EVERYONE LIKES A WINNER: AN EMPIRICAL TEST OF THE EFFECT OF ELECTORAL CLOSENESS ON TURNOUT IN A CONTEXT OF EXPRESSIVE VOTING

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This paper investigates the effect of closeness on electoral turnout under instrumental and expressive voting. In the former case the empirical implication is unambiguous: the closer the election, the higher expected turnout. Under expressive voting the relation between turnout and closeness may take a different form. For example, turnout may well increase with decreasing closeness when voters have a preference for winners. The empirical implication is that turnout does not necessarily reach its (local) maximum when closeness does but may depend on the relative strength of both effects. An empirical test using data on Belgian municipal elections supports this. It is found that there is a non-monotonic relation between electoral turnout and the size of the largest party in the municipality. Turnout reaches a local maximum when the largest party obtains just over 52% of the seats and then falls indicating that the "instrumental" closeness-argument is most forceful here. However, importantly, there is another turning point: the presence of a highly dominating party (that receives two-thirds of the votes or more) in the elections stimulates turnout despite the fact that dominance implies lower closeness.

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Introduction

Understanding the individual voter's decision whether or not to turn out to vote has been a major challenge for public choice. Downs (1957) focuses on voting as an instrumental act (as a means to influence the election outcome). Doing so, he convincingly shows that rational voters would most likely abstain as the probability for their vote to be decisive is close to zero in most elections. Still, people do vote. In trying to explain this paradox, many authors have critically examined the underlying motivations of the individual voter. The most fruitful approaches start from the observation - made by Downs himself - that voting may not be instrumental in all circumstances: voting could be motivated by factors other than the desire to determine the outcome of the election. For example, voting may serve as a means to create social solidarity or to express political preferences, (Downs, 1957, 48). Later authors have – in trying to resolve the voting paradox – paid still more attention to voting's expressive content. Individual voters thereby derive utility from the very act of expressing their political preferences or their solidarity with a peer group or from performing their civic duty (for example, Riker and Ordeshook, 1968; Brennan and Hamlin, 1998).

The present paper analyses the effect of electoral closeness on turnout. The closeness of the election has been identified as a crucial determinant of turnout. In a context of instrumental voting, closeness increases the probability that a single vote determines the outcome of the election. Therefore, the closer is the election the higher is the expected turnout. In a context of expressive voting, the role of closeness is ambiguous and depends on the precise nature of the underlying preferences of the electorate. Fiorina (1976) was the first to demonstrate how closeness may actually discourage turnout for some groups of voters. Schuessler (2000a, b) develops a comprehensive model of expressive voting in which turnout is related to the expected vote shares of the parties that participate in the election. The intuition behind his model is that voters like to identify with larger groups and thus with "winning" parties or candidates. Such a preference for "going with a winner" has been suggested by Bartels (1988, 112) in his analysis of US presidential primaries and in an experimental design by Niemi and Bartels (1985). The aim of the present paper is to (*a*) critically analyse the role of electoral closeness and voter identification in a context of expressive voting and to (*b*) test the proposition that turnout is positively affected by the presence of a dominating party.

The outline of the paper is as follows. In section I, we briefly discuss the nature of individual voters' expressive preferences for "winning politicians". We relate this discussion to a highly similar discussion in the economics of sports. There, it has been found that fans' preferences for winning teams blur the relationship between the uncertainty of outcome (closeness) of a game and attendance. We demonstrate – in a two-party context - that turnout may well be non-monotonic in electoral closeness as the presence of large parties in the election has two offsetting effects on turnout. First, the presence of a larger party lowers turnout as it lowers the closeness of the election. Second, as voters like to identify with "winners", a larger party within a municipality increases the expressive utility of voting (and therefore electoral turnout). We discuss how the analysis can be generalised to a multiparty setting. The main proposition – that turnout may be a non-monotonic function of electoral closeness – is tested in section II. There, we analyse the empirical relation between turnout and closeness in Belgian municipalities (elections of 2000). While the system of proportional representation often leads to a fragmented party system, many municipalities are dominated

by a single party. As such, local politics in Belgium often boils down to a two-bloc competition. In our empirical analysis we distinguish between those two-bloc municipalities and the more politically fragmented jurisdictions. Our results are in line with the theoretical predictions: we find clear evidence that turnout is a non-monotonic function of electoral closeness, thus suggesting the presence of "stardom" considerations in the individual voter's calculus.

I. Electoral closeness and turnout under instrumental and expressive voting

An interesting (and didactically productive) analogue has been suggested between expressive voting on the one hand and attending and cheering in the sports arena on the other (Brennan and Buchanan, 1984). A fan supporting his/her team does not do this for instrumental reasons. (S)he does understand that his/her cheering will not determine the outcome of the game but…still (s)he cheers. In the same manner, the voter participates in the election and votes for a given candidate or party while still understanding that his/her single vote is most unlikely to determine who will win the election.

The analogy between individuals attending sports events and voters participating in elections offers unique opportunities for academic cross-fertilisation. Attendance at sports events and electoral turnout show many other similarities. Both – be it for different reasons – are affected by the uncertainty of outcome. In sports competitions, the fact that the outcome of, say, a soccer game is uncertain makes attending the game more interesting for the individual spectator. Further, a typical claim is that measures are often taken in order to secure even contests and competitions. The underlying motivation thereby is that uneven contests reduce sports fans' interest. In elections, the closeness of the contest has been identified as a crucial determinant of "political attendance" (turnout). In a context of instrumental voting, the shape of this relation is straightforward. If, in a two-party context, both parties are expected to obtain more or less equal amounts of votes, the individual voter will be more likely to turn up as this implies a higher probability of being decisive. In a context of expressive voting, however, the role of closeness is ambiguous and depends on the precise nature of the underlying preferences of the electorate.

- *Closeness and instrumental voting*

Downs' (1957) expected utility model of voter turnout argues that the individual *homo oeconomicus* calculates the expected utility from each possible action and votes only if the benefits of doing so outweigh the costs. In a two-party context, an individual votes only if the net benefits of voting are strictly positive, i.e. if:

$$R = pB - C > 0$$

This is the common formulation of the Calculus-of-Voting model where R is the net satisfaction (in utiles) that an individual receives from voting. This depends on the "instrumental" benefits (p.B) and costs (C) from voting. The costs comprise the information costs as well as the opportunity costs of heading to the polls. The "instrumental" benefits from voting depend on the future public policy that the voter expects. This policy is assumed to depend solely on the party that wins the election. The instrumental benefit term

is the product of two components. The first – p – gives the probability that one's vote is decisive, meaning that it leads one's preferred party to victory. The second factor in the instrumental benefit term – B – gives the utility gain that is realised when one's preferred party comes into power (B thus corresponds with the difference between the utility from the preferred party's platform minus the utility from the opponent party's platform). The larger this difference, the higher are the potential gains from casting a vote.

The effect of closeness on electoral turnout works through its impact on the probability for the voter to be decisive. It is intuitively clear that this probability (and thus turnout) will be higher in an electoral contest between two parties expecting 50 % of the votes than in an election where one of the parties is expected to obtain an 80 % vote share. Closeness of the election – measured by the expected vote share differential between the two parties – is an indicator of outcome uncertainty. The more uncertain the election outcome, the higher the probability that any single voter may affect it and the higher will be the instrumental benefits from voting. Empirical analyses generally confirm this prediction. Reviews on the relationship between closeness and turnout, in Matsusaka and Palda (1993) and Mueller (2003), show that the estimated coefficients are mostly of the correct sign and generally statistically significant. Closeness counts.

- *Closeness and expressive voting*

The prediction in Downs' model of instrumental voting is unambiguous: turnout will increase if elections are closer. In the context of expressive voting, the driving force behind this positive relationship is absent. This, however, does not mean that the closeness or "outcome uncertainty" of the election becomes irrelevant for the rational voter's decision to turn out. For example, and again demonstrating the similarities of electoral contests and sports games, it may be that voters are more likely to turn out in an election just *because* it is close as "playing in an election is simply more exciting when the game is less predictable" (Schuessler, 2000a, 110). From this perspective closeness encourages turnout irrespective from the instrumental effect of the probability that a single vote is decisive.

Fiorina (1976) demonstrates that for some voters, closeness in the election may *discourage* turnout. To be more precise, Fiorina (1976) shows how so-called "loyalist cross-pressured" citizens will be less likely to vote in close elections. Cross-pressured voters are those for who the party identification and party differential conflict. These are, for example, voters that have partisan preferences for party X but who find that *in the current election* the platform of party Y is more attractive than that of party X. So, while "in general" they prefer X, they "now" prefer Y's platform. Loyalists are those that vote for their "own" party if they vote. So a loyalist cross-pressured voter votes for his "all time favourite" party despite the fact that in the present election it offers a less attractive platform than the opposition party. The intuition is that a voter who is loyal, votes for his/her favourite party and derives utility from that. However, if the election is close, casting a loyal ballot may have a cost in that the preferred party might actually win the election and implement the policy platform that is inferior to the one (s)he prefers.

Schuessler (2000a, b) develops a model in which the expressive utility of voting is a non-monotonic function of the number of other voters supporting the same candidate or party. Voting is an act by which voters identify with a given candidate and/or attach themselves to a collective of fellow voters with similar preferences. As a general rule, expressive utility from voting is positively related to the number of other voters for the same candidate/party.

The intuition is that "(…) there may be some 'herding' or 'contagion' effect to voting: knowing that a large share of the electorate is voting for a candidate simply makes it more attractive for me to vote for this candidate also. Similarly, and in the same irreducible manner, voters may simply prefer to be supporting a winner" (Schuessler, 2000a, 101). Hence, initially, the expressive utility increases with the number of other voters for the same party. Still, after some point an increase in this latter number decreases expressive utility. The reason is that, if *no* other voter votes for a given party, then, voting for this party is not an instrument to identify oneself as member of a group. If, in contrast, *all* voters vote for the same candidate then the individual voter cannot express himself as belonging to a well-defined group (and thus not-belonging to the complement group). An immediate implication of this is that the relationship between a party's size and expressive utility from voting for it is non-monotonic.[1] The crucial thing to note is that the maximum level of expressive utility is reached for levels of support that are significantly higher than 50 % (the percentage where – in a two party context – closeness is at its highest level).

- *Combining instrumental and expressive motivations*

A simple analysis of turnout that combines Schuessler-type expressive motivations with instrumental motivations is given in figures 1.a - 1.c. We assume a situation with two parties L (large) and S (small). The expected votes - v_L and v_S - are such that:

$$v_L \geq v_S.$$

Individual voters' decision whether or not to turn out depends on the difference in expected votes as this difference - v_L-v_S - reflects the (lack of) closeness of the election. Larger differences in expected votes lead to lower turnout for instrumental reasons (or for expressive reasons of the type where people prefer to vote in "exciting" elections, see above). Importantly, the closeness-effect on turnout is identical for voters supporting L and voters supporting S. Turnout in the election is then a simple function of the amount of expected excess votes (v_L -50 %) for party L as expressed by the downward sloping line in figure 1.a. The convexity of this "closeness-argument curve" reflects that initial deviations from a perfectly equal contest reduce the incentive to vote more than when the largest party already obtains, say, 85% of the vote.

Voters are also expressively motivated in the sense that voting allows them to express their attachment to a larger group. As discussed, higher utility is obtained from voting for a candidate who is more likely to win. Voters favouring L will therefore be more likely to turn out to the extent that v_L (and thus also v_L-50 %) is larger. Note that we assume a differential, additional benefit from attachment or identification only for the largest party (the "winner").[2] Denoting the attachment or identification arguments that voters may have as

[1] Interestingly, also in the economics of sports it is observed that people only like winners up to a certain point. Knowles, Sherony and Haupert (1992), for example, find that attendance reaches its maximum when the probability of winning of the (home) team is significantly larger than 50 %. Still, attendance falls if the home team wins too often. Their interpretation is that fans do not like their team to be too certain of a victory. Szymanski (2003) states in his review of the literature that "there seems to be an emerging consensus that demand for match tickets peaks at the point where a home team's probability of winning is about twice that of the visiting team".

[2] A more general model may formalise the probability of turning out to vote for expressive reasons as a positive function of the size of both L and S. This would imply that voters attach some positive expressive utility from associating themselves with larger groups *an sich*, even if they are

"stardom-argument", we expect an additional effect on turnout as reflected in the "stardom-argument curve".

The general effect of the "stardom-argument" is to moderate the effect that lack of closeness has on turnout.

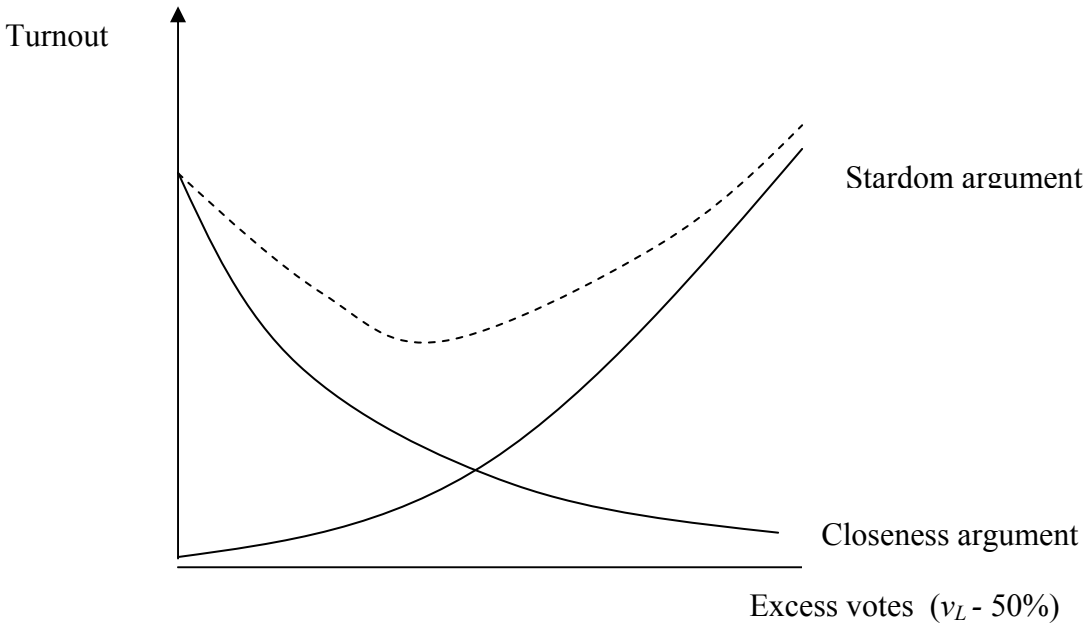

Figure 1.a: "stardom" and "closeness"

Figure 1.a is an extreme case where "stardom" attracts ever more voters. As a result, we obtain a non-monotonic relationship where turnout reaches a local maximum at v_L = 50 % and v_L = 100 %.

Still, it is perfectly possible that the effect of stardom is non-monotonic. This will be the case if the stardom-mechanism derives from Schuessler-type motivations whereby voters identify with "stars" as a means to distinguish themselves sociologically from other voters. If this is the case, then the "stardom" aspect may be as reflected in figure 1.b. Indeed, for small values of v_L (v_L-50 %), the "stardom"-effect is such that it brings more people to the polls. Still, the marginal stardom-effect falls over the region. The reason is that a voter derives no utility from voting for a candidate/party unless this allows him/her to identify himself/herself as belonging to a given group (and thus as not-belonging to the complement group). As a consequence, the expressive utility derived from voting falls after some value v_L*. At that point the largest party becomes so popular that it does not allow the voter to identify himself. Voting for the larger party contains no information on the voter's identity.

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not "winners" (a distinction that will of course win relevance in a context where more than two parties compete, see further). We assume that such an argument is already captured in the closeness-argument curve (given that higher v_S necessarily entails a closer election in a two-party system).

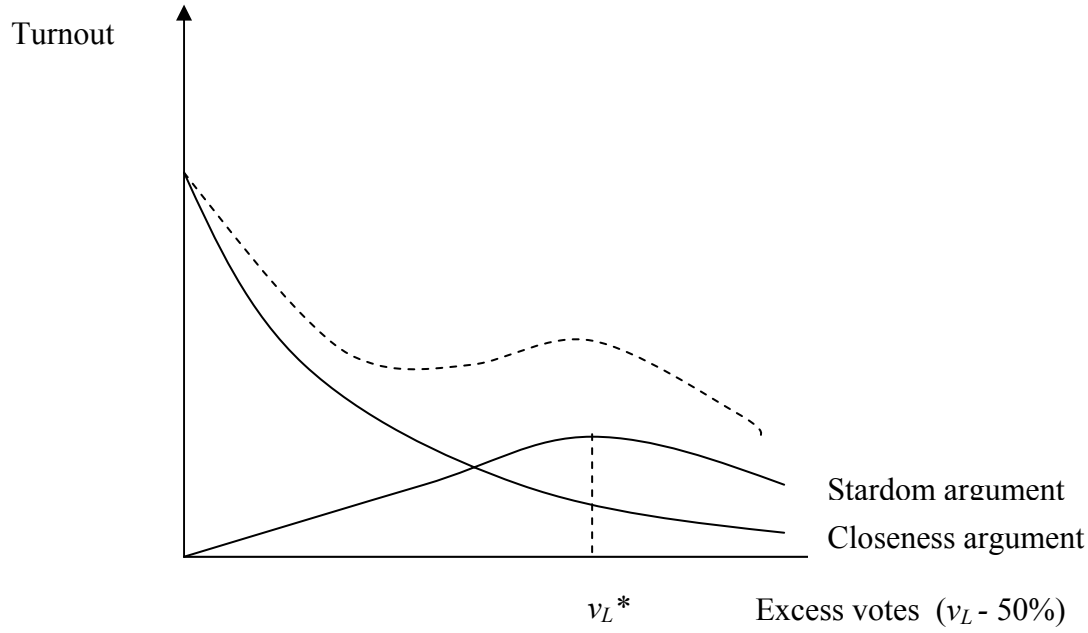


Figure 1.b:
"stardom" and "closeness"

In figure 1.b, the stardom argument curve reaches a maximum at v_L* and the sum of both curves (the dashed line) has two local maxima: one at 0 % of excess votes (when both parties are expected to obtain equal vote shares) and one where the stardom-effect dominates.

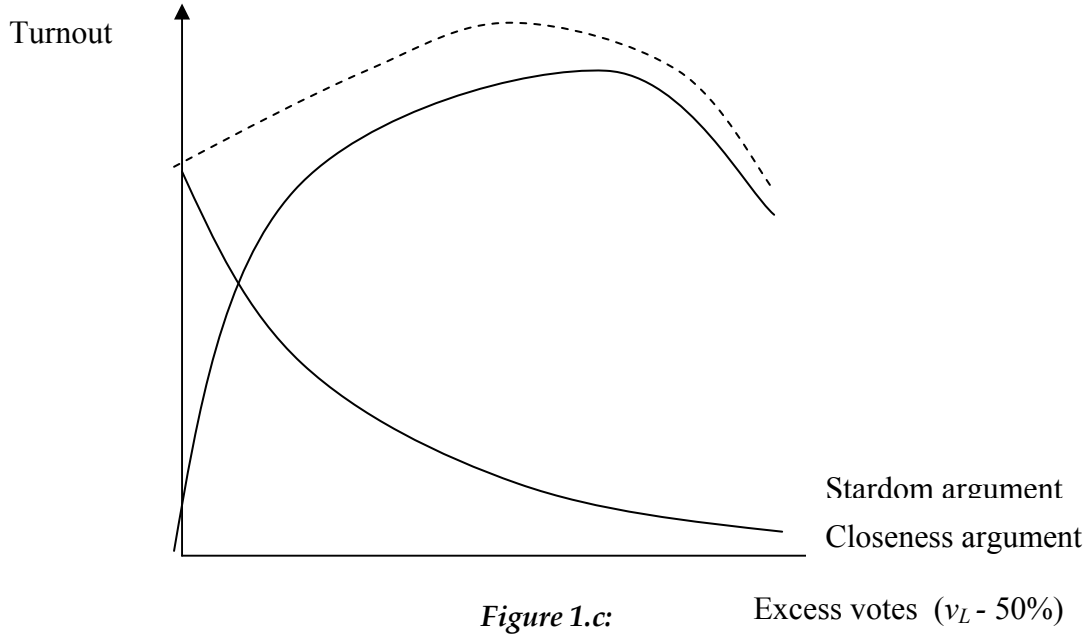


Figure 1.c:
"stardom" and "closenessess'

Of course, the precise shape of the dashed line in figure 1 depends on the slopes of both the "closeness argument" and the "stardom argument" curves. Unfortunately, the Schuessler-

type analysis only allows us to say something about the general *form* of the stardom-curve. It does not allow us to say something definite about how it relates to the closeness-curve. For example, if the stardom curve is much steeper initially, as in figure 1.c, it is possible that the dashed line has only one maximum (well above 50%). In both cases, however, turnout is a non-monotonic function of closeness.

- *Generalizing to multi-party competition*

One way to generalize the previous argument to multi-party systems is to assume that the party system essentially remains a two-bloc system when one of the parties is much larger than the others. The idea is that in such situations, the smaller parties may reflect one common alternative to the voter, even though they still participate separately in the election. That this may not be a far-fetched assumption is supported by the frequent formation of large (i.e. multi-member) coalitions meant to exclude the largest party from office (so-called "tegencoalities", Buelens, 1993, 56). For example, after the 1982 municipal elections, 69 of the 174 Flemish municipalities where no party obtained an absolute majority witnessed the formation of such a "tegencoalitie" (Buelens, 1993, 56). In such cases, the stakes in the election translate into supporting/opposing the largest party and there are basically two alternatives. If this is the case, the previous exposition – assuming a two-party system – still holds.

Nonetheless, matters tend to become more complicated when the party system cannot easily be reduced to a two-bloc system. More precisely, while the stardom-argument can still be expected to hold for the largest party, the closeness of the election is much harder to define (and measure). In fact, is not straightforward to judge whether an election with three parties obtaining 20%-35%-45% respectively is closer than one where the vote distribution is 25%-30%-45%. Though the distance between the first and last party has reduced, the distance between the first and second party has increased. Kirchgässner and Schimmelpfennig (1992) and Kirchgässner and Zu Himmern (1997) analyse turnout in elections for the German Bundestag. They use two measures of closeness: the expected difference in votes between the two major candidates and an entropy measure (to capture effects from multiparty competition). What remains valid, irrespective of the number of parties in the election is, of course, that the largest party, also in multiparty contexts, can be expected to have some "star appeal".

II. Empirical analysis

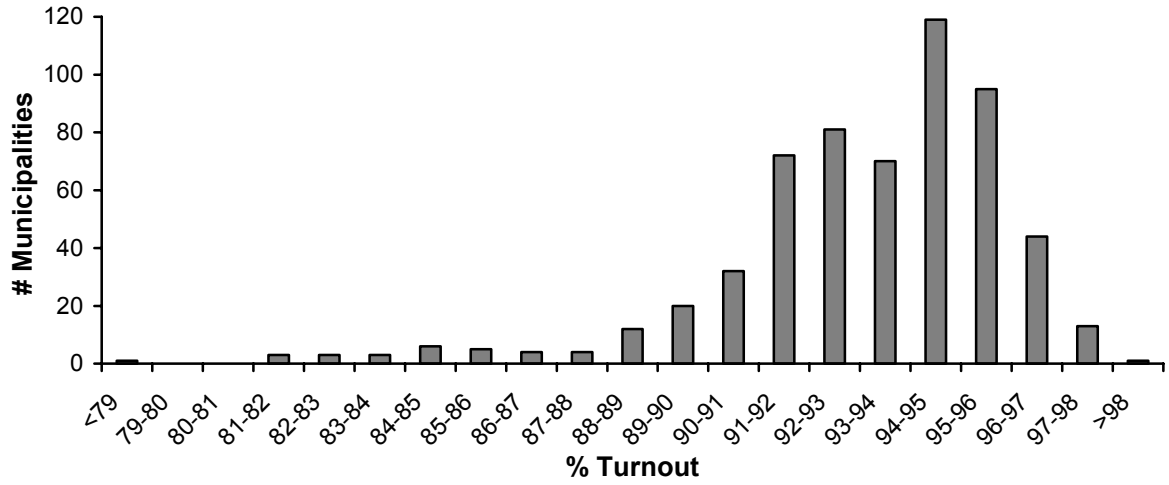
In order to investigate the effects on turnout of both "stardom" and "closeness" effects we consider the 2000 municipal elections in Belgium. Section II.1 gives a brief discussion of the institutional context. The empirical specification is given in section II.2. Results are in section II.3.

II.1 Municipal elections in Belgium

The Belgian electorate is called to the poll booth once every six years (on the second Sunday of October) to vote for a new municipal council. Importantly, Belgium is one of the few remaining Western countries – besides e.g. Luxembourg, Australia and Greece – that has

compulsory voting.[3] Still, this compulsory character is to a large extent 'symbolic' as penalisation is virtually non-existent in practice. Indeed, from a survey among the 27 Belgian judicial areas concerning their policy towards prosecution and conviction of non-voters, we gathered that non-voters were prosecuted in but 2 of the 27 judicial areas (Turnhout and Mechelen).[4] And even here, only about 1 percent of the non-voters was prosecuted (391 individuals on a total of 34260 non-voters in these areas). Almost all were fined (350 individuals).

The fact that voting is, *at least by the letter of the law*, compulsory entails high turnout rates in Belgian elections. Nonetheless, each election witnesses a large number of people that do not conform to this duty (628,957 individuals in 2000). Moreover, not only is the number of people that disregard the compulsory character of Belgian elections large, there is also significant inter-municipal variation in the turnout rates. This variation in turnout rates, where percentage turnout in the municipality is defined as the number of votes cast (valid as well as invalid) divided by the number of registered voters, among 588 Belgian municipalities is depicted in figure 1.[5]



Whilst turnout is generally quite high, it is clear that there is an amount of variation between the turnout rates of the Belgian municipalities. Even though voting is (theoretically) compulsory, turnout rates varied between 78.57% (in the municipality of Elsene) and 98.46% (in Mesen) and displayed a standard deviation of 2.85%.

II.2 Empirical specification

In order to investigate the possible effect of "stardom", it is necessary to test a functional form that encompasses all possibilities. To this end the following functional form is examined[6]:

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[3] It must be said that 'compulsory voting' is somewhat of a misnomer since it is not the voting itself that is compulsory. One simply is obliged to present oneself at the polling station. This does not necessarily imply that one also should cast a (valid) vote.

[4] Only 25 responses were received. Data for Verviers and Dendermonde are missing. Presumably, this indicates lack of prosecution in these areas.

[5] Herstappe was removed from the analysis due to lack of data.

[6] A more complex situation, as depicted in figure 1.b, would involve a fourth power term. Given that the theoretical arguments suggest that such turning point only occurs for very large levels of excess seats, and given that extreme values are rare in the Belgian context, we do not report or discuss results from such a specification. Experimenting with them from a purely empirical point

$$TURN_i = \beta_1 + \beta_{2j}X_{ij} + \beta_3 STAR_i + \beta_4 STAR_i^2 + \beta_5 STAR_i^3$$

$TURN_i$ reflects electoral turnout in municipality *i*. To be more precise, TURN takes into account that actual turnout (TURNOUT) - the proportion of the electorate that votes - is a bounded variable. Therefore a standard logit transformation of the variable, TURN = ln(TURNOUT) / (1- TURNOUT)), is used.[7] X_{ij} are the municipality specific variables, defined below and STAR measures the largest party's effect on turnout with STAR being the proportion of the seats won by the largest party.

The functional form encompasses the various possibilities implied in section I. For example, if β_5 is not significantly different from zero and β_3 is positive and β_4 is negative, there is only a single turning point and so the turnout will rise to a certain point but will diminish beyond that point. If this turning point is at 50 % (effectively reducing the multiparty context to a two bloc system), competitive elections will elicit a greater turnout than uncompetitive. However, if stardom effects are strong (see figure 1.c) it is well possible that a single turning point is observed for situations where the largest party is significantly larger than 50 %. On the other hand, if β_5 is positive and significant with the same β_3 and β_4 there will be two turning points and therefore strong winners encourage supporters to gain the "glow of winning by association" (and of the winners being beholden to them).

The control variables in X are discussed below. The (log) of the VOTERS is used to accommodate for the Downs (1957) argument that a larger voting population decreases the probability that one vote will make a difference thus implying that any effect will be negative on turnout. MIGRATION, the amount of inward and outward movement of the population as a percentage of the population, is used to test whether municipalities with a highly stable population have a tighter social network and community life with higher "social pressure" (Karnig and Walter, 1974 and Hoffman-Martinot, 1994). Also, Hoffman-Martinot (1994) argues that stable, self-centred communities might grow stronger feelings of identification, also increasing social pressure to turn out to vote. An alternative explanation for this migration-effect may be that voters who have resided in the same community for a longer period are more aware of local issues and candidates (Filer *et al.*, 1993). This implies that they face lower information costs. Finally, higher (out)-migration may indicate that people do not vote as, actually, they might live elsewhere in the near future and will thus be unaffected by local policy. All of these effects suggest that there is an anticipation of a negative effect on turnout.

Population Density (per m^2), DEN, is added to test the further (Hoffman-Martinot, 1994) hypothesis that the residents of more densely populated areas are less well integrated in the community as urbanisation leads to "a weakening of interpersonal bonds". As a consequence the social pressure to vote will be weaker, depressing turnout. The other variables included (initially) are AGE, the proportion of elderly (over 65); UN, percentage unemployment; INCOME, average per capita income; and INCDIST, income diversity[8].

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of view did not yield any significant result and also made other terms less precise.

[7] After transformation, the dependent variable ranges from negative infinity to positive infinity, eliminating predictions outside the allowable range.

[8] The data available means that we define inequality as dispersion using an "inter-quartile coefficient":

$$100*(Q3-Q1)/Me,$$

where Q1 is the income of the top of the first quartile (the poorer end); Q3 is the income for the top

These variables attempt to pick up the socio-economic heterogeneity of the population. For example, income diversity may weaken social pressure within the community to turn out to vote (see Cohen, 1982 and Ashworth et al, 2002).[9]

NUM gives the number of parties in the election. There is no consensus whether – from a theoretical point of view – the number of parties in the election is expected to increase or decrease turnout. A *positive* effect can be expected on the basis of one of two arguments. Firstly, a larger number of parties enriches the choice offered to the electorate, thus lowering possible alienation by increasing the probability that voters can identify with some party (Seidle and Miller, 1976; Blais and Carty, 1990 and Hansen, 1994). This can be expected to enlarge the benefits of voting to the individual. Secondly, Dittrich and Johansen (1983) argue that more parties increase the competitiveness of the party system and thus again the potential benefits from selecting 'good policy'. However, this argument may be flawed as one could expect that in a more competitive system the quality of any proposed policy will be higher (and turnout depends on the difference in utilities between platforms, not the level of the preferred platform only). A positive effect on turnout may still be expected if "higher quality politics in general" allows the voter to identify himself more easily with the respective political platforms. A *negative* effect on turnout can be expected as an increase in the number of parties is likely to enlarge the need for coalition formation under given electoral rules (Jackman, 1987; Blais and Carty, 1990 and De Winter *et al.*, 1991). This decreases the direct influence of the electorate on the choice of who governs it. Blais and Dobrzynska (1998, 249) contend also that more parties might increase the complexity of the political system and make it harder for the voter to make up his mind. This increases the information costs of the voter and reduces his likelihood of heading to the polls (Hoffman-Martinot, 1994).

Before estimation, it is necessary to address the inevitable simultaneity within the equation. It is clearly possible that turnout may affect the share of the vote of the leading party. Thus appropriate instruments need to be found. There are some possible instruments that readily lend themselves to the purpose, notably the same variables from previous elections. These variables were used for instruments and found to provide results in line with those presented in the next sub-section. However, they are relatively arbitrary and so to address this it is possible to use the model itself to construct suitable instruments. This involves adopting recent suggestions for instruments, based on the third (and higher) moments, as espoused by Dagenais and Dagenais (1997) and Lewbel (1997) and from these estimations to derive the appropriate model.[10]

In addition, there are two other notable factors were accounted for: the possibility of prosecution for not voting and whether the winning seat proportion is sufficient to give the winning politicians overall power or not. In order to cover these factors, instruments were added for those authorities that had prosecuted in the past and the Banzhaf power index (see

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of the third quartile and Me is median income.

[9] Data on the non-political control variables are from various NIS – National Institute for Statistics - publications. Political data – including turnout - were obtained from the department of political science of the Vrije Universiteit Brussel.

[10] The instruments used are a constant, z_1 and z_4 where (with * designating the Hadamard element by element matrix multiplication operator and the variables in deviation from mean form)

$$z_1 = x^*x; \qquad z_4 = x^*x^*x - 3x[E(x'x/N)^*I_k].$$

with x reflecting the right hand side variables in the equation, see Dagenais and Dagenais, (1997, 197-198). The choice was dictated by the Monte Carlo simulations of Dagenais and Dagenais (1997) and involve the same terms as versions of the Lewbel (1997).

Huber et al (2003) for definition of the index) for the previous two elections. In this fashion, some element of previous norms in the municipalities is also introduced into the estimation.[11]

II.3 Empirical results

The results are presented in table 1[12]. There are a number of factors to note initially. Firstly, the diagnostic tests generally indicate that the estimations are well-specified. It appears that the instruments are satisfactory for the task, in terms of specification and exogeneity.[13] There is a slight doubt about the normality test that is only satisfactory in the preferred equation in column 4. Finally, a number of the variables, density, age, and income, are insignificant in the most general version and so have been tested out to the preferred equation. In the case of age this is very close to significance and so results with this variable included are also presented, though its omission leads to a more satisfactory equation in terms of the diagnostic tests. It can be seen that, if an inference is to be drawn, the greater the proportion of older people in the population, the lower the turnout will be, which is reasonable as infirmity could cause people not to be able to vote. It cannot be excluded, of course, that our results indicate that older people are less politically active.[14]

Table 1 here

Turning to the significant socio-economic effects, a number of salient factors emerge. First, the number of registered voters significantly reduces turnout. This is in line with the argument that the less a vote matters, the less incentive there is to use it. Second, higher migration levels do indeed depress turnout. Whether this is due to looser social networks (Hoffman-Martinot, 1994) or less awareness or interest in local issues and candidates (Filer et al, 1993) or because of impending out-migration is a matter of conjecture. Third, increased unemployment negatively affects turnout. This may suggest that there is a greater feeling of being disenfranchised from society by dint of unemployment and so less incentive to vote. Finally, income diversity has a significantly negative effect on turnout. This may reflect the fact that population heterogeneity lowers social pressure to turn out. Thus, overall, the

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[11] Direct consideration of the prosecution effect by the use of dummy variables for these authorities proved to be insignificant. For more on the necessity to account for the effect of power, see footnote 13.

[12] A further set of results using only those authorities where there was an overall majority for one party, which is directly in line with the theory presented in the previous section but not reflective of Belgium overall is provided in the Appendix. It can be seen that the results are broadly comparable.

[13] It is worth noting that OLS estimation of the equations leads to a different implication for the shape of the cubic function so taking account of the simultaneity is crucial. Also, in terms of gaining satisfactory values for the diagnostic tests, the use of the Banzhaf power indices was very important indicating that there is a clear effect of the type of power in terms of the turnout.

[14] Both interpretations should be made with caution because of the potential ecological fallacy which is inherent to the interpretation of an analysis on aggregate data.

control variables generally have the anticipated effects. Thus, consideration can be made of the political variables.

As noted above, the number of parties contesting the election is relevant for turnout. From table 1, it can be seen that there is a negative effect of fragmentation - municipalities where more parties compete in the election are characterised by a lower turnout. Hence, possible positive effects of multi-party systems through lower alienation and a more competitive political system appear to be dominated by the negative effects of an implied higher need for coalition formation and higher informational costs. It is of note that this phenomenon is not special to the 2000 Belgium elections. De Winter *et al*. (1991, 44) observed a similar negative effect in the 1988 municipal elections[15].

Finally, we consider the effects of the dominant party in the elections. It can be seen that the cubic estimation of the proportion of the seats reveals some interesting factors. Two turning points are such that the first of these will indicate a down-turn in the turnout until the second turning point after which there will be a continued rise in the turnout. Taking column 4 as the preferred equation (but it can be seen that the other equations give a similar inference), the turning points occur at 52.1% of the seats being gained by the winning party and 65.9% of the seats. Thus between these two points there is a (small) fall-off in turnout but there is a (sharp) rise in turnout for big winners. Thus large winners induce large turnouts.

The results in table 1 suggest a clear stardom-effect on turnout. Still, as discussed, the multiparty context in many Belgian municipalities may blur the case, or certainly complicate the interpretation. Therefore, we duplicated our analysis, now focusing on that subset of municipalities that had a "clear winner", i.e. those municipalities where the largest party obtained a majority of the seats. In these municipalities political competition approaches a two-party (two-bloc) setting. The results (in appendix) are very much in line with the results in table 1. The stardom-effect is now such that turnout increases up to a point where the largest party is 53.32 %, it then decreases and reaches a local minimum at 64.51 %. In municipalities where the largest party obtains still more seats, turnout is systematically higher, again reflecting a dominance of stardom-effects.

III. Conclusion

Since long, the public choice literature has agreed on the fact that in order to understand why voters turn out to cast their vote a model of instrumental voting does not suffice. Voters (also) have expressive utility from voting. Such utility may reflect the fact that voters like to express their attachment to a given group (and thereby their non-attachment to other

[15] De Winter *et al*. (1991) report a non-linear relation for the Belgian data. To test for non-linearity in our data, powers of two and higher were considered. The overall effect was that such powers were not significant. The closest was the addition of a quadratic term of the number of parties, NUM^2. The effect was such that it induced multicollinearity into the equation, with both terms becoming insignificant at 10% levels of significance. It is of note that the overall effect using the coefficients on NUM and NUM^2 was still negative. Also, any turning point was outside the observed data set reinforcing the conclusion of the text. In addition, when either of the terms was omitted, the other became negative and significant and the choice of preferred functional form was dictated by significance and fit. Following Geys and Heyndels (2002), consideration was also given to examining more general measures such as the Hannah and Kay (1977) measure of concentration. However, in the context here, the dominant measure of fragmentation proved to be the number of parties.

groups) or that they "just" like to support winners. Both effects result in a non-monotonic relation between turnout and the size of the largest party in a jurisdiction. We test this using data on turnout at municipal election in 588 Belgian municipalities.

A number of clear effects are found. Firstly, the greater the number of parties that contest the election the lower ceteris paribus will be the electoral turnout. Second, it emerges that there are increases in turnout up until there is an absolute majority, that is, clear government control. Thirdly, after this point there is a decline in turnout until there is a super-dominant position, close to a 2:1 majority for one party after which the turnout increases.

The results do need comparison with those of a number of other studies (e.g. Hansen, 1994, where a positive effect of the number of parties on turnout was found in a context of a system of proportional representation). It is of note that Belgian municipalities – unlike, say, their Norwegian counterparts – have a parliamentary system as opposed to a representation in power on the councils. Our results may be taken to suggest that in Belgian municipalities the increased probability for coalition formation in municipalities with more parties actually discourages the electorate because its direct influence in choosing their government decreases. Indeed, there is an interest in securing overall power, perhaps a legacy of a political world dominated by coalitions and power sharing agreements between politicians outside the remit of the electorate. However, once the Rubicon of power is crossed there is a decline in turnout until a later position where there is a form of "absolute" power which cannot be upset by disaffected members. Quite why this winner association occurs is not entirely clear unless it derives from other phenomenon like supporting successful teams in competitive sport. One reason in the Belgian contest may be the requirement to vote which whilst not binding is effective in creating large turnouts. In such circumstances, with the "forced interest" in politics, a desire to associate with a big or star winner emerges. It is clearly of interest to see if such a position also translates to other countries.

TABLE 1

Instrumental Variable Estimation of the Effects of Variables on Turnout in the 2000 Local Elections in Belgium

Dependent Variable	**Turnout***	**Turnout***	**Turnout***
Number of Observations	588	588	588
Independent Variables			
Intercept	1.931 (3.111)	1.833 (2.821)	1.712 (2.348)
VOTERS (Log of the number of Registered Voters)	**-0.208** **(0.027)**	**-0.209** **(0.027)**	**-0.210** **(0.026)**
UNEMP (% unemployed)	**-4.292** **(0.911)**	**-3.722** **(0.728)**	**-3.581** **(0.728)**
OLD (% between 25 and 65)	-2.077 (1.378)	-2.037 (1.252)	
DEN (Density of Population)	-0.005 (0.010)		
MIGRAT (Migration)	**-6.422** **(0.637)**	**-6.411** **(0.612)**	**-6.366** **(0.612)**
INCOME (Per Capita Income)	-0.002 (0.002)		
INCDIST (Income Dispersion)	***-0.005*** ***(0.003)***	**-0.006** **(0.002)**	**-0.006** **(0.002)**
NUM (number of parties)	-0.024 (0.015)	***-0.028*** ***(0.015)***	***-0.029*** ***(0.015)***
STAR	**21.372** **(10.211)**	**21.110** **(9.997)**	**21.804** **(9.874)**
$STAR^2$	**-38.664** **(18.717)**	**-37.634** **(18.416)**	**-37.469** **(18.431)**
$STAR^3$	***23.260*** ***(11.744)***	**22.269** **(10.943)**	**21.169** **(10.123)**
R^2	0.537	0.537	0.537
NORM	8.111	7.335	4.662
FF	2.931	3.011.	1.441
HET	3.117	2.907	2.197
INSIG		0.788	1.498
Sargan	9.442	12.559	8.559
Hausman (IV Exogeneity)	1.337	1.914	1.714

Notes:*Turnout is Ln(turnout/(1-turnout)). In all cases, the Sargan test of mis-specification of the instruments indicates that the choice is satisfactory. The degrees of freedom of the test vary depending on the variables in the model – see footnote 10 for details of the instruments. Similarly, the Hausman test indicating exogeneity indicates a satisfactory estimating equation INSIG is the test of omitting the variables from the most general version of the model in column 2.

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APPENDIX

TABLE A1

Instrumental Variable Estimation of the Effects of Variables on Turnout in the 2000 Local Elections in Belgium for Authorities with the Leading party Gaining an Overall Majority

Dependent Variable	**Turnout***	**Turnout***	**Turnout***
Number of Observations	290	290	290
Independent Variables			
Intercept	3.399 (3.423)	3.400 (3.155)	1.993 (3.348)
VOTERS (Log of the number of Registered Voters)	**-0.205** **(0.044)**	**-0.205** **(0.043)**	**-0.204** **(0.042)**
UNEMP (% unemployed)	**-3.813** **(0.751)**	**-3.124** **(0.740)**	**-2.623** **(0.731)**
OLD (% between 25 and 65)	-3.101 (1.992)	-3.212 (1.993)	
DEN (Density of Population)	-0.007 (0.011)		
MIGRAT (Migration)	**-6.911** **(0.955)**	**-6.519** **(0.811)**	**-6.221** **(0.838)**
INCOME (Per Capita Income)	-0.003 (0.003)		
INCDIST (Income Dispersion)	***-0.005*** ***(0.003)***	**-0.005** **(0.002)**	**-0.004** **(0.002)**
NUM (number of parties)	-0.027 (0.016)	***-0.031*** ***(0.016)***	**-0.033** **(0.015)**
STAR	**25.773** **(11.251)**	**26.411** **(11.343)**	**26.125** **(11.888)**
$STAR^2$	**-45.132** **(22.112)**	**-45.670** **(21.882)**	**-44.749** **(21.318)**
$STAR^3$	**26.001** **(12.993)**	**26.001** **(11.932)**	**25.320** **(11.331)**
R^2	0.429	0.429	0.428
NORM	7.773	7.001	5.477
FF	2.881	2.992	1.665
HET	3.442	3.661	2.553
INSIG		0.566	1.033
Sargan	10.336	11.955	7.941
Hausman (IV Exogeneity)	1.224	1.832	1.999

See notes to Table 1 for further explanation.