candidate tends to drop out of the race when she has the same political orientation as one of the top two candidates (in 91.1 percent of the cases, at the threshold); when her orientation differs from both the top two, she instead tends to run in the second round (in 85.2 percent of the cases). As a result, the latter case accounts for the vast majority of complier districts.[10]

Third, *monotonicity* is fulfilled as the qualification rule did not generate any defier: no candidate who received a vote share lower than the qualification threshold was allowed to run in the second round.

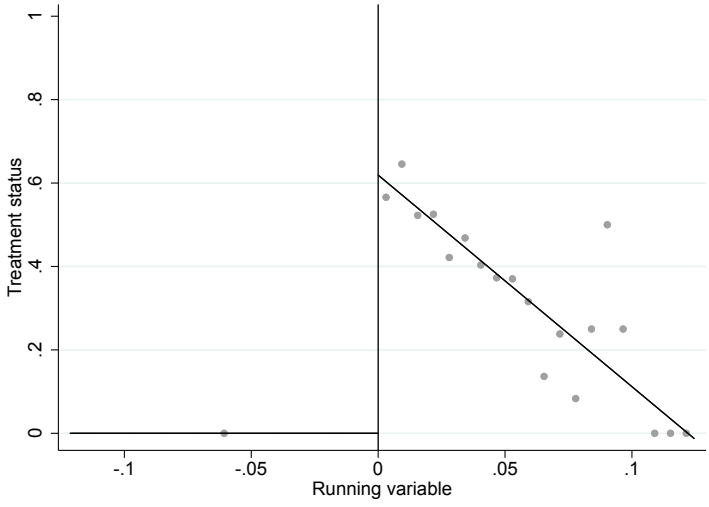
Finally, the *exclusion restriction* requires that the qualification of the third candidate only af-

[10]While our analysis primarily seeks to estimate the impact of the third candidate's presence in the second round, the second part of our discussion (Section 5.2) examines at greater length the factors affecting the decision of the third candidate whether to drop out or stay in the race, thereby providing additional evidence on the characteristics of complier districts.

fects second-round outcomes through the third candidate's presence in that round. We cannot entirely rule out the possibility that the third candidate's decision to drop out (which is only observed conditional on her qualification) disappoints some voters, or that it is interpreted as a signal on other candidates' characteristics, thus affecting voter behavior in the second round through other channels. Such violations of the exclusion restriction, however, are unlikely to drive the bulk of our results. First, the qualification of the third candidate has very small, and non-statistically significant, effects in districts where she shares the same political affiliation as one of the top two candidates and almost always drops out (Table A2 in the Appendix). Second, additional evidence on third candidates' dropouts and on their press coverage (which we discuss at greater length in Section 5.2) suggests that dropout decisions are unlikely to carry much private information and that they rarely generate adverse voter reaction.

Under these four conditions, the second-stage estimate can be interpreted as the causal impact of the treatment on complier districts, at the threshold. Estimating the impact of the presence of the third candidate on electoral outcomes amounts to comparing voters' behaviors in elections with two versus three candidates modulo two noticeable exceptions. First, in 5.5 percent of the elections near the discontinuity, the candidate ranking second in the first round dropped out of the race. Second, in 1.2 percent of the elections, the candidate ranking fourth in the first round also qualified for the second round, and she decided to run in three instances. Appendix C discusses these particular cases at greater length and shows that our results are not driven by them.

Figure 1: First stage



Notes: Dots represent the local averages of the treatment status (y-axis). Averages are calculated within bins of the running variable (x-axis). The running variable (the qualifying margin of the third-highest-ranking candidate in the first round) is measured as percentage points. Continuous lines are a linear fit.

Table 2: First stage

Outcome	(1)	(2)	(3)	(4)
	Treatment status			
Assignment status	0.552***	0.611***	0.509***	0.566***
	(0.042)	(0.030)	(0.051)	(0.043)
Observations	1,541	3,579	2,142	3,579
Polynomial order	1	1	2	2
Bandwidth	0.017	0.038	0.023	0.038
Band. method	MSERD	IK	MSERD	IK
Mean, left of the threshold	0.00	0.00	0.00	0.00

Notes: Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. The outcome is a dummy equal to 1 if the third candidate is present in the second round. The dependent variable is a dummy equal to 1 if the third candidate gathered more than 12.5 percent of the registered votes in the first round. Separate polynomials are fitted on each side of the threshold. The polynomial order is 1 in columns 1 and 2, and 2 in columns 3 and 4. The bandwidths are derived under the MSERD (columns 1 and 3) and IK (columns 2 and 4) procedures.

4 Empirical results

4.1 Impact on participation and candidate votes

We consider three outcomes related to participation: turnout, the share of null and blank votes, and the share of candidate votes, all defined using the number of registered voters as the denominator. We begin with a graphical analysis before presenting formal estimates of treatment effects.

In the graphs in Figure 2, each dot represents the average value of the outcome within a given bin of the running variable. To facilitate visualization, a quadratic polynomial is fitted on each side of the 12.5 percent threshold. We observe a clear discontinuity at the cutoff for each outcome: the presence of the third candidate has a large and positive impact on the share of registered citizens who vote and on the share of citizens who vote for one of the competing candidates rather than casting a blank or a null vote.

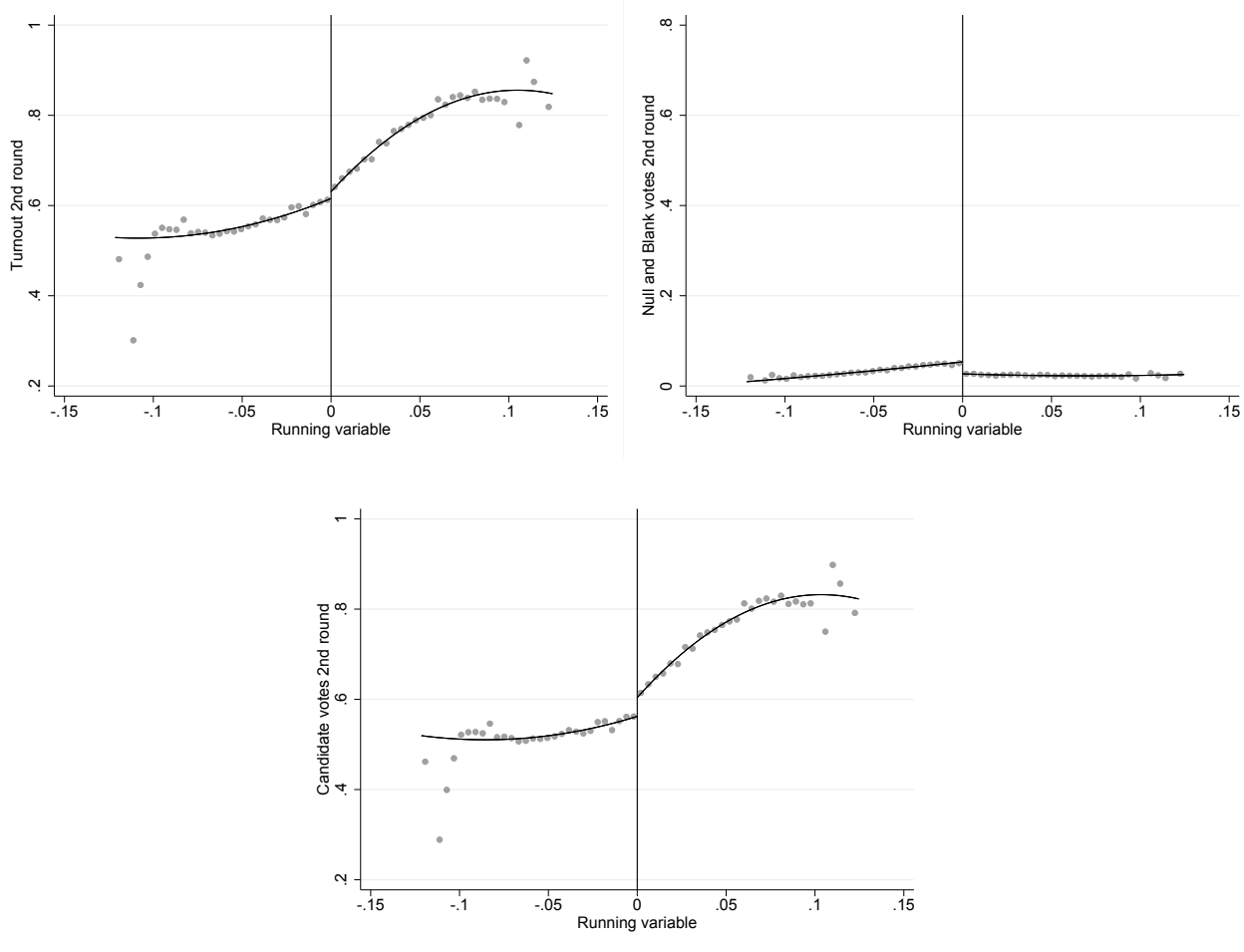
Table 3 provides the formal estimates of the impacts using our preferred specification. On average, the presence of the third candidate in the second round increases turnout by 4.0 percentage points (6.7 percent), reduces the share of null and blank votes by 3.7 percentage points (78.7 percent),[11] and increases the share of candidate votes by 7.8 percentage points (14.2 percent). All effects are significant at the 5 percent level and the last two at the 1 percent level. As should be

[11] In the 2015 local elections, the only ones in which blank and null votes were counted separately, the impact on both outcomes was negative (Figure A2 and Table A3 in the Appendix).

expected, the impact on the share of candidate votes corresponds to the sum of the absolute value of the impacts on the turnout rate and the share of blank and null votes.

To probe the robustness of the results to specification and bandwidth choices, Table 4 estimates the treatment effect on the share of candidate votes using four different specifications. Columns (1) and (2) show the results obtained under the MSERD and IK optimal bandwidths, using a local linear regression. Columns (3) and (4) use a quadratic specification. The estimates obtained using these different specifications are all significant at the 1 percent level and very close in magnitude.

Figure 2: Impact on participation and candidate votes



Notes: Dots represent the local averages of the outcome variable (y-axis). Averages are calculated within 0.4 percentage-point-wide bins of the running variable (x-axis). The running variable (qualifying margin of the third-highest-ranking candidate in the first round) is measured as percentage points. Continuous lines are a quadratic fit.

Table 3: Impact on participation and candidate votes

Outcome	(1) Turnout	(2) Null and Blank votes 2nd round	(3) Candidate votes
3rd present	0.040**	-0.037***	0.078***
	(0.017)	(0.004)	(0.019)
Observations	2,298	2,630	2,374
Polynomial order	1	1	1
Bandwidth	0.025	0.028	0.026
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.598	0.047	0.548

Notes: Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. Each outcome uses the number of registered voters as the denominator. The variable of interest (the presence of the third candidate in the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate in the first round was higher than the threshold). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table 4: Impact on candidate votes

Outcome	(1)	(2)	(3)	(4)
	Candidate votes in the 2nd round			
3rd present	0.078***	0.075***	0.080***	0.080***
	(0.019)	(0.016)	(0.026)	(0.024)
Observations	2,374	3,454	3,039	3,454
Polynomial order	1	1	2	2
Bandwidth	0.026	0.037	0.033	0.037
Band. method	MSERD	IK	MSERD	IK
Mean, left of the threshold	0.548	0.541	0.544	0.541

Notes: The polynomial order is 1 in columns 1 and 2 and 2 in columns 3 and 4. The bandwidths are derived under the MSERD (columns 1 and 3) and IK (columns 2 and 4) procedures. Other notes as in Table 3.

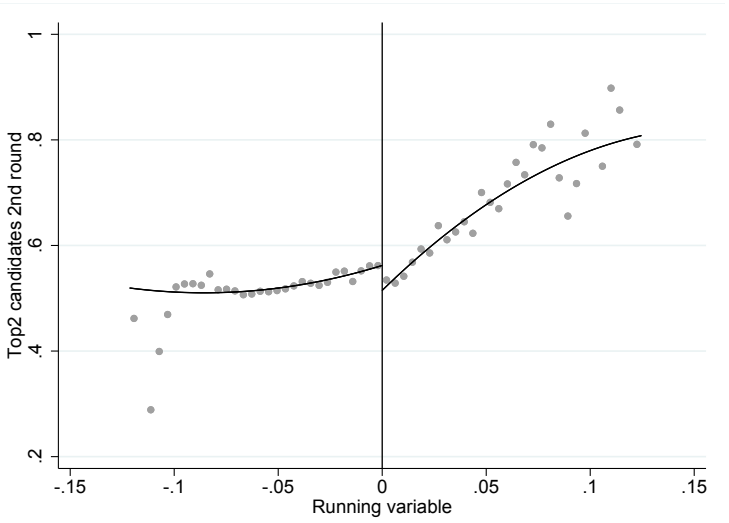
4.2 Impact on votes going to the top two candidates

We now estimate the effect of the presence of the third candidate on the second round vote share of the candidates who placed first and second in the first round. If vote shares were defined using the number of candidate votes as denominator, the total vote share of the top two candidates in the second round would decrease by exactly the fraction of votes going to the third candidate when she is running. Instead, we define vote shares using the number of registered citizens as denominator,

just as we did for participation outcomes. As a result, the presence of the third candidate has no mechanical effect: it can decrease the vote share of the other two candidates, increase it, or leave it unchanged.

Figure 3 plots the vote share of the top two candidates against the running variable. The quadratic polynomial fit indicates a large downward jump at the cutoff.

Figure 3: Impact on votes going to the top two candidates



Notes as in Figure 2.

Table 5: Impact on votes going to the top two candidates

	(1)	(2)	(3)	(4)
Outcome	Vote share top 2 in the 2nd round			
3rd present	-0.069***	-0.072***	-0.061**	-0.068***
	(0.020)	(0.015)	(0.028)	(0.023)
Observations	2,250	3,704	2,726	3,704
Polynomial order	1	1	2	2
Bandwidth	0.024	0.040	0.030	0.040
Band. method	MSERD	IK	MSERD	IK
Mean, left of the threshold	0.551	0.541	0.546	0.541

Notes as in Table 4.

Consistent with the graphical analysis, the estimates reported in Table 5 indicate a sizable and significant negative impact of the treatment on the vote share of the top two candidates in the second round. Our preferred specification (column 1) shows that the presence of the third candidate decreases the vote share of the top two candidates by 6.9 percentage points (12.5 percent) on

average, an effect significant at the 1 percent level. The effect has a similar magnitude and remains significant at the 1 or 5 percent level in other specifications.

We further estimate the impact on the vote share of the first and second candidates separately, and find that both decrease by a similar magnitude on average when the third candidate is present (Figure A3 and Table A4 in the Appendix).

4.3 Impact on the top two candidates depending on political orientation

We now assess whether the presence of the third candidate systematically affects the outcome of the race. We first show that the vote shares of the top two candidates decrease in proportion to their ideological proximity with the third candidate. We focus on elections in which the political orientations of the three candidates are well-identified and differ from one another, so that they can be ranked on the left-right axis. The resulting sample accounts for 75.7 percent of the districts where the third candidate qualifies and runs in the second round, near the discontinuity. We call A the candidate most to the left, C the candidate most to the right, and B the candidate located between A and C. We study three different settings, each characterized by the ideological position of the third candidate – on the left, right, or in the middle.[12]

As shown in Figure 4.1, when the third candidate is C, candidate B (who is closer to her) loses the most votes. The regression results are reported in Table A5 in the Appendix: while the vote share of candidate B decreases by 5.2 percentage points on average, the vote share of candidate A decreases by only 2.5 percentage points. The effect on an outcome defined as the difference between the vote shares of candidates A and B is significant at the 10 percent level.

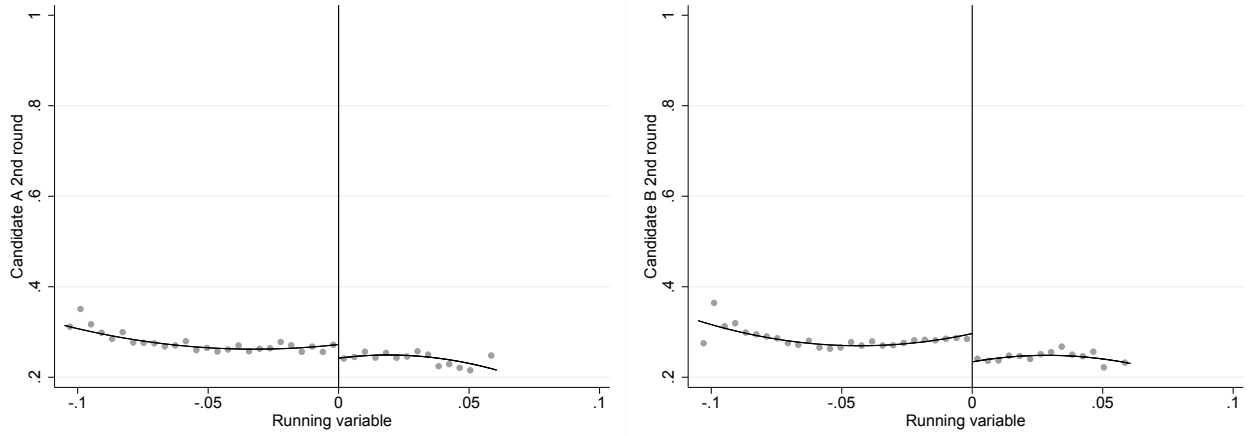
Symmetrically, when the third candidate is A, candidate B again loses the most from her presence (Figure 4.2). As shown in Table A6 in the Appendix, while the vote share of candidate B decreases by 8.6 percentage points on average, the vote share of candidate C is not significantly affected by the presence of candidate A. Again, the effect on the difference between the vote shares of B and C is significant, and at the 1 percent level.

Finally, when the third candidate is located in the middle, both A and C lose a large number of votes (Figure 4.3). As shown in Table A7 in the Appendix, the presence of B decreases the vote share of candidate A by 7.1 percentage points on average and the vote share of candidate C by 5.6 percentage points. Unlike in the first and second settings, the effect on the difference between the vote shares of B and C is not statistically significant.

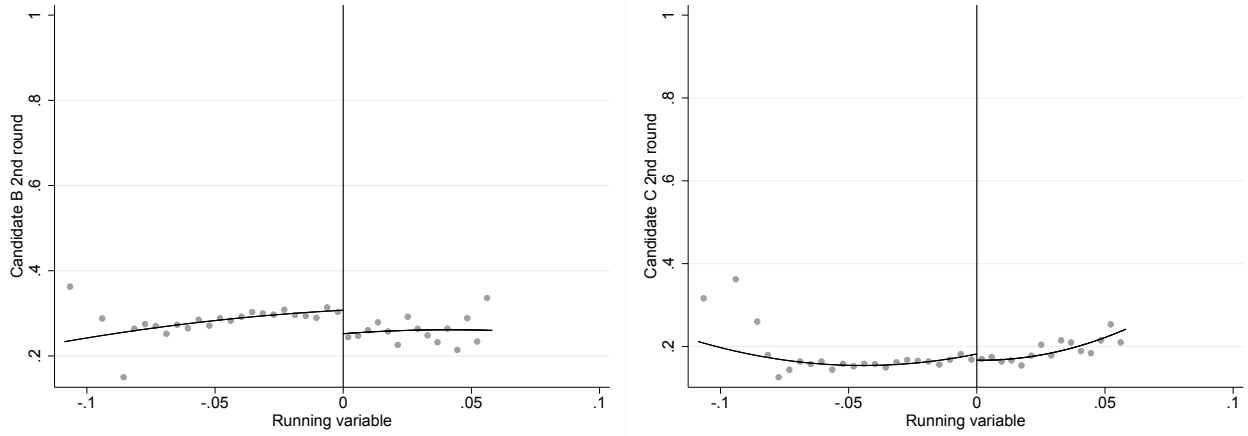
[12] In 97.3 percent of the elections corresponding to the first setting, the third candidate is on the far-right (C), one of the top two candidates is on the right (B), and the other is on the left (A). In 94.6 percent of the elections corresponding to the second setting, the third candidate is on the left (A), one of the top two candidates is on the right (B), and the other is on the far-right (C). In 62.7 percent of the elections corresponding to the third setting, the third candidate is on the right (B), one of the top two candidates is on the left (A), and the other is on the far-right (C). In 36.4 percent, the third candidate is on the center (B), one of the top two candidates is on the left (A), and the other is on the right (C).

Figure 4: Impact on the top two candidates depending on political orientation

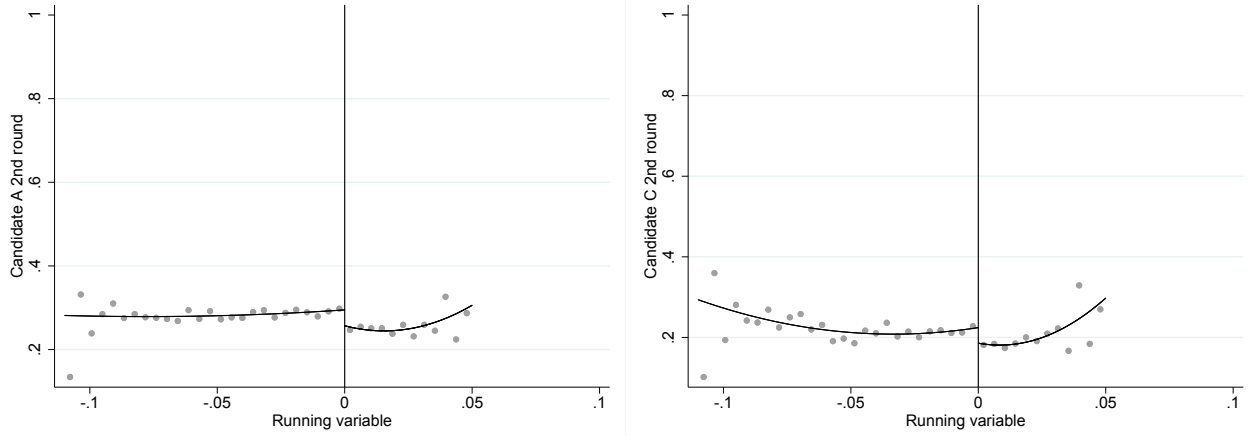
4.1. Impact on candidates A and B when the third candidate is C (1st setting)



4.2 Impact on candidates B and C when the third candidate is A (2nd setting)



4.3 Impact on candidates A and C when the third candidate is B (3rd setting)



Notes: Figure 4 includes the elections where the top three candidates have distinct political orientations. Figure 4.1 (resp. 4.2) includes only the elections where the third candidate is located to the right (resp. left) of both the first and the second candidates. Figure 4.3 includes only the elections where the third candidate is located between the first and the second candidates. Other notes as in Figure 2.

4.4 Impact on the top two candidates depending on the strength of the third

The rest of this section focuses on the first and second settings, where we can identify which candidate is ideologically closest to the third candidate and suffers the most from her presence. We now test whether the presence of the third candidate reduces the number of votes cast for the top two candidates even when she has low foreseeable chances of being a front-runner in the second round.

We estimate and compare the impact of the presence of the third candidate on the vote shares of the top two candidates in a series of subsamples. In each new subsample, we impose additional restrictions which, arguably, make it less plausible that the third candidate could pose a challenge on the top two candidates.

The first subsample combines the first and second settings as defined in Section 4.3, without imposing any further restrictions: it includes all elections in which the three top candidates have distinct political orientations, and the third candidate is either on the left or the right of both top two candidates. In this sample, although the third candidate does rank behind the top two candidates in the second round in the vast majority of cases, she nonetheless wins in 11 elections near the threshold and ranks second in 28 (Table 6, column 3, sample 1).

To define the next subsamples, we consider the total voter support that each of the top three candidates may expect to receive in the second round, based on the votes obtained by other candidates of the same political orientations in the first round. A candidate from the left, for instance, may expect to receive votes not only from her supporters but also from supporters of other left-wing candidates who did not qualify for the second round. We thus define her "strength" as the sum of first-round vote shares of all candidates belonging to the left.

We restrict the second sample to observations from the first sample in which the third candidate's strength is lower than that of each of the top two candidates. For example, if the third candidate is on the left, the second candidate is on the far-right and the first candidate is on the right, we consider only elections where the left candidates gathered fewer votes in total in the first round than those on the right or far-right. This restriction makes it arguably less likely that the third candidate could be a front-runner in the second round – and indeed, such a candidate never wins and ranks second in only 3 cases near the discontinuity in this sample (Table 6, column 3, sample 2).

Candidates' strengths computed based on first-round results only provide imperfect information on the level of support that candidates can hope to receive in the second round, not least because not everyone votes sincerely in the first round. Thus, the third and fourth samples further impose a difference of at least five and ten percentage points, respectively, between the strength of the third candidate and the strength of each of the top two candidates. In samples 3 and 4, the average gap between the strength of the third candidate and of each of the top two candidates is as

large as 11.4 and 13.5 percentage points in the first round, close to the discontinuity. Hence, these additional restrictions make it even less plausible that the third candidate had reasonable chances to be in contention for victory – and indeed, such a candidate never ranked first or second in those two subsamples (Table 6, column 3, samples 3 and 4).

As shown in Table 6, the impact of the presence of the third candidate on the vote share of the top two candidates is robust across the four samples and strikingly close in magnitude: all estimates are significant at the 1 percent level and included between 8.0 and 13.2 percentage points (column 1).

Table 6: Impact on the vote share of the top two candidates depending on the strength of the third .

	(1)	(2)	(3)	(4)	(5)
Impact 3rd present	Top 2 Candidates	*Bandwidth / Observations*	3rd becomes 1st/ 3rd becomes 2nd	Closest Candidate	Furthest Candidate
Sample 1	-0.082***	0.014	11	-0.061***	-0.027**
	(0.017)	546	28	(0.008)	(0.013)
Sample 2	-0.080***	0.019	0	–0.054***	-0.026***
	(0.015)	609	3	(0.009)	(0.010)
Sample 3	-0.088***	0.014	0	-0.050***	-0.037***
	(0.020)	331	0	(0.010)	(0.013)
Sample 4	-0.132***	0.008	0	-0.060***	-0.074***
	(0.029)	107	0	(0.016)	(0.018)

Notes: Column 2 gives the bandwidths used for the estimation of the impact on the vote share of the top two candidates as well as the number of observations lying in those bandwidths. Column 3 displays the number of cases where the third candidate ranks first or second in the second round in the elections included in the bandwidths defined in column 2. Other notes as in Table 3.

4.5 Impact on winner identity

We turn to the last and perhaps most important outcome, the winner of the election, and test whether the presence of the third candidate decreases the likelihood that the candidate ideologically closest to her wins the election. Formally, we use a dummy equal to 1 if the closest candidate wins (and 0 if she loses) as the outcome. We run the analysis for the elections in sample 2, in which the candidate ideologically closest to the third is clearly identified, and the third candidate never wins (as shown in Table 6), ensuring that the results are not artificially driven by elections in which the outcome takes the value 0 at the right of the threshold due to the victory of the third candidate.

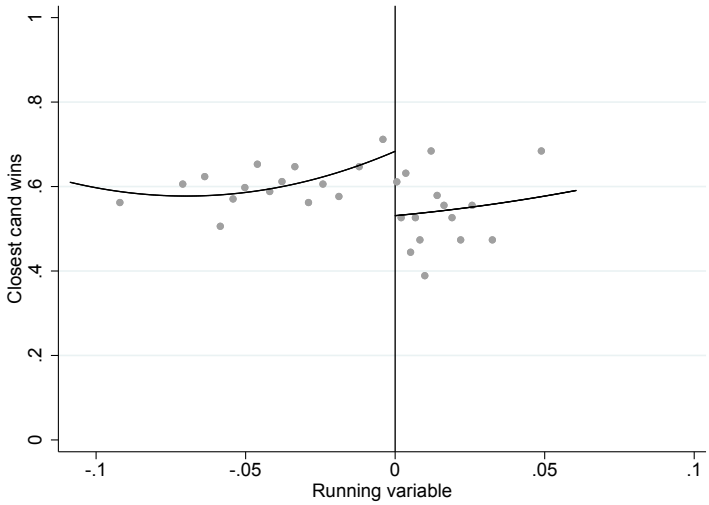
As shown in Figure 5, the presence of the third candidate has a large and negative impact on the probability that the closest candidate wins, thus harming the third candidate's supporters who prefer the closest over the furthest candidate. Table 7 provides the formal estimates. In our preferred specification (column 1), we find a negative effect of 19.2 percentage points on average.

This estimate is significant at the 5 percent level and robust to other specifications (columns 2 through 4). This result means that, in around one-fifth of the elections we consider, the candidate among the top two that is ideologically closest to the third loses as a result of her presence whereas she would have won absent the third, in a two-candidate race against the other top-two candidate.

Given our results in Section 4.3, the candidate ideologically closest to the third candidate would most likely also win a two-candidate race against the third, making her the Condorcet winner of the second round. Indeed, in elections of the first setting, where the candidate who arrived third in the first round is C, B should be expected to win a race against C, as she obtained more votes in the first round and would attract relatively more voters of candidate A (based on estimates from Table A6 in the Appendix). Similarly, in elections of the second setting, in which the candidate who arrived third in the first round is A, B obtained more votes in the first round than A and she would attract relatively more voters of candidate C, in a race against A (based on estimates of Table A5 in the Appendix). In sum, in around one-fifth of the elections we consider, the presence of the third candidate causes the defeat of the likely Condorcet winner, harming the third candidate's supporters and a majority of voters.

We next explore what these results tell us about the factors affecting voters' participation and voting choice as well as candidates' decision to compete or drop out.

Figure 5: Impact on the probability that the closest candidate wins



Note: We use elections of sample 2 as defined in Section 4.4. Dots represent the local averages of the probability that the candidate ideologically closest to the third wins in the second round. Averages are calculated within quantile-spaced bins of the running variable (x-axis). The running variable (the qualifying margin of the third-highest-ranking candidate in the first round) is measured as percentage points. Continuous lines are a quadratic fit.

Table 7: Impact on the probability that the closest candidate wins

Outcome	(1)	(2)	(3)	(4)
	Closest candidate wins			
3rd present	-0.192**	-0.178***	-0.101	-0.205**
	(0.089)	(0.069)	(0.140)	(0.094)
Observations	686	1,567	553	1,567
Polynomial order	1	1	2	2
Bandwidth	0.021	0.043	0.017	0.043
Band. method	MSERD	IK	MSERD	IK
Mean, left of the threshold	0.656	0.622	0.678	0.622

Notes: We use elections of sample 2 as defined in Section 4.4. The outcome is a dummy variable equal to 1 if the candidate ideologically closest to the third wins in the second round. Other notes as in Table 4.

5 Interpretation of the results and discussion

5.1 Voters' behavior

The effects of the third candidate's presence on electoral outcomes may in theory be driven by the response of both voters and other candidates. In our setting, however, there is only one week between the two rounds, leaving little time for the top two candidates to adjust their strategies to the presence of an additional competitor. While we lack data on candidates' precise political platforms, we collected data on their campaign expenditures for the 2011 and 2015 local elections and for the 1993, 1997, 2002, 2007, and 2012 parliamentary elections (collectively accounting for 77.8 percent of our sample).[13] As shown in Appendix D, we find no impact of the presence of the third candidate on the top two candidates' campaign expenditures or contributions, suggesting that they do not intensify their political campaign when the third candidate is present and that our results are primarily driven by voters' response to changes in the electoral offer. Accordingly, we now discuss what our aggregate effects can teach us about individual voters' behavior and motivations.

5.1.1 Loyals and switchers

When the third candidate is absent, voters may choose to either vote for one of the top two or refrain through abstaining or voting blank or null. When the third candidate is present, they have a third possible option: voting for her. The corresponding two by three matrix (Figure 6) defines

[13] All data come from the French National Commission on Campaign Accounts and Political Financing (CNCCFP). Data on campaign expenditures for the 1993, 1997, and 2002 parliamentary elections were collected and digitized by Abel François and his co-authors (see Fauvelle-Aymar and François, 2005; Foucault and François, 2005).

six different types of citizens. Our effects on participation and on the vote share of the top two candidates are driven by the four types of citizens (2, 3, 5, and 6) who behave differently whether the third candidate is present or absent.

Figure 6: Matrix of citizens' behavior

3rd absent / 3rd present	Abstain or blank or null	Vote for one top-two candidate	Vote for the third candidate
Abstain or blank or null	Type 1	Type 3	Type 5
Vote for one top-two cand.	Type 2	Type 4	Type 6

The large increase in the number of candidate votes reported in Section 4.1 first suggests that the third candidate has a large number of "loyal" supporters who vote for her when she is present but abstain or vote blank or null otherwise (type 5 citizens). However, this effect might also result from the heightened mobilization of the top two candidates' supporters, resulting in a larger number of type 3 citizens (who do not cast a candidate vote when the third is absent and vote for the top two when she is present) than type 2 citizens (who follow the opposite trajectory). Indeed, the presence of the third candidate in the second round reduces the winning margin by 5.8 percentage points on average (Figure A4 and Table A8 in the Appendix), and more contested elections may drive additional supporters of the top two candidates to the polls.

To assess the relative importance of both mechanisms, we compare the effects on participation in settings where one or the other channel is likely to dominate. In elections in which the top two candidates have distinct political orientations, the presence of the third candidate substantially increases closeness (Table A9 in the Appendix, column 3) by disproportionately decreasing the vote share of the front-runner ideologically closest to her. Instead, when the top two candidates have the same political orientation, they are equally distant from the third, so that the third candidate's presence does not significantly affect closeness (Table A9 in the Appendix, column 2) but adds more diversity to the existing political offer. We find much larger effects on the number of candidate votes in races of the latter type (Table A10 in the Appendix), suggesting that the effects on participation are mostly driven by "loyals" voting for the third candidate.

We now interpret the large decrease in the total vote share of the top two candidates reported in Section 4.2. This effect is first driven by the behavior of another type of third candidate's voters: "switchers", who vote for the top two candidates when she is absent but switch to the third when she is present (type 6 citizens). The loss of these voters could be compensated by the increased mobilization of the top two candidates' supporters, measured by the difference between the number of type 3 and type 2 citizens, but again, our test above suggests that this mechanism only has modest importance on average. The fact that the top two candidates' vote shares decrease in proportion to their ideological proximity to the third brings additional support for the interpretation that switchers

are responsible for most of the effect. It also rules out the possibility that switchers are simply noisy voters, randomly splitting their votes among competing candidates (such noisy voting should affect the top two candidates equally). Instead, this result suggests that the candidate among the top two that most switchers prefer, and vote for when the third candidate is absent, is the one closest to the third.

The results in Sections 4.4 and 4.5 further imply that the number of switchers remains very high even when the third candidate has low foreseeable chances of being a front-runner in the second round, and that their choice to vote for the third candidate when she is present often causes the defeat of the top-two candidate they prefer.

5.1.2 Theoretical implications

When the third candidate has a reasonable chance of finishing first or second in the second round, switchers' behavior can easily be rationalized within pivotal models. Following Downs (1957), these models posit that voters face a cost of voting and receive instrumental benefits depending on their likelihood to be pivotal and on the differential utility associated with one candidate defeating another (e.g., Palfrey and Rosenthal, 1983, 1985). Voters who face a sufficiently low cost of voting, whose instrumental benefits are maximized by voting for the third candidate, but who are not indifferent between the top two, will vote for one of the top two when the third is absent and for the third when she is present, as switchers do. The behavior of loyals is more difficult to rationalize, as it requires these voters to all receive sufficiently low instrumental benefits from choosing between the top two candidates. For loyals who abstain when the third candidate is absent, these benefits need to be lower than the cost of voting, itself bounded by the instrumental benefits of voting for the third candidate when she is present. For loyals who vote blank or null when the third candidate is absent, casting a vote for one of the top two candidates would not generate much additional cost, and the associated benefits thus need to be close to null (for instance, as a result of these voters being exactly indifferent between the top two candidates).

The behavior of loyals and switchers is even more difficult to rationalize when the third candidate is unlikely to be a front-runner in the second round. Rational voting models (e.g., Myerson and Weber, 1993) assume that voters care only about the winner of the election, predicting a positive vote share for the third candidate only when she and the second candidate have an equal probability to be in contention for victory. Similarly, in models positing that vote choices are driven by group rules rather than pivot probabilities (Coate and Conlin, 2004; Feddersen and Sandroni, 2006), groups' aggregate utility is assumed to depend only on who wins the election. As a result, in three candidates' races, the sincere equilibrium in which all voters choose their most-preferred candidate only exists when the third candidate is sufficiently strong. Instead, when her chances of victory are too low, we end up in a Duvergerian equilibrium where only the top two receive votes

(Bouton and Ogden, 2017). These models are particularly difficult to reconcile with the fact that the number of switchers remains equally high in races where the third candidate's strength is lower than that of each of the top two candidates, the third never wins, and where switchers' behavior often leads to the defeat of their preferred top-two candidate. We now discuss three explanations that could rationalize this behavior within voting models centered on instrumental motives.

First, in rational voting models, aggregate uncertainty on the level of candidates' support can lead to an equilibrium in which more than two candidates receive a substantial fraction of votes (Myatt, 2007; Fisher and Myatt, 2017). But these models also predict that strategic coordination on the top two increases with the distance from contention, which is not what we observe: as shown in Section 4.4, the negative impact on the top two candidates' total vote share remains strong and remarkably stable in samples 3 and 4, which include elections with a gap of at least five and ten percentage points, respectively, between the third candidate's strength and that of each of the top two candidates. Building on previous models, Bouton, Llorente-Saguer, and Castanheira (2015) further demonstrate that a sincere equilibrium exists as long as voters conceive that the third candidate could win, with even a very low probability. While the third candidate never ranks first or second in samples 3 and 4, we cannot entirely exclude that some voters thought ex ante that she had a non-zero probability of winning. However, Bouton, Llorente-Saguer, and Castanheira (2015) show that the sincere equilibrium also requires that voters give a sufficiently large probability to the existence of a state of nature where the third candidate has a stronger support than one of the top two, or that they give a positive probability to a full reversal of support between the third and the candidate ideologically closest. Both conditions seem unlikely to be satisfied when the third candidate's strength lags far behind the top two in the first round. In addition, while existing models are mostly silent about equilibrium selection, one could expect such configuration to facilitate the coordination of instrumental voters on the Duvergerian equilibrium, which again we do not observe.

A second, complementary, way in which our results could be reconciled with instrumental motives is if voters had limited information about, or gave little attention to, the three candidates' first-round rankings and vote shares. Not collecting or not paying attention to freely available and directly relevant information may itself be considered at odds with rational behavior. In addition, if switchers' voting behavior was driven by limited information, we would expect it to be less prevalent in districts where voters are more informed, which we do not observe. We proxy the level of information by the salience of the race (parliamentary elections being more salient than local elections) as well as three different measures of media exposure: local newspaper consumption, measured at the département level, and radio and TV news audiences, measured at the département and region level, respectively.[14] We find that the impact on the top two candidates' vote share stays

[14]Proxying the level of information by the salience of the race is a strategy also used by Hall and Snyder (2015).

equally high in parliamentary elections and in districts with media exposure higher than the median or the second tercile (Tables F1, F4, and F5 in Appendix F), and that it remains unaffected by the gap between the strength of the third candidate and of the top two in these subsamples (Tables F2 and F6 to F8 in Appendix F).

A third possible interpretation for switchers' behavior that is consistent with instrumental motives is that these voters are not *short-term* but *long-term* instrumentally rational (Castanheira, 2003). Vote shares in the second round only determine who wins the election, and they are not taken into account for other purposes such as campaign expenditure reimbursement (which is based on first-round vote shares only). Hence, voters should not expect their candidate or party to benefit directly from a higher vote share in the second round. However, they may choose to vote for the third candidate in order to signal their preferences and affect the policies implemented by the winner, or to influence the opinions and future votes of other voters (Piketty, 2000). To the extent that dynamic strategic motives are driving voters' behavior, we should expect voters to trade off the impact of their vote on present elections and on future elections and policies. We should see fewer people vote for the third candidate when their vote is likely to matter more for the result of the current election: for instance, when the second round is expected to be close. Instead, we find that the impact on the vote share of the top two candidates is equally strong in elections where the top two candidates were very close in the first round (Tables E1 and E2 in Appendix E), including in parliamentary elections and in districts with higher media exposure (Tables F3 and F9 to F11 in Appendix F). These results suggest that switchers are willing to decrease the vote share of the top-two candidate they prefer whether or not they expect the race to be close, which further suggests that dynamic strategic motives are unlikely to explain the bulk of our results.[15]

In summary, it is difficult to rationalize our results within existing rational or group rule-utilitarian voting models, which assume that the individual or group's utility is only affected by who wins the election, even when allowing for imperfect information, aggregate uncertainty, or dynamic strategic motives. Instead, our results suggest that voters' choice of candidate, as well as their decision whether to vote or abstain can only be satisfactorily explained by taking into account expressive benefits independent of the election results. For many voters, the expressive utility of

Data on local newspaper circulation were collected by Julia Cagé (see Cagé, 2017). We collected the data on radio and TV news audiences from Médiamétrie. Data on radio news audience are available at the département level on a yearly basis from 2003 to 2015. Data on TV news audience are available at the region level for the years 2010, 2011, 2012, and 2015. For each of the three measures of media exposure (local newspaper consumption, radio news audience, and TV news audience), we split our sample based on medians and terciles estimated separately for each election year, to control for time trends. See Appendix F for more details.

[15] Alternatively, switchers might continue voting for the third when this threatens the victory of the top-two candidate they prefer because they reason that the associated signal is all the more powerful as it is costly. This interpretation requires a large number of voters to be sufficiently sophisticated and to believe that candidates and other voters are sufficiently sophisticated as well to interpret their vote in this way, making it perhaps less likely.

voting for their favorite candidate outweighs the cost of voting.[16] For others, this expressive utility outweighs the instrumental cost of contributing to the victory of their least favorite candidate. To feature both trade-offs, our results call for a model of costly voting in elections with more than two candidates, and in which voters value both instrumental and expressive motives.

5.2 Candidates' decision to drop out

The negative impact of the third candidate's presence on the chances of victory of the top-two candidate ideologically closest to her sheds light on the motives underlying third candidates' behavior as much as voters'. Third candidates could prevent this effect by simply dropping out of the race between the first and second rounds. The fact that they do not drop out more systematically, especially when their own likelihood of being a front-runner is very low, implies that they often value the benefits associated with competing in the second round more than they care about influencing the race's outcome. In this last section, we provide additional evidence to better understand why, and under which circumstances, third candidates decide to stay in the race instead of dropping out. This evidence also allows us to better characterize complier districts, in which the effects of the third candidate's presence were estimated, and to bring additional support for the exclusion restriction underlying these estimates.

Formally, using our regression discontinuity design framework, we regress a dummy equal to 1 if the third candidate drops out on the assignment variable, and compare the effects in different configurations. The most important factor affecting candidates' decision to drop out is political orientation. As mentioned in Section 3.2, the third candidate drops out of most races (91.1 percent, at the threshold) in which she has the same orientation (far-left, left, center, right, or far-right) as one of the top two candidates. Instead, she stays in the race in the large majority of elections (85.2 percent, at the threshold) in which she has a different orientation than both top two candidates (Figure G1 and Table G1 in Appendix G).

To better understand this difference, we gathered descriptive evidence from press articles covering instances of candidates dropping out. Using Factiva's research tool, we collected all articles released between the two rounds of all elections in our sample and containing the entity "désist".[17] We obtained a total of 1,678 articles published in 86 different newspapers in election years 1997, 2002, 2007, 2011, 2012, and 2015 (more information in Appendix H). In each, we systematically coded the context in which the dropout took place (decision made by the party, existence of an agreement among parties, or decision made individually by the candidate), the reasons provided by the party or candidate (preventing the victory of another candidate or feeling ideologically

[16] For other recent evidence on expressive motives of turnout, see Fiva and Smith (2017) and Ujhelyi, Chatterjee, and Szabó (2017).

[17] This entity is present in all forms of the verb "se désister" (to drop out) and in the noun "désistement" (dropout).

close to a top-two), and whether the article mentions the reactions of the candidate's party, voters, or competing candidates. All statistics are reported in Tables H1 to H3 in Appendix H.

The most striking lessons of this investigation are as follows. First, articles covering dropouts are nearly ten times more likely to report that the third candidate's decision to drop out was the result of a party-level agreement when she has the same orientation as one of the top two candidates than when she has a different orientation than both. Conversely, articles are ten times more likely to mention that she took the decision to drop out on her own, independently from any party's instructions, when she has a different orientation than both top two candidates. Second, when the third candidate has a different orientation, 63.1 percent of articles report that she dropped out in order to prevent the victory of another candidate (against 29.2 percent when she has the same orientation as one of the top two), and none that she dropped out because she felt ideologically close to one of the top two candidates (against 15.9 percent).

These patterns suggest that third candidates who have a different orientation than both of the top two only drop out in rare circumstances, motivated by their aversion for one of the top two more than ideological proximity with the other. In general, they fail to internalize the cost that staying in the race generates for the ideologically closest top-two candidate. Instead, when the third candidate has the same orientation as one of the top two, ideological proximity (as well as, perhaps, the habit to govern together) helps their parties reach an agreement which internalizes this cost and, in an overwhelming majority of cases, results in the third candidate dropping out. Such agreements are often département- or even nation-wide, so that dropouts of candidates of the two parties balance each other, and the cost for one candidate to drop out is mitigated by the increased likelihood of victory of another candidate of her party in another district.

Interestingly, when the third candidate has the same orientation as one of the top two, her likelihood to drop out is not only much higher, it also varies more with first round results. Same-orientation third candidates are relatively more likely to drop out in competitive races, characterized by a small difference between the strengths of the top two candidates (Table G2 in Appendix G). This brings additional support for the interpretation that their decision to drop out is motivated by their party's desire to ensure the victory of a sister party's candidate. However, third candidates are less likely to drop out when they are closer to the top two candidates in the first round (Table G4 in Appendix G), suggesting that candidates trade-off party instructions with their desire to stay in the race, and that their immediate individual interest is more likely to prevail when they have a chance of being a front-runner in the second round. Instead, the dropout decision of third candidates with a different orientation than both top two does not follow any such pattern (Tables G3 and G5 in Appendix G).[18]

[18]The third candidate's decision to drop out or stay in the race only occurs conditional on qualifying for the second round. Observing this decision could, in theory, affect voters' behavior directly, independently of the third candidate's

Our analysis of the factors affecting third candidates' dropout decision has two implications for the interpretation of our effects on voters' behavior. First, voters' difficulty to behave strategically in our sample might be driven by the overrepresentation, among complier districts, of second-round races where the third candidate has a different orientation than both top two, resulting from the low likelihood of third-candidate dropouts in this setting. Second, this feature of our sample is not idiosyncratic. It results from the intrinsic difficulty for candidates of distinct orientations to find an agreement leading to the dropout of the lower ranked. The tradeoff between expressive and instrumental motives might well be particularly difficult for voters to solve when they have to choose between candidates of different orientations, but this tradeoff is also likely to occur systematically more often in this context.

6 Conclusion

This paper highlights the motivations and consequences of citizens voting for lower-ranked candidates in elections held under plurality rule. Using a fuzzy regression discontinuity design around the qualification threshold for the second round of French local and parliamentary elections, we compare electoral outcomes when voters have to choose between two or three candidates.

The presence of the third candidate increases the share of registered citizens who vote for a candidate by 7.8 percentage points; it reduces the vote share of the top two candidates in proportion to their ideological proximity with the third by 6.9 percentage points. The latter impact remains equally strong when first-round results indicate that the third candidate is very unlikely to be a front-runner in the second round, and it causes the defeat of the Condorcet winner in one-fifth of the races.

The behavior of third candidate's voters, whether they are loyal supporters who abstain or vote blank or null when the third candidate is absent, or switchers who vote for the top two candidates in that case, is difficult to rationalize within canonical voting models. In both rational voter and group-rule-utilitarian models, the individual or group's utility is only affected by the election's winner. Instead, our results suggest that voters' choice of candidate, as well as their decision whether to vote or abstain, can only be satisfactorily explained by taking into account expressive benefits

presence, thus violating the exclusion restriction (previously discussed in Section 3.2). The evidence we collected on factors affecting dropouts suggests this is unlikely to be the case, in particular in elections where the third candidate has a different orientation than both top two, which account for the majority of our compliers, and which we focus on to measure the effects on winner identity and on the vote shares of the top two depending on their political orientation or on the strength of the third candidate (Sections 4.3 through 4.5). First, in these districts, the fact that the third candidate's decision does not systematically vary with first-round results alleviates the worry that it might increase the salience of some features of the race, including its level of competitiveness. Second, in addition to providing information, the decision of the candidate could provoke specific voters' reactions. However, less than one percent of dropout articles report an adverse reaction following the decision to drop out.

independent of the result. For many voters, the expressive utility of voting for their favorite candidate outweighs the cost of voting. For others, this expressive utility outweighs the instrumental cost of contributing to the victory of their least favorite candidate.

Anticipating voters' behavior, third candidates could drop out of the race between the first and the second rounds to prevent the defeat of the ideologically closest top-two candidate. Instead, our results suggest that third candidates often value the benefits associated with competing in the second round more than influencing its outcome. When the third candidate has a different orientation than both top two candidates, dropouts remain an exception. They only become the rule when the third candidate has the same orientation as one of the top two candidates and she follows party-level agreements.

Overall, our results on voters and candidates' behaviors suggest that the plurality rule often leads to coordination failure, and suboptimal outcomes, due to the combination of two phenomena: first, a large number of elections in which voters have to choose between more than two candidates due to the difficulty for parties of differing orientations to reach an agreement; and second, a large fraction of voters valuing expressive more than instrumental motives when confronted with such an electoral offer. Ultimately, these findings call into question the widespread use of the plurality rule to aggregate voter preferences.

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Appendix (for Online Publication only)

Appendix A. Additional tables and figures

Table A1: Elections in the sample

	Year	Number of observations
Parliamentary elections	1978	423
	1981	333
	1988	455
	1993	496
	1997	565
	2002	519
	2007	467
	2012	541
	Total	3,799
Local elections	2011	1,561
	2015	1,897
	Total	3,458
Total		7,257

Notes: Parliamentary elections are held in all French constituencies every five years. Before 2013, local elections took place every three years and, in each département, only half of the cantons were electing their council member in a given election. After the 2013 reform, all cantons participated in elections held every six years. The reform further reduced the number of cantons from 4035 to 2054, to leave the total number of council members roughly unchanged. All French territories participate in local elections, except for Paris and Lyon (where the departmental council is elected during municipal elections) and some French territories overseas.

Table A2: Intend to treat estimates when the third candidate has the same orientation as one of the top two candidates

Outcome	(1) Turnout	(2) Null and Blank	(3) Candidate votes	(4) Vote share top 2	(5) Closest cand wins
	2nd round				
3rd qualifies	-0.015	-0.004	-0.010	-0.023	0.022
	(0.019)	(0.003)	(0.020)	(0.020)	(0.068)
Observations	687	824	690	718	820
Polynomial order	1	1	1	1	1
Bandwidth	0.024	0.029	0.024	0.025	0.030
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean	0.676	0.033	0.643	0.641	0.718

Notes: Sample includes all elections where the third candidate has the same orientation as one of the top two candidates. In column (5), the sample is further restricted to elections where the candidate ideologically closest to the third is identified (we exclude the elections where the three candidates have the same orientation and elections where one of the top two candidates is from a non-classified orientation). Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. In Columns (1) to (4), each outcome uses the number of registered voters as the denominator. In Column (5), the outcome is a dummy equal to 1 if the candidate closest to the third wins the election. The dependent variable is a dummy equal to 1 if the third candidate is qualified. Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table A3: Impact on blank and null votes separately for the 2015 local elections

Outcome	(1) Null and Blank votes	(2) Blank votes	(3) Null votes
	2nd round		
3rd present	-0.027***	-0.015***	-0.011***
	(0.003)	(0.002)	(0.001)
Observations	474	386	601
Polynomial order	1	1	1
Bandwidth	0.014	0.011	0.017
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.053	0.036	0.017

Notes: Sample includes only the 2015 local elections. Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. Each outcome uses the number of registered voters as the denominator. The variable of interest (the presence of a third candidate at the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table A4: Impact on the vote shares of the candidates who ranked first and second in the first round, taken separately

Outcome	(1) Vote share top 2	(2) Vote share 1st 2nd round	(3) Vote share 2nd
3rd present	-0.069***	-0.032***	-0.035***
	(0.020)	(0.011)	(0.012)
Observations	2,250	2,923	2,126
Polynomial order	1	1	1
Bandwidth	0.024	0.031	0.024
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.551	0.308	0.249

Notes: Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. Each outcome uses the number of registered voters as the denominator. The variable of interest (the presence of a third candidate at the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table A5: Impact on candidates A and B when the third candidate is C (1st setting)

Outcome variable	(1) Top two cand.	(2) Cand. A 2nd round	(3) Cand. B
3rd present	-0.077***	-0.025***	-0.052***
	(0.016)	(0.010)	(0.010)
Observations	556	627	508
Polynomial order	1	1	1
Bandwidth	0.019	0.022	0.018
Bandwidth method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.547	0.268	0.285

Notes: Sample includes the elections where the top three candidates have distinct political orientations and where the third candidate is located to the right of both the first and the second candidates. Other notes as in Table A4.

Table A6: Impact on candidates B and C when the third candidate is A (2nd setting)

Outcome variable	(1) Top two cand.	(2) Cand. B	(3) Cand. C
	2nd round		
3rd present	-0.062***	-0.086***	0.005
	(0.020)	(0.019)	(0.014)
Observations	136	160	187
Polynomial order	1	1	1
Bandwidth	0.012	0.013	0.015
Bandwidth method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.478	0.300	0.169

Notes: Sample includes the elections where the top three candidates have distinct political orientations and where the third candidate is located to the left of both the first and the second candidates. Other notes as in Table A4.

Table A7: Impact on candidates A and C when the third candidate is B (3rd setting)

Outcome variable	(1) Top two cand.	(2) Cand. A	(3) Cand. C
	2nd round		
3rd present	-0.125***	-0.071***	-0.056
	(0.039)	(0.022)	(0.036)
Observations	145	152	133
Polynomial order	1	1	1
Bandwidth	0.015	0.016	0.013
Bandwidth method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.508	0.289	0.217

Notes: Sample includes the elections where the top three candidates have distinct political orientations and where the third candidate is located between the first and the second candidates. Other notes as in Table A4.

Table A8: Impact on the winning margin in the second round

Outcome	(1) Distance winner - 2nd candidate 2nd round
3rd present	-0.058*** (0.014)
Observations	2,677
Polynomial order	1
Bandwidth	0.030
Band. method	MSERD
Mean, left of the threshold	0.155

Notes: The outcome variable is the vote share of the winner minus the vote share of the second candidate in the second round, as fractions of candidate votes. Other notes as in Table A4.

Table A9: Impact on the winning margin depending on the orientations of the top two candidates

Outcome	(1)	(2)	(3)
	Distance winner - 2nd candidate, 2nd round		
	Full Sample	Top 2 same orientation	Top 2 distinct orientations
3rd present	-0.058***	0.056	-0.080***
	(0.014)	(0.045)	(0.016)
Observations	2,677	164	2,303
Polynomial order	1	1	1
Bandwidth	0.030	0.024	0.028
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.155	0.136	0.156

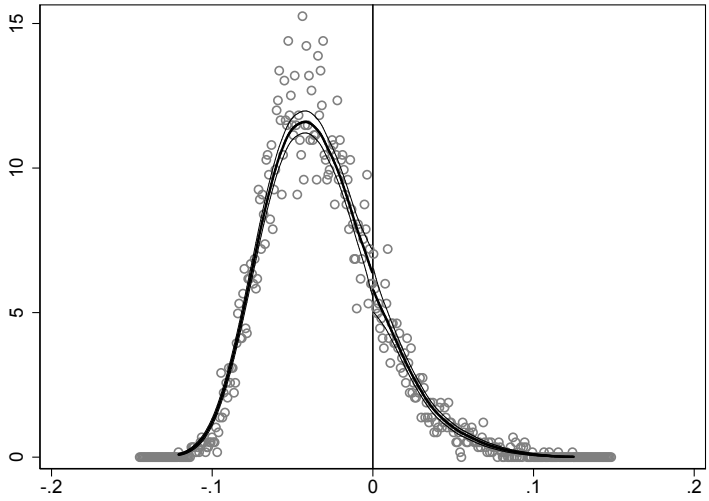
Notes: The outcome variable is the vote share of the winner minus the vote share of the second candidate in the second round, as fractions of candidate votes. Column 2 includes only the elections where the top two candidates have the same orientation. Column 3 includes only the elections where the top two candidates have distinct orientations. Other notes as in Table A4.

Table A10: Impact on participation depending on the orientations of the top two candidates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full Sample			Top 2 same orientation			Top 2 distinct orientations		
	Turnout	BlankNull	Cand vot	Turnout	BlankNull	Cand vot	Turnout	BlankNull	Cand vot
3rd present	0.040**	-0.037***	0.078***	0.120***	-0.087***	0.207***	0.026	-0.032***	0.059***
	(0.017)	(0.004)	(0.019)	(0.033)	(0.016)	(0.038)	(0.020)	(0.003)	(0.021)
Observations	2,298	2,630	2,374	301	286	274	1,981	2,076	1,998
Polyn. order	1	1	1	1	1	1	1	1	1
Bandwidth	0.025	0.028	0.026	0.033	0.031	0.030	0.024	0.025	0.024
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD
Mean	0.598	0.047	0.548	0.533	0.097	0.439	0.605	0.042	0.562

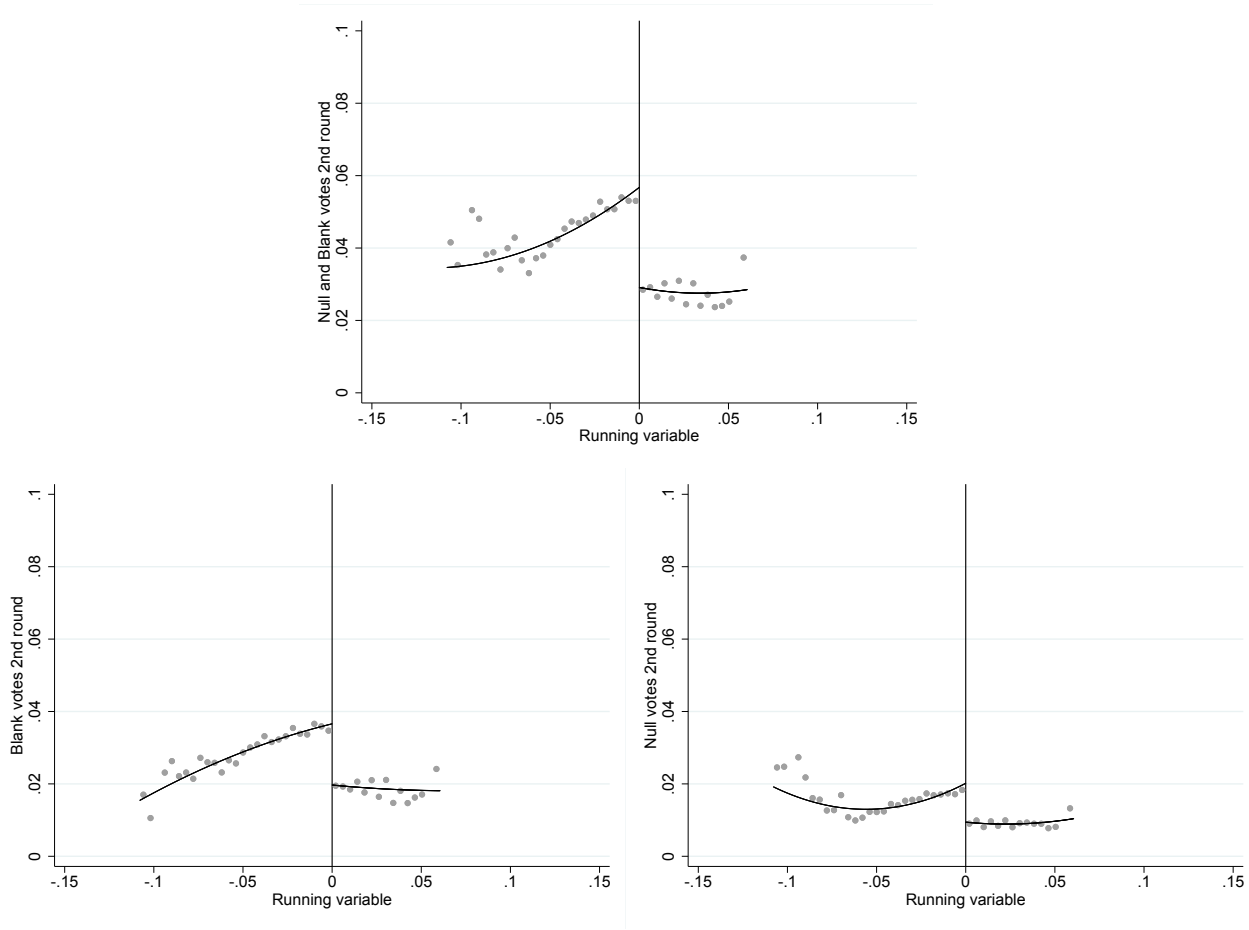
Notes: Columns 4, 5, and 6 include only elections where the top two candidates have the same orientation. Columns 7, 8, and 9 include only elections where the top two candidates have distinct orientations. Other notes as in Table A4.

Figure A1: McCrary test of the density of the running variable



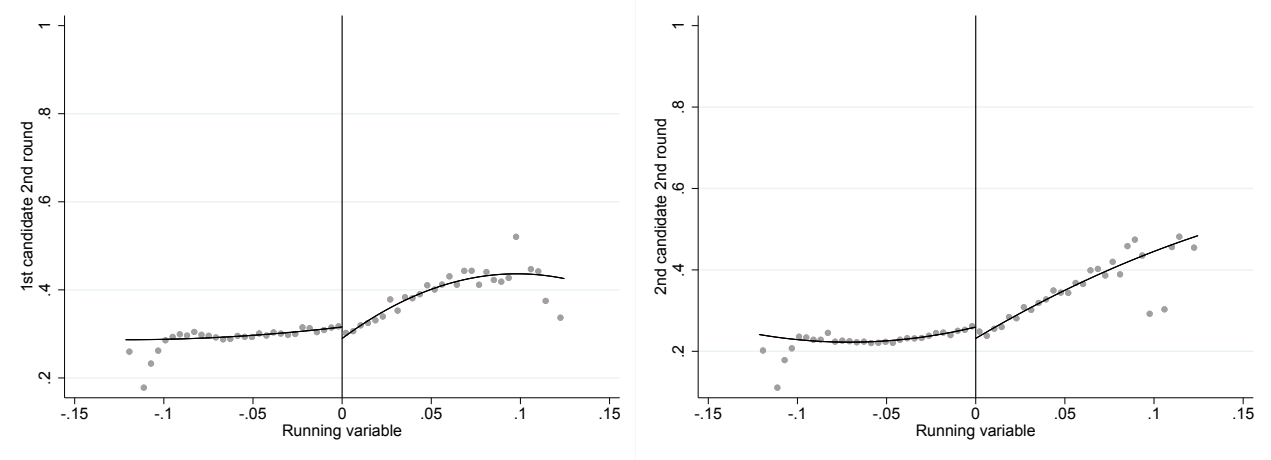
Notes: This Figure tests for a jump in the density of the running variable (the qualifying margin of the third-highest-ranking candidate in the first round) at the threshold. The solid line represents the density of the running variable. Thin lines represent the confidence intervals.

Figure A2: Impact on blank and null votes separately in the 2015 local elections



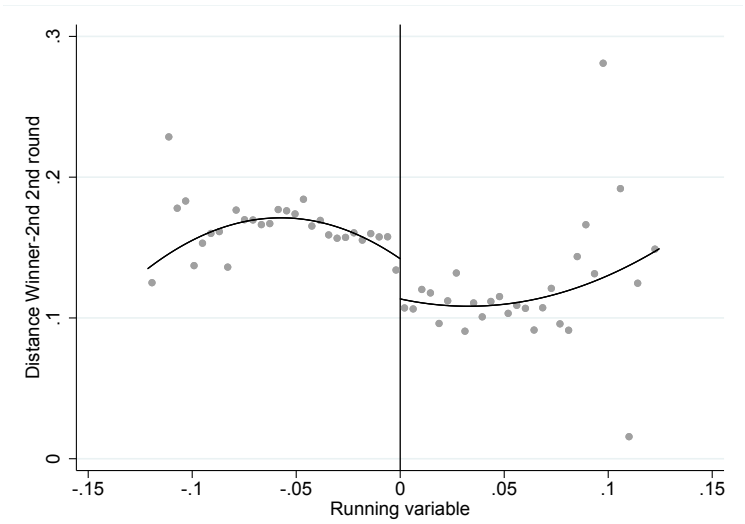
Notes: Sample includes only the 2015 local elections. Dots represent the local averages of the outcome variable (y-axis). Averages are calculated within 0.4 percentage-point-wide bins of the running variable (x-axis). The running variable (qualifying margin of the third-highest-ranking candidate in the first round) is measured in percentage points. Continuous lines are a quadratic fit.

Figure A3: Impact on the vote shares of the candidates who ranked first and second in the first round, taken separately



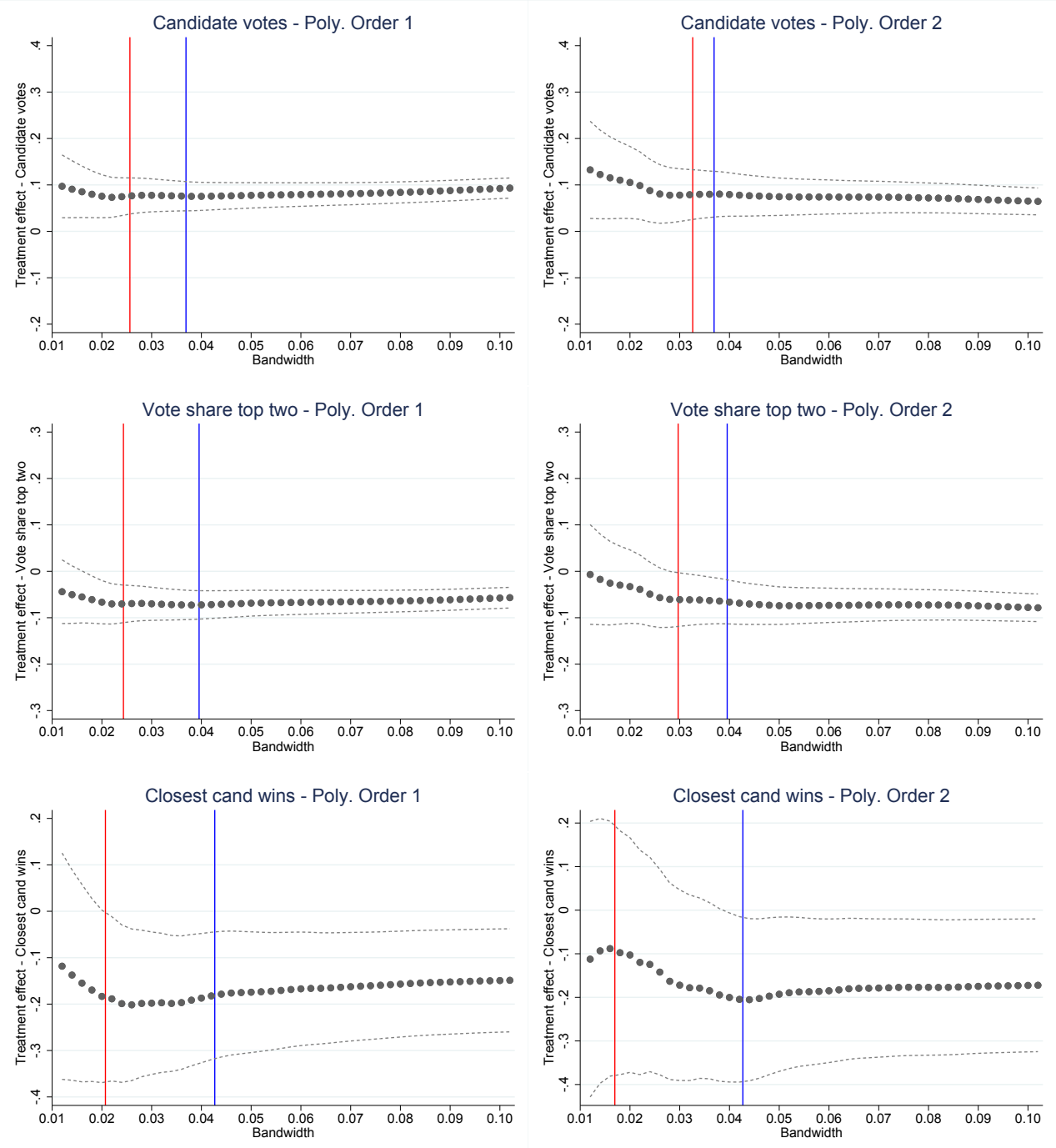
Notes: Dots represent the local averages of the vote share of the first (resp. second) candidate in the second round (y-axis). Vote shares are computed using the number of registered citizens as the denominator. Averages are calculated within 0.4 percentage-point-wide bins of the running variable (x-axis). The running variable (qualifying margin of the third-highest-ranking candidate in the first round) is measured in percentage points. Continuous lines are a quadratic fit.

Figure A4: Impact on the winning margin in the second round



Notes: Dots represent the local averages of the difference between the share of candidate votes obtained by the winner and by the candidate who came in second in the second round. Other notes as in Figure A3.

Figure A5: Robustness of the main results to bandwidth choice



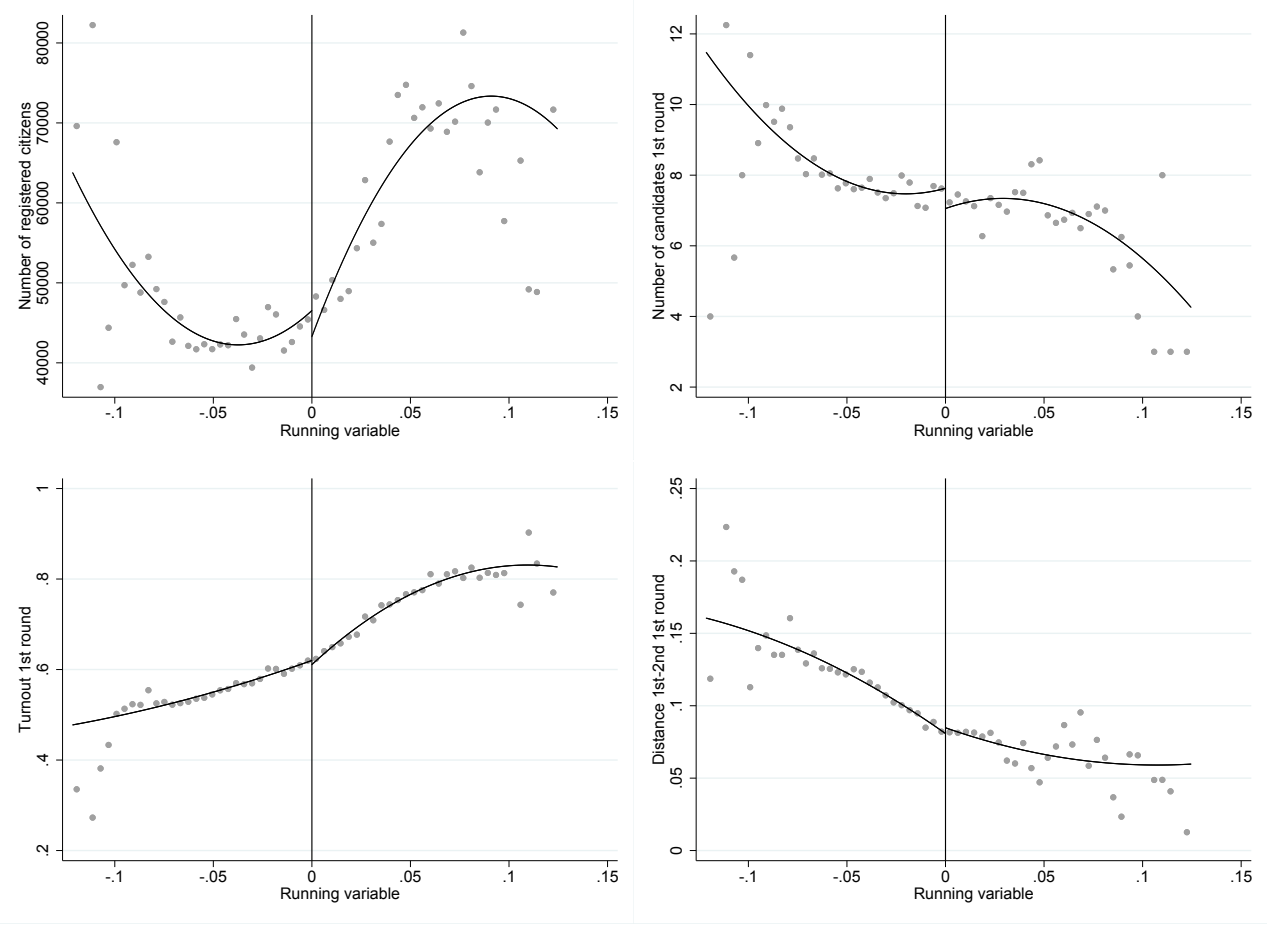
Notes: We show the sensitivity of our main results to bandwidth choice, using a linear or a quadratic specification. Dots represent the estimated treatment effect of the presence of the third candidate using different bandwidths (x-axis). Dotted lines represent the 95% confidence interval. We report all estimates for values of the bandwidth from 1 to 10 percentage points, in step of 0.2 percentage points. The vertical red (resp. blue) line gives the value of the MSERD (resp. IK) optimal bandwidth.

Appendix B: Placebo tests

We perform a series of placebo tests which examine whether there is a discontinuity in any of the following first-round variables at the cutoff: voter turnout, number of registered voters, number of candidates, and closeness (defined as the difference between the vote shares obtained by the top two candidates, as a fraction of candidate votes).

As shown in Figure B1, there is no significant jump at the cutoff for any of these variables. The formal estimation confirms the absence of treatment effect. Columns 1 through 4 of Table B1 present the results obtained for these four outcomes under our preferred specification. None of the estimates is statistically significant at the standard levels. Hence, we cannot reject the null hypothesis that the treatment has no effect on these baseline variables.

Figure B1: Placebo tests on baseline variables



Notes: Dots represent the local averages of the baseline variable (y-axis). Averages are calculated within 0.4 percentage-point-wide bins of the running variable (x-axis). The running variable (qualifying margin of the third-highest-ranking candidate in the first round) is measured as percentage points. Continuous lines are a quadratic fit.

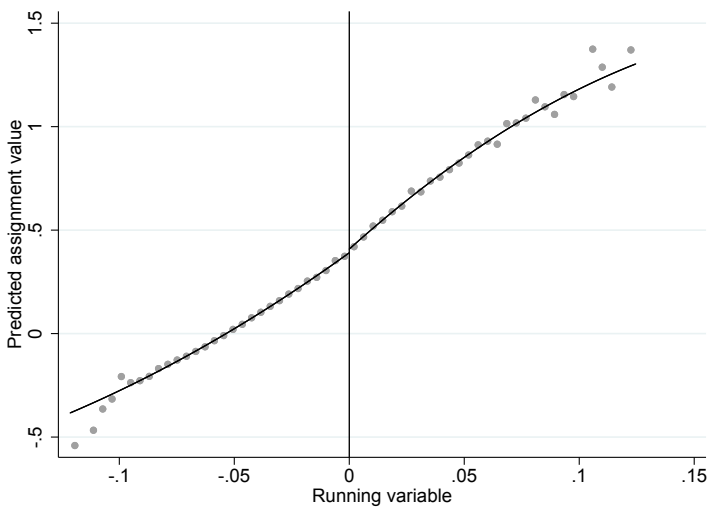
In addition, we conduct the following general test for imbalance. We regress the assignment variable D on a set of first-round variables including the four aforementioned variables as well as share of candidate votes, vote share of each of the top three candidates, political label and orientation of the three candidates, number of candidates from the left, right, far-right, far-left, and center, number of candidates of a non classified orientation, dummies if there is at least one candidate from the far-left, left, center, right and far-right, and a dummy equal to one if the third candidate has the same orientation as one of the top two candidates.. We then use the coefficients from this regression to predict assignment status, and test whether the predicted value jumps at the threshold. As shown in Figure B2, the assignment status predicted by baseline variables increases continuously as a function of the running variable and does not show any discontinuity at the threshold. This suggests that there is no systematic discontinuity in the preexisting observable districts' characteristics at the threshold. The formal estimate in Column 5 of Table B1 confirms this result: the coefficient is small (1.5 percentage points) and non-significant.

Table B1: Placebo tests

Outcome	(1) Nb reg. citizens	(2) Nb cand. 1st round	(3) Turnout 1st round	(4) Dist. 1-2 1st round	(5) Predicted assignment
3rd present	5,601	-0.14	0.003	0.003	0.015
	(5,639)	(0.64)	(0.015)	(0.011)	(0.017)
Observations	1,879	2,428	2,189	2,018	1,930
Polynomial order	1	1	1	1	1
Bandwidth	0.021	0.026	0.024	0.022	0.021
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	43,982	7.55	0.604	0.092	0.301

Notes: Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. The variable of interest (the presence of a third candidate at the second round), is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Figure B2: General balance test



Notes: Dots represent the local averages of the predicted assignment status (y-axis). Other notes as in Figure B1.

Appendix C. Robustness of the results to two special cases

Case 1: Second candidate dropouts

While the first candidate never drops out of the race in our sample, the second candidate drops out between the two rounds in 5.5 percent of the elections near the discontinuity. When the second candidate drops out of the race on the left of the discontinuity, the second round takes place but is uncontested, and the only candidate remaining in the race wins the election. When the second candidate drops out of the race on the right of the discontinuity, the third candidate remains in the race in all but one election, and the second round takes place between the candidates who placed first and third in the first round.

As shown in Table C1, the likelihood of the second candidate dropping out is not significantly affected by the presence of the third candidate. Moreover, we derive our main results restricting the sample to configurations where all three candidates have distinct political orientations (see Sections 4.3 to 4.5) and where, as a result, the second candidate almost never drops out (she does so in only 4 elections near the discontinuity or 0.4 percent of the cases).

In sum, our results are not driven by second candidate dropouts.

Table C1: Second candidate dropouts

	(1)	(2)	(3)	(4)
Outcome	Second candidate drops out			
3rd present	0.025	0.025	0.024	0.036
	(0.045)	(0.032)	(0.058)	(0.053)
Observations	1,966	3,430	3,092	3,430
Polynomial order	1	1	2	2
Bandwidth	0.021	0.037	0.033	0.037
Band. method	MSERD	IK	MSERD	IK
Mean, left of the threshold	0.038	0.034	0.037	0.034

Notes: Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. The outcome is a dummy equal to 1 if the second candidate drops out of the race in the second round. The variable of interest (the presence of a third candidate in the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1 in columns 1 and 2, and 2 in columns 3 and 4. The bandwidths are derived under the MSERD (columns 1 and 3) and IK (columns 2 and 4) procedures.

Case 2: Fourth candidate qualifies and runs in the second round

In 22 races, or 1.2 percent of the elections near the discontinuity, the candidate ranked fourth in the first round also obtained a number of votes higher than 12.5 percent of the registered citizens

and qualified for the second round. She decided to run in the second round in only 3 races close to the discontinuity, and in these cases, the third candidate always dropped out of the race.

When turnout is low, it is difficult for more than three candidates to reach the 12.5 qualification threshold. Restricting our sample to elections where turnout in the first round is lower than 58 percent enables us to get a subsample of elections where the fourth candidate never qualifies. As shown in Table C2, the impacts on our three main outcomes are robust in size and significance in this sample: using our preferred specification, we find that the presence of the third candidate raises the share of candidate votes by 7.8 percentage points on average (compared with 7.2 for the whole sample), decreases the vote share of the top two candidates by 5.1 percentage points on average (compared with 6.9 for the whole sample), and decreases the probability that the top-two candidate ideologically closest to the third wins by 32.3 percentage points on average (compared with 19.2 for the whole sample). As on the whole sample, the first two coefficients are significant at the 1 percent level and the third coefficient at the 5 percent level.

In sum, our results are not driven by elections where the fourth candidate qualifies and runs in the second round.

Table C2: Main results in elections where the 4th candidate never qualifies

Outcome	(1) Candidate votes	(2) Vote share top 2 2nd round	(3) Closest cand wins
3rd present	0.078***	-0.051***	-0.323**
	(0.014)	(0.014)	(0.149)
Observations	285	359	191
Polynomial order	1	1	1
Bandwidth	0.008	0.010	0.012
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.470	0.469	0.802

Notes: Sample includes only the elections with first round turnout lower than 58%. In column (3), the sample is further restricted to elections where the three candidates are from distinct political orientations, the candidate ideologically closest to the third is identified, and the strength of the third candidate is lower than that of each of the top two candidates (as in Section 4.5). Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. In Columns (1) and (2), each outcome uses the number of registered voters as the denominator. In Column (3), the outcome is a dummy equal to 1 if the closest candidate wins the election. The variable of interest (the presence of the third candidate in the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate in the first round was higher than the threshold). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Appendix D. Campaign expenditures

In French local and parliamentary elections, candidates who receive at least 1 percent of candidate votes in the first round must submit their campaign accounts to the French National Commission on Campaign Accounts and Political Financing (CNCCFP). The CNCCFP then examines the accounts, checks whether candidates respected the maximal amount they were authorized to spend in their district, and assesses whether they are eligible to be reimbursed by the French State.

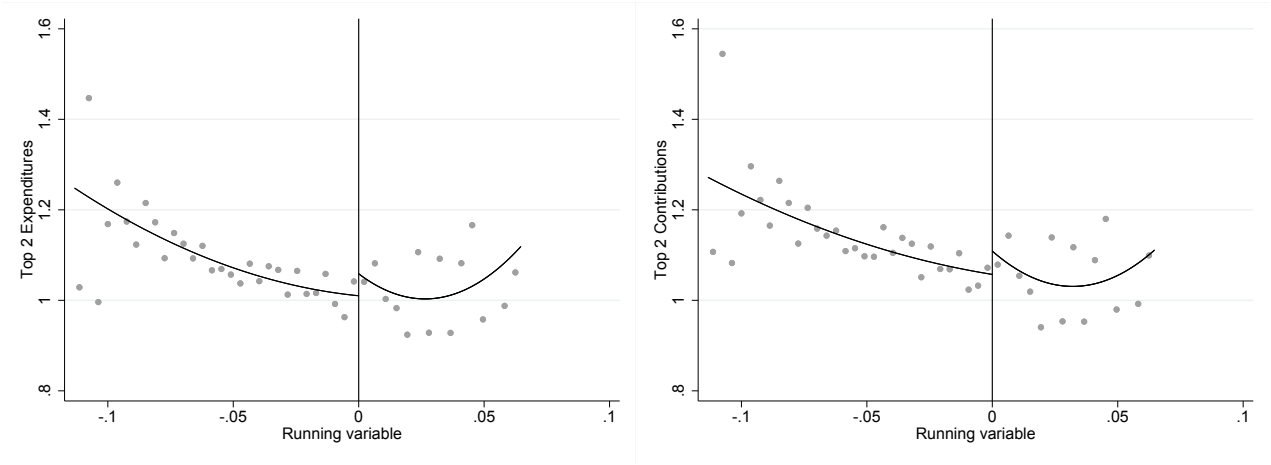
Data on campaign expenditures are made publicly available by the CNCCFP. The CNCCFP was created in 1990. Hence, data for elections held before 1990 are not available. Official accounts for the most recent elections - 2011 and 2015 local elections, as well as 2007 and 2012 parliamentary elections - are available online on the CNCCFP website (http://www.cnccfp.fr/index.php?art=584). Official accounts for the 1993, 1997, and 2002 parliamentary elections were digitized from printed booklets by Abel François and his co-authors for their studies on the impact of electoral expenditures on turnout (Fauvelle-Aymar and François, 2005) and electoral results (Foucault and François, 2005). In total, we were able to gather data corresponding to 77.8 percent of our sample.[19]

For each election, district, and candidate, we observe the total amount spent by the candidate (summing up expenditures incurred before the first round and between the first and second rounds), the total amount of contributions she received, and the amount of each type of contribution (contributions received from the candidate's political party, personal funds, donations, natural advantages, and other sources), as well as the decision of the CNCCFP to accept, modify, or reject the account.

These data enable us to test whether the top two candidates increase their campaign expenditures in response to the presence of the third candidate. As we can see in Figure D1, the presence of the third candidate does not significantly affect the campaign expenditures of the top two candidates, or the contributions they receive to finance their campaign. Table D1 provides the formal estimates. Neither the effect on top two candidates' total expenditures nor the estimate on total contributions is statistically significant. The estimate on contributions received from candidates' political parties is significant at the 5 percent level, and positive. Nevertheless, the estimate on total contributions is small, not significant, and actually negative: the top two candidates do not receive significantly more money overall when the third candidate is present.

[19]Note that for the 2011 local elections, data are only available for districts exceeding 9,000 inhabitants. As a result, we observe the campaign expenditures for 74.4 percent of that election's races. In addition, for the 1993 parliamentary elections, data for two French territories overseas are missing. Finally, data are missing for candidates who received less than 1 percent of the candidate votes in the first round (in which case they do not need to release their accounts publicly), or because they did not release their campaign account on time (this happened in 1 case for the first candidate, 8 cases for the second candidate, and 34 cases for the third candidate).

Figure D1: Campaign expenditures of the top two candidates



Notes: Sample includes 2011 and 2015 local elections and 1993, 1997, 2002, 2007, and 2012 parliamentary elections. One outlier has been removed to make the graph clearer (the district "Saint-Pierre-et-Miquelon" in the 1997 parliamentary elections). Dots represent the local averages of the outcome variable (y-axis). Averages are calculated within 0.4 percentage-point-wide bins of the running variable (x-axis). Each outcome uses the number of registered voters as the denominator. The running variable (qualifying margin of the third-highest-ranking candidate in the first round) is measured as percentage points. Continuous lines are a quadratic fit.

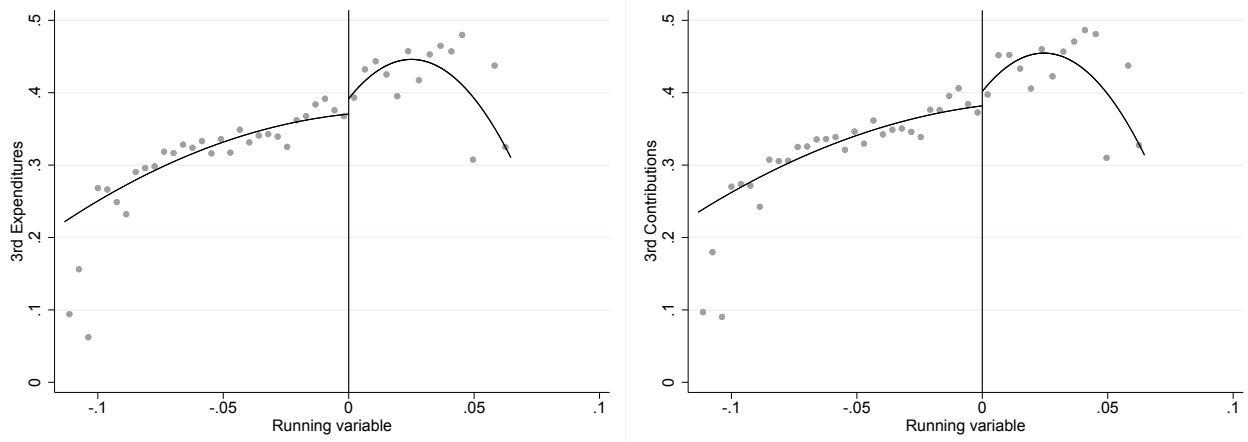
Table D1: Campaign expenditures of the top two candidates

Outcome	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Top two candidates							
	Total expenditures	Total contrib.	Personal contrib.	Party's contrib.	Natural advantages	Donations	Other contrib.	Balance
3rd present	0.013	-0.024	-0.078	0.080**	0.003	0.003	-0.006	-0.010
	(0.079)	(0.092)	(0.068)	(0.039)	(0.012)	(0.061)	(0.020)	(0.021)
Observations	890	786	800	1,236	1,437	954	1,216	774
Polyn. order	1	1	1	1	1	1	1	1
Bandwidth	0.013	0.012	0.012	0.018	0.023	0.014	0.018	0.011
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD
Mean	1.017	1.045	0.688	0.113	0.037	0.198	0.022	0.044

Notes: Sample includes 2015 and 2011 local elections and 1993, 1997, 2002, 2007, and 2012 parliamentary elections. Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. Each outcome uses the number of registered voters as the denominator. The outcome "Other Contributions" (column 7) sums all the contributions received by the candidates that are not personal contributions, party contributions, natural advantages, or donations. In the 1993 parliamentary elections, natural advantages were not counted separately, and they are included in the other contributions. The variable of interest (the presence of a third candidate at the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

We now turn to the impact of the presence of the third candidate on her own overall campaign expenditures (which again sum up expenditures incurred before the first round and between the first and second rounds). We do not find any significant impact on the third candidate's total expenditures or on the total contributions she received (Figure D2 and Table D2). When we disentangle between the different sources of contributions, only one coefficient out of six is significant at the 10 percent level, and negative.

Figure D2: Campaign expenditures of the third candidate



Notes as in Figure D1.

Table D2: Campaign expenditures of the third candidate

Outcome	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Third candidate							
	Total expenditures	Total contrib.	Personal contrib.	Party's contrib.	Natural advantages	Donations	Other contrib.	Balance
3rd present	0.035	0.038	0.054	-0.031*	-0.000	-0.004	0.000	-0.000
	(0.037)	(0.040)	(0.035)	(0.018)	(0.007)	(0.024)	(0.005)	(0.011)
Observations	929	842	831	679	1,034	679	901	701
Polyn. order	1	1	1	1	1	1	1	1
Bandwidth	0.014	0.013	0.012	0.010	0.017	0.010	0.013	0.010
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD
Mean	0.382	0.397	0.307	0.023	0.015	0.043	0.005	0.010

Notes as in Table D1.

Appendix E: Impact on the top two candidates depending on the closeness of the race

We estimate the impact of the presence of the third candidate on the vote share of the top two candidates depending on the closeness of the race in the first round. In Table E1, closeness is defined as the difference in vote shares (as a fraction of candidate votes) between the first and second candidates. In Table E2, closeness is defined as the difference in strengths between the first and second candidates, where a candidate's strength is equal to the sum of first-round vote shares (as a fraction of candidate votes) of all candidates from the same orientation (see Section 4.4).

As defined in Section 4.4, sample 1 includes all elections in which the top three candidates have distinct political orientations and the third candidate is either on the left or the right of both top two candidates, so that the candidate ideologically closest to the third is clearly identified. We then consider two subsamples: one in which the distance between the top two candidates in the first round is smaller than 10 percentage points and one in which the distance is smaller than 5 percentage points. In those subsamples, the gap in vote shares (resp. strengths) between the first and second candidates is, on average, equal to 4.3 and 2.3 (resp. 4.7 and 2.5) percentage points, respectively, close to the discontinuity.

As shown in Tables E1 and E2, whatever the definition of closeness we use, the effect of switchers' behavior on the vote share of the top two candidates is robust across the three samples and strikingly close in magnitude. In Table E1, all estimates are significant at the 1 percent level and included between 7.7 and 8.2 percentage points (column 1). In Table E2, all estimates are also significant at the 1 percent level and included between 8.2 and 10.4 percentage points (column 1).

These results suggest that switchers are equally willing to vote for the third candidate and thus decrease the vote share of the top-two candidate they prefer when the race is close in the first round.

Our results are robust to considering sample 2 as defined in Section 4.4 instead of sample 1.

Table E1: Impact on the top two candidates depending on the closeness of the race (defined in terms of vote shares)

	(1)	(2)	(3)	(4)
Impact 3rd present	Top 2 cand. 2nd round	*Bandwidth / Observations*	Closest candidate 2nd round	Furthest candidate 2nd round
Sample 1	-0.082***	*0.014*	-0.061***	-0.027**
	(0.017)	*546*	(0.008)	(0.013)
Sample 1	-0.080***	*0.012*	-0.056***	-0.031**
+ distance12$\leq$10pp	(0.021)	*345*	(0.009)	(0.015)
Sample 1	-0.077***	*0.014*	-0.057***	-0.024
+ distance12$\leq$5pp	(0.025)	*228*	(0.010)	(0.017)

Notes: The distance between the top two candidates is defined as the difference in vote shares (as a fraction of candidate votes) between the first and second candidates. Column 2 gives the bandwidths used for the estimation of the impact on the vote share of the top two candidates as well as the number of observations lying in those bandwidths. Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. Each outcome uses the number of registered voters as the denominator. The variable of interest (the presence of a third candidate at the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table E2: Impact on the top two candidates depending on the closeness of the race (defined in terms of strengths)

	(1)	(2)	(3)	(4)
Impact 3rd present	Top 2 cand. 2nd round	*Bandwidth / Observations*	Closest candidate 2nd round	Furthest candidate 2nd round
Sample 1	-0.082***	*0.014*	-0.061***	-0.027**
	(0.017)	*546*	(0.008)	(0.013)
Sample 1	-0.094***	*0.019*	-0.059***	-0.034***
+ distance12$\leq$10pp	(0.020)	*423*	(0.010)	(0.013)
Sample 1	-0.104***	*0.015*	-0.064***	-0.036
+ distance12$\leq$5pp	(0.034)	*189*	(0.012)	(0.024)

Notes: The distance between the top two candidates is defined as the difference in strengths between the first and second candidates. Other notes as in Table E1.

Appendix F. Impact on the top two candidates depending on voters' level of information

In this section, we estimate the impact of the presence of the third candidate on the top two candidates' vote share in districts where voters have more or less information. As in Section 4.4 and Appendix E, we restrict the analysis to elections of sample 1: all elections in which the top three candidates have distinct political orientations and the third candidate is either on the left or the right of both top two candidates, making one of them the candidate ideologically closest to the third. We first test whether the impact varies depending on the level of information. We then focus on high-information districts and run the same sub-sample analysis as in Section 4.4 and Appendix E to test whether the impact on the top two is affected by the gap between the strength of the third candidate and that of each of the top two candidates or by the closeness of the race in these districts. We proxy the level of information by election salience and media exposure.

Salience of the election

We first proxy the level of information by the salience of the race and compare the effects in local and parliamentary elections, the latter type of elections being the more salient. As shown in Table F1, the impact on the top two candidates' vote share is very similar in both types of races: the two coefficients are significant at the 5 percent level and close in magnitude. Focusing on parliamentary races, we find that the impact remains large even when the third candidate has very low chances of becoming a front-runner in the second round: all estimates are included between 5.1 and 11.6 percentage points across the four sub-samples shown in Table F2. Moreover, the magnitude of the effect stays high in close elections, whether closeness is measured as the difference in vote shares between the top two candidates (Table F3, columns 2 and 3) or as the difference in strengths (Table F3, columns 3 and 4): all estimates are comprised between 5.5 and 9.2 percentage points.

Table F1 : Impact on the top two candidates in local vs. parliamentary elections

Outcome	(1)	(2)
	Vote share top 2 - 2nd round - Sample 1	
	Local elections	Parliamentary elections
3rd present	-0.059***	-0.069**
	(0.015)	(0.033)
Observations	273	210
Polyn. order	1	1
Bandwidth	0.012	0.012
Band. method	MSERD	MSERD
Mean, left of the threshold	0.474	0.601

Notes: Sample 1 includes the elections in which the top three candidates have distinct political orientations and the third candidate is either on the left or the right of both top two candidates, making one of them the candidate ideologically closest to the third. Column 1 (resp. 2) further restricts the sample to local (resp. parliamentary) elections. Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. The outcome uses the number of registered voters as the denominator. The variable of interest (the presence of a third candidate at the second round) is instrumented by the assignment variable (whether the vote share of the third-highest-ranking candidate was higher than the cutoff). Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table F2: Impact on the top two depending on the strength of the third candidate, in parliamentary elections

Outcome	(1)	(2)	(3)	(4)
	Vote share top 2 - 2nd round			
	Parliamentary elections			
	Sample 1	Sample 2	Sample 3	Sample 4
3rd present	-0.069**	-0.077**	-0.051	-0.116**
	(0.033)	(0.031)	(0.040)	(0.049)
Observations	210	166	144	62
Polyn. order	1	1	1	1
Bandwidth	0.012	0.012	0.012	0.006
Band. method	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.601	0.614	0.617	0.625

Notes: Sample includes only the parliamentary elections. Sample 1 includes the elections in which the top three candidates have different political orientations and the third candidate is either on the left or the right of both top two candidates, making one of them the candidate ideologically closest to the third. Sample 2 includes the elections of sample 1 in which the third candidate's strength is lower than that of each of the top two candidates. Sample 3 (resp. 4) includes the elections of sample 2 with a difference of at least 5 (resp. 10) percentage points between the strength of the third candidate and the strength of each of the top two candidates. Other notes as in Table F1.

Table F3: Impact on the top two depending on the closeness of the race, in parliamentary elections

Outcome	(1)	(2)	(3)	(4)	(5)
	Vote share top 2 - 2nd round - Parliamentary elections				
	Sample 1	Distance12 (vote share)		Distance12 (strength)	
		≤10%	≤5%	≤10%	≤5%
3rd present	-0.069**	-0.055	-0.057	-0.088***	-0.092**
	(0.033)	(0.056)	(0.054)	(0.029)	(0.042)
Observations	210	122	64	183	68
Polyn. order	1	1	1	1	1
Bandwidth	0.012	0.010	0.011	0.020	0.014
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.601	0.606	0.609	0.624	0.616

Notes: Sample includes only the parliamentary elections. Sample 1 includes the elections in which the top three candidates have different political orientations and the third candidate is either on the left or the right of both top two candidates, making one of them the candidate ideologically closest to the third. Column 2 and 3 include only elections where the difference in vote shares between the first and second candidates in the first round is lower than 10 and 5 percentage points, respectively. Column 4 and 5 include only elections where the difference in strengths between the first and second candidates is lower than 10 and 5 percentage points, respectively. Other notes as in Table F1.

Media exposure

We now proxy the level of information by media exposure, usign three different measures: newspaper consumption and radio and TV news audience.

Data on local newspaper circulation were collected by Julia Cagé for her work on media competition and participation in France (Cagé, 2017). These data are available at the département-year level for 87 département out of 101, excluding French territories overseas and the region "Ile-de-France", for each year in which an election of our sample took place.[20] For each département and election year, we computed the level of local newspaper consumption as the total number of newspaper copies in circulation divided by the total population.[21]

We collected data on radio and TV news audiences from Médiamétrie (http://www.mediametrie.fr), a company specialized in the measurement of media audiences in France. Data on radio news audience are available at the département-year level for 80 départements out of 101, excluding French territories overseas and the 16 least densely populated départements, for years 2003 to 2015. The yearly radio news audience is measured as the percentage of the département population aged 13

[20] Data are available up to 2014. We thus use 2014's values for the local elections held in 2015.

[21] Note that the two départements of "Corse" were merged together in the newspaper database, so both départements have the same value of newspaper consumption in each year.

and over who listened at least once to a radio news channel between 5am and 12am on a weekday.[22] For the six parliamentary elections held before 2003, we proxy the audience of each département using the 2003 data.

Data on TV news audience are available at the region-year level for 20 regions out of 27, excluding French territories overseas and the regions "Corse" and "Centre", for the years 2010, 2011, 2012, and 2015. The TV news audience is measured as the average percentage of the region population aged 4 and over who watched a news broadcast per minute during the first semester of the year.[23] For the elections held before 2010 (seven parliamentary elections), we proxy the audience of each region using the 2010 data.

Overall, we have a measure of newspaper consumption for 83.3 percent of our sample and a measure of radio news audience (resp. TV news audience) for 88.6 (resp. 91.2) percent of our sample. For each of these three measures of media exposure, we split our sample based on medians and terciles. We estimate medians and terciles separately for each election year, to control for time trends.

As shown in Table F4, the impact on the top two candidates' vote share is not smaller but actually slightly larger in high-information districts: estimates in districts above the newspaper, radio, or TV median are included between 8.6 and 11.2 percentage points (columns 2, 4, and 6), while estimates in districts below the median are comprised between 5.3 and 7.8 percentage points (columns 1, 3, and 5). Similarly, the impact is always larger in the third tercile than in the first (Table F5).

Focusing on districts above the median, whatever the measure of media exposure we use, the impact on the vote share of the top two candidates remains large across the four sub-samples defined based on the gap between the strength of the third candidate and that of each of the top two candidates (Tables F6 to F8). For instance, in districts with radio news audience above the median (Table F7), the impact is as large as 7.2 and 9.3 percentage points in elections where the third candidate's strength is lower than that of each of the top two candidates by at least 5 and 10 percentage points, respectively (compared with 8.6 percentage points when we put no restriction on the strength of the third). Moreover, in these districts, the effect remains equally high even when the race is close in the first round, whether closeness is measured as the difference in vote shares or strengths between the first and second candidates (Tables F9 to F11).

[22] We consider the following six radio news channels: Europe 1, France Bleu, France Inter, RMC, RTL, and Sud Radio.

[23] We consider the news broadcasts of the following four TV channels: TF1 ("le 13h" and "le 20h"), France2 ("le 13h", "le 20h", "JT Nuit", and "journal du matin"), France 3 ("12-13 edition des initiatives", "12-13 edition des régions", "12-13 édition spéciale régionale", "12-13 journal national", "12-13 journal regional", "19-20 journal national", "19-20 journal régional", "Edition Outre Mer", "Flash Infos", "Soir 3 edition régionale", and "Soir 3 le journal"), M6 ("le 1245" and "le 1945"), and Arte ("Arte Journal"). For 2015 and 2012, the first semester stretches from January 2 to May 28. For 2011, it lasts from January 3 to July 3, and for 2010, from January 4 to June 27.

The results are qualitatively similar when we run these sub-sample analysis on districts in the third tercile (results available upon request).

All in all, these results suggest that the impact on the vote share of the top two candidates stays large in high-information districts, and that it remains unaffected by the distance between the third and the top two candidates or by the closeness of the race in these districts.

Table F4 : Impact on the vote share of the top two candidates in districts above or below the median

Outcome	(1)	(2)	(3)	(4)	(5)	(6)
	Vote share top 2 - 2nd round - Median					
	Newspaper		Radio		TV	
	Below	Above	Below	Above	Below	Above
3rd present	-0.053**	-0.096***	-0.078***	-0.086***	-0.061***	-0.112***
	(0.026)	(0.028)	(0.021)	(0.027)	(0.020)	(0.024)
Observations	264	239	239	263	350	295
Polyn. order	1	1	1	1	1	1
Bandwidth	0.011	0.017	0.011	0.016	0.017	0.015
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.534	0.512	0.528	0.526	0.523	0.528

Notes: Column 1 (resp. 3, 5) includes only the districts with newspaper consumption (resp. radio news audience, TV news audience) below the median. Column 2 (resp. 4, 6) includes only the districts with newspaper consumption (resp. radio news audience, TV news audience) above the median. Other notes as in Table F1.

Table F5 : Impact on the vote share of the top two candidates in districts in different terciles

Outcome	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Vote share top 2 - 2nd round - Terciles								
	Newspaper			Radio			TV		
	T1	T2	T3	T1	T2	T3	T1	T2	T3
3rd present	-0.046	-0.093***	-0.079**	-0.085***	-0.053*	-0.104***	-0.048**	-0.094***	-0.120***
	(0.030)	(0.026)	(0.039)	(0.026)	(0.032)	(0.031)	(0.023)	(0.027)	(0.044)
Observations	197	230	130	168	234	148	219	171	184
Polyn. order	1	1	1	1	1	1	1	1	1
Bandwidth	0.013	0.016	0.015	0.011	0.020	0.013	0.016	0.013	0.014
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD	MSERD
Mean	0.532	0.527	0.510	0.539	0.514	0.527	0.518	0.525	0.535

Notes: Column 1 (resp. 4, 7) includes only the districts with newspaper consumption (resp. radio news audience, TV news audience) in the first tercile. Column 2 (resp. 5, 8) includes only the districts with newspaper consumption (resp. radio news audience, TV news audience) in the second tercile. Column 3 (resp. 6, 9) includes only the districts with newspaper consumption (resp. radio news audience, TV news audience) in the third tercile. Other notes as in Table F1.

Table F6: Impact on the vote share of the top two candidates depending on the strength of the third candidate, in districts with newspaper consumption above the median

Outcome	(1)	(2)	(3)	(4)
	Vote share top 2 - 2nd round			
	Newspaper consumption above median			
	Sample 1	Sample 2	Sample 3	Sample 4
3rd present	-0.096***	-0.100***	-0.132***	-0.148*
	(0.028)	(0.030)	(0.037)	(0.086)
Observations	239	160	94	23
Polyn. order	1	1	1	1
Bandwidth	0.017	0.014	0.011	0.005
Band. method	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.512	0.528	0.545	0.623

Notes: Sample includes only the districts that are located in départements with newspaper consumption above the median in the year of the election. Other notes as in Table F2.

Table F7: Impact on the vote share of the top two candidates depending on the strength of the third candidate, in districts with radio news audience above the median

Outcome	(1)	(2)	(3)	(4)
	Vote share top 2 - 2nd round			
	Radio news audience above median			
	Sample 1	Sample 2	Sample 3	Sample 4
3rd present	-0.086***	-0.097***	-0.072**	-0.093**
	(0.027)	(0.026)	(0.036)	(0.041)
Observations	263	239	83	42
Polyn. order	1	1	1	1
Bandwidth	0.016	0.017	0.007	0.006
Band. method	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.526	0.535	0.565	0.610

Notes: Sample includes only the districts located in départements with radio news audience above the median in the year of the election. Other notes as in Table F2.

Table F8: Impact on the vote share of the top two candidates depending on the strength of the third candidate, in districts with TV news audience above the median

Outcome	(1)	(2)	(3)	(4)
	Vote share top 2 - 2nd round			
	TV news audience above median			
	Sample 1	Sample 2	Sample 3	Sample 4
3rd present	-0.112***	-0.105***	-0.129***	-0.143***
	(0.024)	(0.023)	(0.033)	(0.052)
Observations	295	314	179	47
Polyn. order	1	1	1	1
Bandwidth	0.015	0.020	0.016	0.007
Band. method	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.528	0.540	0.558	0.614

Notes: Sample includes only the districts that are located in regions with TV news audience above the median in the year of the election. Other notes as in Table F2.

Table F9: Impact on the vote share of the top two candidates depending on the closeness of the race, in districts with newspaper consumption above the median

Outcome	(1)	(2)	(3)	(4)	(5)
	Vote share top 2 - 2nd round				
	Newspaper consumption above median				
	Sample 1	Distance12 (vote share)		Distance12 (strength)	
		≤10%	≤5%	≤10%	≤5%
3rd present	-0.096***	-0.101***	-0.077*	-0.158***	-0.222***
	(0.028)	(0.035)	(0.041)	(0.039)	(0.076)
Observations	239	127	120	113	48
Polyn. order	1	1	1	1	1
Bandwidth	0.017	0.014	0.022	0.016	0.012
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.512	0.520	0.528	0.526	0.518

Notes: Sample includes only the districts that are located in départements with newspaper consumption above the median in the year of the election. Other notes as in Table F3.

Table F10: Impact on the vote share of the top two candidates depending on the closeness of the race, in districts with radio news audience above the median

Outcome	(1)	(2)	(3)	(4)	(5)
	Vote share top 2 - 2nd round				
	Radio news audience above median				
	Sample 1	Distance12 (vote share)		Distance12 (strength)	
		≤10%	≤5%	≤10%	≤5%
3rd present	-0.086***	-0.077**	-0.083***	-0.102**	-0.068
	(0.027)	(0.032)	(0.030)	(0.050)	(0.068)
Observations	263	176	136	112	77
Polyn. order	1	1	1	1	1
Bandwidth	0.016	0.015	0.018	0.013	0.016
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.526	0.539	0.527	0.535	0.518

Notes: Sample includes only the districts that are located in départements with radio news audience above the median in the year of the election. Other notes as in Table F3.

Table F11: Impact on the vote share of the top two candidates depending on the closeness of the race, in districts with TV news audience above the median

Outcome	(1)	(2)	(3)	(4)	(5)
	Vote share top 2 - 2nd round				
	TV news audience above median				
	Sample 1	Distance12 (vote share)		Distance12 (strength)	
		$\leq$10%	$\leq$5%	$\leq$10%	$\leq$5%
3rd present	-0.112***	-0.110***	-0.108***	-0.130***	-0.157***
	(0.024)	(0.030)	(0.029)	(0.027)	(0.046)
Observations	295	187	162	184	89
Polyn. order	1	1	1	1	1
Bandwidth	0.015	0.015	0.023	0.019	0.016
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.528	0.534	0.531	0.536	0.525

Notes: Sample includes only the districts that are located in regions with TV news audience above the median in the year of the election. Other notes as in Table F3.

Appendix G. Third candidate dropouts - RDD analysis

In this section, we use our regression discontinuity design framework to provide additional evidence on third candidates' dropout decision. In the graphs and tables below, the outcome is a dummy equal to 1 if the third candidate drops out of the race in the second round. By definition, it always takes value 0 at the left of the threshold.

The first graph in Figure G1 plots the probability to drop out against the running variable in the whole sample. Note that it is the exact mirror of the first-stage figure shown in Section 3.2. We then differentiate elections where the third candidate has the same political orientation as one of the top two candidates from elections where she does not. Table G1 provides the formal estimates: on average, the third candidate is much more likely do drop out when she has the same political orientation as one of the top two candidates (91.1 percent close to the threshold) than when she has a different orientation than both of them (14.8 percent close to the threshold).

We now assess whether the likelihood to drop out depends on first round results, focusing on elections where the candidate ideologically closest to the third is clearly identified: in the sample where the third candidate has the same orientation as one of the top two, we exclude the elections where the three candidates have the same orientation and elections where one of the top two candidates is from a non-classified orientation. In the sample where the third candidate has a different orientation than both top two, we only include the elections of sample 1 as defined in Section 4.4.

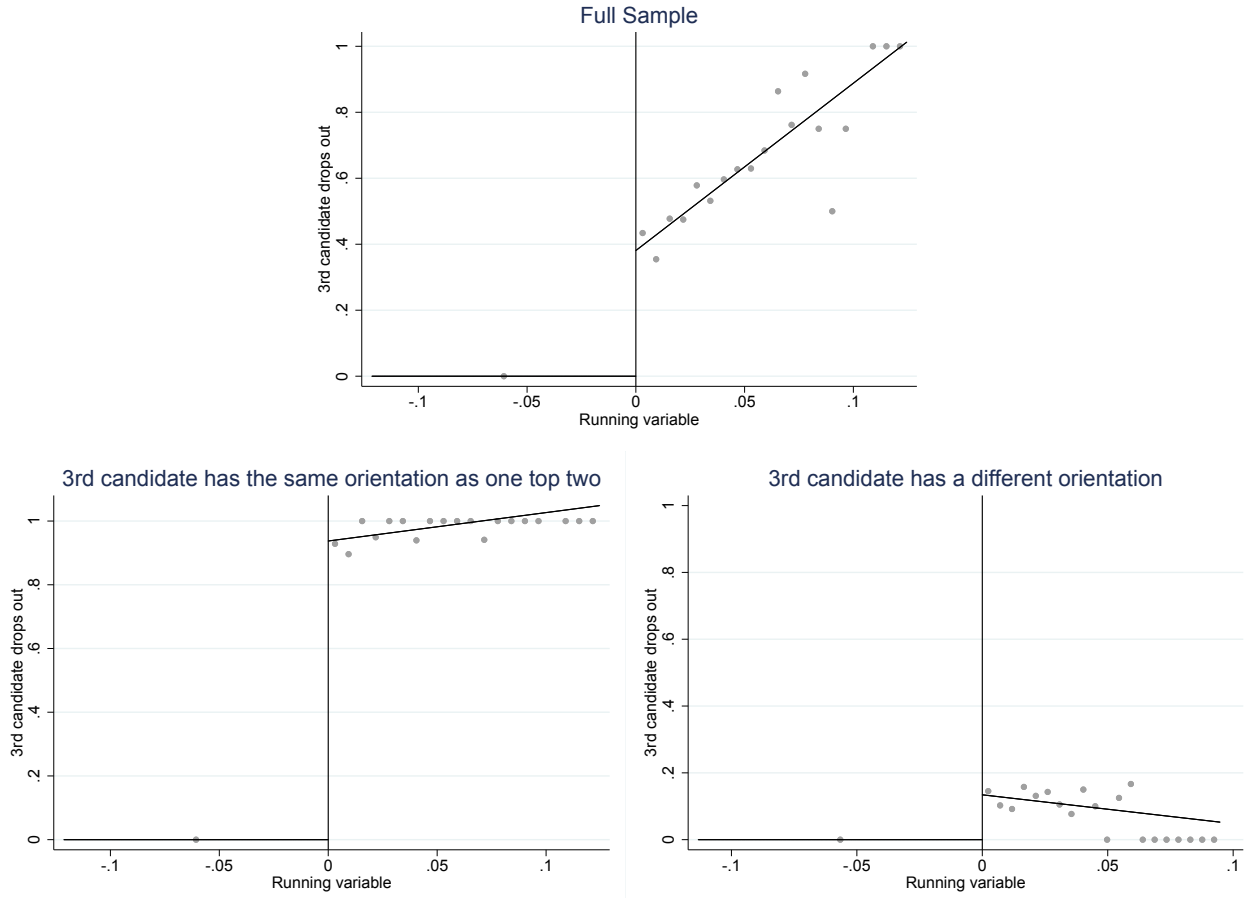
We first test whether the decision to drop out depends on the closeness of the race. As in Appendix E, we test for two definitions of closeness: difference between the vote shares of the first and second candidates in the first round and difference between their strengths. Both measures use the fraction of candidate votes as the denominator. When the third candidate has the same orientation as one of the top two, her probability to drop out does not vary when the vote shares of the top two candidates are close, but she does drop out more often when the difference between their strengths is small: the third candidate always drops out of the race when the gap is smaller than 10 or 5 percentage points (Table G2). When the third candidate has a different orientation, neither the gap in vote shares nor in strengths between the top two affects her decision to drop out: estimates across the four sub-samples are comprised betwen 10.4 and 11.6 percentage points (Table G3, columns 2 to 5), compared with 13.2 for all elections of sample 1 (Table G5, column 1).

Finally, we test whether the probability that the third candidate drops out is affected by her distance with the top two candidates.

As shown in Table G4, when the third candidate has the same orientation as one of the top two, she is even more likely to drop out when she lags far behind the candidate ranked second in the first round: she drops out of the race in 95.8 percent of the cases when the gap between their vote shares is larger than 5 percentage points (column 2) and in all elections when it is larger than 10

percentage points (column 3). Instead, when the third candidate has a different orientation, her probability to drop out is not higher when she has very low chances of becoming a front-runner in the second round: she drops out in 11.7 percent (resp. 10.6 percent) of the cases when the gap between her strength and the strength of each of the top two candidates is larger than 5 (resp. 10) percentage points, compared with 13.2 for all elections of sample 1 (Table G5).

Figure G1: Probability that the third candidate drops out depending on her political orientation



Notes: The outcome is a dummy equal to 1 if the third candidate drops out of the race in the second round. Averages are calculated within bins of the running variable (x-axis). The running variable (the qualifying margin of the third-highest-ranking candidate in the first round) is measured as percentage points. Continuous lines are a linear fit.

Table G1: Probability that the third candidate drops out depending on her political orientation

	(1)	(2)	(3)
Outcome	3rd candidate drops out		
	Full Sample	3rd same orientation	3rd different orientation
3rd qualifies	0.448***	0.911***	0.148***
	(0.042)	(0.026)	(0.035)
Observations	1,541	1,027	1,169
Polyn. order	1	1	1
Bandwidth	0.017	0.036	0.019
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.00	0.00	0.00

Notes: Column 1 includes all elections. Column 2 includes only the elections where the third candidate has the same political orientation as one of the top two candidates. Column 3 includes only the elections where the third candidate has a different orientation than both top two candidates. Standard errors are in parentheses. ***, **, and * indicate significance at 1, 5, and 10%, respectively. Each column reports the results from a separate local polynomial regression. The outcome is a dummy equal to 1 if the third candidate drops out of the race in the second round. The dependent variable is a dummy equal to 1 if the third candidate is qualified. Separate polynomials are fitted on each side of the threshold. The polynomial order is 1, and the optimal bandwidths are derived under the MSERD procedure.

Table G2: Probability that the third candidate drops out depending on the closeness of the race, when she has the same orientation as one top-two

Outcome	(1)	(2)	(3)	(4)	(5)
	3rd candidate drops out - same orientation				
	Closest Identified	Distance12 (vote share) ≤10%	≤5%	Distance12 (strength) ≤10%	≤5%
3rd qualifies	0.914***	0.866***	0.880***	1.004***	1.012***
	(0.025)	(0.041)	(0.051)	(0.003)	(0.011)
Observations	966	671	402	384	185
Polyn. order	1	1	1	1	1
Bandwidth	0.034	0.043	0.045	0.040	0.040
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.00	0.00	0.00	0.00	0.00

Notes: Column 1 includes all elections where the third candidate has the same political orientation as one of the top two candidates and where the closest candidate is clearly identified (we exclude the elections where the three candidates have the same orientation and elections where one of the top two candidates has a non-classified orientation). Columns 2 and 3 include only elections where the difference in vote shares between the first and second candidates in the first round is lower than 10 and 5 percentage points, respectively. Columns 4 and 5 include only elections where the difference in strengths between the first and the second candidates is lower than 10 and 5 percentage points, respectively. In column 5, due to the small sample size, the command rdrobust could not compute the optimal bandwidth, and we used the same bandwidth as in column 4. Other notes as in Table G1.

Table G3: Probability that the third candidate drops out depending on the closeness of the race, when she has a different orientation than both top two

Outcome	(1)	(2)	(3)	(4)	(5)
	3rd candidate drops out - different orientation				
	Sample 1	Distance12 (vote share)		Distance12 (strength)	
		$\leq$10%	$\leq$5%	$\leq$10%	$\leq$5%
3rd qualifies	0.132***	0.116**	0.106*	0.104**	0.104
	(0.040)	(0.051)	(0.058)	(0.044)	(0.082)
Observations	518	345	215	388	196
Polyn. order	1	1	1	1	1
Bandwidth	0.013	0.012	0.013	0.018	0.016
Band. method	MSERD	MSERD	MSERD	MSERD	MSERD
Mean, left of the threshold	0.00	0.00	0.00	0.00	0.00

Notes: Column 1 includes only the elections of sample 1: all elections where the three candidates have distinct political orientations and the third candidate is either on the left or on the right of the two other candidates, making one of them the candidate ideologically closest to the third. Columns 2 and 3 include only elections where the difference in vote shares between the first and second candidates in the first round is lower than 10 and 5 percentage points, respectively. Columns 4 and 5 include only elections where the difference in strengths between the first and the second candidates is lower than 10 and 5 percentage points, respectively. Other notes as in Table G1.

Table G4: Probability that the third candidate drops out depending on her distance with the top two candidates, when she has the same orientation as one top-two

Outcome	(1)	(2)	(3)
	3rd candidate drops out - same orientation		
	Closest identified	Distance top two$\geq$5pp	Distance top two$\geq$10pp
3rd qualifies	0.914***	0.958***	1.000
	(0.025)	(0.033)	(0.000)
Observations	966	460	241
Polyn. order	1	1	1
Bandwidth	0.034	0.029	0.029
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.00	0.00	0.00

Notes: Column 2 (resp. 3) further restricts the sample to elections where the third candidate's vote share in the first round is lower than the vote share of the second candidate by at least 5 percentage points (resp. 10 percentage points). In column 3, due to the small sample size, the command rdrobust could not compute the optimal bandwidth, and we used the same bandwidth as in column 2. Other notes as in Table G2.

Table G5: Probability that the third candidate drops out depending on her distance with the top two candidates, when she has a different orientation than both top two

Outcome	(1)	(2)	(3)
	3rd candidate drops out - different orientation		
	Sample 1	Distance top two≥5pp	Distance top two≥10pp
3rd qualifies	0.132***	0.117**	0.106
	(0.040)	(0.053)	(0.089)
Observations	518	433	102
Polyn. order	1	1	1
Bandwidth	0.013	0.018	0.007
Band. method	MSERD	MSERD	MSERD
Mean, left of the threshold	0.00	0.00	0.00

Notes: Column 2 (resp. 3) further restricts the sample to elections where the third candidate's strength is lower than that of each of the top two candidates by at least 5 percentage points (resp. 10 percentage points). Other notes as in Table G3.

Appendix H. Third candidate dropouts - Descriptive evidence from press articles

Using the Factiva research tool (https://www.dowjones.com/products/factiva), we collected all press articles released between the two rounds of all elections in our sample and containing the entity "désist". This entity is present in all forms of the verb "se désister" (to drop out) and in the noun "désistement" (dropout). We obtained a total of 1,678 articles published in 86 different newspapers in election years 1997, 2002, 2007, 2011, 2012, and 2015. Table H1 gives the breakdown of the articles collected by election type and year.

Table H1: Press articles collected by election type and year

	Year	Number of articles
Parliamentary elections	1997	11
	2002	26
	2007	240
	2012	631
	Total	908
Local elections	2011	263
	2015	507
	Total	770
Total		1,678

We read each article and kept only the articles providing information on third candidates' decision to drop out. We discarded articles covering elections where the third candidate eventually stayed in the race, articles covering second candidates' dropouts, articles reporting a dropout without giving any information on it, and articles commenting dropouts that occurred in past elections.

We are left with a total of 590 instances of third candidates dropping out. Note that an instance may be covered by several articles and that one article may cover several instances.

As shown in Table H2, for each instance, we first coded whether the article discusses dropouts at the national level (15.6 percent of the cases), or instead focuses on a particular département (8.6 percent of the cases) or a particular district (75.8 percent of the cases). Next, we classified each instance depending on whether the third candidate has the same orientation as one of the top two candidates (39.5 percent of the cases) or a different one (53.7 percent of the cases)[24]. Dropouts

[24]Forty instances are left unclassified (6.8 percent). In these cases, the dropout decision was made by the party at the national or département level without stating the exact configuration in which the third candidate was required to drop out, making it impossible to know whether it led to dropouts in elections where the third had the same orientation

from candidates who have a different orientation than both top two are over-covered by the press, as they represent less than 15 percent of all dropouts in our sample but more than 50 percent of the instances covered by the press.

Table H2: Descriptive statistics

	Number of instances	Percentage
Level		
National	92	15.6
Département	51	8.6
District	447	75.8
Total	590	100
Configuration		
Same orientation	233	39.5
Different orientation	317	53.7
Unspecified	40	6.8
Total	590	100

Next, for each instance, we coded the context in which the dropout took place (decision made by the party, existence of an agreement among parties, or decision made individually by the candidate), the reasons provided by the party or candidate (preventing the victory of another candidate, or feeling ideologically close to a top-two), and whether the article mentions the reactions of the candidate's party, voters, or competing candidates. Table H3 gives the statistics for the whole sample and separately for instances where the third candidate has the same orientation as one top-two or a different one. Note that the 40 instances for which the configuration is unspecified are included in the whole sample (first line in the tables below) but not in the breakdown by political orientations (second and third lines in the tables).

as one top-two or not. For instance, some articles report that left parties asked their candidates to drop out if ranked third and if a far-right candidate was among the top two, but without giving any information on the orientation of the other top-two candidate.

Table H3: Statistics on the dropouts' context, reasons, and reactions

	A. Context			
	(1)	(2)	(3)	(4)
	Presence	Party's decision	Agreement	Candidate's decision
All	47.8	29.8	15.4	18.0
Same orientation	44.2	41.6	33.9	2.6
Different orientation	44.2	12.9	3.8	31.2

Notes: Column 1 gives the percentage of instances for which the article provides information on the context in which the dropout took place. Column 2 gives the percentage of dropouts decided by the party, and column 3 gives the percentage of dropouts that are part of an agreement among parties. All dropouts part of an agreement are also considered as dropouts decided by the party. Column 4 gives the percentage of dropouts decided individually by the candidate, independently from any party's instructions.

	B. Reasons			
	(1)	(2)	(3)	(4)
	Presence	Prevent victory	Ideological proximity	Other reasons
All	59.0	51.7	6.3	5.8
Same orientation	44.2	29.2	15.9	7.7
Different orientation	65.6	63.1	0.0	4.7

Notes: Column 1 gives the percentage of instances for which the article reports at least one reason provided by the candidate or party to justify the decision to drop out. Column 2 (resp. 3) gives the percentage of instances where the article reports that the candidate dropped out to prevent the victory of another candidate (resp. because the candidate or party felt ideologically close to a top-two). Column 4 gives the percentage of instances where the article reports another reason. It includes all reasons that concern less than 5 percent of the instances each.

	C. Reactions				
	(1)	(2)	(3)	(4)	(5)
	Presence	Exclusion	Voters critics	Furthest cand critics	Other reactions
All	10.7	5.1	0.5	4.1	5.4
Same orientation	2.2	0.0	0.4	0.9	1.7
Different orientation	18.3	9.5	0.6	6.9	8.8

Notes: Column 1 gives the percentage of instances for which the article reports at least one reaction following the dropout. Column 2 gives the percentage of cases where the party decided to exclude the candidate because she dropped out against the party's instructions. Column 3 (resp. 4) gives the percentage of cases where voters (resp. the furthest candidate among the top two) critized the dropout decision. Column 5 gives the percentage of instances where the article reports another reaction. It includes all other reactions that concern less than 5 percent of the instances each, except voters' critics, as we discuss this statistics in the main text (see Section 5.2).

Appendix I. Political orientations

Political labels are attributed by the French Ministry of Interior. Tables below show how we allocate each political label to one of our six political orientations for each election and year. The 1978 and 1981 parliamentary elections are shown together as the political parties competing in both elections were identical.

1978 and 1981 parliamentary elections	
Political label	**Political orientation**
Divers Droite	Right
Divers Gauche	Left
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Parti Communiste Français	Left
Parti Socialiste	Left
Rassemblement Pour la République	Right
Union pour la Démocratie Française	Right
Non Classés	Other
Indépendants	Other

1988 parliamentary elections	
Political label	**Political orientation**
Communiste	Left
Divers Droite	Right
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front National	Far-right
Majorité Présidentielle	Left
Radical de Gauche	Left
Régionalistes	Other
Rassemblement Pour la République	Right
Parti Socialiste	Left
Union pour la Démocratie Française	Right

1993 parliamentary elections	
Political label	**Political orientation**
Communiste	Left
Divers	Other
Divers Droite	Right
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front National	Far-right
Gestion Ecologie	Other
Majorité Présidentielle	Left
Radical de Gauche	Left
Régionalistes	Other
Rassemblement Pour la République	Right
Parti Socialiste	Left
Union pour la Démocratie Française	Right
Europe Ecologie les Verts	Left

1997 parliamentary elections	
Political label	**Political orientation**
Communiste	Left
Divers	Other
Divers Droite	Right
Divers Gauche	Left
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front National	Far-right
Parti Radical Socialiste	Left
Rassemblement Pour la République	Right
Parti Socialiste	Left
Union pour la Démocratie Française	Right

2002 parliamentary elections	
Political label	**Political orientation**
Communiste	Left
Chasse, Pêche, Nature et Traditions	Right
Divers	Other
Démocratie Libérale	Right
Divers Droite	Right
Divers Gauche	Left
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front National	Far-right
Ligue Communiste Révolutionnaire	Far-left
Lutte Ouvrière	Far-left
Mouvement National Républicain	Far-right
Mouvement Pour la France	Right
Pôle Républicain	Left
Radical de Gauche	Left
Régionalistes	Other
Rassemblement Pour la France	Right
Parti Socialiste	Left
Union pour la Démocratie Française	Center
Union pour un Mouvement Populaire	Right
Europe Ecologie les Verts	Left

2007 parliamentary elections	
Political label	**Political orientation**
Communiste	Left
Chasse, Pêche, Nature et Traditions	Right
Divers	Other
Divers Droite	Right
Divers Gauche	Left
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front National	Far-right
Majorité présidentielle	Right
Mouvement Pour la France	Right
Radical de Gauche	Left
Régionalistes	Other
Parti Socialiste	Left
Union pour la Démocratie Française -Mouvement Démocrate	Center
Union pour un Mouvement Populaire	Right
Europe Ecologie les Verts	Left

2011 local elections	
Political label	**Political orientation**
Autres	Other
Communiste	Left
Divers Droite	Right
Divers Gauche	Left
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front National	Far-right
Majorité présidentielle	Right
Nouveau Centre	Right
Modem	Center
Parti de Gauche	Left
Radical de Gauche	Left
Régionalistes	Other
Parti Socialiste	Left
Union pour un Mouvement Populaire	Right
Europe Ecologie les Verts	Left

2012 parliamentary elections	
Political label	**Political orientation**
Alliance Centriste	Center
Autres	Other
Centre pour la France	Center
Divers Droite	Right
Divers Gauche	Left
Ecologistes	Other
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front de Gauche	Left
Front National	Far-right
Nouveau Centre	Right
Parti Radical	Right
Radical de Gauche	Left
Régionalistes	Other
Parti Socialiste	Left
Union pour un Mouvement Populaire	Right
Europe Ecologie les Verts	Left

2015 local elections	
Political label	**Political orientation**
Communiste	Left
Divers	Other
Debout la France	Right
Divers Droite	Right
Divers Gauche	Left
Extrême Droite	Far-right
Extrême Gauche	Far-left
Front de Gauche	Left
Front National	Far-right
Modem	Center
Parti de Gauche	Left
Radical de Gauche	Left
Parti Socialiste	Left
Union Centriste	Center
Union pour la Démocratie	Right
Union des Démocrates et Indépendants	Right
Union de Gauche	Left
Union pour un Mouvement Populaire	Right
Europe Ecologie les Verts	Left