

### Strategic voting in proportional systems: the case of Finland

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# **Strategic Voting in Proportional Systems: The Case of Finland**

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Founded in 1963 by two prominent Austrians living in exile – the sociologist Paul F. Lazarsfeld and the economist Oskar Morgenstern – with the financial support from the Ford Foundation, the Austrian Federal Ministry of Education, and the City of Vienna, the Institute for Advanced Studies (IHS) is the first institution for postgraduate education and research in economics and the social sciences in Austria. The **Political Science Series** presents research done at the Department of Political Science and aims to share “work in progress” before formal publication. It includes papers by the Department’s teaching and research staff, visiting professors, graduate students, visiting fellows, and invited participants in seminars, workshops, and conferences. As usual, authors bear full responsibility for the content of their contributions.

Das Institut für Höhere Studien (IHS) wurde im Jahr 1963 von zwei prominenten Exilösterreichern – dem Soziologen Paul F. Lazarsfeld und dem Ökonomen Oskar Morgenstern – mit Hilfe der Ford-Stiftung, des Österreichischen Bundesministeriums für Unterricht und der Stadt Wien gegründet und ist somit die erste nachuniversitäre Lehr- und Forschungsstätte für die Sozial- und Wirtschaftswissenschaften in Österreich. Die **Reihe Politikwissenschaft** bietet Einblick in die Forschungsarbeit der Abteilung für Politikwissenschaft und verfolgt das Ziel, abteilungsinterne Diskussionsbeiträge einer breiteren fachinternen Öffentlichkeit zugänglich zu machen. Die inhaltliche Verantwortung für die veröffentlichten Beiträge liegt bei den Autoren und Autorinnen. Gastbeiträge werden als solche gekennzeichnet.

## **Abstract**

Voters try to avoid wasting their votes even in PR systems. In this paper we make a case that this type of strategic voting can be observed and predicted even in PR systems. Contrary to the literature we do not see weak institutional incentive structures as indicative of a hopeless endeavor for studying strategic voting. The crucial question for strategic voting is how institutional incentives constrain an individual's decision-making process. Based on expected utility maximization we put forward a micro-logic of an individual's expectation formation process driven by institutional and dispositional incentives. All well-known institutional incentives to vote strategically that get channelled through the district magnitude are moderated by dispositional factors in order to become relevant for voting decisions. Employing data from Finland – because of its electoral system a particularly hard testing ground - we find considerable evidence for observable implications of our theory.

## **Keywords**

Strategic voting, PR systems, micro-logic, expectation formation, Finland, institutional incentives, dispositional incentives.

**General note on content**

The opinions expressed in this paper are those of the author and not necessarily those of the IHS.

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## I. Introduction

Studying strategic voting in PR systems seems to be a hopeless endeavor. The literature on electoral systems agrees that under PR many if not all incentives are absent to reduce the number of parties or candidates through either strategic entry decisions of political elites or strategic voting of voters. The conclusion scholars draw from this is that studying strategic voting might be more promising in strong (Sartori 1968) electoral systems possessing a variety of incentives for strategic behavior.

We argue that this conclusion is too hastily drawn. Focusing on strategic behavior of voters, this paper makes a case that despite weak incentive structures of electoral institutions we have to look more closely how voters actually perceive these incentives and form expectations about the outcome of an election in a particular electoral system. Although we do not dispute that strategic voting might be easier to observe in plurality systems, even a small number of strategic voters in PR systems might have a large political impact, though. Since typically single parties do not gain enough seats to form a majority government, coalition governments will be necessary. In the election preceding the coalition formation process the coordinated effort of even a small number of strategic voters might be decisive about the fate of a particular coalition government. Thus, strategic voting might prove particularly relevant in PR systems despite being relatively small in absolute size.

The paper advances as follows. First, we revisit the prevalent argument in the literature that voters do not have the necessary informational requirements to vote strategically in PR systems with large district magnitudes. We will argue that instead we have to focus on how voters form expectations before we can derive predictions about the implications of strategic voting on the success of parties in PR-systems. Second, we derive observable implications of this micro-logic and test them with district-level election returns of Finnish parliamentary elections from 1991-2007 as well as with survey data stemming from the Finnish CSES data. Our results provide considerable support for our hypotheses about the expectation formation process of voters and its relevance for the success of parties in parliamentary elections.

## II. Weak Incentives and a Magic Vail of Ignorance?

What is the impact of electoral systems on an individual's decision-making process? Voters form preferences about the objects on the ballot, parties or candidates. While disagreeing on how to model the decision-making process, all traditional theories of voting behavior agree that at the end voters should cast their vote for the object on the ballot they prefer most. Thus, the traditional political behavior literature is blind towards possible influences of electoral systems on vote-choice. Conversely, the comparative literature on electoral systems allows for the possibility that the same voter might end up voting differently depending on the particular electoral rules used. The hypothesized mechanism is known as Duverger's (1954) "psychological effect". Voters are systematically drawn away from their most preferred party<sup>1</sup>, just because they realize that supporting a marginal party might be equivalent to wasting their vote given a particular electoral system. In order to avoid wasting their votes, voters cast a *strategic* vote for a viable party although they prefer another one.

PR systems offer opportunities to gain seats even for marginal parties, particularly, if there is none or only a small national threshold. Therefore, the incentives for supporters of such parties to cast a strategic vote are *a priori* reduced. How many strategic votes ought to be expected? Leys (1959) and Sartori (1968) argue that the smaller the district magnitude is, i.e., the fewer seats are awarded at the electoral district level, the stronger the incentives to vote strategically. More recently scholars argue that strategic voting fades out when district magnitude is greater than 5 because – as their argument goes - it gets too complicated for voters to satisfy informational requirements (Cox 1997: 100, Cox and Shugart 1996, Sartori 1968: 279) and to generate expectations which party is marginal. Evidence to support this claim comes from apparent empirical regularities based on Japanese and Colombian district-level results (Cox 1997: Chapter 5, Cox and Shugart 1996) as well as electoral returns in Spanish districts (Cox 1997: 115-117, Gunther 1989). The presented evidence does not explain, though, why there is suddenly a magic veil that makes it impossible for voters in larger districts to sort out whether a vote for their most preferred party is wasted or not. In fact, looking at the expectation formation process more closely as previous research has done we expect to find evidence of strategic voting even in PR systems with large districts.

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<sup>1</sup> To simplify language we will just refer to political parties, even if voters can explicitly vote for candidates.



### III. A Micro-logic of Expectation Formation and Hypotheses

Voters form preferences for parties and derive a utility from voting for their most preferred party ( $U_{\text{pref}}$ ). Let's denote the expected probability that a vote will not be wasted, i.e., a voter expects his or her most preferred party to win at least a seat in this district by  $p_{\text{pref}}$ . Thus the expected utility,  $EU(\text{pref})$ , that his or her most preferred party is competitive to gain a seat, combines the traditional utility component weighted by the voter's expectation. Thus,  $EU(\text{pref}) = p_{\text{pref}} \cdot U_{\text{pref}}$ . This also implies that with probability  $1 - p_{\text{pref}}$  no gain will be realized from voting for his or her most preferred party. Although, it seems quite likely that different voters employ different decision rules, we assume that voters' decision rule is to maximize their expected utility from voting. Thus, we expect voters to deviate from their most preferred party and cast a strategic vote, the lower the expected probability  $p_{\text{pref}}$ , i.e., the more uncertain voters are that their most preferred party is able to win a seat. Voters might end up casting a strategic vote for a party they expect to be represented in the district ( $p_{\text{strat}} = 1$ ) from which they derive the highest utility ( $U_{\text{strat}}$ ) although voting for such a party introduces some expressive costs that come with deserting their most preferred party on Election Day, i.e.  $EU(\text{strat}) = U_{\text{strat}} - c$ .

Which factors determine these expectations? We argue that the expected probability that a vote will not be wasted on a voter's most preferred party is a function depending on institutional ( $i$ ) as well as dispositional ( $d$ ) incentives, i.e.,  $p_{\text{pref}} = f(i, d)$ . The electoral system provides a set of institutional incentives while dispositional incentives are determined by intrapersonal motivations and capabilities to comprehend those institutional incentives. Following the logic of previous research on electoral systems, we focus on the district magnitude through which all institutional incentives get channeled (e.g., Cox 1997; Taagepera and Shugart 1993: 112-118). The larger the district magnitude the lower the threshold for any party to gain seats (Sartori 1968: 279) and, thus, on average the higher their supporters expected probability  $p_{\text{pref}}$  that their vote will not be wasted.

Focusing on the micro-logic of expectation formation, we argue, however, that the way voters generate expectations and employ them in their decision calculus is driven by dispositional incentives and not by institutional incentives that get channeled through the district magnitude as proposed by the literature. Voters do not care *per se* about the district magnitude. They simply care about whether or not a vote for their most preferred party is likely to be wasted.

In order to clarify the consequences of dispositional incentives we entertain the following thought experiment. Take two hypothetical voters in the same electoral district, i.e., we are holding constant institutional incentives ( $i$ ) These voters nevertheless might have systematically formed different expectations  $p_{\text{pref}}$  whether a vote for their most preferred party is wasted simply because they prefer different parties.

Suppose one hypothetical voter most prefers a party that is not in danger of losing representation in the district. Thus, there is no need to vote strategically because the voter would expect that casting a vote for her most-preferred party would not be wasted. This is obviously different given that our other hypothetical voter most prefers a - at least in her district - marginal party. This voter should feel constraint because the expectation ( $p_{\text{pref}}$ ) that her most preferred party gains representation might be rather low. Depending on the nature of the district race and holding constant institutional incentives (*i*), a vote for a marginal party might be wasted. Formally a voter casts a strategic vote if  $EU(\text{strat}) > EU(\text{pref})$ , i.e., if  $EU(\text{strat}) > p_{\text{pref}} \cdot U_{\text{pref}}$ . Thus, given the expectation that a voter's most preferred party will not gain representation in the district a vote for a marginal party is wasted. Consequently  $p_{\text{pref}}$  might be small enough to tip the seesaw towards voting strategically. Such a voter is then predicted to strategically desert her most preferred party.

Voters employ appropriate decision heuristics in order to form an expectation  $p_{\text{pref}}$  that their most preferred party is able to gain representation, i.e., whether their vote could be wasted. Party elites, opinion polls or the media are likely to provide attentive voters with cues about the outcome of a district race. Even inattentive voters - as "cognitive misers" (Fiske and Taylor 1991) - are looking for a way to simplify their decision-making process. The *electoral history heuristic* is probably such a short cut that is most easily available for such voters. Voters look back to previous elections. Even if they cannot recall the correct result of this election, they can easily infer from the rough coordinates of the competitive electoral landscape of previous elections to the upcoming election (Gschwend 2004; Gschwend 2007, 3-4; Lago 2008).

The simple but crucial question supporters of a marginal party have to answer is whether they expect their most preferred party to gain representation in their district in the upcoming election. This expected probability ( $p_{\text{pref}}$ ), although not directly observable, should be systematically smaller for supporters of a party that has previously failed to gain representation in this district than for supporters of a party that was able to gain representation. Thus, the incentives to vote strategically should be particularly high for supporters of marginal parties if their party had no seat in the electoral district in the previous election. A vote for this party is potentially wasted. It does not require much from a voter to figure this out. Even more, forming expectations ( $p_{\text{pref}}$ ) this way should not be harder for voters in large districts than for voters in small districts. This process to form expectations stays in stark contrast to the proposed ad-hoc logic in the literature that it simply becomes too hard to form expectations which party is marginal if the district magnitude is greater than 5 (Cox and Shugart 1996: 311; Cox 1997: 100). No appeal to a magic veil of voter ignorance in large districts is needed.

Moreover, we do not expect that institutional (*i*) and dispositional (*d*) incentives operate independently. Instead, these incentives operate conjointly and should, therefore interact to generate an expected probability  $p_{\text{pref}}$  as follows. While parties are generally motivated to

communicate the importance of being represented to their various constituencies<sup>2</sup>, they should do so more forcefully in small districts than in large districts. A small share of votes might prevent a party to gain seats in a small district but can be sufficient to gain representation in a large district. Consequently, voters are expected to be more aware of the threat to waste their vote the smaller the district magnitude is. The observable implication of this mechanism is consistent with what the Leys-Sartori conjecture predicts: in large districts on average more supporters of a particular party should form a higher expected probability  $p_{\text{pref}}$  that a vote for this party is not wasted, holding dispositional incentives ( $d$ ) constant, than in smaller districts. Thus, all institutional incentives that get channeled through the district magnitude define the context of an individual's decision-making process and conditions the effect of strategically deserting one's most preferred party at the polls through the proposed expectation formation process.

What are the substantive consequences of such an expectation formation process? Given that expectations are not observable, we need to generate observable implications in order to provide testable hypothesis about its consequences. Following the lead of previous research, we will focus on party vote shares at the electoral district level. If voters do not expect their most preferred party to gain seats in the district, they should desert their most preferred party and vote strategically for another party that is expected to gain seats. Contrary to what the current literature would suggest, this should be observable even in large districts. Thus, *the more likely a party is expected to be in danger of losing representation in a district, the more it should get punished by strategic desertion and, consequently, the smaller its vote share in the district.*

This logic also implies that parties not in danger of losing representation will benefit from strategic voting. In addition to the votes of their loyal supporters, they might win over strategic votes of supporters of parties who expect their party to be in danger of losing representation. Thus, the less likely parties are expected to be in danger of losing representation, the better they should perform at the district-level. Nevertheless, voters are expected to be more aware of the threat to waste their vote the smaller the district magnitude is. Thus, *the effect of strategic desertion for parties that are expected to be in danger of losing representation should be stronger the smaller the district magnitude is.*

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<sup>2</sup> Taagepera and Shugart (1993: 118-120) show that particularly in Finland parties do not field candidates in districts where they have no chance of winning a seat. The observable implication is that electoral campaigns help voters to be aware of the possibility of wasting their vote.

## IV. The Case of Finland

Our proposed theory describes how any effects of varying size of the district magnitude have an impact on the electoral outcome. If there are no additional rules that determine the translation of votes into seats (e.g. compensatory seats on a higher level) at the district level, the strategic incentives that get channeled through the district magnitude can be isolated. In order to test whether these incentives of strategic voting are not only present in districts with small district magnitude but also – albeit to lesser degree - in districts with higher district magnitude we need to introduce enough variation in the distribution of our key independent variable, district magnitude, and at the same time holding constant alternative explanations. Thus, a case study design has an advantage over pooling data from various electoral systems because the impact of social cleavages, political culture and the party system can be largely controlled given that the elections were held in the same country.

Moreover, if our reasoning about expectation formation and its consequences for voting behavior is supported by empirical evidence rather than by a voter's ignorance argument, then a particularly hard case to demonstrate evidence supporting our theory stems from a PR system with rather large multimember districts. In such an electoral system, following Cox and Shugart (1996), we should not find any evidence of strategic voting, whatsoever. In contrast to this reasoning, we expect to find evidence of strategic voting, namely systematic strategic desertion of parties that are not likely to gain representation in a district. If a party is not expected to gain a seat in a particular district, voters should strategically desert this party compared to supporters of this party in a district, where the party is expected to gain seats.

Given these institutional requirements, Finland seems a particular hard case to look for any effects of district magnitude on the degree of strategic voting. Finland employs a multimember-district electoral system with one tier and no compensatory seats. Additionally the district magnitude differs considerably - it ranges from 6 to 35 - and even the smallest districts are still considered relatively large by Cox and Shugart's standards<sup>3</sup>. The voter casts her ballot in the district for a candidate of a party. The votes of all candidates of one party will be summed up at the district level and the number of seats for each party in the respective district is calculated by applying the d'Hondt formula. Thus, even in a system that

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<sup>3</sup> Our argument is based on the assumption, that a voter's expectation reflects the competitive nature of the district race. But in PR systems like Finland, where the result of national elections is the starting point for coalition bargaining process a voter might focus on the national level instead. If voters in Finland focus on national results in order to derive their expectations one might observe in small districts less strategic desertion than we would otherwise expect if voters focus on the local level to form their expectations. Thus, we potentially underestimate the relationship of district magnitude and strategic desertion if voters derive their expectations based on the competitive nature of the national rather than the local race at the district level.

allows for personal preference votes the party-logic of the system prevails (Kuusela 1995, Pesonen 1995).<sup>4</sup>

## V. Data, Operationalization and Results

Since our hypotheses are geared at the electoral district-level we employ actual election returns in order to test them.<sup>5</sup> Particularly we pool data from all national elections in Finland since 1991, because since the end of the 1980s and the establishment of the Green Party (VIHR) the party system has been very stable (Sänkiaho 1995).<sup>6</sup> We omit the most recent election of 2011 because of its exceptional character (the spectacular rise of True Finns party makes the comparison hard with previous elections, see Nurmi and Nurmi 2012). Thus, through selection this particular time frame we can hold macro-level trends in the development of the party system constant.

Contrary to previous research we explicitly formulate predictions about the impact of district magnitude on the amount of strategic voting that favors or penalizes certain parties. However, the standard dependent variable in the literature, the effective number of parties, as an aggregate measure of the nature of district party competition, does not directly reflect that.<sup>7</sup> Rather, the effective number of parties is a summary measure where different conceivable constellations of a district-level race score the same. Instead, the natural candidate of a dependent variable that is substantively more relevant and theoretically tailored more precisely to our hypotheses is the district-level result of various parties. In order to hold the influences of the party system constant we analyze district-level election returns of those seven parties that were continuously represented in parliament during our time of analysis. Thus, we employ one dependent variable: the vote share of each of the seven parties in 14 electoral districts<sup>8</sup> in the last five elections (1991, 1995, 1999, 2003, 2007). One party (RKP) did not compete everywhere. Thus, we have a total of 441 valid observations.

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<sup>4</sup> Ortega Villodres (2003) shows, that Finnish voters disperse their votes widely among the candidates within a party – but this has merely implications for the level of intra-party competition.

<sup>5</sup> Ideally, a panel survey design of eligible voters clustered on the electoral district level is needed to test our theory about the expectation formation process and strategic voting in a PR system such as Finland on the individual-level. This is, however, not available.

<sup>6</sup> The data is provided by 'Statistics Finland', the governmental statistical office, and can be downloaded from [http://www.stat.fi/index\\_en.html](http://www.stat.fi/index_en.html). According to personal information provided by Jaana Asikainen from 'Statistics Finland' redistricting between 1991 and 2003 is not a problem. In one district, between 1999 (Mikkeli district) and 2003 (South Savo), there was some minor redistricting. Nevertheless besides renaming, the new South Savo district still has about 85 % of the eligible voters of the former Mikkeli district.

<sup>7</sup> Nevertheless, holding other factors constant, the effective number of parties should decline over time in districts where some marginal party supporters (of various parties) vote strategically, because these parties will be deserted and the larger parties will benefit from it in a given district.

<sup>8</sup> We exclude the autonomous province of Åland from our analysis because this district does not participate in the national seat-allocation system (Kuusela 1995: 24).

According to Duverger's Laws the Finnish party system is characterized by its fragmentation. During the last decades the Social Democratic Party (SDP), the agrarian Center Party (KESK) and the conservative National Coalition Party (KOK) became the dominant parties in Finland. Four relevant smaller parties were continuously represented during our time of analysis: the left-wing VAS, the Green Party (VIHR), the Christian Democrats (KD)<sup>9</sup> and the Swedish Regional Party (RKP). The existence of several rainbow coalitions shows that the ideological barriers between parties cannot be very high.<sup>10</sup> A dividing line of the party system (apart from the ideological) is the difference between the rural north and the urban centers of Finland (Sundberg 2000). The SDP has its biggest support in the industrial centers of the South and shares the support of the land workers and small farmers for left parties with its left counterpart, the VAS, in the rural north. The KOK is a strong party in the urban centers while its conservative counterpart, the KESK, is strong in the periphery of the country. A similar pattern is recognizable for the smaller parties. The Greens have their strongholds in urban districts like Helsinki whereas the VAS is stronger in the periphery. The KD is a small party, which has success throughout the country. The liberal RKP is just a regional party, which is supported by the Swedish-speaking minority (Sänkiaho 1995, Martikainen and Yrjönen 1991).

**Table 1:** *Descriptive Statistics of the Dependent Variable by Party*

District Vote Shares	Mean	Std. Dev.	Min	Max
Greens (VIHR)	6.5	3.7	1.5	20.4
KD	4.3	2.2	0.8	9.8
KESK	26.4	11.8	3.7	49.8
KOK	18.5	6.2	8.8	30.4
VAS	10.6	5.6	1.7	27.1
RKP	10.8	6.1	0.2	20.7
SDP	24.7	7.1	11.3	39.4

As table 1 shows, all parties vary noticeably in their strength across electoral districts. Thus, the expectation formation process of a voter preferring a specific party may vary from one district to another. E.g., if a voter prefers the VAS in a relatively large district, where the VAS is traditionally strong (say over 20%), this voter has a lower incentive to strategically desert this party than in a relatively small district, where the VAS is traditionally weak (say just 5%).

<sup>9</sup> This party changed its name and was formerly known as the Finnish Christian League (SKL).

<sup>10</sup> If we are willing to believe, that the ideological distance is the main factor in determining voters' utility from voting, the costs of strategic voting seem not to be that high and we should observe a significant level of strategic voting.

What would happen if we were wrong and voters simply cast their votes for the party they prefer most? The observational implication of this individual-level process on the district level would be that parties vote shares should be predictable by past performances in that district. Given the low electoral volatility within electoral districts (Pesonen 1995) and the stable party system in Finland during the time of our analysis (Sundberg 2000), a party's previous vote share should be a strong predictor. Thus, we need some kind of normal vote baseline to not falsely overestimate the effect of strategic desertion on a party's vote share at the district level. Our normal vote (*NORMALVOTE*) measure is a party's previous vote share in that district. This is a very conservative measure since every party's previous vote share comprises both, its latent support in that district in addition to the number of strategic votes that either favored or penalized this party in the previous election. Therefore, we potentially underestimate the number of votes that are strategically cast or withdrawn from a latent level of sincere party support in a given district.

The Leys-Sartori conjecture posits that the smaller the district magnitude is, i.e., the fewer seats are awarded at the electoral district level, the stronger the incentives to vote strategically. We argued, that this effect of the district magnitude depends on the expectation whether a voter's preferred party is endangered to lose representation. However, since it is likely that the marginal impact of district magnitude  $M$  on party vote shares at the district level diminishes if  $M$  gets larger we logistically transform the district magnitude ( $\log(M)$ ) to account for that. Moreover, our theoretical contribution is to point out the conditionality of this conjecture as a consequence of the described heterogeneity of the expectation formation processes that might go on at the individual level. As hypothesized, we anticipate a reduced impact of institutional incentives on a party's vote share for larger districts if this party is expected to be in danger of losing representation. Given the logic behind the electoral history heuristic we measure this expectation (*EXPECTATION*) simply by a dummy variable that scores 'one' in a given district if this party had gained no seat in the previous election. In our data the number of such critical districts varies considerably across parties as can be seen in table 2.

**Table 2:** *Expectations whether vote for party is wasted*

Party	Districts with Expectation = 0	Districts with Expectation = 1	Sum
Greens (VIHR)	27	43	70
KD	37	33	70
KESK	68	2	70
KOK	68	2	70
VAS	55	15	70
RKP	20	1	21
SDP	70	0	70
No. of Districts	345	96	441

In order to test, whether expectations have a systematic effect on party vote shares at the district level we will estimate the following model:

$$Y = b_0 + b_1 \cdot \text{NORMALVOTE} + b_2 \cdot \log(M) + b_3 \cdot \text{EXPECTATION} + \varepsilon$$

We hypothesized that parties should get strategically deserted, i.e. they get systematically smaller vote shares at the district level, if voters expect the party to be in danger of losing representation (i.e., if *EXPECTATION* = 1). Therefore, we expect the respective coefficient ( $b_3$ ) to be negative. This relationship should hold no matter whether a party competes in small or large districts. We also control for a baseline level of votes a party would normally expect to gain in each district.

Furthermore, we hypothesized that the effect of expectations is conditional on the incentives that get channeled through the district magnitude. We, therefore, add an interaction effect to the above model. Thus, the general specification is as follows:

$$Y = b_0 + b_1 \cdot \text{NORMALVOTE} + b_2 \cdot \log(M) + b_3 \cdot \text{EXPECTATION} + b_4 \cdot \log(M) \cdot \text{EXPECTATION} + \varepsilon$$

Our quantity of interest is the size of the causal effect of *EXPECTATION*, which is the difference in predicted vote shares when *EXPECTATION* changes from 1 to 0. Plugging in those values we get:

$$Y(\text{EXPECTATION} = 1) = b_0 + b_1 \cdot \text{NORMALVOTE} + b_2 \cdot \log(M) + b_3 + b_4 \cdot \log(M)$$

$$Y(\text{EXPECTATION} = 0) = b_0 + b_1 \cdot \text{NORMALVOTE} + b_2 \cdot \log(M)$$



and, consequently, the causal effect of *EXPECTATION* is

$$Y(\text{EXPECTATION} = 1) - Y(\text{EXPECTATION} = 0) = b_3 + b_4 \cdot \log(M)$$

If our theory of how expectations are formed at the individual-level is correct, the observable implication we expect to find is that there is more strategic desertion the smaller the district magnitude is. This implies that the causal effect of *EXPECTATION* should be larger in absolute terms in smaller districts and should eventually level out if the district magnitude increases. Nevertheless, and in contrast to previous research, there should be a systematic level of strategic desertion observable even in large districts, in particular in districts with a district magnitude greater than  $M = 5$ .

We employ ordinary least squares (OLS) to estimate party vote shares in each district. The standard errors are clustered by party and electoral district to account for the non-independence in the data structure. Table 3 shows our estimation results for both models.

**Table 3:** *Estimated effects of expecting a party not to gain representation on party vote shares in Finnish parliamentary elections, 1991-2007*

	Party Vote Shares (1991-2007)	
	(1)	(2)
NORMAL VOTE	0.94*** (0.01)	0.94*** (0.01)
log(M)	-0.45 (0.31)	-0.75* (0.38)
EXPECTATION	-0.78** (0.32)	-4.26*** (1.55)
EXPECTATION*log(M)		1.41** (0.58)
CONSTANT	2.49** (0.97)	3.35*** (1.18)
Adjusted $R^2$	0.92	0.92

N = 441. Clustered standard errors (by district\*party) in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

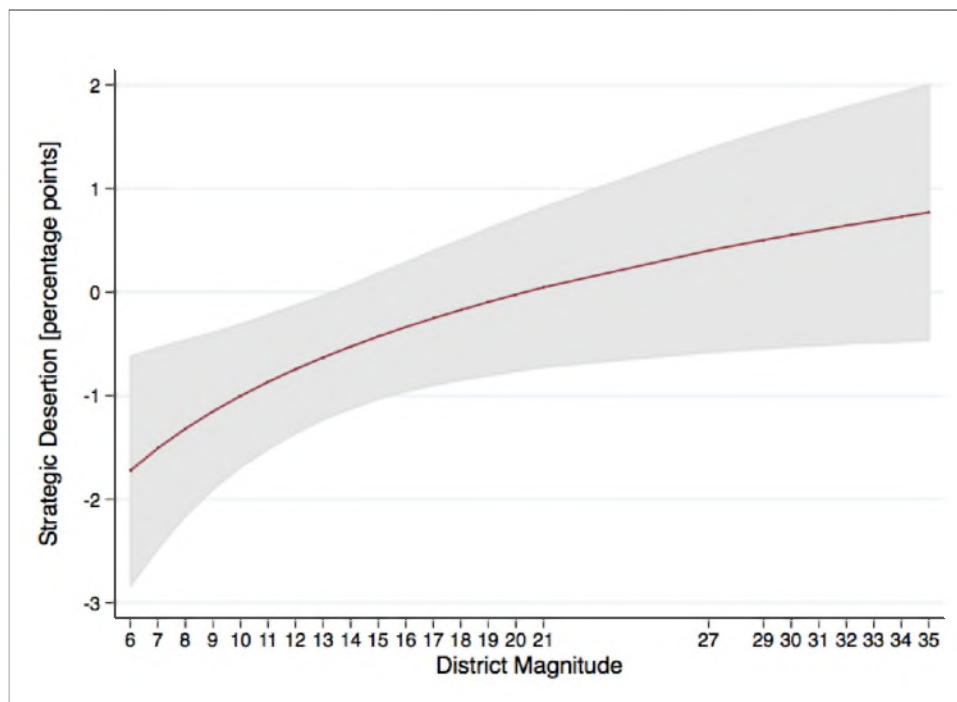
The results across both models indicate that the Finnish party system is in fact rather stable during those elections. A party's vote share in the previous elections pretty much determines its vote share in the upcoming election. Holding everything else constant, the respective

coefficient indicates that each party can expect to get on average 94% of the vote share in the previous election. Although the *NORMALVOTE* coefficient is significantly different from one, a party's vote share in the previous election is the single most reliable indicator across all parties.

Moreover, we find in model 1 as expected a significant negative coefficient  $b_3$  for the effect of *EXPECTATION* on the success of parties. If a party faces the danger of losing representation – because the party did not win a seat in this district in the previous election – its vote share shrinks on average about .8 percentage points. Thus, we find the hypothesized dispositional incentives that cause strategic desertion through the mechanism of expectation formation to be in work across all parties and electoral districts no matter of which size these districts are.

Furthermore we expect that institutional and dispositional incentives operate conjointly when voters form their expectations as to whether a vote for their most preferred party is going to be wasted. For party vote shares at the electoral district level this implies that parties that are not expected to win a seat should get strategically deserted more often the smaller the district magnitude is. In figure 1 we calculate the causal effect of expectations as the difference of a predicted vote share, where the voter's preferred party is in danger to lose representation (*EXPECTATION* = 1) as opposed to a situation, where the party is expected to win at least a seat in the electoral district (*EXPECTATION* = 0). The difference in predicted vote shares for those scenarios are plotted on the vertical axis. The district magnitude is shown on the horizontal axis. The labels on the horizontal axis indicate the district magnitudes that are actually represented in the data we analyze. While the line indicates the predicted point predictions of the causal effect of expectations on a party's success on the polls, the shaded area indicates the respective 95%-confidence intervals.

**Figure 1:** Size of the causal effect of expectations. Strategic Desertion is at work.



The figure indicates that the point predictions are smaller than zero until a district magnitude of about 20. This implies that on average parties could expect to get strategically deserted by their supporters if they would not have won at least one seat in those districts in the previous election. For larger districts voters' expectations and therefore strategic voting seem not to play a crucial role. At least if the district magnitude is smaller than 14, the horizontal 0%-line is still above the upper bound of the respective confidence interval. Thus, the estimated causal effect indicates that there is a statistically significant difference whether voters actually expect their most preferred party to be represented or not. If a party is not expected to gain representation ( $EXPECTATION = 1$ ) the party loses on average almost two percentage points due to voters trying to avoid wasting their votes in a district with  $M=6$  as opposed to a district of the same size where this party is expected to gain at least one seat. These effects are rather similar in size to the ones found in a less controlled environment than here using electoral district vote shares of parties in Portuguese parliamentary elections (Gschwend 2007b).

So far we have seen the consequence of our assumed mechanism, the expectation formation process, that determines whether voters cast a vote for their most preferred party or not. There are no good measures to assess directly how voters form their expectations whether a vote for their most preferred party is likely to be wasted. However, we have seen that there are predictable consequences of such expectations for party vote shares at the electoral district-level. This is the level of analysis of most studies that examine the impact of electoral systems on vote-choice.

A more direct test of our theory, though, should be geared at the individual level. Although there are also no direct measures of how voters form expectations, an observable implication of the expectation formation process is that voters should be less likely to cast a sincere vote, i.e., a vote for their most preferred party if their most preferred party did not win a seat in their electoral district in the previous election. Following the electoral history heuristic such voters would expect a vote for their most preferred party to be wasted. In order to provide evidence for this observable implication we turn to the Finnish module of the CSES data. Two Finnish election studies are part of the CSES data, 2003 and 2007. Data of those two elections have been also part of the district-level analysis above.

Pooling data of both election studies we try to find whether voters in electoral district where their most preferred party – as measured by the standard CSES like/dislike scale – did not win a seat previously are less likely to vote for this party as voters whose most preferred party did win at least a seat previously, i.e., in the parliamentary elections of 1999 and 2003, respectively. We find that supporters of a party that won at least one seat in the respondent's district are on average about 88% likely to cast their vote for this party. Those predicted probabilities decrease to 69%, if those supporters are eligible to vote in a district where this party did not win a seat in the previous elections. This difference in predicted probabilities is systematic and not due to chance alone. Thus, while there is evidence supporting our theory at the district-level we, additionally, have found evidence for an observable implication of our theory at the individual-level as well.

To sum up, expectations matter for voters' decision-making process. The way voters form expectations allows them even in districts with large district magnitudes to behave strategically, in contrast to what the current literature suggests, and try to avoid wasting their votes in the polling booth on parties that are not expected to gain representation in their electoral district.

## VI. Conclusion

In this paper we make a case that despite weak incentive structures of electoral institutions there might be nevertheless indications of strategic voting. Contrary to the literature we do not see weak institutional incentive structures as indicative of a hopeless endeavor for studying strategic voting. The crucial question is how institutional incentives constrain an individual's decision-making process. We argued that we have to look more closely at how voters actually perceive these incentives and form expectations about the outcome of an election in a particular electoral system in order to evaluate and finally predict their voting behavior. Based on expected utility maximization, we put forward a micro-logic of an individual's expectation formation process. We assume that this process can reflect both, institutional as well as dispositional incentives. All well-known institutional incentives to vote strategically that get channeled through the district magnitude are moderated by dispositional factors in order to become relevant for voting decisions. Employing district-level data from Finland – because of its electoral system a particularly hard testing ground - we find considerable evidence for observable implications of our theory. Moreover, we find evidence for the assumed process that determines strategic desertion of non-viable parties at the individual-level using Finnish survey data as well.

Across all parties we find that if they are expected to be in danger of losing representation their supporters strategically desert these parties. Voters are less likely to desert them and consequently these parties perform better in large districts than in small districts.

If voters actually try to avoid wasting their votes on marginal parties even in large districts of Finland, contrary to what the literature based on Cox (1997) and Cox and Shugart (1996) implies, it is quite likely that voters behave similarly in other PR systems as well. If this is the case, the results of our paper would suggest that the relationship between PR and fragmentation of party systems need to be revisited. PR systems per se do not “cause” party system fragmentation just because of the missing incentives for voters to strategically desert marginal parties. Since they do, however, the association between electoral systems and the number of parties is more complicated than the current literature suggests.

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