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PREFERENCES, VOTING RULES, BEHAVIOUR AND OUTCOMES. A FIELD EXPERIMENT ON THE LOCAL ELECTIONS IN ROMANIA

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ABSTRACT

The purpose of this paper is to study the electoral behaviour of the Romanian voters under different voting rules, looking to answer the question regarding the extent to which voting rules matter in the local context. In order to achieve this purpose, I use the results of a pilot field experiment conducted in Bucharest during the local elections, which took place on the 10th of June 2012. Using the experimental results, I aim to answer two types of research questions. The first concerns the extent to which results obtained through different voting rules really differ in a real life setting, and if so, whether it is due only to the aggregation rule or also to a change in electoral behaviour caused by changing the rule. The second one concerns strategic behaviour in particular and aims to see to what extent strategic voting existed in these elections and whether some rules actually encourage strategic voting more than others, as theory predicts.

KEYWORDS

- voting rules
- Romanian elections
- field experiment
- strategic behaviour

Introduction and theoretical argument

According to rational choice neo-institutionalism, the institutions, as a set of formal and informal rules and norms, constrain and influence the behaviour of rational actors and, in combination with preferences they determine the outcomes¹. Applying the rational-choice institutional framework to elections, voting rules and preferences determine outcomes. When holding preferences constant, outcomes can vary as a function of the voting rule in place. Therefore, voting rules can be compared to each other or evaluated in terms of the outcomes they produce. The outcomes that voting rules produce can be divided at least into two types,

¹ Ch R Plott, 'Recent Results in the Theory of Voting', in M. Intriligator (ed.), *Frontiers of Quantitative Economics*, North-Holland, Amsterdam, 1971, pp. 109-27

according to Duverger²: outcomes produced by the mechanical effects of the rule – converting votes into seats, and those created by the psychological effects of the rule – the way people behave under the voting rule as a response to the mechanical effects³. For example, whether a voting rule leads to the election of the Condorcet⁴ winner, when such a winner exists⁵, or if it provides incentives for voters to behave strategically⁶ change their option when their preferred alternative is in danger of losing the elections. However, while some rules provide strong incentives for strategic behaviour, others do not. One reason is that strategic calculations might be difficult under some rules, especially when voters are not used to the rules.

Investigating the type of effects that different voting rules produce both in terms of outcomes and of voting behaviour is important, especially in a new context like a new democracy, where volatility might be high and where electoral reforms might be more frequent. Therefore, understanding what kind of effects different rules produce and to what extent the local context matters might become very relevant for this type of societies. Moreover, to my knowledge, little research of this kind has been carried out in such contexts, and in Romania in particular there has been none at all. Although the Romanian electoral systems for both the general and local elections have been changed in 2008 and both researchers and the policy makers had quite a few things to say about the consequences of these reforms, little information is actually available on what these would actually mean for the Romanian context⁷.

Furthermore, even if there is a vast literature on the effects of voting rules both upon behaviour and upon outcomes⁸, these are mostly based on research carried out on western democracies and thus theoretical predictions might not always match the empirical evidence from the Eastern Europe. Thus, either confirming that these predictions are accurate or infirming them and explaining why some do not apply becomes highly relevant.

² M Duverger, *Political Parties: the Organization and Activity in the Modern State*, Wiley, New York, 1963[1951].

³ We can also talk of a psychological effect on parties and candidates, which will not waste their resources in districts where they fear they will be the victims of strategic voting, the result of the psychological effects on the voters

⁴ A Condorcet winner is an alternative that defeats all other alternatives in pairwise comparisons

⁵ M Peress, 'Selecting the Condorcet Winner: single-stage versus multi-stage voting rules', *Public Choice*, vol. 137, 2008, p. 207.

⁶ Strategic voting refers to a the situation in which a voter casts her vote to her second-choice preference in order to prevent her least preferred alternative to win, when her first choice has no chance of winning (Alvarez et al, 2006)

⁷ Gh Teodor (ed.), *Alegeri 2008. Campanii, lideri și sondaje* [2008 Elections. Campaigns, leaders and polls], Polirom, Iași, 2009; CG Marian & RF King, 'Plus ça change: Electoral law reform and 2008 Romanian parliamentary elections', *Communist and Post-Communist Studies*, vol. 43, 2010, pp. 7-18; A Radu, *Politică între proporționalism și majoritarism. Alegeri și sistem electoral în România postcomunistă* [Politics between proportionalism and majoritarism. Elections and electoral system in Post-communist Romania], Institutul European, Iași, 2012.

⁸ GW Cox, *Making votes count: Strategic coordination in the world's electoral systems*, Cambridge University Press, Cambridge, 1997; JF Laslier, "The Leader Rule: A model of strategic approval voting in a large electorate" *Journal of Theoretical Politics*, vol. 21, 2009, pp. 113-136; M Duverger, op. cit., etc.

For these reasons, I use quasi-experimental methods in order to investigate these questions and the Romanian context of 2012 is an appropriate setting as

both local and general elections have taken place. Thus, a field experiment that allows for the real features of elections, like real candidates, real campaigns and real stakes to be introduced in the research, as opposed to only artificially reproducing these features in the lab through monetary incentives, might be very useful in understanding how well known voting rules interact with the local context and produce effects both on outcomes and on the behaviour of the electorate.

In order to account for these interactions a pilot field experiment has been carried out during the Romanian local elections in Bucharest on the 10th of June 2012. The present paper reports on the conclusions of the data collected through this quasi-experiment and their implications for the Romanian context.

The paper is structured as follows: section II presents the methodology and data used, including the quasi-experimental design for the field study and concludes with the main research questions and hypotheses for which this study has been intended; section III starts with a very short presentation of the local elections and the main candidates and then moves on to do some preliminary analysis of the data; finally, section IV concludes the study and proposes further research directions.

Methodology and data

The experimental design. I use the data from a pilot quasi-field experiment conducted during the local elections in Bucharest, Romania, on the 10th of June 2012. The purpose of the experiment was the study of voting behaviour under various voting rules in the context of the local elections. For this purpose, one location in each of the six districts of Bucharest was randomly selected, each of these locations including up to six polling stations grouped together in the same building. The experiment was conducted in two time intervals, the first from 8.00 until 14.00 and the second from 15.00 until 21.00, while the polls opened at 07.00 and closed at 21.00. During these two time periods, a total number of 278 questionnaires⁹ have been applied. Questions concerned vote choice for the general mayor under several voting rules (two-round majority, Borda count, approval, limited voting and the majority judgement system on a 10 point scale¹⁰.

⁹ Although the initial idea behind this field experiment was to set up an experimental polling station and get people to actually vote on experimental ballots under different voting rules, due to difficulties in getting approval from Biroul Electoral Central – BEC (the Romanian Central Electoral Committee) to run the experiment, we have decided to switch to a survey solution, where we would ask people how they would vote under different voting rules scenarios. This compromise solution has allowed us to take advantage of the real life choice situation, with real candidates, real campaign and real stakes, that the local elections provided, while still complying with the requirements imposed by BEC.

¹⁰ Voters were asked to give each candidate a grade from 1 to 10, where 1 is the smallest grade and 10 the highest. Although in the original formulation the authors used a qualitative measure (M Balinski & R Laraki. *Majority Judgement: measuring, ranking and electing*, MIT Press, London, 2010), we relied on a numeric one, as the 1 to 10 grading system is used in Romanian schools and thus it is easy to understand by the voters

A series of questions regarding the degree of political information the voter held, political views and socio-demographic information were also included.

Although the design did not actually ask people to cast a vote under different voting rules, but just created different voting rules scenarios and then asked people how they would vote in each of these scenarios, I argue that the design can still be considered an experimental one, borderline between field and survey experiments. The design still has the main advantages of field experiments: it deals with real voters, real candidates and a real campaign, thus closely mimicking real elections in this respect¹¹. All the while it also approaches a survey experiment with repeated measures where the baseline would be vote under the existing voting rule in the real elections, while the scenarios could be considered vignettes, after which change in behaviour is measured and compared to the baseline¹².

The design was an intra-subject one, as the same subject was asked to advise how she would vote under all scenarios in the study. Although the intra-subject design has many advantages when comparing results, it might raise some issues concerning the effect of having chosen to answer in one way under a scenario on the way people chose to answer the latter ones. Thus, people might have tried to be consistent and therefore choose to answer in the same way under different scenarios¹³.

Because there was no way to properly sample the people that would come and vote, as there was no way to predict which people would show up to vote and which of those would agree to take part in the experiment, the operators have been instructed to approach people at random, but at the same time to try and get people from as many socio-demographic categories (age, gender, education and ethnicity) as possible. Even though the obtained sample is not representative for the population of Bucharest, or for the Romanian population for that matter, in order to get results as precise as possible and to get valid comparisons between different categories, after the experiment, we decided to control for any sample bias by performing weighting on the sample.

Research questions and hypotheses. There are several types of research questions and hypotheses I am interested in testing with this design, aiming to get a better understanding of how varying the voting rule would impact the outcome of the elections and the voting behaviour of the electorate.

¹¹ J Carpenter, J List, & G Harrison (ed.), *Field Experiments in Economics*, Springer, 2005

¹² C Atzmüller, & PM Steiner, 'Methodology' *European Journal of Research Methods for the Behavioral and Social Sciences*, vol. 6, no. 3, 2010, pp. 128-138

¹³ The solution for this problem would have been to randomly vary the order of the scenarios or to randomly assign only some of the scenarios to each person. We chose not to do this, as the number of respondents assigned to each group would have been small enough not to be able to get an accurate measure of the magnitude of these effects. However, these issues will be taken into account and dealt with in the next field experiment during the general elections, when there will be more locations and more people involved in the study.

In regard to the outcome of elections, I am interested in both the absolute and relative results of the candidates. On the aggregate side of things, I analyse the extent to which different voting rules produce different outcomes, when there can only be a single winner of the elections. Thus, the focus is on whether and to what extent the different voting rules under study produce a different winner.

H1: The winner depends on the voting rule in place.

In theory, different voting rules could lead to different outcomes, even if preferences remain constant, either because of the electoral formula itself or because strategic behaviour is involved. However, as strategic behaviour depends on the stakes of the elections and also on the complexity of the voting rule, I expect little evidence of strategic behaviour for the local elections. The reason for this is that the local elections for the general mayor in Bucharest have been quite non-competitive, with the first ranked candidate, Sorin Oprescu, winning approximately 64% of the vote share. The second reason is that some of the voting rules I study are somewhat complex (Borda count, limited voting etc.) and the voters are not used to them. Thus the possibility for strategic calculation might be severely reduced due to these aspects.

The second aspect of outcomes refers to the individual results each candidate would obtain in comparison to the rest. A measure of the relative individual outcomes could be given by the vote share that each candidate obtains in comparison to the rest and whether the differences in vote shares between candidates across rules are constant or vary. Regarding the relative individual outcomes, I aim at testing two hypotheses referring to the manner in which different voting rules will affect these outcomes:

H2.1: The more permissive the rule is in terms of the number of choices it allows the voter to express, the lesser the difference in vote share between the candidates.

H2.2: The more egalitarian towards the candidates a permissive rule is, in the sense that it does not ask the voter to order her the preferences she expresses, the lesser the difference in vote share between candidates.

The intuition behind these hypotheses is that the intensity or the strictness of the preferences might vary, especially when moving down past the first preference. Thus, if the rule is permissive, meaning the voter is allowed to express more than one preference, she might be more inclined to approve of more candidates or split the votes between several candidates, thus shifting up the scores of lower ranked candidates, even though the actual rank order will probably not be altered. Furthermore, I expect the observed difference to be even lower in the case of rules that are more egalitarian towards the candidates, that is, they allow voters to express more than one preference without requiring the voter to rank her preferences, like in the case of approval voting, as voters can only express the subset of alternatives

they prefer most, but not the order in which the alternatives in the subset are preferred.

The design of the study also allows approaching the outcome issue from a different perspective. Because I am analysing an intra-subject design, where the voting choices that the same person would make under the different voting rules are known, I can also examine the extent to which individual choices vary across rules. In doing so, several types of research questions arise both about the effect of the different rules in combination with the preference profile, and also regarding the effects of this particular research design. Using the intra-subject design I can research the extent to which strategic behaviour appears by comparing vote choice to the actual preference profile of each voter and also with the vote choice of the same person under different rules. Thus, I can also check the extent to which vote choice is consistent with the preference profile. Unfortunately, I will not be able to perform this analysis on the results of this pilot, because although the design allows me to, the small sample of participants does not. Therefore, I am forced to turn to aggregate measures of strategic voting, following Cox's work¹⁴ and the tools developed by him and others that came after¹⁵ consisting on comparisons of the vote share differences between the candidates.

However, the issues of consistency also raise methodological questions, as consistency might only be a consequence of the intra-subject choice of research design. Unfortunately, this methodological concern cannot be addressed here, as further data is necessary to determine the degree to which choices remain consistent when either employing a between subject design or when randomly changing the order in which the subject is provided with the scenarios.

With all these limitations, the advantage of this design is that, assuming that variation in choice is mainly determined by the rule in place and the preference profile, we can better trace the extent to which voters engage in strategic behaviour under different rules. Unfortunately, due to the non-competitive nature of these elections and the novelty of some of the rules, we expect little strategic behaviour:

H3.1: The less competitive the elections are, the lesser the strategic behaviour.

H3.2: The more complex or unfamiliar the voting rule is, the less likely it is for voters to engage in strategic behaviour, even when the rule might allow it.

Finally, the last type of research questions I aim to answer using the data collected is the extent to which this type of research is feasible for Romania. How open are Romanian voters to this type of research and how capable are they to use different strategies under different voting rules when it suits them. Thus, I am

¹⁴ GW Cox, op.cit.

¹⁵ R Moser & E Scheiner, 'Strategic voting in established and new democracies: Ticket splitting in mixed-member electoral systems', *Electoral Studies*, vol. xxx, 2008, pp. 1-11; RM Alvarez, FJ Boehmke & J Nagler, 'Strategic voting in British elections', *Electoral Studies*, vol. 25, 2006, pp. 1-19

interested in the share of non-responses and infer that the non-response rates could be used as an indicator for the level of complexity of the rule. Thus, the higher the non-response rate the more complex the rule is perceived to be.

Results

The local elections in Romania, which have been the focus on this research, have taken place on the 10th of June 2010 under plurality, also known as the first past the post system. Eighteen candidates have entered the race for the seat of general mayor in Bucharest, including the incumbent Sorin Oprescu. The elections have been won by the incumbent with a majority of 64%. Oprescu has run for the second time as an independent candidate. He is a former member of the Social-Democratic Party (PSD), having resigned from the party just before the local elections back in 2008. Although he remained independent, he was supported by his former party in the 2012 elections. PSD did not nominate its own candidate for the mayoral office. Coming in second, with only 18% of the vote share, was the liberal-democrat candidate Silviu Prigoana. The Liberal-Democrat Party (PDL) has been the main incumbent party until the spring of 2012, losing in popularity due to the austerity measures implemented in the past couple of years. Finally, the third ranked candidate, with 5% of the vote, was Horia Mocanu, the candidate of the newly formed populist party of the People –Dan Diaconescu (PP-DD). The party is focused on its leader and initiator Dan Diaconescu and these were the first elections in which PP-DD entered candidates in the race. Finally, coming in fourth, with the same vote share of 4% are the independent candidate Nicușor Dan (for which the expected vote share was about 8% according to the polls), and Gigi Becali, the leader and initiator of the quite radical and populist Party New Generation(PNG).

The experimental results match the aggregate official results for the first two ranked candidates, as 58.6% of the subjects declared that they have voted for Sorin Oprescu and 24.22% for Silviu Prigoana. However, coming in third in the experimental data is Dan Nicusor with 11.72% of the vote (ranked 4th on the real results), followed by Horia Mocanu with 1.95% of the vote and Gigi Becali with only 0.4% of the vote. Thus, the experimental results change the order of the third and fourth candidates, with Nicusor Dan getting a score almost 4 times higher than the real one. However, this is not surprising, given that the experimental sample is not large enough to be representative for the whole population of the city.

Comparing aggregate results under the voting rules used in this study (two-round majority, Borda count¹⁶, approval, limited voting and the majority judgement system -MGS on a 10 point scale) and the first preference of the voters, the results for the first 5 ranked candidates yield:

¹⁶ Borda count results have been compromised by some operators and will not be used in this analysis

Table 1. Candidates' total vote share

Candidate	Official Results(%)	Experimental Results Plurality (%)	Limited (%)	Approval (%)	1 st preference (%)	MGS (means)	MGS (median)
1 Sorin Oprescu	64	58.6	56.61	31.04	58.08	7.52	9
2 Silviu Prigoana	18	24.22	22.82	18.12	23.53	5.65	6
3 Nicusor Dan	4	11.72	12.84	13.42	12.5	6.47	7
4 HoriaMocanu	5	1.95	2.24	2.68	1.83	-	-
5 Gigi Becali	4	0.39	0.87	13.42	0.73	4.07	3

First we can observe that all rules yield the same winner, Sorin Oprescu, although the percentage is a bit lower in the experimental results in comparison to the real vote. The interesting part is that the percentage is considerably lower under approval, even when compared to the rest of the experimental results. Also the second place is occupied by the real runner up, except for the grading system, where voters were asked to give a score from 1 to 10 to each candidate. The grading system, which usually takes into consideration the median grade that each of the candidates has received, ranked Nicusor Dan higher than Silviu Prigoana by a whole point. The rest of the results are consistent with the outcome of the question regarding vote choice in the real elections, although percentages are considerably higher for the both the second and third place and considerably lower for the fourth and fifth place. These could all be effects of the sampling bias, given that the sample is not representative. However, since what I am mostly interested is the variation in vote choice across the rules in the experiment and not necessary interested in comparisons to the real results, having oversampled some candidate's voters and under-sampled others, should not invalidate the scope of the study.

I final observation I would like to make regarding the aggregate level results is that choices are to a large extent consistent with the voters' first preference, as the study began by asking people to state their three most preferred candidates and the order in which they preferred them.

Given the observations above, at least at the aggregate level, the hypothesis regarding the change in outcomes under different voting rules can be rejected, at least for the first placed candidate. The winner stays the same regardless of the rule in place. There could be two explanations for this non finding. One is that since the incumbency won such a comfortable majority it might be difficult to notice the differences across rules than it would in a more competitive setting where hierarchies would be more easily overthrown. Secondly, it might be that participants wanted to be consistent with their answers and were less inclined to switch their vote from one rule to the next, thus giving similar answers to all of them.

In order to test the hypothesis regarding the declining difference in vote share between candidates under different rules, I calculate vote share ratios between the

first and second ranked candidate and the second and the third. I will not go lower than that, for two reasons: first, starting with the fourth place the vote share is rapidly declining; and secondly because these are the main two measures used to explain and predict strategic voting¹⁷. Cox's initial formulation¹⁸ only looked at the vote share difference between the first and second losers which in a single-member district setting would be the second and the third ranked candidates. He did so in order to operationalize Palfrey's (1984) definition of Duvergerian and non-Duvergerian equilibria, hypothesising that Duvergerian equilibria are a consequence of strategic voting and thus an indication that this type of behaviour occurred. The idea behind this is that in a Duvergerian equilibrium the second loser is trailing so far behind the first loser that voters are able to identify the second loser as non-viable (as not having any chance to win) and thus strategically coordinate on the first loser who could become a viable challenger to the front runner. In contrast, in non-Duvergerian equilibria, the second and third losers are so closely tied that it is difficult for voters to tell who the top challenger could be and thus the coordination strategy outlined above cannot take place. The ratio obtained by dividing the vote share of the second loser to that of the first loser could be an indicator of whether the voters were and were not in a Duvergerian equilibrium. Thus, a ratio close to 0 indicates that the second loser is trailing far behind while a ratio close to 1 indicates that the two are closely tied.

However, only looking at the ratio between the second and the first loser might not be enough to predict strategic voting. If the second loser is trailing so far behind that the voters can coordinate on the first loser, but the first loser is trailing so far behind the front runner that she stands no real chance of defeating the front runner even when getting the second loser's votes, then the voters might have little incentive to abandon the second loser which was their true preference, because they have no chance of preventing the front runner from winning.

Therefore, I am opting to study both and label the Second-First Ratio the vote share ratio between the first loser and the front runner, which are the second and first ranked candidates and the Third-Second Ratio the vote share ratio between the second loser and the first loser, which are the third and second ranked candidates in the race. This way, I can test my hypotheses regarding the declining vote shares when rules become more permissive in terms of the number of choices they offer the voter and more egalitarian towards the candidates when they don't ask voters to rank those preferences and I can also evaluate the presence of strategic voting under the different rules. In order for strategic voting to have occurred, I would expect to find a second-first ratio close to 1 signalling that there is a tight race between the front runner and the first loser and a third-second ratio close to 0 signalling that the second loser is trailing so far behind that voters should have coordinated on the first loser.

¹⁷ Alvarez et al., op. cit.; Moser and Scheiner, op. cit.,

¹⁸ GW Cox, op. cit.

Table 2. Second –First and Third –Second Vote Share Ratios

	Second - First Vote Share Ratio	Third - Second Vote Share Ratio
1. Real results (First past the post)	0.28	0.22
Experimental results (First past the post)	0.41	0.48
2. Limited voting	0.40	0.56
3. Approval	0.58	0.74
4. First preference	0.41	0.53

Let's begin with the declining difference in vote shares. The results indicate that the vote share ratio is higher in the experimental results in comparison to the real results, because, like previously stated, it appears we have sampled a larger proportion of second and third ranked candidates' supporters than we would expect to find in the population. Thus, there was a closer race between the front runner and the first loser in the experiment that it actually was in real life. However, similar to the real results, the second-first ratio is fairly close to the third-second ratio and the situation is similar for the results when taking into account only the first preference of the voters. Thus, the first loser was trailing behind the front runner at the same distance as was the second loser compared to the first loser. Therefore, even if all the votes of the second loser would have gone to the first loser, the first loser still would have not been able to defeat the front runner. As for the ratios under limited voting, we can notice that the third-second ratio has gone up while the second-first ratio slightly decreased, thus bringing the second loser closer to the first loser but distancing the first loser from the front runner. The gap between the two ratios has also increased, meaning that the first loser and front runner are further apart than are the second loser and the first loser. Under approval, both ratios as well as the gap between them go considerably higher in comparison to all other results, meaning that the front runner and the first and second losers come closer to one another, but the second and first losers approached more than the first loser and the front runner. Thus, even though these results might not be robust and require further research, it would seem that the ability to express more than one preference does shift the ratios up and the effect is larger when no ranking of the candidates is allowed or required.

As for strategic voting, the third-second ratio doesn't approach 1 under neither of the rules, but comes closest under approval and limited voting. At the same time the second-first ratio is far from 0 under all rules, but out of the experimental results is lowest under limited voting. Thus, neither rule meets the requirements for strategic voting. The consequence of these conclusions is that we should observe a small proportion of strategic voting in general if any at all, but we would expect a larger share of strategic voting under these multi-choice rules (approval, limited voting) in comparison to the single-choice rules (plurality).

There are two possible strategic voting situations for these elections. Voters preferred the second loser to both the front runner and the first loser and also preferred the first loser to the front runner, so given that the second loser stood no chance, they choose to vote for the first loser in the hope that she would manage to defeat the front runner. Secondly, there is the category that had the first loser as a first preference but considered she did not stand any chance of winning and thus decided to go with the front runner who was most likely to win.

There is little evidence of strategic voting under the real voting rule. Only 18 people vote for another alternative than their most preferred one. Out of them, 11 have a different first preference than Oprescu and 9 out of these 11 chose Oprescu, who was their second choice. Thus, only in these cases we could talk about not wanting to waste the vote on a candidate that has no chance of winning. However, the sample is too small to try and characterize these people. Therefore, strategic voting in Romania should be analysed further by a similar design in the context of the general elections. Investigating the same rules on the general elections, when there will be single member districts with different degrees of competitiveness will also allow me to test the hypothesis regarding the effect of the closeness of the elections on the observed amount of strategic vote.

Under approval voting, in order to talk about strategic voting, we should talk about sincere and insincere voting, as per Laslier's et. al.¹⁹ (2009, 2010) Leader Rule. According to the Leader Rule, a voter is sincere if she approves of all candidates that she prefers to the most likely to win candidate (the Leader) and doesn't approve any of the of candidates she prefers the Leader to. Then, in order to decide if she approves of the Leader, she will compare her to her main challenger. The results indicate that out of the 269 people who indicated their vote choice under approval and did not abstain or refused to answer, 58 have deviated from this rule. Thus, the Romanian example seems to question the expected prediction regarding vote under approval. However, most subjects only chose to approve exactly one candidate and, with little exception, this was their first preference, indicating that people were somewhat reluctant to use the properties of this rule. The same stands for limited voting, where most people chose not to split the votes between several candidates, and gave their preferred option all three votes. The tables below describe the two situations:

Table 3. Results of vote under approval rule

	No of Approvals											Mean	Median
	0	1	2	3	4	5	6	7	8	10	16		
No of respondents	8	119	67	41	8	12	5	2	2	1	1	2.08	2

¹⁹ JF Laslier & K Van der Straeten, 'A Live experiment on approval voting', *Experimental Economics*, vol. 11, 2008, pp. 97-105

Table 4. Number of voters that cast 1,2 and 3 votes by candidate

No	Name	Cod party	3 votes	2 votes	1 vote	Total vote no.	Percentage received of the total vote	No. of approvals	Percentage received of the total approvals
1	BECALI GEORGE	PNG-CD	1	0	4	7	0.87	80	13.42
2	COJOCARU CONSTANTIN	PP-LC	0	0	0	0	0.00	8	1.34
3	COLUMBEANU ADRIAN IRINEL	PPPS.	1	1	2	7	0.87	25	4.19
4	DAN NICUȘOR DANIEL	CI	25	7	14	103	12.84	80	13.42
5	DIMA PETRICĂ	PSR	0	0	0	0	0.00	4	0.67
6	DOBRESCU FLORIN	PTT	0	0	2	2	0.25	4	0.67
7	GEORGESCU IONUȚ	PER	0	0	0	0	0.00	11	1.85
8	GRIGORIU ADRIAN	PNDC	0	0	0	0	0.00	3	0.50
9	IONESCU CONSTANTIN	PSDM	4	0	0	12	1.50	5	0.84
10	IODĂNESCU ANGHEL	UNPR	0	0	4	4	0.50	35	5.87
11	LINCU VASILE	PUER	0	0	1	1	0.12	6	1.01
12	MOCANU VASILE-HORIA	PP-DD	3	3	3	18	2.24	16	2.68
13	OPRESCU SORIN MIRCEA	CI	136	15	16	454	56.61	185	31.04
14	POPEANGĂ PETRE	PRM	3	0	2	11	1.37	12	2.01
15	PRIGOANĂ VASILE-SILVIU	PDL	50	13	7	183	22.82	108	18.12
16	ROMAN NICOLAE	P.PRO.	0	0	0	0	0.00	6	1.01
17	TEODOSIU-IONIȚĂ IOAN	PAS	0	0	0	0	0.00	1	0.17
18	VLADU ALEXANDRU	PPE-DE	0	0	0	0	0.00	7	1.17
Total			223	39	55		100%	596	100%

Even though the number of people with insincere voting behaviour under approval is rather small, we could try and model the behaviour and investigate which category of people is more likely to behave in this manner. In order to do so, I employ a logit model, where the dependent variable is a dummy variable that is 1 when people behave insincerely and 0 for all other cases. As independent variables I use dummies to indicate whether the respondents' first choice was Oprescu or Prigoana, a measure of how informed people think they are about the campaign, on a 5 point scale, and socio-demographic variables, like age measured in years, education measured on a 5 point scale, gender.

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	5.07642	1.29179	3.930	0.00***
op	-2.05685	0.84013	-2.698	0.22
pr	-1.02759	0.84013	-1.223	0.22
age	-0.07088	0.18791	-0.377	0.00**
edu	-0.07088	0.18791	-0.377	0.70
male	0.32508	0.36192	0.898	0.36
info	-0.16137	0.18535	-0.871	0.38

Signif.codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
 Null deviance: 227.47 on 223 degrees of freedom
 Residual deviance: 202.87 on 217 degrees of freedom
 AIC: 216.87

The results indicate that the only two factors with a significant impact on the odds of behaving insincerely are: 1) having Oprescu as first preference and 2) age. Both have a negative impact, meaning that people whose first preference is Oprescu or people who are older are more likely to vote sincerely under approval and vice versa. A possible explanation for these results would be that older people might have more stable preferences, could be more risk adverse and more reluctant to behave insincerely. On the other hand, because Oprescu was a member of the Social-Democratic Party, and is still supported by them, he might be more appealing to older people, as he might be perceived as representing the left. Thus, it is very likely that most of the older people vote sincerely.

Finally, the last thing I would like to do in this analysis is to compare the non-response rate for different voting rules. The table below summarises these rates:

Table 5. Non-response rates

	Number of valid responses	Number of refusals	Refusal rate (%)
1. Experimental results (First past the post)	278	0	0
2. Limited voting	268	10	3.73
3. Approval	267	11	4.12
4. First preference	276	6	2.17
5. Second preference	192	86	44.79
6. Third preference	155	123	79.35
7. 2 round majority (majority runoff)	258	20	7.75
8. Grades (for Oprescu)	262	16	6.11

The rates in the table above seems to indicate that people did not find either approval or limited voting hard to understand as the non-response rates are rather low. However, if we look at the 2 round majority rule scenario where people were asked which pair of candidates they would like to see in the second round and also if we look at the response rate for the full preference profile, we can observe that the non-response rates increase significantly, especially for the second and third preference. A possible explanation is that people might not have a full preference profile, as none of the existing rules in Romania asks them to express more than one preference. Thus, it is very possible that people only decide which candidate they like best and do not evaluate each pair of two possible candidates to have clear preferences about the full ordering of all possible alternatives. This is another issue that requires further investigation.

Concluding remarks

The purpose of this study was to evaluate and compare the different outcomes and voting behaviour that can result as a consequence of changing the voting rule. For this purpose, I have analysed the results of an experimental study carried out during the local elections in Bucharest. The results of this preliminary analysis on the data seem to indicate that the rules which have been studied do not change the outcome too much, at least in the context of the local elections in Bucharest. Thus, the front runner and the runner up remain the same under all voting rules. Only the third and fourth place candidates change under some of the rules. The second conclusion is that although the rules seem to make little or no alterations to the order of the candidates, the vote share ratios between the second and the first ranked candidates (first loser and front runner) and between the third and second ranked candidates (second and first loser) seem to increase (meaning the differences in vote shares become smaller) under limited and approval voting,

especially under approval voting, as these rules allow for more than one choice and also since approval does not allow for different rankings of approved candidates. This is extremely interesting especially since non-response rates seem to indicate that a good proportion of the people have trouble indicating a second and third preference. Thus, a rule that allows for more choices might allow people to better express their diffuse preferences between candidates.

Finally, the second purpose of this study was to check to what extent this type of research is feasible for the Romanian context, to what extent people are able to understand new rules and try to cast votes using them and also to what extent our research instrument works or needs to be altered. The results have raised some interesting questions which I can only partially answer using the data collected up to this point. Therefore, further research, on a wider population, with a wider variety of degrees of competition between candidates in the race and with the random alternation of the orders the scenarios appear in, is necessary to account for some of the results obtained up to this point.

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