



Strategic voting in established and new democracies: Ticket splitting in mixed-member electoral systems

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A B S T R A C T

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Using Cox's 'SF-ratio' (the ratio of the vote won by the 'second loser' to that of the 'first loser'), we examine strategic voting in mixed-member electoral systems in ten countries and a total of 35 elections. The SF-ratio is a useful indicator of strategic defection from less competitive to more competitive electoral options that is comparable across very diverse country cases. Under conditions of a Duvergerian equilibrium, where there is substantial information indicating which candidate is likely to end up the top challenger to the frontrunner, the SF-ratio for a district will tend toward zero. In contrast, in cases where voters either are unwilling or unable to cast strategic ballots, SF-ratios will tend to be higher. Our findings show substantial evidence of strategic voting in established democracies, particularly in districts with closer races, but little evidence of strategic voting in new democracies with poorly institutionalized party systems.

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There have been a number of studies of ticket splitting under two-ballot mixed-member electoral systems. In many ways, such systems offer an ideal arrangement for understanding "horizontal" ticket splitting (see Burden and Helmke's introductory article). Under these mixed-member systems, voters cast two ballots simultaneously to elect representatives to a single branch of the legislature. They cast one ballot for a candidate in a single member district (SMD) and one for a party in a proportional representation (PR) contest. Because these two votes are cast under different electoral rules, mixed-member systems are also ideal laboratories for examining the sources of split-ticket voting. Scholars have regularly used the difference in aggregate vote totals – usually at the district level – to argue that much of split-ticket voting in mixed-member systems is founded on strategic voting rather than, for example, strategic balancing of different parties to achieve a certain

policy goal or governing coalition (e.g., divided government). Such analyses use as evidence of strategic voting ticket splitting in which a larger number of votes are cast for a competitive SMD candidate than the candidate's party receives in PR balloting. However, a recent study by Moser and Scheiner (2005) indicates potential shortcomings in the most common approach to demonstrating such strategic voting in mixed-member systems.

Taking these shortcomings into account, we offer a different approach to understand ticket splitting in mixed-member systems. We utilize Cox's (1997) 'SF-ratio' to examine voter behavior in mixed-member systems in ten different country cases and a total of 35 different elections. We argue that ticket splitting in mixed-member systems should be viewed as arising in large measure from a combination of strategic calculations and preferences based on the personal qualities of a candidate (the so-called 'personal vote'). We further argue that the relative degree to which voters tend to engage in ticket splitting due to strategic concerns is conditioned upon a variety of institutional and contextual factors. Our analysis suggests that different factors underpin ticket splitting in established

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and new democracies. While there are elements of strategic and personal voting in all systems, we argue that ticket splitting in established democracies with institutionalized party systems is more commonly a function of strategic voting than in new democracies where the personal vote is more likely to drive ticket splitting.

Given our approach and method, we are most concerned with a specific aspect of ticket splitting, namely, the direction of ticket splitting rather than the magnitude of this phenomenon. Put another way, we are most concerned with what type of parties receive additional votes from ticket-splitting voters than how many voters are casting their ballots for different parties. As we show below, the SF-ratio is a measure that can provide insight into whether or not ticket splitting is following a pattern that suggests defection away from uncompetitive candidates and toward competitive ones.

1. Strategic voting as a cause of ticket splitting in mixed-member electoral systems

As we discuss below, two-ballot mixed-member electoral systems vary in many ways, but one of the things that makes them most useful to electoral system scholars is the feature they have in common. As we define them here, two-ballot mixed-member systems are electoral systems that (1) are used to elect the members of the legislature, and (2) offer voters two ballots that they cast essentially simultaneously for one house of the legislature, one vote for a candidate in an SMD and one for a party in PR. These systems are useful for political scientists as they allow us to see at an aggregated level the extent to which voters' ballots for parties in PR match their votes for candidates in SMDs.

As would be expected, ticket splitting is common in mixed-member systems. For example, looking at elections in five mixed-member systems in the 1990s, Moser and Scheiner (2000) find that the average first place candidate won anywhere from 3.4 (in Lithuania) to 11.7 (in Japan) percentage points more votes in her SMD than her party won votes under PR.

Strategic voting is frequently held up as one of the principal reasons for this ticket splitting (Bawn, 1999; Cox, 1997; Fisher, 1974; Roberts, 1988; Reed, 1999). To be sure, some level of strategic voting can exist under any electoral rule, even PR. Nevertheless, because voters can feel more confident that PR rules will permit their most preferred party to win representation, there are far fewer incentives to cast a strategic vote in a proportional system. Therefore, most studies assume that votes cast in PR balloting are the representation of voters' true preferences. Indeed, Burden (in this Symposium) highlights that in Japan the PR vote does reflect sincere party preferences. As a result, the focus is on explaining the reasons behind ticket splitting— that is, the reasons behind the differences in the total numbers of PR and SMD votes. At their most methodologically sophisticated (Bawn, 1999; Cox, 1997; Reed, 1999), these studies utilize OLS regression, control for a number of other factors— most notably, candidate incumbency— and tend to find a high correlation between closeness of the race and ticket splitting. That is, all else equal, they find that candidates in

very close races tend to receive a larger number of SMD votes relative to the number of votes their parties win in PR races. From this result, these studies infer – quite reasonably – that voters in districts with close candidate races are more likely to attempt to use their vote to affect the outcome. In short, the finding suggests that a desire to cast a strategic vote leads voters to split their tickets.¹

However, two problems emerge as we attempt to draw lessons from these analyses about the reasons for split-ticket voting in mixed-member systems. First, these studies focus on established democracies, which maintain institutionalized party systems. Second, the approach commonly used to demonstrate strategic voting in mixed-member systems is not wholly reliable. We discuss each of these problems in greater detail below.

1.1. Strategic voting and party system institutionalization

Scholars typically view strategic voting as fundamental to elections in established democracies. We define strategic voting as casting ballots for alternatives other than one's first preference in order to improve the expected outcome of the election. Voters' strategic defection from smaller parties unlikely to win election under certain electoral rules and the anticipation of such behavior by elites drive the dynamic by which electoral systems shape party systems. Evidence of the existence of strategic voting in established democracies is abundant and persuasive (Barnes et al., 1962; Fisher, 1974; Bawn, 1993, 1999; Niemi et al., 1992; Cox, 1997; Alvarez and Nagler, 2000; Alvarez et al., 2001). While it has been shown that strategic voting occurs in all types of electoral systems (see Cox, 1997), scholarship on the phenomenon has focused on plurality systems, which provide the greatest incentives for supporters of minor parties to strategically defect to larger parties. Scholars have noted that various individual and contextual factors – education, socioeconomic status, degree of party identification, and constituency effects (e.g., competitiveness of the race) – also influence the propensity of voters to behave strategically (Spafford, 1972; Johnston and Pattie, 1991, and Niemi et al., 1992).

Strategic voting requires information on candidates' electoral viability. SMD bipartism is founded in large part on strategic voting and such bipartism requires “reasonably accurate and publicly available information on candidate standing” (Cox, 1997, p.79). For example, Cox (1997) argues that when there is difficulty perceiving which of the top two 'losers' in a race (i.e., second and third place in an SMD) is the principal challenger, voters will be uncertain about which candidate to give their strategic vote. As a result, under such conditions in SMDs, supporters of the third place candidate will face little incentive to cast their vote elsewhere, leading to a 'non-Duvergerian' equilibrium.

¹ In many cases, it is certainly possible that voters are casting a strategic vote in the PR-list tier, especially to help certain parties reach a PR threshold. However, studies like those cited here also examine the correlation between closeness of the SMD race and the degree to which PR and SMD votes match one another. As Cox (1997, p. 82) notes, “there is no reason to think that strategic list votes should be cast differentially in constituencies that are close in terms of the candidate votes.”

On the other hand, voters ought to move rapidly away from third place candidates who are not clearly competitive with the second place candidate, leading to a Duvergerian equilibrium. In such cases, voters can more certainly predict who the 'real' challenger to the winner is and, therefore, have sufficient information to vote strategically.

Well-established parties are particularly critical to shaping voters' level of information about candidates' likely viability and the lack of such parties produces a formidable obstacle to strategic behavior by voters and elites.² In well-developed party systems, candidates' party affiliations give voters their best cue as to candidates' competitiveness. Without such cues, it is more cumbersome for voters to determine likely strong competitors, thereby making it more difficult to cast a strategic vote. The transitory nature of party organizations in unstable new democracies promotes great volatility between electoral periods and provides little opportunity for voters to cultivate lasting preferences for one party or another (see, e.g., Ames et al. in this Symposium; Baker et al., 2006). In the absence of widespread, concrete party preferences, many voters are left with no partisan cues on how to cast their vote and must instead rely on patronage, incumbency, and the personal characteristics of candidates.³

This does not mean that voters in new democracies cannot vote strategically. Duch and Palmer, 2002 use survey data to show that Hungarian voters successfully identified situations when strategic voting would be more likely to be effective and regularly reacted to such situations by defecting from their first choice to a major party more capable of winning office. They estimate that almost 14% of Hungarian voters behaved strategically when faced with a 'wasted-vote situation'. Benoit (2001) has provided similar evidence of strategic voting in Hungary. However, Duch and Palmer's estimates of Hungarian voters acting strategically when conditions warranted (13.6%) pale in comparison to Alvarez et al.'s (2001) estimates of British third-party voters' propensity to defect to major parties (52–95%). But this difference may be due to particular electoral rules used in the two countries (mixed system in Hungary versus pure plurality in Great Britain) as much as the character of each country's party system.

Our study of strategic electoral behavior in ten countries⁴ and 35 elections builds on Duch and Palmer's findings by offering a systematic comparison of strategic behavior in mixed-member systems. We examine electoral results both in four new democracies (including three post-communist states) and six consolidated democracies. Moreover, our cases of post-communist democracies offer a more demanding test of strategic voting since the party systems in Russia and Lithuania are not as developed as in Hungary (Kitschelt, 1995; Evans and Whitefield, 1993).

Hence, we expect to find that strategic voting occurs much less regularly in our post-communist cases than in the consolidated democracies in our sample.⁵

1.2. Differentiating between strategic voting and the personal vote in mixed-member systems

In addition, the most common approach to studying ticket splitting in mixed-member systems is not always a reliable indicator of strategic voting. Again, the most common approach utilizes as the outcome variable the difference between a given candidate's share of the SMD vote in a given SMD and the PR vote received by the candidate's party in the district. The principal explanatory variable is the closeness of the race and studies argue that the fact that closer races tend to see a greater difference between the SMD and PR votes is an indication of strategic voting.

However, widening the number of cases and differentiating between the amount of ticket splitting for different ranks (i.e., differentiating between candidates finishing first in the district from those finishing in second and those finishing lower), Moser and Scheiner (2005) demonstrate that the link between closeness of the race and the amount of split-ticket voting may be due to *personal* rather than *strategic* reasons. That is, in many cases, candidates may be in a closer race because they received a large number of *personal* votes that do not carry over to their party, not because they gained extra (*strategic*) votes from voters because they are in a close race. Indeed, the very reason they are in a close race may be *due to* the extra personal votes that they receive. Moser and Scheiner's (2005) analysis indicates the presence of substantial strategic ticket splitting in Germany, but is unable to find evidence of such behavior in four other country cases, Japan, Lithuania, New Zealand, and Russia. Their findings suggest that there *may* be strategic voting in the other four cases – indeed, it would be surprising if there were none – but there is so much personal voting that it makes it impossible to recognize it when utilizing the common OLS approach to studying the problem. Burden's analysis in this Symposium offers additional support for the argument that the personal vote for a candidate not affiliated with voters' preferred party is a major reason for ticket splitting.

2. SF-ratios as an approach to studying strategic ticket splitting

Because of these problems, we take a different approach to studying strategic voting as a source of ticket splitting in mixed-member electoral systems. As we explain in greater detail below, we analyze Cox's (1997) 'SF-ratio' measure (the ratio of the vote won by the 'second loser' to that of the 'first loser') in a wide array of mixed-member electoral systems that include both established and new democracies. SF-ratios are particularly useful here for two reasons. First, focusing on SF-ratios in SMD elections provides

² See Moser and Scheiner (2004) for analysis of how the level of party institutionalization affects electoral outcomes in mixed-member systems.

³ New democracies may also experience problems with press freedoms and reliable public opinion polls that further detract from the ability of voters in these systems to behave strategically by denying them the information necessary to do so.

⁴ We include Scotland and Wales in what we are calling 'countries'.

⁵ Hungary was not included in the study because we could not obtain PR results at the single-member district level.

a unique window into electoral behavior and whether strategic voting is present. Second, our analysis focuses on the SMD candidate race's SF-ratio as the outcome variable, but uses both the SF-ratio in the PR tier at the single-member-district level and the level of competitiveness in the SMD race as explanatory variables. By including the SF-ratio in PR balloting as a control variable, our other explanatory variables help us to understand the divergence in SMD and PR SF-ratio patterns. In this way, we are also able, in effect, to understand the factors leading to ticket splitting.

SF-ratios can indicate strategic voting as a source of ticket splitting in the following way. Under conditions of a Duvergerian equilibrium, where there is substantial information indicating which candidate is likely to end up the top challenger to the frontrunner, the SF-ratio for a district will tend toward zero. In other words, as it becomes clear who the top challenger in an SMD will be, voters become much less likely to continue to support candidates who are likely to finish in third place or worse. As a result, the second place candidate will have many more votes than the third place candidate in the district. In contrast, in cases where voters either are unwilling or unable to cast strategic ballots, SF-ratios will tend to be higher.

Fig. 1 offers two contrasting SF-ratio patterns. The top left hand figure represents the breakdown of SF-ratios in German SMDs in 1998. The mode to the left within the figure indicates that the bulk of districts have very few votes going to third place candidates relative to second place candidates. To be sure, this result is partly due to the fact that two parties are overwhelmingly stronger than all others in Germany. However, this fact should not be highlighted to the exclusion of other explanations. The top right hand figure indicates that voting in PR does not lead to a ratio of third to second place votes that leans as far to the left (toward zero). In short, the mode in the SMD figure is not purely a result of preference for the two top parties. Moreover, it is important to note that there was no clear mode in the SF-ratio patterns in SMDs in 1953 in Germany, the country's first election in the postwar period under the mixed-member system (Moser and Scheiner, 2006). Just as much as two strong parties undoubtedly affected the mode near zero in German SMDs in 1998, more than 40 years with the system along with a highly institutionalized party system certainly shaped voters' ability to cast the strategic votes necessary to create such a pattern. Meanwhile, the pattern in the

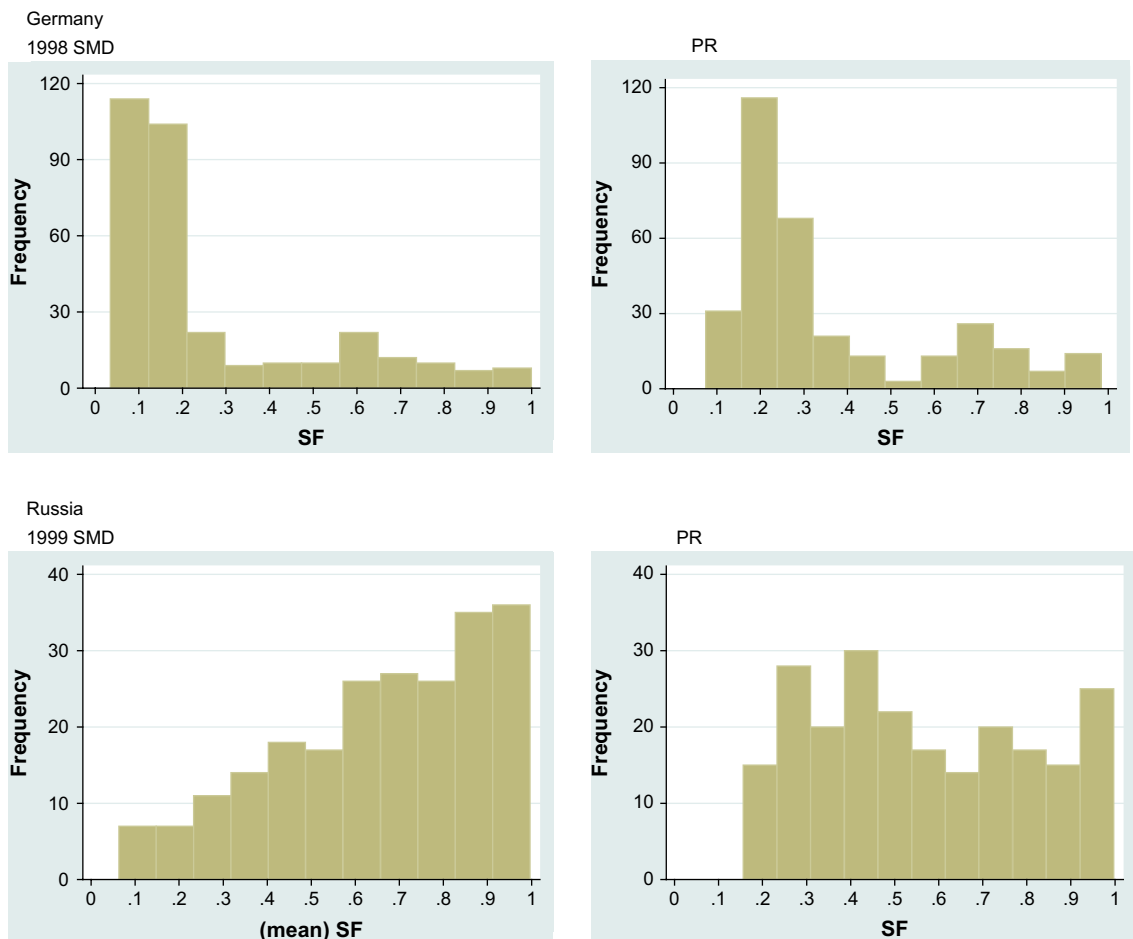


Fig. 1. SF-ratios (district-level) for Germany and Russia.

1999 election in Russia is quite different. In Russian SMDs, the mode pushes up toward one on the right hand side, indicating that voters were not shifting away from the second loser. This pattern stands in contrast not only to the one we see in Germany, but also to the pattern we see in the ratio of the third place party to the second place party in PR voting in Russia. Moreover, unlike Germany, which swiftly moved from no clear pattern in its SMD SF-ratio distributions in its first mixed-member system election in 1953 to modes near zero in the elections that immediately followed, Russia's mode near one in SMD elections remained nearly constant from its first mixed-member system election in 1993 (Moser and Scheiner, 2006).

To be sure, SF-ratio patterns are dependent not only upon strategic behavior by voters, but by elites as well. Elites, such as party leaders, campaign contributors, and candidates themselves, will be much less likely to support potentially uncompetitive candidates, thereby helping to winnow down the number of strong candidates. So, the story behind these equilibria is not merely one about voters. However, elite behavior is predicated on anticipated voter behavior. Thus, the aggregate behavior of voters is critical to sending both elites and voters a cue to who is competitive and voters' strategic behavior therefore is very much a part of the patterns that emerge.

Of course, using SF-ratios is not without potential problems. The ecological inference problem is the most obvious disadvantage to any approach founded on aggregate data levels and Karp (in this Symposium) raises important criticisms of studies of aggregate level vote data, but there are three additional problems as well. First, in looking at SF-ratios, there is no finely grained way of differentiating between different SF-ratio distributions, especially ones that are very similar. Second, as Cox (2001) notes, SF-ratio values can be ambiguous. A value of one might occur when both the second and third loser are considered potentially strong candidates – and so, therefore, voters abandon neither – or when both are truly minor candidates, neither of whom receives many votes. Third, by themselves, SF-ratios cannot demonstrate who the key actors are. An SF-ratio around zero does not tell us if voters have cast ballots strategically or if there has been a strategic desertion of the race by candidates.⁶

Such potential problems certainly cannot be ignored, but they are of less concern to us here. To begin with, as Cox notes, one of the principal advantages of SF-ratios is that they allow for comparison of significantly different cases. All that is required to compare them is district level electoral data. At the heart of our study here is a desire to understand the conditions under which Duvergerian outcomes are most likely and what factors – beyond the SF-ratio in PR balloting – correlate with shifts in the SF-ratios in SMDs. Our hypotheses below are about these conditions and the patterns they are likely to bring about,

and do not require measurement that can precisely differentiate between two ratios that are similar but slightly different. By utilizing SF-ratios, we can compare multiple countries, each undergirded by very different political contexts and structures. If the SF-ratio patterns turn out generally as we hypothesize in the different systems, it offers substantial support for our arguments.

At least as important, when studying SF-ratios in mixed-member systems – especially when we examine all elections beginning with the advent of the mixed-member system in a given country – we are able to conduct intra-country comparisons, both over time and across the two tiers within the system. If, independent of the SF-ratio patterns in the PR tier, SF-ratios tend toward zero in SMD races (and do so increasingly over time), we can feel confident that strategic behavior is the reason why. If, independent of the SF-ratio patterns in the PR tier, SF-ratios tend to stay away from zero in SMD races, we can feel confident that far less strategic behavior is occurring, whether because of voters' unwillingness to cast strategic ballots or because of constraints on their ability to differentiate between the principal challengers.

Note the importance of the intra-country SMD-PR comparison here. Where voters are given only one ballot, it is nearly impossible to use aggregate data to determine voter preferences and, therefore, whether they are casting strategic votes away from their preferences. In contrast, work on ticket splitting in mixed-member systems typically assumes that most PR ballots cast are in line with voters' true preferences.⁷ By examining SF-ratios in mixed-member systems, we can get an aggregate sense of voters' true preferences and the extent to which voters are willing (at least in the aggregate) to deviate from these true preferences.

3. Sample

One of the most attractive features of studying mixed-member systems is the fact that such systems now exist in numerous contexts (and continents) and offer a substantial number of elections over time. Our cases vary widely in their level of democratic experience, the institutionalization of their party systems, their prior electoral system history, and the rules that govern their mixed-member systems. Although we only include countries (or national subunits) for which we have both SMD and PR results broken down at the SMD level, our sample is made up of a number of different sorts of countries. From advanced industrial democracies we examine Germany (13 elections in our data set, 1953–1998), which has used its mixed-member system for decades, as well as Italy (3 elections, 1994–2001), Japan (4 elections, 1996–2005), and New Zealand (3 elections, 1996–2002), which introduced their mixed-member systems in the 1990s, and national subunits Scotland and Wales (2 elections each, 1999–2003), which introduced their mixed-member systems in 1999. From new democracies, we have Bolivia (2 elections

⁶ This last problem would also be a problem in most individual-level surveys of voters, as such surveys tend to focus purely on the set of choices available to voters, not how they would behave in the face of a different set of candidates and/or parties.

⁷ See Cox (1997) and Bawn (1999) on Germany and Reed (1999) on Japan.

in our data set, 1997–2002), and post-communist states Lithuania (3 elections, 1992–2000) and Russia (2 elections, 1995–1999), which introduced their mixed-member systems in the early 1990s, and Ukraine (1 election in the data set, 1998), which introduced its mixed-member system in the late 1990s.

The analysis was conducted at the district level in the SMD tier of each election. With 35 elections in 10 countries, the dataset includes well over 7000 observations.

4. Variables and hypotheses

The discussion of Duvergerian equilibrium and SF-ratios tending toward zero is of course founded on contexts where there are incentives for strategic voting (or strategic entry and exit of candidates and/or parties). Where such incentives are far weaker – e.g., in PR races, where even relatively weak parties can gain representation – or voters do not behave in a short-term instrumentally rational fashion, have widespread certainty about who the winner is likely to be, and/or prefer one party (or candidate) to the point of being indifferent to all others,⁸ no equilibrium ought to exist, and no clear SF-ratio pattern will develop. Based on these different types of variation, we pursue a series of hypotheses on likely SF-ratio patterns.

4.1. Outcome variable and method

The outcome variable here is the SF-ratio in each district for each election in each country in our data set. We use a logit transformation of the variable to make it unbounded and run a random effects regression model. Based on the above discussion, our hypotheses are founded on the argument that very low SF-ratios in the SMD tier are often associated with strategic voting. Therefore, we expect negative coefficients on variables that should lead to greater strategic voting and positive coefficients on variables that make strategic voting less likely.

4.2. Hypotheses and explanatory variables

To some degree, particular SF-ratios emerge in SMDs, not because of large scale strategic behavior, but because a particular proportion of voters simply prefers the second place candidate's party to the party of the third place candidate. As noted above, most studies of ticket splitting in mixed-member electoral systems assume that most ballots cast in PR are sincere votes. We therefore use the ratio of the PR vote won by the party with the third largest list vote total to the PR vote won by the party with the second largest total (both measured at the SMD level) as a proxy measure for what the SF-ratio would look like with sincere voting. We expect the coefficient on the variable SFPR, to be positive, as a higher SFPR ratio ought to lead to a higher SF-ratio in SMD balloting. If there is only straight ticket voting, the SF-ratio and SFPR will correlate perfectly. In this way, SFPR is also useful as a control because including it, in effect, allows us to use the other variables to explain much

of the divergence from straight ticket voting.⁹ Controlling for the SF-ratio in the PR race, we pursue a number of hypotheses.

Strategic Voting Hypothesis. SF-ratios will be lower in close races

Strategic voting is more likely in close races, where a change in a person's vote will be more likely to have an impact on the final outcome. To test this hypothesis, we create a 'Margin of Victory' variable which is the difference between the proportions of the vote won by the first and second place candidates in the district. Since strategic voting is more likely in close races, we expect the Margin of Victory to have a positive effect on the SF-ratio. A greater margin of victory indicates a less close race, which ought to push up the SF-ratio.

Party institutionalization hypothesis. SF-ratios will be lower when there are well institutionalized party systems

As we discussed above, we expect substantial differences between established and poorly institutionalized party systems. Information is critical to the ability of voters to behave strategically. Voters can receive information in numerous ways, including from media reports and through significant experience with the system. One of the most important informational cues available to voters is the presence of parties that can help them structure the vote. Where voters can utilize the cues offered by established parties, they find it easier to differentiate between the likelihood of different candidates succeeding in a race. In contrast, where no such cues exist, it is more difficult for voters to take votes away from one potential challenger and cast them strategically for another. Therefore, there ought to be less difference between the success of second and third place candidates in poorly institutionalized party systems. For a variety of reasons, party systems in new democracies tend to be less institutionalized. We therefore use level of democratization as a proxy measure for party institutionalization. We create a dichotomous dummy variable, 'Established Democracy', which we code as '1' for established democracies in our data set and '0' for the new democracies (Bolivia, Lithuania, Russia, and Ukraine). We expect Established Democracy to have a negative coefficient, as strategic voting should be more prevalent in institutionalized party systems.

Moreover, we do not expect voters in less institutionalized systems to respond to competitive races with the same levels of strategic voting. Because information is less readily available in new democracies with less institutionalized party systems, uncertainty should be higher in such

⁹ We should add that we also run an identical model in which the outcome variable was the SF-ratio minus SFPR, with SFPR removed from the set of explanatory variables. We believe that the model is less useful in that it essentially takes away information about whether strategic voting is occurring; that is, by using an outcome variable that is the difference between the SMD SF-ratio and SFPR, we do not know if there is a particularly low SF-ratio, which would be our best indication that strategic voting is occurring. Nevertheless, in running this alternative model, we find that the direction of the relationship between electoral competitiveness and the SF-ratio remains the same and statistically significant.

⁸ See Cox (1997, p.79).

systems, therefore making it more difficult for voters to recognize who is in and out of the running. Moreover, with no established parties to structure the vote, there may be a perception that *anyone* can win once there is a competitive race. Voters therefore may actually be *less* likely to cast strategic votes in competitive races and elites may be less likely to shift resources away from less competitive candidates.¹⁰ We create an interaction term between Margin of Victory and Established Democracy, which we call 'Margin*Established Democracy'. We expect Margin*Established Democracy to have a positive coefficient, as the variable represents the impact on the SF-ratio of the margin between first and second place in established democracies.¹¹ However, once we introduce the interaction term, we expect the coefficient on Margin of Victory to be negative or non-significant, as the value of this coefficient will be driven in very large part by the results of elections in uninstitutionalized party systems, where the competitiveness of the race is likely to have no effect on strategic voting or even make strategic voting less likely.

The closeness of the race between first and second place is not the only cue that voters may utilize to determine when to act strategically. That is, there is a substantial difference between a close race in which the winner receives 50% of the vote while the runner up receives 49%, and a close race in which the winner gets 30% of the vote and the runner up takes 29%. In the former case, there is great incentive to vote strategically for one of the top two candidates in order to affect the race. In the latter case, though, the fact that other candidates might be competitive with even a relatively small share of the vote gives voters less incentive to shift away from their preferred candidate. For this reason, we include a variable we call '50 – Winner', which is the absolute value of 50 minus the winning candidate's percentage of the vote. As suggested above, when the winning candidate receives markedly less than 50% of the vote, voters will be less likely to cast a strategic vote. When the winning candidate receives markedly more than 50% of the vote, voters will also have less incentive to cast a strategic vote because there is relatively little chance of defeating the top candidate and therefore strategic voting will have less of an effect on the final outcome. We therefore expect the coefficient on 50 – Winner to be positive.

First election hypothesis. SF-ratios will be higher in the first election held under a new electoral system

¹⁰ It must be noted that we are concentrating here on a specific pattern of ticket splitting (defection away from less competitive parties) from a particular source (strategic calculation), not the absolute magnitude of ticket splitting (the number of voters splitting their tickets). Weak parties are expected to undermine the strategic defection away from small parties under certain conditions for the reasons stated above. However, weak parties could also increase the number of voters who engage in ticket splitting for non-strategic reasons. Karp and Graham (2005) argue that voter uncertainty increases ticket splitting and Kimball (2005) cite vote ambivalence as a non-strategic source of increased ticket splitting.

¹¹ In terms of interpreting the results, this explanation is of course a bit of an oversimplification. To determine the full correlation between competitiveness and the SF-ratio, we also need to factor in the uninteracted variables.

We expect that voters (and elites) in the first elections under any new districting system (even within well-established party systems) will lack sufficient information about likely candidate success to be able to behave wholly strategically. We therefore create the dichotomous dummy variable 'First Election', coded '1' for the first election under the mixed-member system and '0' otherwise. We expect the coefficient on it to be positive, as we expect less strategic voting and higher SF-ratios in the first election under a new system.

Change over time hypothesis. SF-ratios will get lower over time

We expect that with each election, information will become greater and voters will be more capable of voting strategically. In established democracies, putting into place a new electoral system can make it difficult for voters to know how to act. Indeed, Johnston and Pattie's analysis of split-ticket voting in the initial elections under the mixed-member systems in New Zealand, Scotland, and Wales indicates that "many electors will only vote a split ticket when they receive and are convinced by information suggesting that this is a sensible strategy" (Johnston and Pattie, 2002, p. 598). But, over time, even in new democracies, voters become more likely to cast strategic ballots. As time passes, more information about the workings of the system emerges, voters gain greater information on specific parties and candidates, and voters simply become more experienced with the functioning of democracy (Tavits and Anus, 2006). We create 'Election Number', which is equal to the number of elections held in the country under the mixed-member electoral system in the election under consideration (e.g., Election Number in the first election is 1). We expect the coefficient to be negative, as strategic voting ought to go up and the SF-ratio ought to go down with each election under the system.

SMD-PR linkage hypothesis. SF-ratios will be higher in systems with SMD-PR linkage mechanisms

The most important distinguishing feature of a mixed-member electoral system is whether the two tiers are linked together in a system of compensatory seats. In mixed-member systems with linked tiers, seats or votes won by a party in one tier are subtracted from its total in the other tier. Mixed-member systems like Germany's and New Zealand's, which use the PR tier to compensate for disproportional effects of the SMD tier, should undermine the constraining effect of the SMD portion of the system. Arguably, voters in linked mixed-member systems have no incentive to defect from small parties to large parties since the SMD vote has virtually no effect on the final distribution of legislative seats. In contrast, un-linked mixed-member systems, such as Japan's and Russia's, should be more likely to witness strategic voting. That said, however, we offer this hypothesis much less optimistically because of previous work on mixed-member electoral systems that indicates the presence of substantial strategic voting even in Germany, which is considered the archetypal mixed-member electoral system with linkage (Bawn, 1999, Moser and Scheiner, 2005). We create 'No SMD-PR Linkage' here and tentatively expect it to have

a negative coefficient, as systems without linkage ought to have lower SF-ratios.

We should note that with the exception of the 2000 election, Lithuania has used a two-round majority system in its SMDs. For this reason, we use as the SF-ratio for Lithuania in 1992 and 1996 the ratio of fourth to third place votes (the second and first loser in the first round). Because Lithuania switched over to a plurality system in the SMDs in 2000, we believe that voters had to gain new information on the workings of the system and, especially, the success of different candidates. For this reason, we code the election as a one for both First Election and Election Number. However, these changes ultimately have very little effect on the results.

5. Results

Simple summary statistics of district level votes cast in mixed-member electoral systems suggest that strategic voting drives much of ticket splitting in established democracies, but does not in new democracies. Moser and Scheiner (2000) find that in the 1990s, nearly all winning candidates in Germany (1998), Japan (1996), and New Zealand (1999) received a larger number of SMD votes in their district than their party did in the SMD in PR balloting, but that with each worse ranked candidate, a larger percentage received fewer SMD votes than their party won votes in PR. In Germany, for example, only 3% of first place candidates, but 94.5% of fourth place candidates won fewer SMD votes than their party won PR ballots. In contrast, no such ticket splitting patterns existed in Lithuania (1996) and Russia (1999), where there was relatively little difference in the percentage of candidates at different ranks with a greater number of SMD than PR votes. In Russia, for example, 33.3% of first place candidates and 28.9% of fourth place candidates received fewer SMD votes than their party won PR ballots in the district (Moser and Scheiner, 2000). The clear implication is that in the established democracies voters who preferred candidates from less popular parties are casting strategic SMD votes for candidates with a better chance of winning, while there is little evidence of such a pattern in new democracies.

However, as suggested above, simply comparing the breakdown in SMD and PR votes is not enough to demonstrate strategic voting. Here our analysis of SF-ratios is useful. The results of our multi-variate model are listed in Table 1.

Nearly all of our hypotheses bear out, most notably with respect to our hypotheses about strategic voting and the difference between institutionalized and non-institutionalized party systems. Of course, as should be expected, the coefficient on SFPR is positive and statistically significant. Higher ratios of the third place vote to the second place vote in PR balloting (within an SMD) are correlated with higher SF-ratios in SMD balloting. Indeed, as shown in Fig. 2, holding all other variables at their means, the results suggest that an SFPR ratio of 0 would lead to an SF-ratio in SMD balloting of 0.16, whereas an SFPR ratio of 1 would lead to an SMD SF-ratio of 0.71.

We find clear evidence for the Party Institutionalization Hypothesis, which suggested that SF-ratios would be lower in more institutionalized party systems. The coefficient on

Table 1

Random effects model of the correlates of SF-ratios (SMD candidate level).

Variable	Coefficient	SE
SFPR	2.528	0.069*
Margin of Victory	-1.340	0.248*
Established Democracy	-0.777	0.088*
Margin*Established Democracy	1.962	0.275*
50 – Winner	0.011	0.002*
First Election	0.807	0.037*
Election Number	0.002	0.005
No SMD-PR Linkage	0.892	0.065*
Constant	-1.586	0.109*
N	7007	
Number of groups	10	
Wald chi-squared	2439.94	
Prob > chi-squared	0.000	

Outcome variable: logit transformation of SF-ratio for candidates at the SMD level. Model is Stata's 'xtreg Y X1 X2, re i(ID variable)' model, where country is the ID variable. The level of analysis is each SMD in each election in each country. * $p < 0.001$. Sample: elections under mixed-member electoral system rules in 35 elections in Germany, Italy, Japan, New Zealand, Scotland, Wales, Bolivia, Lithuania, Russia, and Ukraine.

Established Democracy is negative and statistically significant, indicating that SF-ratios in such systems will tend to be closer to zero than in new democracies. As shown in Fig. 2, with all other variables at their means, a value of 1 on the Established Democracy variable (thereby indicating that the country is an established democracy) leads to an expected SF-ratio of 0.38, as opposed to 0.49 for new democracies (which score a 0 on the Established Democracy variable).¹² In addition, the coefficient on the uninteracted Margin of Victory variable is negative and statistically significant. In short, in new democracies, far from leading to more strategic voting, greater competitiveness leads to higher SF-ratios.

We hypothesized that this result might obtain, but the finding still seems counter-intuitive. The implication is that greater competition leads voters to be less likely to cast a strategic vote. We believe that the finding makes greater sense once we discuss the results of the 50 – Winner variable. The coefficient on 50 – Winner is positive and statistically significant, indicating that when the winning candidate's share of the vote is further away from 50%, the SF-ratio tends to go up. Races with winners who took a large share of the vote gave voters who preferred other candidates little ability to affect the race even if they changed their vote, so there was less reason to vote strategically. Races that had winners with relatively small shares of the total vote signaled that even relatively weak candidates could win and, therefore, voters had more incentive to stick with their preferred candidate. We can see this in the expected values listed in Fig. 2: with all other variables at their means, in races that had a winner with 50% of the vote (50 – Winner equals 0) the expected value of the SF-ratio is 0.37. However, the further the winner's vote percentage

¹² In generating these expected values, we also adjust accordingly the values attached to the Margin*Established Democracy variable (i.e., it is equal to the Margin of Victory for established democracies and equal to 0 for new democracies).

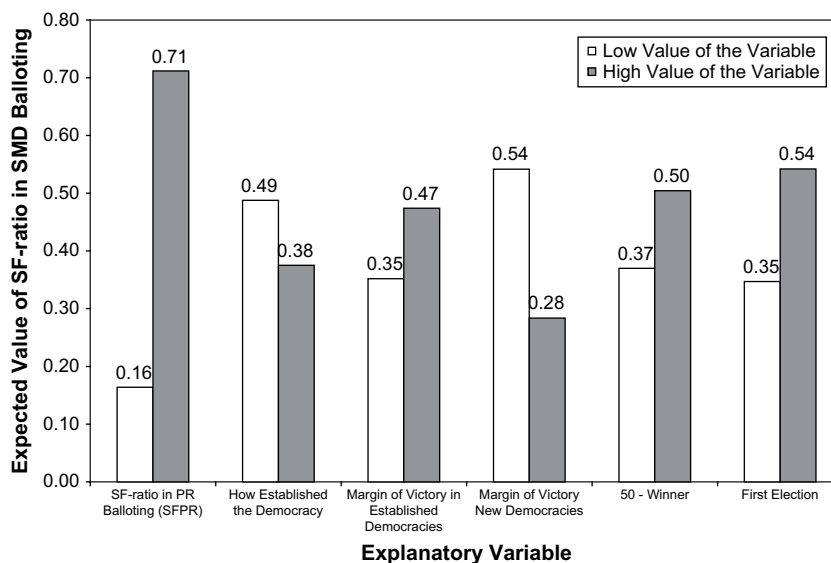


Fig. 2. Impact of each major explanatory variable on SF-ratios in SMD balloting. Expected values are generated by taking the lowest and highest values for the variable in question, while holding all other variables at their means. 'How Established the Democracy' has a low value of 0 for a New Democracy and a high value of 1 for an Established Democracy. In addition, 'Low Value' of Margin*Established Democracy is equal to 0; for 'High Value' it is equal to the mean Margin of Victory. 'First Election' has a low value of 0 (not first election) and a high value of 1 (first election).

is from 50, the higher the SF-ratio, so that at the theoretical maximum score for 50 – Winner (i.e., 50) the SF-ratio would be 0.5.

Fig. 3 draws out the concepts here more fully by comparing the expected SF-ratio separately in the new and established democracies in our data set. In determining expected SF-ratios for new democracies, we use the mean value for each variable as calculated only within new democracies (although the First Election and Election Number variables are left at their means) and we only use means from established democracies to generate expected SF-ratios for established democracies. Here we see that the expected SF-ratio in new democracies is 0.61, as opposed to only 0.36 in established democracies. Greater constraints on strategic behavior appear to explain these differences. First, the mean SF-ratio in PR is much higher—0.65–0.44—in our new democracies than in established ones (with the difference between them statistically significant at the 0.0001 level). What this suggests is that it is harder to distinguish between the relative strength of parties in general in our new democracies, making it more difficult for voters to even know what parties are more likely to put up winners. Second, and related to the first point, winning candidates in new democracies tend to win with much lower percentages of the vote than in established democracies. The mean winner in a new democracy SMD was 38.7% compared to 44.6% in established democracies (with the difference between them statistically significant at the 0.0001 level). As noted above, the fact that seats can be won with fairly low percentages of the vote gives even weaker candidates greater incentive to stay in a race and voters an incentive to continue to support them.

Moreover, analyses of SF-ratios between lower-ranked candidates in postcommunist states (third/fourth-place and fourth/fifth-place in Russia and fourth/fifth-place in

Lithuania) also show a tendency toward one (Moser and Scheiner, 2006), further supporting our assertion about voters' inability to differentiate between the likelihood of victory of multiple candidates in many districts. This pattern, suggesting a lack of strategic behavior, is most evident in Russia. Russian SMD elections have been extremely fractionalized and have a relatively low effective threshold. (The average winner in Russia's 1995 SMD elections garnered around 30% of the vote.) This means that any candidate with high name recognition or a significant voting constituency could win a district race.

We find strong evidence for the Strategic Voting Hypothesis, which suggested that SF-ratios would be lower in close races. The coefficient on Margin*Established

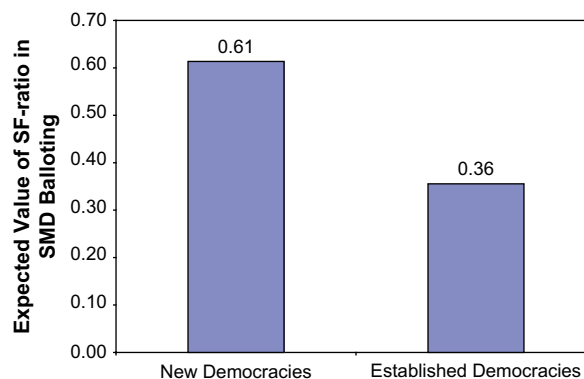


Fig. 3. Differences in SF-ratios in new and established democracies. Expected values for the New Democracies category are calculated by plugging in the mean values of the variables (except for number of elections) from the new democracies in our data set. The means from the established democracies in our data set are used to determine the expected values for the Established Democracies category.

Democracy is positive and statistically significant. When combined with the coefficients on Margin of Victory and Established Democracy, it is clear that greater competitiveness in established democracies leads to lower SF-ratios. We can see this in Fig. 2, where we generate predicted SF-ratios separately for established and new democracies for low and high levels of the margin of victory. With all other variables at their means, where the margin of victory is approximately 0 in an established democracy, we expect an SF-ratio of 0.35, as opposed to an SF-ratio of 0.47 when the margin of victory is huge (0.82). Of course, as suggested above, the results are quite different in new democracies. In a new democracy, where the SMD margin of victory is approximately 0, the expected SF-ratio is 0.54, but drops down to 0.28 for a really uncompetitive race (margin of victory is 0.82).

We also find evidence for the learning over time hypotheses. The First Election Hypothesis suggested that SF-ratios would be higher in the first election held under a new electoral system. Indeed, the coefficient on First Election is positive and significant, indicating higher SF-ratios in first elections. As Fig. 2 indicates, all other variables at their means, the expected SF-ratio for first elections is 0.54 and drops to 0.35 for later elections. At first glance, the Change over Time Hypothesis – SF-ratios get lower over time – does not bear out as Election Number is not statistically significant. However, this non-result is most likely due to the influence of a very large number of elections in Germany. Presumably, after a certain number of years, no major new learning occurs under a system. If we exclude all elections after election number ten in Germany, the coefficient on Election Number becomes statistically significant and negative.¹³

Finally, the SMD-PR linkage hypothesis – that SF-ratios will be higher in systems with SMD-PR linkage mechanisms – does not bear out. Indeed, the positive coefficient is the opposite of what we expected. Systems with no linkage mechanisms have *higher* SF-ratios than those that do not. This is surprising as systems with linkage mechanisms create less incentive for strategic voting. We offer two potential reasons for this finding. First, it is possible that the greater importance of gaining SMD seats in systems without linkage give voters, politicians, and candidates greater incentive to try to win SMDs, even when their chances of victory are remote. More likely, this finding is probably best explained by the combination of this greater incentive

to stay in the race in unlinked systems and the high correlation between unlinked mixed-member systems and new democracies. The absence of conditions favorable to strategic voting in new democracies may be overriding the institutional incentives for strategic voting provided in unlinked systems.¹⁴ And the combination of weak incentives to vote or exit strategically and the strong incentives to try to gain SMD seats may be driving this pattern.

6. Conclusions

Because voters in these systems cast two ballots simultaneously under very different electoral rules, mixed-member systems provide an excellent context for the study of split-ticket voting. This paper has concentrated on attempting to understand the conditions under which ticket splitting in mixed-member systems is driven by strategic voting.

Utilizing SF-ratios is extremely useful for comparing across country cases, even allowing us to compare developed and developing democracies. We find strong evidence of strategic voting (and/or strategic elite behavior) in mixed-member electoral systems. Unlike Moser and Scheiner's (2005) work on the personal vote, which found evidence of strategic voting only in Germany, this study suggests that electoral actors react strategically to the incentives of electoral rules in most established democracies. However, while strategic voting is a relatively common occurrence, it is not a universal phenomenon. It takes time, and only occurs when certain crucial conditions are met, most notably the availability of sufficient information to distinguish between viable and non-viable candidates.

Our findings of SF-ratios tending away from zero in new democracies suggest that political actors in poorly institutionalized party systems find it difficult to act strategically because of a lack of information. Moser and Scheiner's (2005) results indicate that there was clear evidence of personal voting in Lithuania and Russia, but those results were unable to isolate whether strategic voting was also present. Our analysis here suggests, indeed, that there does not appear to be a large amount of strategic ticket splitting in those two cases. In short, the implication is that personal voting – rather than political parties – appears to be structuring the vote in the developing democracy settings that we examine. As a result, we are left pessimistic about the possibility of voters being able to gain sufficient information and behave more strategically in these new democracies in the near future.

It is possible that we simply do not have enough elections in our sample. It took four elections before Japan finally obtained a modal SF-ratio pattern around zero. Perhaps, in another election or two, Lithuania and Russia will also find the same pattern. We are pessimistic about this occurring. Prior to 2005, Japan's SF-ratio patterns tended to rest around the middle of the 0–1 distribution and most likely a strengthened party system helped drive the pattern there toward zero. In contrast, patterns in Lithuania and Russia are far to the 'one' end, suggesting that it remains very difficult for voters to differentiate between

¹³ One excellent suggestion we received to deal with this problem is essentially to combine First Election and Election Number into one variable by simply taking the log of the number of elections (which would presumably capture the fact that the impact of time is bigger at the beginning). We chose not to do this because we wanted to highlight in our analysis the importance of the first election and the relative lack of importance of change over time as many elections pass. That said, we also ran (but do not list the results here) a model that used this alternative measure. As expected the coefficient on the Election Number Log variable was negative and statistically significant. Also, in this alternative model, with one exception the results for the other variables scarcely change. The only major change is that in this model the size of the coefficient on the No SMD-PR Linkage variable declines and is non-significant. (However, for reasons discussed in the next paragraph, this last result should not be surprising.)

¹⁴ See Moser and Scheiner (2004).

the likely strength of many different candidates, and the party systems in those two countries remain weak and poorly institutionalized.¹⁵

Our findings make clear that other, non-strategic factors such as the personal vote also contribute to ticket splitting, particularly in new democracies. There remains ample opportunity to use mixed-member systems to examine further these non-strategic causes of split-ticket voting as well as semi-strategic factors that may also lay behind ticket-splitting in mixed-member systems, such as strategic balancing to produce a particular constellation of political forces in the governing coalition of such systems.

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¹⁵ For the specific SF-ratio patterns of all the countries and elections in the data set used in this paper, see Moser and Scheiner (2006).