

***GOING IT ALONE?***

***STRATEGIC ENTRY UNDER MIXED ELECTORAL RULES\****

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## **Going it Alone? Strategic Entry Under Mixed Electoral Rules**

### *Abstract*

Recent studies on strategic voting and entry in elections that combine plurality or majority and proportional representation (PR) have found candidate placement in single-member district (SMD) races to improve a party's PR performance. The primary implication of the existence of "contamination effects" is that parties have an incentive to nominate candidates in as many single-member districts as possible. Pre-electoral coordination in the majoritarian component of mixed electoral systems, however, is far from uncommon. In this paper, we identify a number of institutional incentives that induce political parties to form pre-electoral alliances in spite of contamination effects. By identifying institutions that favor and hamper coordination, we seek to advance the understanding of PR-SMD interactions and to assess their implications for the design, classification, and empirical analysis of mixed electoral rules. Our statistical tests evaluate strategic entry in a diverse sample of countries.

## 1. Introduction

In the past decade, hundreds of millions of voters have taken part in elections held under institutional rules that combine majoritarian and proportional principles of representation. Beyond this minimalist definition, however, the heterogeneity characterizing mixed systems that were introduced in recent years, either as a response to crises of governance<sup>1</sup> or as the outcome of transitions from autocratic rule,<sup>2</sup> has presented psephologists with a wealth of new research questions, both theoretical and empirical in nature.

The emerging literature on mixed electoral systems has provided valuable insights into their origins and consequences. Scholars have formulated alternative taxonomies<sup>3</sup> and have investigated an increasingly diverse set of research questions by analyzing how mixed systems emerge,<sup>4</sup> studying the strategic behavior of parties and voters,<sup>5</sup> and assessing effects on legislative behavior<sup>6</sup> and national party systems.<sup>7</sup> Despite the volume of new work on mixed systems, a critical question remains unanswered: *how does the strategic environment created by mixed electoral systems influence coordination among political parties?*

Scholars have debated various aspects of strategic coordination, including why parties adopt particular nomination strategies (Reed 1995, Christensen and Johnson 1995; Cox and Niou 1994, Cox 1997, Browne and Patterson 1999), how political parties select candidates for party lists (Siavelis 2002) and how party nomination strategies lead to legislative majorities (Shvetsova 2002). In mixed electoral systems, parties are faced with many choices about strategic entry and nomination of candidates: should they contest elections in both tiers independently, in formal coalitions with other parties, in informal coalitions with other parties or should they abstain from electoral competition altogether?<sup>8</sup> In this paper, we are particularly interested in evaluating pre-electoral coordination in the majoritarian component of the election.

The analysis of strategic coordination in mixed systems is complicated by differences in the emerging scholarship regarding the incentives produced by these electoral rules. Two

schools of thought differ on how the combination of proportional and majoritarian rules may structure the incentives facing political actors. The first approach derives expectations from direct applications of Duverger's principles and assumes that the incentive structures in the proportional and majoritarian tiers are independent of one another. In the PR tier, particularly where seats are allocated in one national district, voters are expected to behave expressively, fostering the fractionalization of the party system. In SMD races, voters are expected to coordinate on the two most viable candidates and parties are thought to be provided with the incentive to either "prudently withdraw" (Cox 1997), enter stand-down agreements with other parties, or form broad electoral coalitions that jointly back single-member district candidates. Candidate nomination should, under the assumptions of this school of thought, follow expectations derived from "pure" forms of PR and SMD.<sup>9</sup>

Assuming the independence of the majoritarian and proportional tiers, researchers have conducted "controlled experiments" (Moser 1997 and 1999; Reed 1999; Benoit 2001b) evaluating how distinct electoral rules affect outcomes while other potential influences (cultural, social, and/or temporal) on the party system are held constant. Research following this approach has assessed, primarily through the analysis of split-ticket voting, whether parties and voters rationally adapt to the institutional features of each tier.

The second school of thought emphasizes the interactive features of mixed electoral systems. Rather than combining two sets of electoral rules with independently induced incentives, mixed systems are subject to a "contamination effect" that creates a unique strategic environment, defying expectations derived from direct applications of Duverger's propositions to each component of the election (Herron and Nishikawa 2001). In this approach, mixed systems are thought to be theoretically and empirically distinct from pure SMD or PR. Thus, decisions about strategic entry and withdrawal should be influenced by the incentive structure produced by the combination of proportional and majoritarian rules in a single election.

The logic of contamination effects is straightforward. The placement of a candidate in a single-member district race boosts, in the same district, the performance of the PR list with which the candidate is affiliated. An implication of this finding is that, to maximize their PR vote bonus, parties have an incentive to "go it alone" by nominating candidates in as many districts as possible, thereby eschewing cooperative agreements that would limit how they distribute candidates in the majoritarian tier. Even minor, hopeless parties should not be expected to engage in coordination in, or withdraw from, SMD contests. Consequently, SMD elections under mixed electoral rules should be characterized by multiparty competition and by a higher number of parties than pure first-past-the-post elections.

The proposition that contamination effects discourage coordination, however, is challenged by two empirical observations. First, in elections held under mixed electoral rules, many parties fail to place candidates in every single-member district. Second, particularly in cases such as Hungary and Italy, substantial pre-electoral coordination takes place in the form of stand-down agreements or explicit alliances. Though some studies have attempted to explain pre-electoral coordination under hybrid rules, all of them have focused on one or two countries. Herron (2002b), for instance, explains why Russian and Ukrainian parties generally run candidates in a relatively small number of districts. Possible negative effects of candidate placement, limited organizational resources, and the possibility of reaching strategic agreements with other parties may discourage elites from nominating candidates to each single-member district race. Ferrara (2003) instead focuses on institutional incentives and conjectures that coordination in Italy is promoted by the majoritarian character of its electoral system (see also Katz 2001; D'Alimonte 2001). Similarly, Benoit (2001a) attributes the Hungarian party system's convergence toward bipolar competition to the incentives built into the new electoral law.

The above discussion suggests that a thorough assessment of contamination effects' impact on pre-electoral coordination in SMD races is a critical lacuna in the literature on mixed

electoral systems. Contamination effects matter: candidate placement in single-member districts is found to consistently improve a party's PR performance in a variety of highly diverse cases such as Russia, Japan, Lithuania, Ukraine, Germany, New Zealand, and Italy (Herron and Nishikawa 2001, Cox and Schoppa 2002; Ferrara 2003a; Golosov 2003). However, the open question is: How much do they matter? In other words, what factors may induce political parties to forego the benefits that contamination effects guarantee in the form of a PR vote bonus, either by agreeing to support one another's candidates or by forming coalitions that jointly nominate and back single-member district candidates?

This article moves beyond country-specific explanations of pre-electoral coordination by concentrating on the institutional incentives that may discourage parties from nominating candidates in every single-member district. By evaluating party strategy, we seek to enhance the understanding of the interaction between the majoritarian and proportional components of the election and to assess its implications for the design, classification, and empirical analysis of mixed electoral systems. Aside from addressing a relevant, substantive research question, the establishment of the conditions that induce political parties to coordinate under mixed electoral rules has important methodological and practical implications. From a methodological standpoint, this study assesses the validity of "controlled experiments" that assume the independence of the SMD and PR tiers by identifying those mixed systems where the incentives generated by the interaction of the majoritarian and proportional components promote multipartism and those where single-member district elections are likely to operate consistently with the Duvergerian logic typical of single-member plurality. From a practical standpoint, the findings presented here provide useful information to reformers who seek to introduce mixed electoral systems by shedding some light on the type of electoral institutions that foster two-party or multi-party competition in single-member districts.

In the following sections, we discuss approaches to the study of mixed systems more fully and elaborate a series of propositions by identifying particular institutional arrangements that may prompt parties to form pre-electoral alliances or go it alone. Then, we conduct empirical tests on district-level data of single-member district elections taking place in a variety of countries or sub-national units that employ mixed electoral systems to select their legislative representatives: Bolivia, Germany, Hungary, Italy, Japan, Lithuania, Mexico, New Zealand, Russia, Scotland, South Korea, Ukraine, and Wales. We find that single ballot mixed systems, seat linkages connecting the SMD and PR tiers, and the national allocation of PR seats promote the proliferation of candidacies in SMD races; in contrast, pre-electoral coordination is more likely to take place in highly majoritarian mixed systems.

## **2. Pre-Electoral Coordination Under Mixed Electoral Rules**

Strategic coordination, as noted above, encompasses a heterogeneous set of behaviors that may include decisions to form parties, register parties for participation in elections, and engage in specific nomination strategies in the two tiers of a mixed electoral system. This observation begs the question, is the number of participating parties determined endogenously or exogenously?<sup>10</sup> The distinction has implications for the analysis (see Shepsle 1991) as the incentives influencing parties to coordinate constituency nominations could also affect entry decisions. Because our analysis focuses on electoral coordination in the SMD tier in a cross-section of mixed systems, we assume that the number of parties that can offer candidates in SMD is fixed.<sup>11</sup> While inter-election dynamics may encourage political actors to defect from parties (Laver and Benoit 2003), to create new parties (Hug 2001), to merge existing parties, or to disband parties, we are concerned with decisions to coordinate nominations in the SMD tier by parties that have committed to participation by gaining entry to the party-list ballot.<sup>12</sup>

In this section, we identify a number of institutional arrangements that may induce political parties to engage in strategic coordination in the single-member district races of mixed electoral systems. We expect elements of the "formulaic structure" (Cox 1997, 60) of mixed systems (such as ballot structure, electoral formula, the majoritarian character of the electoral rules, and PR district magnitude) to affect a party's strategy and its decision to either coordinate with other parties or go it alone by placing autonomous candidates in SMD races. Generally, pre-electoral coordination is believed to be relatively more beneficial to parties in dual ballot mixed systems, in systems where the majoritarian component dominates the election, in systems where the presence of a PR threshold threatens the viability of small parties, and in districts where the corresponding PR district magnitude is low.

On the basis of ballot structure, mixed electoral systems may be divided into two broad categories. In dual ballot mixed systems, such as those employed to elect the German Bundestag, the Italian Chamber of Deputies, the Russian State Duma, and the Japanese Diet, voters cast two separate ballots: one for a candidate and one for a PR list.<sup>13</sup> Parties and voters can, therefore, make distinct strategic decisions in each tier. By contrast, in single ballot mixed systems such as those employed to elect the Italian Senate, the Mexican Chamber of Deputies, and the South Korean Kukhoe, voters only cast a single "nonexclusive" vote (Cox 1997, 41), by which they simultaneously select a single-member district candidate and a party list. The votes received by all SMD candidates affiliated with a particular party are then pooled for the purposes of allocating PR seats. We hypothesize ( $H_1$ ) that *parties are more likely to coordinate in the single-member district races of dual ballot mixed systems than in single ballot mixed systems*. We expect to observe such a systematic difference for three reasons.

First, in single ballot mixed systems, where a vote for a single-member district candidate is also a PR vote, parties have the incentive to place candidates, even those who have no chance of winning their respective SMD race, in as many districts as possible if they wish to

maximize the number of PR seats they receive. Second, in these systems, voters are less likely to consider a vote cast for a hopeless SMD candidate to be a wasted vote, particularly if the party with which that candidate is affiliated has a reasonable chance of winning a PR seat in that constituency. The pooling of SMD votes to allocate PR seats removes the incentive for voters to comply with expectations derived from Duverger's Law in single-member districts. In turn, anticipating fewer desertions, parties should be expected to nominate more candidates to the single-member districts of single ballot mixed systems. Finally, pre-electoral coordination involves significant costs for parties, particularly if it is realized through the establishment of explicit coalitions, rather than through stand-down agreements. By entering an alliance, a party must sacrifice some autonomy. Nonetheless, while in dual ballot mixed systems parties are able to preserve their independence and cultivate their electoral support by running autonomous PR lists, in single ballot mixed systems parties can only maintain a separate identity by nominating their own single-member district candidates (Katz 2001, 117). In this sense, formulaic structures allowing voters to cast two separate ballots render pre-electoral coordination relatively less costly.

The electoral formula employed to elect representatives in the majoritarian component of mixed electoral systems is another relevant source of incentives influencing the extent to which parties are willing to engage in pre-electoral coordination. The literature explaining strategic entry decisions in single-member district races held under alternative, pure electoral rules is well developed. Cox (1997, 123-138)<sup>14</sup> evaluates strategic voting and entry in elections held under majority-runoff rules. Contrary to single-member plurality contests, electoral rules requiring candidates to win a majority of the vote (at least in the first round) to win the available seat should not produce two-party competition. Though voters still have the incentive to desert first round candidates whom they perceive to be unlikely to qualify for the second round,<sup>15</sup> and hopeless candidates have an incentive to withdraw or coordinate with other parties, majority

elections have a weaker reductive impact on the number of viable candidates and thus provide fewer incentives to establish pre-electoral alliances.

Benoit (2001b, 478) expects strategic voting and pre-electoral coordination to be mitigated by the majority-plurality rules adopted to elect single-member district representatives in Hungary. Given that advancement to the second round may confer upon a political party considerable "bargaining leverage," the electoral law discourages the formation of alliances before the election. Though Benoit (2001a) finds evidence for electoral coordination by political parties in Hungary's single-member districts, coordination typically takes place only after the first round: When "two [allied candidates] step forward, one steps back." Consistent with these expectations, we hypothesize (H<sub>2</sub>) that *more coordination is observed in single-member district races of mixed electoral systems if the majoritarian component of the election operates through plurality, rather than majority-runoff or majority-plurality.*

While ballot structure and the electoral formula are considered to be decisive in a party's evaluation of the payoffs associated with pre-electoral coalition-building, we anticipate that the majoritarian character of the formulaic structure is the most critical determinant shaping a party's decision to conclude pre-electoral agreements with other parties or nominate its own single-member district candidates. Mixed systems not only combine different electoral rules in the election of a single legislative assembly; they also combine two distinct principles of representation. In some mixed electoral systems (e.g., Russia) majoritarian and proportional institutions are evenly balanced, but in many others one component appears to drive the outcome of the election. Nevertheless, how is a mixed electoral system classified as more or less majoritarian? In Sartori's (1994, 73) words, when does the "disproportion" prevail over the "proportion?"

Shugart and Wattenberg (2001a) distinguish "mixed-member proportional" (MMP) from "mixed-member majoritarian" (MMM) systems on the basis of the presence or absence of a "seat

linkage" between the SMD and PR tiers of the election. Under MMP rules, such as those employed to elect the German Bundestag and New Zealand's House of Representatives, the total number of seats a party is assigned is contingent upon its performance in the PR election. In New Zealand, for instance, each party receives a number of PR seats that is equal to the number of seats to which it would be entitled if the entire House of Representatives were elected through PR less the number of single-member seats it won. In MMP systems, therefore, the seat linkage effectively compensates for the disproportionality generated by SMD elections. Conversely, in MMM systems, the number of seats that a party receives in one component of the election is independent of the seats it wins in the other component.

We hypothesize (H<sub>3</sub>) that *the existence of a seat linkage inhibits pre-electoral coordination*. In MMP systems, which generate fully proportional outcomes, parties face little incentive to coordinate. Even those parties that have no hope of winning any single-member district, in fact, are not at all damaged by the electoral formula because the compensatory mechanism guarantees that their total seat share will be proportional to their vote share. Hence, there is no reason for parties to form pre-electoral alliances in the single-member district elections of MMP systems, because the outcome is inconsequential for the maximization of their seat total (Moser 2001, 7). Rather, parties should be expected to place candidates in as many districts as their resources allow. By running their own single-member district candidates, parties may increase their visibility, advertise their platform, and costlessly exploit the boost that contamination effects are likely to give to their PR performance. The disincentive to coordinate, therefore, is far more pronounced in MMP systems, where non-competitiveness in SMD races is not penalized by the mechanics of the SMD-PR mixture.

While the operation of a seat linkage is clearly the most important factor determining whether the majoritarian or proportional components drive election results, it is not the only institutional feature that affects the overall (dis)proportionality of the electoral outcome. In

particular, three critical elements of the formulaic structure of mixed electoral systems confer more importance upon one tier of the election or the other: the percentage of total seats distributed through SMD, the existence of a PR threshold and its relative permissiveness, and PR district magnitude. The incentives that such institutions provide to parties and voters are expected to figure prominently in a party's calculus and in its formulation of an electoral strategy.

The share of seats distributed in the majoritarian component varies greatly in the mixed electoral systems employed to elect a growing number of legislatures worldwide (see Massicotte and Blais 1999; Shugart and Wattenberg 2001a), ranging from 10 percent (Ecuador) to 85 percent (South Korea). Japan (62.5 percent) and Russia (50 percent), for example, are intermediate cases. We posit (H<sub>4</sub>) that, holding the presence of a seat linkage constant, *as the share of seats allocated in single-member district races increases, parties are more likely to engage in pre-electoral coordination.*

In markedly majoritarian systems where a large proportion of seats is set aside for the majoritarian component of the election, forming broad pre-electoral alliances may help parties of all sizes achieve their office-seeking or policy-seeking goals. For large parties, effective pre-electoral coordination with other parties and the establishment of alliances that are competitive in most single-member district races nationwide may prove to be the difference between forming a government and organizing the opposition. It may be instrumentally rational for party leaders to forego the benefits of placing their own candidates in every single-member district to maximize, through the formation of pre-electoral alliances, their chances of commanding a legislative majority in conjunction with other parties.

Similarly, smaller parties whose candidates are not viable in single-member districts should expect to be punished quite severely by the mechanics of MMM systems where the share of seats available in the PR tier is too small to offset the disproportionality that majoritarian

elections are likely to yield. For these parties, failing to coordinate with other parties may cause their seat share to diverge substantially from their vote share. Nonetheless, entering pre-electoral coalitions with larger parties in SMD races<sup>16</sup> allows small and medium-sized parties to win more seats than they would as a result of the boost in PR performance that the placement of autonomous candidates provides. Consequently, an increased seat share may also confer upon these parties additional blackmail power and leverage they can employ to extract policy concessions from their allies after the election, particularly if their participation is indispensable to the survival of a coalition government.

Heavily majoritarian mixed electoral systems provide large, policy-seeking parties and smaller parties with an incentive to enter pre-electoral coalitions. The larger the deviation from proportionality that the mechanics of a mixed system are expected to produce, the more likely it is that parties will coordinate in the SMD component of the election. While large parties should attempt to maximize their chances of winning a legislative majority by concluding strategic agreements with parties they wish to include in a future governing coalition, small parties should readily renounce some of their autonomy in an effort to protect their survival, maximize their seat share, and increase their bargaining strength. Contamination effects provide some benefits to parties that command the resources to nominate their own candidates in every single-member district. In turn, the SMD contests of mixed systems should tend toward the multiparty competition that SMD elections normally discourage. In highly majoritarian hybrid systems, however, the benefits of coordination should exceed those of running independently of other parties. We should therefore expect the single-member district races of mixed electoral systems to increasingly approximate two party competition as the relative salience of the majoritarian component increases. Endeavoring to bolster PR performance in systems where the PR tier is far less relevant than the majoritarian tier is not an optimal electoral strategy.

In addition, the incentive for small parties to join pre-electoral alignments should be stronger in the presence of a PR threshold that is high enough to threaten their survival by precluding access to the seats distributed in the proportional component of the election. For instance, in the election of the Chamber of Deputies in Italy, small parties find it relatively easier to win SMD seats (by obtaining larger parties' backing for some of their single-member district candidates) than PR seats. In the 2001 elections, in fact, while only 5 parties managed to overcome the 4 percent threshold in the PR tier, as many as 10 parties that ran PR lists won representation in the majoritarian component. We hypothesize (H<sub>5</sub>) that *as the percentage of votes that must be received to participate in the distribution of PR seats increases, pre-electoral coordination also increases.*

The final institutional feature that is expected to affect the proportionality of the electoral outcome and, in turn, strategic entry decisions is the district magnitude of the PR constituency where the district is located. We hypothesize (H<sub>6</sub>) that *pre-electoral coordination is lower in districts with higher district magnitudes.* Political parties, in fact, may well attempt to improve their PR performance by nominating candidates to as many single-member districts as possible. For instance, in countries like Ukraine and Russia, where all of the available PR seats are distributed in a national PR constituency, parties may expect to win a nontrivial number of additional seats through the PR bonus spawned by candidate placement in single-member districts. In contrast, however, when PR district magnitude ( $M$ ) is low and where only a limited number of parties have realistic aspirations of winning PR seats, smaller, nonviable parties may find it inconsequential to boost their PR performance by nominating their own single-member district candidates. Rather, they may be more sensitive to incentives to either withdraw or back other, more viable candidates, perhaps in exchange for pre- or post-electoral concessions from the parties whose candidates they instruct their voters to support.

The above discussion yields the following predictions. Little or no pre-electoral coordination should be observed in the single-member districts of MMP systems without a PR threshold. In contrast, substantial coordination should take place in dual ballot MMM systems where most of the legislative seats are allocated through single-member plurality and where the PR threshold is high. Also, parties should engage in some coordination in MMM systems where the majoritarian and proportional components are evenly balanced. Finally, the electoral strategies enacted locally by political parties should be informed by the marginality of a district and the participation of an incumbent candidate in a single-member district race.

### **3. Data and Variables**

Our analysis assesses strategic entry at the SMD level in a variety of important and diverse mixed electoral systems. Specifically, we report results of tests conducted on constituency-level data from elections of the Bolivian Chamber of Deputies, German Bundestag, Hungarian National Assembly, Italian Chamber of Deputies and Senate, Japanese House of Representatives, Lithuanian Seimas, Mexican Chamber of Deputies, New Zealand's House of Representatives, Russian Duma, Scottish Parliament, South Korean Kukhoe, Ukrainian Verkhovna Rada, and Welsh National Assembly. For each country or sub-national region, we analyze the most recent election for which data are available.<sup>17</sup> Aside from including the most populous and influential countries whose legislatures are elected through mixed systems, our sample is characterized by great institutional variation, by party systems that have achieved different levels of institutionalization, and by diverse social cleavage structures. We seek to show that our theoretical expectations have generality and that the hypothesized patterns are observable in many kinds of mixed electoral systems irrespective of contextual, social, and cultural factors.

The electoral rules employed in the countries evaluated in this paper are distinguished by profound differences in the way they combine proportional and majoritarian principles of

representation. Our analysis includes five MMP systems (Bolivia, Germany, New Zealand, Scotland, and Wales), three partially compensatory MMM systems<sup>18</sup> (Italy, both houses, and Hungary), and six non-compensatory MMM systems (Mexico, Russia, Japan, Lithuania, South Korea, and Ukraine). Moreover, we consider both single ballot (Italian Senate, Mexico, and South Korea) and dual ballot mixed systems. As indicated by Table 1, the electoral rules adopted by the countries included in our sample vary on a number of other dimensions, such as the share of seats allocated through SMD, the presence of a threshold in the PR tier, PR district magnitude, and the SMD allocation formula. While our analysis does not include every hybrid system, the comprehensiveness and heterogeneity of our sample renders it adequately representative of the world's mixed systems and appropriate to test hypotheses that seek to explain how party strategy is shaped by mixed electoral rules in a variety of institutional, social, and cultural settings.

*Insert Table 1 about here*

### 3.1 Dependent Variables

The measurement of the strategic entry decisions made by political parties in the majoritarian component of mixed electoral systems involves a difficult choice of indicators that may reveal the extent to which parties employ "go it alone" strategies in SMDs or engage in some form of pre-electoral coordination with other parties. Benoit (2001c) measures pre-electoral coordination through the use of the "average coalition size," or the average number of parties supporting each candidate competing for the available seat(s). Though this measure is optimal in assessing whether parties conclude explicit pre-electoral agreements with other parties, its use is rendered particularly problematic in this case because it does not capture the significance of informal deals or strategic withdrawals by which parties agree to support one another's candidates without necessarily forming official alliances.<sup>19</sup>

We evaluate our propositions on two dependent variables. While both variables are measures of strategic entry, they allow us to assess two different aspects of the problem under

investigation. First, we measure pre-electoral coordination as a count of the candidates participating in a SMD race who are affiliated with a party that ran a list in the PR component of the election.<sup>20</sup> This is a rough measure of pre-electoral coordination, as it does not reveal much about both official and informal agreements among political parties. But, this variable allows us to distinguish the institutional features of mixed electoral systems that encourage parties to go it alone from those that have a reductive impact on the number of candidates entering SMD races, either by inducing parties to withdraw from the race or by prompting them to coordinate with other parties. In other words, this variable allows us to identify the kinds of mixed systems that, consistent with the theory of contamination effects, encourage parties to run candidates in as many districts as possible and those that induce them to forego the PR vote boost generated by "go it alone" strategies in SMD. We anticipate the number of affiliated candidates to be higher in single ballot than in dual ballot mixed systems, in systems than do not use plurality to allocate SMD seats, in mixed systems with a seat linkage, and where PR seats are allocated in one national district. Conversely, we expect the number of affiliated candidates to decrease as the share of total seats allocated in the SMD component increases and in the presence of less permissive PR thresholds.

A limitation of the indicator we just described is that, by merely considering the absolute number of affiliated candidates, it fails to take into account the number of parties that *could have* placed SMD candidates. For instance, less coordination takes place in a district where 5 out of 5 parties participating in PR elections ran their own candidates than in a SMD where 20 PR lists support 10 candidates. To avoid over- or underestimating pre-electoral coordination, we make use of a second dependent variable that measures coordination more directly by considering the number of candidacies relative to the number of parties taking part in the election. We calculate, for each SMD in our sample, the average number of parties supporting each candidate by dividing the number of parties running lists in the corresponding PR constituency by the total

number of candidates participating in the SMD race. We include independent candidates in the denominator, as parties may back non-affiliated candidates with whom they share ideological affinities, policy preferences, and/or common adversaries.<sup>21</sup> We expect the average number of parties per candidate to increase as the share of seats distributed through SMD increases, as the PR threshold increases, and when SMD seats are assigned through the first-past-the-post formula. In contrast, we anticipate the average number of parties per candidate to be lower where PR seats are allocated nationally, in single ballot mixed systems, and in MMP systems.

### 3.2 Independent Variables

*Single Ballot.* Hypothesis 1 seeks to explain the difference between the placement strategies of political parties in single and dual ballot mixed systems. We create the variable "single ballot," which is coded 1 if voters only cast one ballot, by which they simultaneously select a SMD candidate and a PR list (as in the Italian Senate, Mexico and South Korea), and 0 otherwise.

*Plurality.* The impact of the formula employed in the SMD component (Hypothesis 2) is tested through the use of the dichotomous variable "plurality," which is coded 1 for the SMDs of each of the countries included in the sample with the exception of Hungary (which employs two-stage majority-plurality) and Lithuania (which used majority runoff in the 1996 election).

*Link.* This variable is coded 1 if the electoral system under consideration has a seat linkage connecting the majoritarian and the proportional components of the election (that is, for MMP systems) and 0 if the electoral rules do not impose any such linkage (MMM). This variable allows us to assess the difference between the strategic entry decisions made by parties in MMP and MMM systems (see Hypothesis 3).

*%SMD.* The explanatory variable "%SMD," which reflects (in percentages) the share of total seats that is allocated in the majoritarian tier of the election, is employed to test Hypothesis 4. Hypothesis 4 predicts that parties are provided by incentives to engage in pre-electoral coordination in SMD races where the relative salience of the majoritarian component is high.

*PR Threshold.* The effect of the relative permissiveness of the PR threshold on candidate placement strategies in SMDs (Hypothesis 5) is assessed by regressing the dependent variables on the variable "PR threshold." PR threshold is coded as the percentage of votes that a party must receive, at the national or district level, to participate in the distribution of PR seats.

*PR District Magnitude (Logged):* Hypothesis 6 anticipates that high PR district magnitudes will encourage parties to run more SMD candidates in the hope that the PR vote bonus they receive by placing autonomous candidates in SMD races will translate into additional PR seats. To assess whether this pattern is observable in the data, we employ the natural logarithm of PR district magnitude. We use the natural log of PR district magnitude, rather than the raw value, because, while the number of affiliated candidates is expected to increase monotonically as a function of PR district magnitude, it is not expected to do so in a linear fashion. As PR district magnitude increases, in fact, the magnitude of its marginal effect on the number of affiliated candidates should gradually attenuate.<sup>22</sup>

*Reformed PR.* We control for the electoral system that was employed to elect a particular legislative body prior to the introduction of a mixed system in some of our tests. Sartori (1994, 75) predicts that replacing a PR system with mixed electoral rules is likely to fail to reduce the fractionalization of the party system. To control for the effect of past electoral rules, we include in some models the variable "Reformed PR," which is coded 1 if the introduction of the mixed system used in the election under consideration was adopted to replace a "pure" PR system (as in Italy and Bolivia).

*Postcommunist.* Much of the literature on countries that have recently completed transitions from communist rule has noted that many of those countries have inchoate party systems. Many parties have arisen and quickly disappeared over the course of few general elections, party affiliations among voters are weak, and the electorate's volatility is high (see White, Rose, and McAllister 1997; Moser 1997 and 1999). To control for the effects that the lack of an

institutionalized party system may have on strategic entry, we employ the variable "postcommunist" (coded 1 for Hungary, Lithuania, Russia, and Ukraine and 0 for each of the other sample countries). We do not expect the relationship the institutional variables of interest to affect pre-electoral coordination differently in post-communist countries and in countries that previously employed "pure" PR. We control for these variables to account for the possibility that the number of entrants might, on average, be higher in new democracies, where party systems are not yet fully institutionalized, and in countries where the replacement of a PR system with mixed electoral rules may, as Sartori (1994) predicts, initially fail to reduce the number of parties. For this reason, in both cases we use intercept shifter dichotomous variables.

*LN(Margin)* and *Incumbency*. Consistent with the literature on "pure" SMD systems, we control for the marginality of a district and for the presence of an incumbent candidate. "LN (Margin)" is the natural logarithm of the margin of victory (in percentages) by which a candidate won the SMD in question in the previous election.<sup>23</sup> Incumbency, instead, was coded 1 if the candidate who had won a SMD in the previous election was competing for re-election in the same district.<sup>24</sup> Tentatively, we expect high margins of victory and incumbency to exercise a reductive impact on the number of SMD candidacies by discouraging the entry of potential competitors (see Cox 1997; Jones 1999).

#### 4. Analysis and Discussion

We assess four models of strategic entry in Table 2, where the dependent variable is the number of single-member district candidates who were affiliated with a PR list. Because the dependent variable is a count, and thus can only take on non-negative integer values, standard regression analysis could produce biased and inefficient parameter estimates. The more appropriate functional form to apply in this case is a poisson distribution (tests for overdispersion were negative, indicating that poisson is the appropriate distribution).<sup>25</sup> We present the results of poisson regression in Table 2. Results we estimated through OLS and through Iteratively

Reweighted Least Squares robust regression, which minimizes the influence of the outliers in our data (see Huber 1981), are identical to those shown in Table 2 and very similar to one another.

*Insert Table 2*

In Table 2, the first model includes six explanatory variables that measure institutional features of mixed electoral systems: single/double ballot, SMD formula, seat linkage between the tiers, percentage of seats allocated to SMD, PR threshold, and the natural logarithm of PR district magnitude. In subsequent models, we add control variables such as "postcommunist," "reformed PR" (Models 2, 3, and 4), margin of victory at  $t-1$  (Model 3), and incumbency (Model 4).

The poisson estimates strongly support our expectations. In each of the models, the coefficients for single ballot, seat linkage, and district magnitude are highly significant and positive in sign, indicating that single ballot mixed systems, MMP systems, and systems where PR seats are allocated in large constituencies encourage the proliferation of SMD candidacies. Plausibly, these institutional features of mixed electoral systems induce parties to seek to maximize the PR vote bonus they are likely to receive by running autonomous candidates in single-member districts. Similarly, the parameter estimates for plurality formula, percentage of seats allocated in SMDs, and PR threshold, which are statistically significant and negative in sign, suggest that employing the first-past-the-post rule in SMD, setting aside a large proportion of the available legislative seats for the majoritarian tier, and instituting less permissive PR thresholds exercise a reductive impact on the number of entrants in single-member district races, as they provide incentives to both large and small parties to enter pre-electoral coalitions in the majoritarian component of the election. The consistency of the results shown in Table 2 to our research hypotheses and the robustness of the estimates to alternative specifications of the models strongly support the propositions we put forth to explain pre-electoral coordination.<sup>26</sup>

Because we employ district-level data from multiple countries, however, we performed additional analyses to account for potential complications in our research design.<sup>27</sup> First, it is not

unreasonable to assume that error terms within countries would be correlated with one another; nomination decisions in one district may influence decisions in other districts. But, these effects should be confined within the borders of the countries under consideration. We replicated the poisson regression analysis, clustering by country to relax the assumption of independence within a country's borders. Clustering affects standard errors, not parameter estimates. In Model 1, the coefficients for single ballot, formula, and the percentage of SMD seats are significant at the .05 level. In Model 2, the coefficients for all the institutional variables are significant at the .05 level, save those for PR threshold (where the p-value is .07).

We also replicated the analysis with proportional weights, to account for variation in the number of districts by country. Results were generally robust. Four of the institutional variables (single ballot, plurality, seat linkage, share of seats distributed in SMD) are significant at the .001 level in every model; the signs were as hypothesized. The coefficients for PR threshold are negative and significant only in Model 2; those for district magnitude are positive and significant in Models 2 and 3. Overall, the robustness of our diagnostic tests provides solid support to hypotheses 1, 2, 3, and 4. Hypothesis 5 is supported in six of the twelve models estimated through poisson regression; Hypothesis 6 is supported in seven of twelve models. The analysis reveals that particular institutional features of mixed electoral rules – ballot structure, SMD formula, seat linkages, percent of seats allocated to SMD, PR thresholds, and PR district magnitude – do in fact structure the strategic environment that parties face and affect their strategic entry decisions in single-member district races.

The results shown in Table 3 take into consideration the number of parties in competition rather than exclusively concentrate on the raw count of candidates participating in SMD contests. The dependent variable is, for every district, the ratio of the number of parties participating in the PR portion of the election to the number of SMD candidates. Because our dependent variable is continuous in this analysis, we employ OLS. However, since the dependent variable can only

take on positive values, we also evaluate our research hypotheses with tobit. Our expectations change for this series of models; we expect positive coefficients for percent SMD, PR threshold, and plurality formula. We expect negative coefficients from single ballot, unlinked tiers, and national PR.

*Insert Table 3 about here*

The results of our statistical analysis again support our expectations. With the exception of PR district magnitude, the coefficients for each of the variables of interest are significant at the .01 level; signs are in the hypothesized direction. Plurality formulae, strongly majoritarian systems where most of the available seats are distributed in SMDs, and high PR thresholds are associated with a higher average number of parties supporting each SMD candidate. In contrast, MMP systems and single ballot mixed systems appear to be characterized by a lower average number of parties per SMD candidate, as they presumably provide parties with little incentive to withdraw or engage in pre-electoral coordination in single-member districts.<sup>28</sup>

Additional tests yielded estimates that are similar to those presented in Table 3. Tobit and robust regression estimates conform to those produced by OLS. When we relaxed the assumption of independence within countries, the parameter estimates for single ballot, SMD formula, seat linkage, and percentage of seats allocated in SMD were significant in each of the three models. When we employ proportional weights, our first four propositions are also robustly supported. These additional tests, altering some of the standard OLS assumptions, generate results that largely match the findings in Table 3. While the evidence for hypotheses 5 and 6 is less conclusive, our remaining hypotheses receive strong empirical support in the data.

The uniformity of the results we obtain by running a variety of statistical tests on two dependent variables give us confidence that the institutional features we identified affect strategic entry decisions in mixed electoral systems. However, the substantive impact of those explanatory variables remains to be addressed. In other words, do the predictions we made with

regard to pre-electoral coordination in SMD races hold? We can use the equations estimated through poisson and OLS (Model 1 in Table 2 and Model 1 in Table 3, respectively) to assess strategic entry in mixed electoral systems characterized by different combinations of majoritarian and proportional rules. Table 4 shows the expected values of the affiliated number of candidates and average number of parties per candidate we estimated through Clarify's stochastic simulation techniques (see Tomz, Wittenberg, and King 2003) for six hypothetical mixed systems: a dual ballot MMP system with 5 percent threshold, an MMP system with no threshold, two dual ballot MMM systems where the majoritarian and proportional components are evenly balanced (one that uses plurality and one that uses majority), a heavily majoritarian MMM system where 70 percent of the available seats are allocated in SMDs, and a single ballot mixed system.

*Insert Table 4 about here*

The estimates that are shown in Table 4 are quite consistent with our predictions and indicate that, for the most part, our institutional explanatory variables exert a non-trivial, substantively significant effect on the two measures we employ as indicators of strategic entry. The number of affiliated candidates participating in a single-member district race is higher in MMP systems (6.8 or 7.79, depending on the existence of a PR threshold), in systems where voters only cast one ballot (where over 11 affiliated candidates run in each district), and in systems where SMD elections take place under two-stage majority (9.55). In contrast, the number of SMD candidacies decreases dramatically in highly majoritarian mixed systems (3.82). Finally, more balanced mixed systems employing first-past-the-post are characterized by an intermediate number of entrants.<sup>29</sup>

The estimates computed for the average number of parties per SMD candidate in the six different ideal types of mixed electoral systems also support our predictions. Virtually no coordination seems to characterize SMD races in single ballot mixed systems (there is just over 1

party per candidate), where parties have a strong incentive to nominate their own candidates to as many single-member districts as possible.<sup>30</sup> In addition, *ceteris paribus*, MMM systems appear to encourage more pre-electoral coordination than MMP systems. Finally, the average number of parties per candidates is particularly high in markedly majoritarian mixed systems (3.6), revealing that substantial pre-electoral coordination takes place under rules that assign most of the legislative seats through single-member plurality.

## 5. Implications

How much do contamination effects matter? To what degree do mixed electoral systems encourage parties to "go it alone" in the majoritarian component of the election? The results of this study support the proposition that the institutional features of mixed electoral systems generate outcomes that differ from those generally observed under "pure" SMD and PR. Nonetheless, the institutional heterogeneity that characterizes the world's mixed systems also produces variation in outcomes by creating different strategic environments for political actors. Our key finding is that the incentives produced by mixed systems are influenced substantially by the manner in which majoritarian and proportional institutions are combined.

Where the proportional component is dominant, the interaction between the SMD and PR tiers of the election renders parties more likely to go it alone in single-member districts, as candidate placement in SMD provides them with the opportunity to boost their PR performance. Consequently, SMD races should operate quite differently from purely majoritarian elections, at least from the standpoint of strategic entry. Even in those systems where the majoritarian and proportional components are separated and evenly balanced, parties are likely to nominate more candidates than they would under pure SMD rules, hampering the evolution of two party competition in single-member districts. However, mixed systems may also create a strategic environment conducive to cooperation. In particular, in systems where the majoritarian component dominates the election, parties have an incentive to enter into formal or informal

nomination pacts. Under those circumstances, the incentives provided by contamination effects may be outweighed by the benefits yielded by pre-electoral coordination.

Our findings, which are strongly supported by a variety of statistical tests performed on data from elections held in 14 countries distinguished by profoundly dissimilar cultures, social cleavage structures, and SMD-PR combinations, have important implications for the empirical analysis of mixed electoral systems. Specifically, we question the validity of "controlled experiments" that treat mixed systems as laboratories in which researchers may compare the behavior of parties and voters under different electoral rules. Research designs that assume the independence of the majoritarian and proportional components of the election may omit critical interactions between the tiers. This study, which explicitly takes into account the interaction of institutional rules within a single election, has shown that the strategic entry decisions made by political parties in single-member district races are shaped by the characteristics of both the SMD and PR components of mixed electoral systems. Variation in ballot structure, electoral formula, formal seat linkages, relative permissiveness of the PR threshold, PR district magnitude, and the balance of PR and SMD exert a strong, systematic impact on strategic entry decisions in majoritarian elections.

Our research points to future analyses that should be conducted on mixed electoral systems. Assessing the evolution of coordination strategies employing longitudinal data in one or more countries would provide valuable information about how quickly politicians adapt to changing electoral incentives. Expanding this study by incorporating more mixed systems, particularly at the sub-national level, could enhance our understanding of institutional effects as well as the interaction between local and national elections. More significantly, however, our analysis suggests that, rather than assuming independence between the two tiers of the election, future research could develop more nuanced insights into the consequences of mixed electoral

institutions through an explicit focus on how SMD-PR interactions structure the strategic environment faced by voters, parties, candidates, and legislators.

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**TABLE 1:**  
***Institutional Variation in the Sample Countries***

<i>Country</i>	<i>System</i>	<i>Election Analyzed</i>	<i>Ballots</i>	<i>SMD Seats (% of total)</i>	<i>PR Threshold</i>	<i>PR District Magnitude (Mean)</i>	<i>Formula in SMDs</i>
Bolivia	MMP	2002	2	52	3%	15	Plurality
Germany	MMP	2002	2	50	5% (or 3 SMDs)	598	Plurality
Hungary	MMM	1998	2	46	5%	8 (district) 56 (nat'l)	Majority-plurality
Italy (lower)	MMM	2001	2	75	4%	155	Plurality
Italy (upper)	MMM	2001	1	75	None	4.6	Plurality
Lithuania	MMM	1996	2	50	5%	70	Majority-runoff
Mexico	MMM	2003	1	60	2%	200	Plurality
Japan	MMM	2000	2	62.5	None	16.4	Plurality
New Zealand	MMP	2002	2	56	5% (or 1 SMD)	120	Plurality
Russia	MMM	1999	2	50	5%	225	Plurality
Scotland	MMP	2003	2	57	None	16	Plurality
South Korea	MMM	2000	1	85	3%	46	Plurality
Ukraine	MMM	2002	2	50	4%	225	Plurality
Wales	MMP	2003	2	67	None	12	Plurality

*Sources:* Shugart and Wattenberg 2001; Massicotte and Blais 1999

**TABLE 2:**  
**Strategic Entry under Mixed Electoral Rules; Poisson Regression Results**

<i>Dependent Variable:</i> <i># of Affiliated Candidates in SMDs</i>				
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
<i>Constant</i>	3.16* (.07)	2.94* (.13)	2.46* (.18)	2.61* (.20)
<i>Single Ballot</i>	0.67* (.02)	0.77* (.02)	0.82* (.03)	0.68* (.04)
<i>Plurality Formula</i>	-0.49* (.04)	-0.75* (.04)	-0.71* (.05)	-0.84* (.05)
<i>Seat Linkage MMP=1 MMM=0</i>	0.15* (.02)	0.34* (.04)	0.39* (.05)	0.46* (.05)
<i>% SMD</i>	-0.02* (.00)	-0.02* (.00)	-0.01* (.00)	-0.01* (.00)
<i>PR Threshold</i>	-0.03* (.01)	-0.13* (.01)	-0.09* (.02)	-0.07* (.02)
<i>LN(PR District Magnitude)</i>	0.04* (.01)	0.19* (.02)	0.15* (.02)	0.11* (.02)
<i>Postcommunist</i>	—	0.26* (.05)	0.29* (.05)	0.37* (.06)
<i>Reformed PR</i>	—	0.56* (.03)	0.38* (.05)	0.44* (.05)
<i>LN (Margin t-1)</i>	—	—	-0.02* (.001)	—
<i>Incumbent</i>	—	—	—	-0.01 (.02)
<i>Pseudo R<sup>2</sup></i>	0.13	0.17	0.16	.12
<i>N</i>	2767	2767	2533	2061

Note: \*p < .01 and sign is as predicted

Standard Errors in parentheses

Tests for overdispersion were negative; the functional form applied in the model approximates the distribution of the data.

**TABLE 3:**  
**Coordination under Mixed Electoral Rules; OLS Results**

<i>Dependent Variable: Average Parties per Candidate # of PR Parties/ Total # of Candidates</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
<i>Constant</i>	-1.64* (.12)	-1.90* (.14)	-1.70* (.19)
<i>Single Ballot</i>	-1.66* (.04)	-1.62* (.05)	-1.55* (.08)
<i>Plurality Formula</i>	1.40* (.08)	1.42* (.08)	1.30* (.13)
<i>Seat Linkage</i> <i>MMP=1</i> <i>MMM=0</i>	-0.64* (.04)	-0.63* (.05)	-0.63* (.05)
<i>% SMD</i>	0.04* (.00)	0.04* (.00)	0.04* (.00)
<i>PR Threshold</i>	0.15* (.02)	0.17* (.02)	0.15* (.03)
<i>LN(PR District Magnitude)</i>	0.11 (.02)	0.09 (.02)	0.11 (.04)
<i>LN (Margin t-1)</i>	—	0.04* (.01)	—
<i>Incumbent</i>	—	—	0.02 (.04)
<i>Adj. R<sup>2</sup></i>	.55	.56	.46
<i>N</i>	2767	2533	2061

Note: \*p< .01 and sign is as predicted.  
Standard Errors in parentheses

**TABLE 4:**  
*Assessing Strategic Entry in Hypothetical Mixed Systems*

	<i>Highly Proportional Mixed Systems</i>		<i>Balanced Mixed Systems</i>		<i>Majoritarian Mixed Systems</i>	<i>Single Ballot Mixed Systems</i>
	<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>	<i>6.</i>
<i>Single Ballot</i>	No	No	No	No	No	Yes
<i>Formula</i>	Plurality	Plurality	Plurality	Majority	Plurality	Plurality
<i>Seat Linkage</i>	Yes	Yes	No	No	No	No
<i>%SMD</i>	50	50	50	50	70	50
<i>PR Threshold</i>	5	0	5	5	5	5
<i>PR Magnitude</i>	250	250	250	250	250	250
<i># Affiliated Candidates</i>	6.80 (.13)	7.79 (.31)	5.88 (.11)	9.55 (.26)	3.96 (.07)	11.52 (.35)
<i>95% Confidence Intervals</i>	6.55 to 7.06	7.22 to 8.42	5.66 to 6.10	9.06 to 10.09	3.82 to 4.11	10.86 to 12.21
<i>Avg. Parties per Candidate</i>	2.24 (.04)	1.50 (.08)	2.88 (.04)	1.48 (.06)	3.6 (.03)	1.22 (.06)
<i>95% Confidence Intervals</i>	2.17 to 2.32	1.36 to 1.65	2.81 to 2.95	1.37 to 1.60	3.54 to 3.66	1.11 to 1.33

*Note:* Standard errors are in parentheses below the estimates  
M=1000 sets of simulated parameters.

## 7. Notes

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<sup>1</sup> See Shugart 2001.

<sup>2</sup> See Francisco 2000.

<sup>3</sup> See Shugart and Wattenberg 2001a and Massicotte and Blais 1999.

<sup>4</sup> See Bawn 1993, Benoit and Schiemann 2001, Navarra and Sobbrío 2001 and Remington and Smith 1996.

<sup>5</sup> See Bawn 1999, Benoit 2001a, Cox 1997, Cox and Schoppa 2002, Ferrara 2003, Gschwend, Johnston and Pattie 2003, Herron and Nishikawa 2001, Karp et al. 2002, Moser 1997 and 1999, and Reed 1999 and 2001.

<sup>6</sup> See Bawn and Thies 2003, Haspel, Remington, and Smith 1998, Herron 2002a, Lancaster and Patterson 1990, Stratmann and Baur 2001, and Thames 2001.

<sup>7</sup> See Kostadinova 2002, Sartori 1994, Shugart 2001, and Shugart and Wattenberg 2001b.

<sup>8</sup> Candidates are also faced with decisions about affiliation with a party, running independently, as well as specializing in the PR or SMD tier or running simultaneously in both tiers. This latter option was unavailable in Ukraine as of 2002, but was available in other mixed electoral systems.

<sup>9</sup> Reed (1999, 257-258), for instance, maintains that "Japan's new electoral system... is almost ideally designed for the study of strategic voting," as "no other existing electoral system provides political scientists with data on such neatly separated but simultaneous SMD and PR votes." Similarly, Moser (1999, 366) argues that mixed systems provide "a unique opportunity to study the effects of separate plurality or PR tiers while holding constant other possible intervening variables."

<sup>10</sup> The authors thank an anonymous reviewer for raising this issue.

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<sup>11</sup> An important related question is how contamination effects influence the number of parties in the system. That is, would contamination increase the number of parties contesting elections *relative to a pure PR system*? Depending on the rules of entry and the benefits allocated to parties and candidates (in terms of funding limits, access to free media time, etc.), the incentives of mixed electoral systems may inflate the number of parties contesting in PR relative to a pure PR system. Candidates who covet particular district seats may find advantages in coalescing together under a party banner to gain access to resources that would benefit them in the SMD campaign. The absence of an SMD tier in a pure PR system precludes this incentive from influencing parties in pure PR. Creating pseudo-parties that serve seat maximizing goals for politicians in SMD rather than PR is more likely to occur in countries with inchoate party systems, and anecdotal evidence of such a phenomenon exists in these systems. For instance, in the 1995 Russian parliamentary election, the "party" Pamfilova-Gurov-Lysenko nominated 33 candidates, but only two candidates gained seats – Ella Pamfilova and Vladimir Lysenko. The party's primary purpose was to enhance the electoral prospects of its namesakes in the district races by creating a "party" that could access benefits restricted to registered political parties. Monetary penalties for micro-parties that contested but failed to perform well in PR were increased for the 1999 Russian elections, diminishing the benefits of such a strategy. Some research has discussed these incentives (Herron 2000), but it is a worthy question for future analytical work. However, this incentive does not fundamentally affect our research question.

<sup>12</sup> In some cases, candidates in the SMD tier of mixed systems are affiliated with parties that have not gained entry to the PR ballot. But, these instances are rare.

<sup>13</sup> We should note that mixed systems generally employ closed list PR, but Lithuania uses open list PR in its proportional tier.

<sup>14</sup> See also Shugart and Taagepera (1994); Shugart and Carey (1992, 206-225).

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<sup>15</sup> Irrespective of whether the runoff takes place under "top two" (Cox 1997) or majority-plurality rules.

<sup>16</sup> This generally involves agreements to jointly back one another's candidates in different single-member districts

<sup>17</sup> This corresponds to the most recent election with three exceptions. In the case of Japan, we analyze data from the 2000 election; in the case of Hungary, we only have data for the 1998 election; in the case of Lithuania, we consider the 1996 elections.

<sup>18</sup> Under partially compensatory MMM rules, a system of negative (Italy) or positive (Hungary) vote transfers connects the SMD and PR tiers of the election by penalizing in the allocation of PR seats those parties that are most successful in SMD (see Shugart and Wattenberg 2001a). These systems are distinguished from fully compensatory MMP systems because MMP ensures that the total distribution of seats is fully proportional to the distribution of votes, while partially compensatory mixed systems simply correct some of the disproportionality of the electoral outcome by helping parties that are unsuccessful in SMD win some additional PR seats. In the Hungarian case, the system of positive vote transfers provides an incentive for parties to "go it alone" in SMD, as the votes received by losing candidates are pooled with the PR vote of the parties to which they are affiliated. Unfortunately, accounting for positive vote transfers in our models is equivalent to including a Hungary dummy variable. When we do this, the results presented in this paper do not change.

<sup>19</sup> For example, some Russian political parties engage in pre-electoral coordination that is manifested by the creation of "blocs" of parties. But, many parties also agree behind the scenes to coordinate district nominations (Herron 2002).

<sup>20</sup> We exclude independent candidates because our purpose is to assess party strategy.

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<sup>21</sup> The incidence of independent candidacies is only high in Ukraine and Russia. Therefore, the distinction between total number of candidates and number of affiliated candidates is only meaningful in those two countries. In Ukraine, 1537 out of a total of 3084 candidates ran as independents (or declared affiliation with parties that did not run PR lists) in 2002; in the 1999 Russian elections, 1178 out of a total of 2227 candidates were independents. In both countries, independents not only participate in large numbers; they also win an unusually high number of SMD races (in Ukraine, 92 of 225 SMD races were won by independents in 2002; in Russia, 112 of 225 districts were won by independents in 1999). Given their importance, Russian and Ukrainian political parties should be expected to aggressively court successful independents to persuade unaffiliated deputies to join their parliamentary factions. Parties may withdraw from SMD races they cannot win and endorse an independent frontrunner they wish to include in their faction as a bargaining strategy.

<sup>22</sup> When PR district magnitude increases from 2 to 10, for example, we anticipate a marked increase in the number of affiliated candidates competing in SMD elections. When  $M=2$ , small and medium-sized parties might find it rather useless to run their SMD candidates, as the PR vote bonus will not translate into PR seats. When  $M=10$ , however, more parties can hope to win a PR seat, and therefore should be expected to run their own candidates rather than withdraw or engage in pre-electoral coordination. Past a certain value of  $M$ , though, almost every party has the incentive to run its own candidates, *ceteris paribus*. Hence, we should not expect there to be much of a difference between the impact that PR district magnitude exerts on nomination strategies in systems like Hungary (where  $M=56$ ) and in systems like Russia or Ukraine, where  $M=225$ .

<sup>23</sup> We use the natural logarithm because we expect the relationship between margin of victory and the dependent variables measuring pre-electoral coordination to be curvilinear. We do not

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have data on the margin of victory for South Korea. In some cases we had to deal with the problems posed by redistricting. In the case of Germany, the Central Election Commission provides 1998 SMD results adjusted for the redistricting that occurred prior to the 2002 elections. In the cases of New Zealand, Russia, and Ukraine, we assigned to each district the margin of victory at t-1 provided that the core of the district remained the same (even if its boundaries underwent some changes). For districts that were split, we assign to both of the new districts the margin of victory of the pre-existing SMD (this change only regards Ukraine). For districts that were merged into one, we took the mean margin of victory in the pre-existing districts.

<sup>24</sup> In the coding of "incumbency," we also had to account for re-districting. In the countries where reapportionment was significant (Germany and Ukraine), we assigned to value of 1 to each SMD where a candidate who had won a plurality race in the same region in the previous election was competing for re-election. We do not have data on incumbency for Hungary, Mexico, and South Korea.

<sup>25</sup> See King (1988; 1989) and Chapter 8 in Long (1997) for more information about estimating count models.

<sup>26</sup> When we include independent candidates in the dependent variable, and control for postcommunist countries to account for the large number of SMD candidacies typical of such countries, the estimates are very similar (in size, sign, and significance levels) to those shown in Table 2.

<sup>27</sup> Results of the analyses, and replication data, are available on the authors' websites (XXXX).

<sup>28</sup> When we exclude independents from the measure of the average number of parties, two notable changes occur. First, consistent with hypothesis 6, the coefficient for PR district magnitude becomes negative and significant; more surprisingly, though, the parameter estimate

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expressing the effect of the percentage of seats allocated through SMD also becomes negative. In this case, however, there is a discrepancy between the results generated by OLS and those produced by robust regression, which generates estimates that are consistent with each of our hypotheses by limiting the influence of notable outliers. These are instances (particularly in Russia and Ukraine) where, as expected, parties yielded to independents in some districts and hence nominated very few candidates. This considerably inflates the average number of parties per candidate and leads to overestimates of the amount of coordination taking place in a given district (if there is only one affiliated candidate for 26 PR parties in a district, it is unlikely that all 26 parties support that candidate; it is more likely that parties distributed their support among the numerous independents in the race). Therefore, the results generated by regression techniques that are robust to the distortions introduced by outliers are in our view more credible. Overall, our decision to exclude (Table 2) or include (Table 3) independents in our dependent variables, depending on the aspects of coordination we seek to explain, is not very consequential to the predictions generated by the models. Alternative operationalizations of the dependent variables yield similar results.

<sup>29</sup> We also estimated the expected values of the number affiliated candidates from Table 2, Model 2, to assess the difference in the number of entrants observable in postcommunist countries and in countries where mixed electoral rules were introduced to replace a pure PR system. There are substantive differences. In the balanced type of mixed system (like the one in Table 4, column 3), for example, the expected value of the number of affiliated candidates 4.28 (standard error = 0.23) for cases where the variables "postcommunist" and "reformed PR" both equal to 0. This quantity increases to 5.52 affiliated candidates in postcommunist countries (s.e.= 0.11) and increases even more, to 7.5 candidates (s.e.= 0.37), in countries where mixed systems replaced PR.

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<sup>30</sup> A notable exception is constituted by the Italian upper house elections. Most of the major parties, in fact, coalesce into broad coalitions and nominate common candidates to the single-member districts of the both the Chamber (dual ballot) and the Senate (single ballot). However, it is plausible that pre-electoral coordination takes place in the Italian Senate elections because the existence of a separate PR tier in the election of the Chamber (where all of these parties run autonomous lists) reduces the costs of forming electoral coalitions by allowing individual parties to maintain their separate identity (see Ferrara 2003; Katz 2001).