Electoral Rules and Elite Collusion:
Achieving Duvergerian Outcomes in India through Pre-Election Alliances

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Abstract
Recent research has largely confirmed Duverger’s Law, that electoral competition tends to converge on two parties in single-member district plurality elections. What mechanisms account for this empirical regularity? Much research has assumed that strategic voting is responsible for electoral outcomes consistent with Duverger’s Law. Focusing on Indian state elections, this article shows that when multiple major-party candidates contest a race, Indian voters rarely converge on the two leading candidates, as expected under strategic voting. Rather, Duvergerian two-party outcomes are the result of elite collusion in which parties collude to reduce the number of viable candidates contesting at the district-level. These findings not only help make sense of Indian politics; they also point to a new mechanism underpinning Duverger’s Law.

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Duverger’s Law is one of the most widely known hypotheses in political science. It states that single-member district plurality (SMDP) electoral systems tend to produce two-party systems. Although scholars have been quick to identify exceptions to Duverger’s Law, a number of recent studies have found convincing evidence in favor of the proposition, both at the national-level and increasingly at the district-level. Indeed, the most recent and most thorough test of Duverger’s Law in SMDP systems finds strong, though not unqualified, support for Duverger’s Law, concluding that “strategic behaviour by elites and voters under plurality rule does seem to reduce legislative fragmentation in a way that penalizes small parties and approximates two-party competition. Therefore, while Duverger’s Law is not strictly a law, it is a stronger tendency than much recent work has made it out to be.”

Research demonstrating the link between SMDP electoral rules and a tendency toward district-level bipartism has not, however, fully explained why Duverger’s Law holds across most electoral districts most of the time. Several mechanisms could be at work. Since only the largest vote getter in a district wins a legislative seat, voters may desert their most preferred candidate if she is certain to lose, voting instead for a candidate with a realistic chance of winning. Alternatively, elites may divert valuable resources away from hopeless candidates to

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viable ones, resulting in voters converging on those candidates with the greatest number of endorsements, the largest campaign war chests, and the most extensive media exposure. Another possibility is that parties strategically withdraw from unwinnable contests leaving only two viable competitors. Or, would be parties might simply refrain from forming at all when two competitive parties already exist. Although a number of studies address the strategic behavior of elites in producing electoral outcomes consistent with Duverger’s Law, political scientists have paid far more attention to the strategic behavior of voters. Marshaling evidence from a wide range of countries, scholars have shown that when faced with the opportunity to vote strategically, large numbers of voters do so. They have also gone a long way in explaining why some voters vote strategically while others do not, which should, in principle, help explain variation in when and where Duvergerian outcomes—electoral results consistent with Duverger’s Law—occur.

Interestingly, the world’s largest SMDP country, India, has persistently provided some of the weakest evidence in favor of Duverger’s Law. In only about half of all national- and state-level races do the two leading candidates corner the vast majority of votes. Why does

Duverger’s Law sometimes work in India but not at other times? Through what mechanism do Duvergerian outcomes occur as often as not? In this article, I re-examine Duverger’s Law and the mechanisms underpinning it in the context of state elections in India. To date, the main explanations for the failure of Duverger’s Law in many Indian districts\(^\text{11}\) center around factors, such as federalism, that might get in the way of strategic voting.\(^\text{12}\) I show that India’s experience with Duverger’s Law has, so far, been partly misunderstood because scholars have overlooked India’s frequent pre-election alliances that reduce the number of credible candidates at the district-level in multiparty systems. In so doing, researchers have misidentified the reasons why some single-member districts in India produce two-party systems and have perhaps overestimated the prevalence of strategic voting in India.

Empirically, this article demonstrates that when Indian voters are presented with multiple credible candidates, they rarely produce Duvergerian outcomes. Rather, most instances of convergence on two candidates in the context of multiparty systems occur thanks to the collusion of political parties who narrow the field of credible candidates through pre-election alliances. Theoretically, this article points to a new elite-based mechanism—collusion—that underpins Duverger’s Law but is distinct from the mechanisms previously described in the literature. In light of recent evidence in support of Duverger’s Law, more precisely identifying the mechanisms behind this empirical regularity represents the next step in better understanding the relationship between electoral rules and party competition.

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\(^{11}\) In India, electoral districts are called constituencies, while districts are administrative units. In keeping with the comparative literature on electoral systems, I use the term district throughout.

The remainder of this article proceeds in seven sections. I first describe the logic behind Duverger’s Law and the mechanisms underlying it. Next, I discuss pre-election alliances and their potential impact on district-level electoral outcomes. In the third section, I describe the data that I use to explore Duverger’s Law in India. The fourth section documents that in settings with multiple credible candidates, Indian voters relatively rarely converge on two leading candidates in the expected Duvergerian fashion, casting doubt on strategic voting as the primary mechanism producing district-level two party systems in India. Next, in section five, I show that pre-election alliances play a large part in bringing about electoral outcomes consistent with Duverger’s Law. The sixth section turns to individual-level data showing that the majority of voters who would, at first, appear to be strategic voters are actually voters whose vote choice is affected by pre-election alliances. Finally, section seven reflects on the implications of this article’s findings for the study of Duverger’s Law, strategic voting, and contemporary Indian politics.

1. Duverger’s Law and Its Mechanisms

For many decades, research on Duverger’s Law focused on the national-level party system, in particular on the electoral system’s impact on the number of parties, usually as measured by Laakso and Taagepera’s effective number of parties (ENP). Over the years, scholars have revisited Duverger’s Law in various ways. Perhaps the most important effort in this vein has been Making Votes Count, in which Cox argues that the logic behind Duverger’s Law should apply mainly at the district-level. In a single-member district that elects its legislator

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13 Markku Laakso and Rein Taagepera, “‘Effective’ Number of Parties: A Measure with Application to West Europe,” Comparative Political Studies 12 (1979), 3-27. The effective number of parties is equal to \(1 / \sum_{i=1}^{n} p_i^2\), where \(p\) is a party’s vote share. One can also calculate an effective number of parties for the seats in a legislature. All references in this article to the effective number of parties refer to vote shares.

through plurality rules, voters should converge on two candidates, resulting in a two-party system at the district-level. Whether district-level two-party systems then translate into a national-level two-party system depends, however, on candidates’ ability to coordinate across electoral districts on common party labels such that the two leading candidates in each district are everywhere from the same two parties. Since the publication of *Making Votes Count*, scholars have largely confirmed—albeit with significant exceptions—Cox’s argument that competition within single-member districts tends toward two (effective) parties.\(^\text{15}\)

In explaining the link between SDMP electoral rules and two-party systems, Duverger points to two kinds of mechanisms, the mechanical effect of the electoral system and its psychological effect. The mechanical effects of an SMDP system refers to the translation of votes into seats and therefore apply mainly to understanding the number of legislative parties—that is, parties in terms of their share of legislative seats. Viewed from the level of the electoral district, the mechanical effect of an SMDP system in unambiguous; only the largest vote winner wins a seat. The psychological affects refer to strategic behavior by voters and elites in anticipation of the electoral system’s mechanical effects. So far, the literature has identified four distinct mechanisms related to the psychological effects of SMDP electoral systems.

1.1 Strategic Voting

The first mechanism, and the one that has received the greatest attention, is strategic voting. Fisher defines strategic voting as occurring when a voter “votes for a party they believe is more likely to win than their preferred party, to best influence who wins in the constituency.”\(^\text{16}\)

This justifiably broad definition admits a wide range of potential strategies. However, since this article is concerned primarily with the effect of SMDP electoral rules, I focus specifically on form of strategic voting in which voters abandon any candidate expected to place third or worse in an electoral contest in favor of a less preferred, but more competitive, candidate who is likely to come in first or second. In light of strong evidence that strategic voting occurs among those with the opportunity to vote strategically, a common assumption running throughout much of the literature on electoral systems is that strategic voting is one of, if not the, primary mechanism underpinning Duverger’s Law.

However, recent contributions have pointed out that strategic voting does not always necessarily lead to Duvergerian outcomes. Cox argues that when second- and third-place candidates are effectively tied, voters (and elites) do not know which candidate should benefit from their strategic vote. As a result, second- and third-place candidates receive similar vote shares. Empirically, the implication of his claim is that the ratio of votes won by the second loser (third-place candidate) to the votes won by the first loser (second-place candidate)—what Cox calls the SF ratio—should be distributed bi-modally. Where the second-place candidate is clearly ahead of the third-place candidate, supporters of the third-place candidate should vote strategically leading the third place candidate to win very few votes and to an SF ratio approaching zero. However, where the two candidates are nearly tied, neither candidates’ supporters should vote strategically, resulting in the candidates winning nearly identical vote

17 Duch and Palmer, “Strategic Voting in Post-Communist Democracy?”; Alvarez et al., “Strategic Voting in British Elections”; Abramson et al., “Comparing Strategic Voting Under FPTP and PR”; Fujiwara “A Regression Discontinuity Test of Strategic Voting and Duverger’s Law.” An important caveat is that those who sincerely prefer one of the two leading parties in a district are not in a position to vote strategically. Thus, in many contexts, strategic voting may be limited to a small share of the electorate because most voters’ strategic interests are served by voting sincerely.

18 Cox, Making Votes Count, pp. 86-88.
shares and to an SF ratio near one. Thus, most SF ratios should fall close to zero or one, with few values in between.

Clough’s study of strategic voting complicates the story even further. Using an agent-based model, Clough shows that when voters do not share common information about candidates’ standings in the district, voters frequently fail to converge on only two candidates, even when they are voting strategically. In effect, voters fail to “correctly” vote strategically and end up splitting their votes across more than two candidates. A formal model presented by Myatt arrives at similar conclusion. Having removed the assumption of common knowledge about candidate standing, he shows that voters, many of whom will not vote strategically, fail to coordinate on the two leading candidates. What all of these studies highlight is that even if strategic voting is responsible for Duvergerian outcomes, the absence of Duvergerian outcomes does not necessarily mean that voters are not voting strategically. Rather, strategic voting can potentially sustain non-Duvergerian outcomes as well.

1.2 Elite-Based Mechanisms

In spite of the attention frequently paid to strategic voting, other mechanisms may be at work. Thus far, scholars have suggested three elite-level mechanisms: strategic endorsement, entry, and party formation. Strategic endorsement occurs when political elites divert campaign contributions, effort, media attention, and formal endorsements only on viable candidates, effectively starving sure losers of valuable resources. To the extent that such strategic endorsement draws voters’ attention away from non-viable candidates to those with a reasonable

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chance at winning, strategic endorsement is the elite-based mechanism most closely related to strategic voting. Both mechanisms operate in what Cox calls the post-entry phase of elections, during which “one watches as an actual number of entering candidates is reduced to a smaller effective number of vote-getting candidates.”\textsuperscript{22}

The other two mechanisms relate to the post-entry phase of elections, when “one watches as an indefinitely large field of potential candidates is reduced to a definite field of actual candidates.”\textsuperscript{23} Strategic entry occurs when a party that already exists and is active in an electoral district opts not to contest a district because it expects to lose and does not wish to waste the resources on a losing campaign. When all parties are strategic in their decisions to enter a specific race, then only two parties should enter a race, necessarily producing a two-party system. Strategic entry has received some attention in the context of elections held under the single nontransferable vote (SNTV) in Japan, where parties must decide on the optimal number of candidates fielded in a districts,\textsuperscript{24} but very little in the context of SMDP systems. In part, this is almost certainly because, in many SMDP systems, parties contest races they expect to lose in hopes of remaining a viable future option in the eyes of voters and eventually becoming a credible contender in later elections. Thus, in many of the world’s largest SMDP countries, strategic entry is relatively rare. For instance, even though Canada’s New Democratic Party (NDP) is habitually the country’s third party, rarely winning more than 10% of national legislative seats, after 1963, the party has never failed to put up candidates in at least 95% of the country’s electoral districts.

The final mechanism, strategic party formation, is similar to strategic entry. Strategic party formation involves the decision to form a party in the first place. Elites engaging in

\textsuperscript{22} Cox, \textit{Making Votes Count}, p. 29.
\textsuperscript{23} Ibid.
\textsuperscript{24} Reed, “Structure and Behaviour.”
strategic party formation will form a new party only when they expect to come in first or second in most districts. Otherwise, they will refrain from forming a new party and instead join one of the two existing parties. Like strategic entry, strategic party formation should ensure that only two parties compete in elections, thereby ensuring a two-party outcome at the district level. The complete dominance of two parties in SMDP countries such as the United States and Jamaica, point to the importance of strategic party formation.

2. Pre-Election Alliances and the District-Level Party System

In this section, I introduce another mechanism that can produce Duvergerian outcomes: elite collusion. Elite collusion occurs when parties collude with one another to limit the number of candidates contesting in a district-level race. It is similar to the mechanism of strategic entry in that it refers to a situation in which parties active in an electoral district opt not to contest a race. Thus far, elite collusion and its effects on the party system have been almost entirely overlooked in the literature. However, as I argue below, Duvergerian outcomes in India are frequently the result of elite collusion, rather than strategic voting or strategic endorsements. To better illustrate what elite collusion entails and therefore why it contributes to Duvergerian outcomes, I describe elite collusion as it is practiced in India, through pre-election alliances or seat-sharing agreements.

Pre-election alliances in India typically take the form of nomination agreements in which allied parties agree to field a single candidate in each electoral district rather than all fielding candidates in every district. Pre-election alliances almost never involve the creation of new

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25 Reed, “Structure and Behavior,” pp. 349-350 makes brief mention of the occasional instance of elite collusion in Japan. Sona Nadenichek Golder, The Logic of Pre-electoral Coalition Formation (Columbus, OH: The Ohio State University Press, 2006) discusses elite collusion in France, but her concern is with the determinants of such elite collusion rather than its effects on the party system.
fusion party labels. Parties compete on their own symbols, using their own party labels. They almost always retain complete autonomy over the nomination of candidates in the districts in which they field candidates, and they only seldom coordinate on a common manifesto for the election. In some instances, pre-election coalitions do not even imply that parties will necessarily govern together after the election. In some cases, alliances are incomplete, inasmuch as parties agree not contest against one another in most seats but field candidates against one another in a minority of seats. Pre-election alliances in India are almost never negotiated at the national-level, even in national elections. They are instead brokered on a state-by-state basis. Typically, within an alliance, the number of seats allocated to each party reflects its overall electoral strength in the state, with larger parties contesting more seats and smaller parties contesting fewer.

The aim of a seat-sharing alliance is to ensure the most efficient translation of votes into seats. The expectation is that a party benefits from votes from its allies’ supporters in the seats that its contests, all the while instructing its supporters to vote for allied parties in the seats that the allies contest. By amassing the supporters of multiple parties behind a single candidate in each district, a seat-sharing agreement increases the likelihood that the allied parties will emerge as the largest vote winners in the seats that they contest, thereby enabling each of the allies to win a disproportionately large share of legislative seats relative to their vote shares.

The effect of a pre-election alliance is to reduce—sometimes quite dramatically—the number of candidates from major parties that contest in each district. If all major parties compete as part of one of two main alliances, then even highly fragmented party systems will offer voters in most districts only two major-party candidates. As a consequence, elections featuring extensive elite collusion should frequently produce Duvergerian outcomes, but not because voters or elites strategically converged on the two leading candidates in a crowded field or
because parties failed to form or strategically withdrew their candidates. However, because pre-election alliances typically occur in multiparty systems, the district-level outcomes of these races can be mistaken for powerful evidence of strategic voting or endorsement.

Importantly, elite collusion is distinct from strategic entry. Strategic entry occurs when a party unilaterally decides not to contest seats that it has no hopes of winning. Elite collusion differs on two counts. First, it requires cooperation between parties. If a party unilaterally withdraws from certain races without arriving at a seat-sharing agreement with other parties, it receives no benefits apart from the resources it saves by not contesting certain seats. In contrast, when elites collude to form a pre-election alliance, then a party not only saves the cost of running in a certain number of districts, but it also benefits from the support of voters from allied parties and therefore the increased probability of winning in those seats that it contests. In this way, cooperation is a crucial element of collusion that distinguishes it from strategic entry.

Second, collusion often results in parties not contesting seats in which they are viable competitors. Whereas strategic entry involves parties withdrawing from seats that they could not hope to win on their own, parties engaged in seat-sharing agreements frequently sit out of races they could potentially have won on their own or contest seats that they would be unable to win alone. For instance, the Dravida Munnetra Kazhagam (DMK) and All India Anna Dravida Munnetra Kazhagam (AIADMK) are the two largest parties in the south Indian state of Tamil Nadu. If all political parties in Tamil Nadu contested every seat, then the DMK and AIADMK would likely be the two largest parties in the majority of seats. Yet, in election after election, both parties routinely sit out contests in seats allocated to their alliance partners in return for the support of those allies in other seats. Fearing that they may come in second-place in most seats and therefore win a disproportionately small seat share, these larger parties sacrifice winning some
seats (those that they do not contest) in return for increasing the probability of winning those seats that they do contest. If parties in Tamil Nadu were engaged in strategic entry, both the DMK and AIADMK would contest most seats most of the time since each could plausibly hope to finish first or second in most seats. Meanwhile, seat-sharing agreements also involve parties contesting seats in which they would, on their own, be non-viable candidates. For example, turning again to Tamil Nadu, a small party called the Pattali Makkal Katchi contested 27 of Tamil Nadu’s 234 seats in the 2001 election, when it contested as part of a pre-election alliance with the AIADMK and other parties. Of these, only six were seats in which it had come in first, second, or a close third in the previous election. In the remaining 21, the party would almost certainly have lost if had not contested as part of an alliance. As these examples make clear, elite collusion is not simply a form of strategic entry in which parties contest those seats in which they are viable and withdraw from those in which they are not. Rather, it is a distinct mechanism that is responsible for a large share of India’s district-level Duvergerian outcomes.

3. Data

To explore Duverger’s Law in India and the role of elite collusion, I examine state elections in India during the period 1960-2007. Data come from the Election Commission of India. I exclude the period before 1960 because legislatures were elected using a combination of single-member and double-member districts. I focus on state, rather than national elections, for two reasons. The first is the larger number of observations. India’s lower legislative house, the Lok Sabha, has 543 elected members, while its state assemblies, known as Vidhan Sabhas, together have more than 4,000 elected members. This larger number of observations is particularly useful when examining variation across states. Second, India does not have a single
national party system. Rather, it has a collection of very different state-level party systems, and national elections appear to reflect state-level trends rather than the other way around. As is standard in the study of India, I restrict my analysis to India’s major states that together account for about 95% of the population.

Throughout, I treat a district-level election outcome as Duvergerian if its ENP is less than 2.5. Strictly speaking, a true Duvergerian outcome is one in which the two leading candidates win all votes, thereby producing an ENP of 2 or less. Realistically, if more than two candidates contest, then even if just a small share of votes go to a non-leading candidate, then the district-level ENP may rise above 2. Since ENPs somewhat above 2 may still indicate a good deal of strategic convergence on two leading candidates, particularly in multiparty settings, I treat an ENP of less than 2.5 as a Duvergerian outcome. The ENP in a district where vote shares are distributed 45% - 43% - 12% is 2.49. A distribution of 50% - 37% - 12% also yields an ENP of 2.49. These are both examples of outcomes that would just barely qualify as Duvergerian. In both instances the vast majority of votes go to the two leading candidates even if a significant share of the vote does not.

I collected data on pre-election alliances through secondary sources, concentrating only on alliances between major parties—that is, parties winning more than 5% of the vote in an election. Armed with a list of the major parties contesting each state election, I combed through

27 These are Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal, as well as Chhattisgarh and Jharkhand after 2000.
28 A cut-off of 2.5 for classifying outcomes as Duvergerian or not is common. See, for example, Chhibber and Kollman, *The Formation of National Party Systems*, chapter 2 and Gaines, “Duverger’s Law and the Meaning of Canadian Exceptionalism.” Chhibber and Murali, “Duvergerian Dynamics in the Indian States” treat any outcome with an ENP less than 3 as Duvergerian. However, this threshold is arguably far too high. Elections with three candidates in which votes are distributed 40% - 30% -30% yields an ENP of 2.94. Elections with four candidates in which votes are distributed 50% -20% -15% -15% yields and ENP of 2.99. Using an ENP cut-off of 3 would treat both outcomes as Duvergerian even though neither exhibits convergence on two leading candidates.
secondary sources and news reports to find out which, if any, parties allied with one another. Secondary sources and news reports frequently mention not only when parties contest in alliance but also when they do not. In instances when there was no direct information indicating the absence of an alliance, I verified the absence of an alliance by examining the number of seats in which parties contested against one another. If they contested against one another in a majority of seats and there was no indication of an alliance in secondary sources or news reports, I assume that an alliance was not formed.

In total, I gathered data on 163 state elections, representing all state elections from 1960 to 2007 in India’s major states.29 Having collected data on alliances, I not only know the number of major parties that contested an election but also the number of alliances. Of the 163 elections, 25 (15%) had only two major parties winning more than 5% of the vote; 33 (20%) had more than two major parties but only two election alliances; 35 (21%) had some but not all major parties in alliance; and the remaining 70 (43%) had more than two major parties but no pre-election alliances. Below, when referring to the number of alliances, I treat a party contesting alone as its own single-party alliance. Thus, in an election with four parties, in which two contested in alliance and two contested alone, the number of alliances would be three: two single-party alliances and one two-party alliance.

4. The Failure to Converge in Indian Elections

Of the 36,314 contested races that took place in major-state elections from 1960 through 2007, only 11.7% truly conform to the Duvergerian prediction of an ENP of less than 2. Rather, a plurality of districts falls within the 2.0-2.5 ENP range. However, the majority of district-level

29 I exclude the 1983 Andhra Pradesh and 1985 Assam elections. In both elections, the largest parties officially fielded candidates as independents. Consequently, determining which independent candidates were actually major-party candidates is difficult.
outcomes (54.3%) are non-Duvergerian, with ENPs greater than 2.5. Furthermore, more than a third (35.0%) have an ENP greater than 3.30 Thus, relative to many other SMDP countries, non-Duvergerian outcomes are quite common.31 Nevertheless, Duvergerian outcomes are not unheard of.

What mechanisms account for Duvergerian outcomes in India? More specifically, what mechanism is it that is at work only about half of the time? In this section, I test to what extent Duvergerian outcomes in India are consistent with mechanisms already identified in the literature. With regard to strategic party formation, the prevalence of multiparty systems at the state-level suggests that this mechanism is rarely at work. The average ENP at the state-level for the major states in the 1960-2007 period was 4.5. Additionally, parties do seem to engage in much strategic entry. Where Indian parties have sincere support from the electorate and can recruit candidates to contest, they typically field as many as they can unless they have formed a pre-election alliance. During the period under consideration, 296 parties won more than 10% of the vote in their state and did not contest in alliance with another major party. The average share of seats that these parties contested in state elections was 89%. After 1990, that share went up to 94%. Since the alliance data do not count alliances with small parties, which are relatively common, these figures almost certainly overstate the extent of strategic entry. These averages almost certainly include parties that contested most seats but ceded a handful of seats to small parties and thus show up in my data as having perhaps engaged in strategic entry when they did not.

30 These findings are extremely similar to the patterns reported in Chhibber and Kollman, *The Formation of National Party Systems* and Diwakar, “Duverger’s Law and the Size of the Indian Party System,” for national elections and in Chhibber and Murali, “Duvergerian Dynamics in the Indian States” for state elections covering a slightly different period.
Given that strategic party formation and strategic entry are unlikely to be the mechanisms underpinning Duvergerian outcomes in India, the remaining possibilities are strategic voting and strategic endorsement. Indeed, the presumption in most studies is that strategic voting account for instances of Duvergerian outcomes in India elections. Strategic endorsement is also a possibility since it would, from the view of aggregate level election data, be virtually indistinguishable from strategic voting. In both cases, the Duvergerian outcome stems ultimately from voters converging on two candidates in the post-entry phase of politics. For simplicity, since strategic voting is the mechanism most often discussed in the literature, when referring to the strategic abandonment of sure losers in the context of a multiparty race, I use to the term strategic voting. However, in so doing, I do not mean to exclude the possibility of strategic endorsement, as the evidence presented below applies equally to both mechanisms.

If Duvergerian outcomes in India are the result of strategic voting (or endorsement), then we should observe voters converging on two candidates and largely abandoning all other candidates in a multiparty system. In practice, more than two candidates almost always contest seats to India’s state legislatures. However, even when multiple candidates contest, not all are truly serious options that most voters are likely to consider if voting strategically. Typically, races for India’s state legislative seats include a large number of frivolous candidates who are unknown to the vast majority of voters, engage in little campaigning, and stand no chance of winning even a modest share of the vote. Such candidates usually stand as independents or on unknown party labels. Given the large number of frivolous candidates, it would be a mistake to treat every instance in which the ENP in a district is substantially lower than the actual number

33 During the 1960-2007 period, 94% of all races for India’s state legislatures featured more than two candidates. The figure rises to 98% during the period 1990-2007.
of candidates as evidence of Duvergerian dynamics that stem from strategic voting. Multiple candidates may contest a race, but if only two are serious candidates that have the sincere support of voters and elites, then a two-party outcome is not actually evidence of convergence in response to strategic behavior.

To test whether Indian voters actually abandon non-frivolous candidates and converge on a district’s leading candidates, I need some way to approximate, *ex ante*, which candidates are frivolous and which are credible. To do so, I treat a candidate as credible if she contests on a major-party label, defining a major party as any party than wins 5% or more of the vote in a state election. In other words, any candidate, irrespective of her own performance, is treated as credible if her party wins more than 5% of the total vote. The correlation between major-party candidates and credible candidates is naturally imperfect. Even major parties sometimes field low quality, unknown candidates whom voters do not view as credible. At the same time, some credible candidates do not contest on a major-party label. For example, India has many very small political parties that contest in only a small part of a state and are therefore credible candidates in the places where they contest but fail to win more than 5% of the statewide vote. Additionally, independent candidates can sometimes be credible as well. These caveats notwithstanding, contesting on a major party label is a reasonable proxy for being a credible candidate. Looking the 1960-2007 period, candidates from major parties (those winning more than 5% of the vote in a state) won an average of 31.1% of the vote, whereas candidates from parties winning less than 5% of the state-wide vote (including independents) won an average of 4.0%.

By using a relatively low threshold of 5% for what constitutes a major-party candidate, I present an easy test for finding evidence of Duvergerian convergence on leading candidates.
Imagine, for example, an election with four parties, each of which exceeds 5% of the vote. All four parties field candidates in every district, meaning that I would treat all districts in the state as having four credible candidates. If the four parties all garnered fairly equal shares of sincere support throughout the state but districts routinely had ENPs of less than 2.5, then this would be powerful evidence of Duvergerian convergence, likely sustained by strategic voting or endorsement as voters abandoned the sure loses for the leading candidates. However, imagine that instead of four parties all garnering high levels of sincere support, imagine that two of the parties barely cleared the 5% threshold statewide, and most of their candidates were not actually credible in their districts. Nevertheless, all districts in the state are still coded as having four major candidates, even though only two are usually credible in each district. Given the low levels of sincere support for the two smaller candidates, such districts would likely produce ENPs lower than 2.5 and count as evidence of Duvergerian convergence, even when there is no strategic behavior. In other words, most votes would go to the two leading candidates because the other two candidates have very few sincere supporters, not because of strategic behavior by voters or elites. Thus, by setting the bar rather low for what constitutes a major party, I risk counting electoral outcomes as exhibiting Duvergerian convergence and strategic voting or endorsement, when they are not actually consistent with strategic voting or endorsement. By the same token, if I find that, even with this very low threshold for identifying a candidate as credible, that voters do not converge on two candidates in a multiparty setting, then this is quite compelling evidence of the absence of effective strategic behavior, whether by elites or voters, in the post-entry phase of elections.

Figure 1 shows that when multiple major-party candidates compete, electoral outcomes are typically non-Duvergerian, with votes dispersed across the main candidates. The left panel of
Figure 1 presents the mean district-level ENP across districts by the number of major-party candidates in a district. The dashed horizontal reference line indicates a mean district-level ENP of 2.5. If voters successfully converged on two candidates in districts with more than two credible candidates, then the mean district-level ENP should not increase noticeably, even if the number of major-party candidates increases. However, Figure 1’s left panel reveals fairly striking increases in the mean district-level ENP as the number of major party candidates increases. Outcomes only approximate the Duvergerian expectation when there are two or fewer major-party candidates. But, when three major-party candidates contest, the average ENP is close to 3, and it is about 3.75 when there are four-major party candidates. With each additional major-party candidates fielded, the mean district-level ENP goes up noticeably.

The right panel in Figure 1 presents the same data in a different fashion, presenting the share of Duvergerian outcomes by the number of major-party candidates. Recall that a Duvergerian outcome is an electoral outcome in which the district-level ENP is less than 2.5. This panel shows that when two or fewer major-party candidates contest, the clear majority of elections produce Duvergerian outcomes. The fact that all of them do not produce Duvergerian outcomes likely reflects the fact that the correlation between credible candidates and major-party candidates is not perfect. Once more than two candidates from major parties compete, then Duvergerian outcomes are infrequent. With three major-party candidates, two-thirds of districts exhibit non-Duvergerian outcomes, and with more than four major-party candidates, the share of

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34 Districts may have one or no major-party candidates if one or both of the district’s main vote-winners are from minor parties or are independent candidates.
non-Duvergerian outcomes is more than 90%. Put another way, when given the opportunity to produce non-Duvergerian outcomes because there are multiple credible candidates, in about 75% of races, voters fail to produce Duvergerian outcomes.

Finally, in logistic regression analysis not presented here for reasons of space, I find that the number of major-party candidates is a strong, statistically significant predictor of whether a race produces a Duvergerian outcome or not. Indeed, the predicted probability of a Duvergerian outcome when there are two major-party candidates and other variables are set to their means is 57%. The predicted probability drops to 33% for three major-party candidates and 16% for four major-party candidates.\(^\text{35}\)

At this point, one concern may be that the higher effective number of parties in instances with multiple credible candidates may reflect the non-Duvergerian equilibrium under strategic voting that Cox suggests. It might be that in most Indian districts the second- and third-place candidates are nearly tied, leading to a number of non-Duvergerian outcomes supported by strategic voting. If this were the case, then there should be evidence of a bimodal distribution in the SF ratio for Indian electoral districts. In other words, there should be evidence of many cases in which the ratio of the second loser’s votes to the first loser’s votes are either close to zero or close to one. Figure 2 presents the distribution the SF ratios for races in major states from 1977 through 2007.\(^\text{36}\) Following Cox,\(^\text{37}\) Figure 2 presents different figures based on the districts’ competitiveness in the previous election. Interestingly, the SF ratios are almost identical. Unlike Cox’s data from the UK, the share of observations with an SF ratio close to 0 (indicating a wide gap between the first and second loser and consistent with Duvergerian outcomes brought about

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35 Results are available in the online appendix.
36 India’s electoral districts did not change from 1977 until 2008. Since I divide the data based on previous margin of victory, I only include the period during which electoral districts were identical. I must also therefore exclude the first observation from this period as there is no previous margin of victory available.
by strategic voting) does not change based on the district’s prior competitiveness, as expected.\textsuperscript{38} More importantly, there is no hint of bimodality. SF ratios greater than 0.3 are distributed almost uniformly. Thus, it seems unlikely that the increase in the effective number of parties as the number of credible candidates increases reflects the non-Duvergerian outcomes associated with strategic voting that Cox identifies.

[Figure 2 about here]

The data above are inconsistent with the claim that strategic voting brings about Duvergerian outcomes in India, since there is no evidence that voters actually converge on two candidates when multiple credible candidates contest. Moreover, this failure to converge on two candidates does not appear to be driven by the non-Duvergerian equilibrium identified by Cox. In short, the data indicate that strategic voting and strategic endorsement do not, for the most part, bring about the expected Duvergerian outcomes in India. However, it is important to note that this finding does not mean that voters are not voting strategically. As some have suggested, voters may be voting strategically. But, without sufficient information, their strategic voting does not bring about Duvergerian outcomes. Thus, while this article argues that strategic voting does not account for Duvergerian outcomes in India, it is agnostic as to whether voters themselves attempt to engage in strategic voting but do so unsuccessfully, failing to coordinate on two leading candidates.

5. Accounting for Alliances

\textsuperscript{38} The figures with SF ratios include non-credible candidates, explaining the large number of SF ratios near zero.
All told, data from state elections in India show that Duvergerian outcomes typically occur only in those districts where the number of major-party candidates is two or fewer. When voters have more than two options, electoral outcomes are not consistent with a Duvergerian logic in which voters abandon losing candidates for one of the two leading candidates. Instead, third-, fourth-, and even fifth-place candidates retain significant electoral support. In other words, it is not that voters appear to vary in when and where they are strategic. Rather, the evidence suggests that when confronted with the opportunity to converge on two leading candidates as predicted by Duverger, voters rarely do. Rather, Duvergerian outcomes mainly occur in places where there is little opportunity for strategic behavior. The patterns in Figure 1 say nothing, however, about other mechanisms. In light of India’s multiparty systems at the state level and the relative infrequency with which parties contesting elections without alliance partners withdraw from races they expect to lose, strategic party formation and strategic entry seem to be unlikely candidates for explaining the presence of two-candidate races. This leaves the possibility of elite collusion. What is the impact of seat-sharing agreements on the likelihood of Duvergerian outcomes?

Figure 3 dramatically illustrates the importance of seat-sharing agreements on district-level election outcomes. In both of the plots in Figure 3, each observation is an electoral district. The figures plot the state-level ENP (on the x-axis) against the district-level ENP (y-axis). In both plots, the dashed black line is a lowess smoother. The left panel presents data from districts in states in which no parties are part of election alliances. Therefore the number of parties is equivalent to the number of alliances. With no alliances, the black dashed line indicates a strong positive relationship between the state ENP and the district ENP. When parties do not form alliances, then as the number of parties in the party system rises (as measured by the ENP), so
too does the district-level ENP. This pattern is consistent with the finding in Figure 1 that when there are multiple credible candidates, non-Duvergerian outcomes are common as it appears that voters do not strategically desert losing candidates.

The right panel in Figure 3 reveals a strikingly different pattern. The right panel includes districts in states where all parties are part of one of two alliances.\(^{39}\) In this panel, as the state ENP rises, the district ENP does not rise noticeably, irrespective of how many parties there are at the state-level. Because alliances ensure that the number of district-level credible candidates remains low, Duvergerian outcomes are the norm, even in highly fragmented party systems.

[Figure 3 about here]

If the patterns in the two panels were generalized across India, then the implications of the figure are striking. If, as in the left panel, parties were never in alliance, then Duvergerian outcomes would only occur in those states with a very small number of parties. Any fragmentation of the party system would lead to an increasing number of non-Duvergerian outcomes. However, if, as in the right panel, all parties were in alliance, then Duvergerian outcomes would everywhere be the norm, but not because of strategic voting. Having so far presented data from India graphically, I turn to regression analysis to more systematically demonstrate the importance of alliances in determining whether election outcomes are Duvergerian. The aim of the regression analysis is to test whether the presence of pre-election alliances predicts the prevalence of Duvergerian convergence at the district level.

I test this expectation using the following model:

\(^{39}\) Both panels include districts in states with only two major parties, since these can equally be construed as states with no alliances or with all parties in alliance.
\[ \text{District ENP} = \beta_0 + \beta_1 \text{Number of Alliances} + \beta_2 \text{State ENP} + \ldots \beta_3 \mathbf{X} + \epsilon. \]

*District ENP*, the dependent variable, is the district-level effective number of parties. The main independent variable of interest, *Number of Alliances*, is the number of major party alliances contesting in the state. Thus, a state with only two parties would take a value of two for this variable, as would a state with seven major parties, all of which were part of one of two major alliances. In this way, the variable captures the extent to which party elites do or do not winnow down the field of candidates at the district-level, irrespective of the overall size of the party system. *State ENP* is the state-level effective number of parties. In states with multiple parties in alliance, *State ENP* will be substantially larger than *Number of Alliances*. Even when no major parties are in alliance, *State ENP* will still be noticeably larger than *Number of Alliances* because *State ENP* also takes account of small parties and independent candidates. \( \mathbf{X} \) refers to a set of control variables included in some models.

I expect that the coefficient on \( \beta_1 \) should be positive; as the number of alliances in the state increases, the ENP at the district-level should also increase. I also expect the coefficient on \( \beta_2 \) to be positive but to exhibit a somewhat weaker association with *District ENP*. The overall ENP in the state should not matter if most of those parties are part of an electoral alliance. Therefore, the number of parties in the state should, in many instances, not matter for district-level outcomes. However, as noted above, since *State ENP* also captures small parties and independents—in other words, many of the candidates who are, in fact, credible candidates but whose *ex ante* credibility is harder to measure—I expect there to be a relationship between *State ENP* and *District ENP*. Recall that if voters converged on two parties in the expected
Duvergerian manner thanks to strategic voting (or endorsement), then the coefficients on $\beta_1$ and $\beta_2$ should actually be close to zero as the district-level ENP should be close to two, even if the number of alliances and the state-level ENP are far greater than two.

I estimate the above model in two different ways. First, in models (1) – (3) in Table 1, I pool all the electoral districts. Second, in models (4) – (6), I estimate the coefficients using district-level fixed effects, which allows me to estimate the impact of a change in the number of alliances on the District ENP within the same electoral district. Because electoral districts in India did not change between 1977 and 2008, but redistricting occurred frequently in the period before 1977, I restrict the fixed effects models to the period from 1977 onward. All models are estimated using ordinary least squares (OLS). In models (1) and (2), standard errors are clustered by state, since the data from 1960-76 involve districts whose boundaries vary considerably and are not always easily matched to districts during the later period. In the remainder of the models, standard errors are clustered by district.

In models (1) and (4), I present the simply bivariate relationship between Number of Alliances and District ENP, using the two different estimation strategies. In models (2) and (5), I include State ENP. Finally, in models (3) and (6), I include several additional controls. First, I included Lagged District ENP, which is the District ENP in the previous election. Including Lagged District ENP requires that I drop observations before 1977 because of changing district boundaries. I also end up dropping the earliest election held in a district since no value for Lagged District ENP is available. I also include the independent variables of interest in Chhibber and Murali’s study of Duvergerian outcomes in India.\textsuperscript{40} I also include a time trend variable that

\textsuperscript{40} Chhibber and Murali, “Duvergerian Dynamics in the Indian States.” These variables are NATELEC, which is a dummy variable that takes a value of 1 if state and national elections are held in the same year; NATTYPE, which is a dummy variable that takes a value of 1 if the major parties in the state party system are national parties; and
takes a value of 0 in the first year included in the model (in this case 1977, since I had to drop observations prior to 1977) and a value of 30 in the last year in the period (2007). The time trend is intended to take account of the fact that voters (and politicians) might better learn over time how to coordinate. In model (3), I also include state dummy variables, since political dynamics vary considerably from state to state. Because model (6) include district fixed effects I do not include state dummies.

[Table 1 about here]

In all models, the coefficients on Number of Alliances are substantively and statistically significant. The introduction of control variables decreases the size of the coefficient, but the size of the coefficient remains large. The estimates from the fixed effects models are somewhat smaller than for the pooled analysis. The coefficients on State ENP are also fairly large and statistically significant in all models with standard error clustered by district. However, the magnitudes of the coefficients on State ENP are somewhat smaller. Recall that if voters strategically deserted losing candidates to converge on two leading candidates, then the coefficients on both Number of Alliances and State ENP should be relatively close to zero. Not surprisingly, given the data presented above, this is not the case. Importantly, the coefficient on Number of Alliances highlights the importance of elite collusion in explaining when and where Duvergerian outcomes occur. As the number of alliances increases, so too does the size of the district-level party system. In more concrete terms, using the most conservative estimate from

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MIXTYPE, which is a dummy variable that takes a value of 1 if the major parties in the state party system are a mix of regional and national parties.
model (6), increasing the number of alliances from two to four is associated with an increase of 0.36 in the district ENP, or a little more than a third of a standard deviation in district ENP.

The results in Table 1 are substantively similar if I use an alternative dependent variable, *Duvergerian outcome*, which takes a value of 1 if the district ENP is less than 2.5 and 0 otherwise. The results are also similar if I treat states as the unit of analysis, instead of districts, and my dependent variable of interest is *Mean District ENP*, or the mean value of the district ENP across a state. The results from these additional models are available in the online appendix.

6. Individual-Level Data

So far, I have focused on providing evidence of the importance of pre-election alliance using aggregate level data. Is there corroborating evidence at the individual-level that Duvergerian outcomes stem mainly from pre-election alliances rather than strategic voting?

Choi’s examination of India’s 2004 national election is the only study, of which I am aware, that uses individual-level data to tackle the question of strategic voting in India. Choi relies on three survey questions from the 2004 Indian National Election Study (INES), one about vote choice, a second about the respondent’s preferred party, and a third about the respondent’s expectations about who will win in her district. Looking at voters who reported a vote choice, indicated a preferred party, and identified an expected winner, Choi finds that almost 19% of voters believed that their preferred party was unlikely to win in their district and voted for a party other than their

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41 Jungug Choi, “Strategic Voting in India: Its Extent and Determinants in the 2004 General Election,” *Asian Survey* 49 (2009), 609-624. Kanchan Chandra, “Why Voters in Patronage Democracies Split Their Tickets: Strategic Voting for Ethnic Parties,” *Electoral Studies* 28 (2009), 21-32 uses mainly aggregate level data to argue that strategic voting occurs among voters who might consider voting for an ethnic party. However, Chandra uses a somewhat different notion of strategic voting than is used elsewhere and that would be consistent with voters voting for a sure loser so long as it can “exercise leverage” over the outcomes—that is, win enough votes to potentially swing an election in favor of one party or another.

42 In India, there is typically a lag between when polling concludes and when results are announced. The INES is administered during that window when voters have already cast their votes but they do not yet know the results.
preferred party. He refers to this subset of respondents as strategic voters. The second column from the left of Table 2 presents the results from Choi’s original analysis.

Ideally, we would want to know whether voters thought their preferred party was likely to be one of the top two parties. After all, if a voter in an SMDP system expects her preferred party to come in second, she should have no reason to desert her candidate as the preferred candidate is competitive. In this way, Choi’s figure perhaps represents an upper bound on the share of strategic voters, given that there are reasons other than strategic voting that might explain why a voter would vote for her non-preferred party, particularly if she believes her preferred party is likely to place second.43

However, this figure of 19% does not take into account pre-election alliances. Indeed, Choi acknowledges as much. However, from the perspective of understanding the mechanisms underpinning Duvergerian outcomes, a voter’s decision to vote for another party when she could vote for her preferred party is quite different from the decisions made by party elites to limit the number of major-party candidates fielded in a district. To assess the impact of elite collusion, I divide respondents in the same categories as Choi.44 Using the 2004 election results, I then identify which parties a respondent could have voted for based on her parliamentary district. In so doing, I dropped a number of observations based on what appear to be recording errors in the data.45 Having matched survey respondents to the candidates contesting in their districts, I then dropped the 829 respondents who reported having voted for or identified as the likely winner a party that did not contest in their district. This large number of apparent “errors” could reflect several factors. One might be genuine mistakes on the part of voters who either misremember


44 See the online appendix for details regarding this replication.

45 See the online appendix for further details.
who they voted for or did not have a firm grasp on which parties had fielded candidates in their
districts. Another possibility is that voters reported voting for a party when, in fact, they voted
for its alliance partner. Some voters might conflate the two, treating a vote for their preferred
party’s ally as equivalent to a vote for their preferred party.

The total number of remaining respondents is 9,441. The far right column in Table 2
presents my replication of Choi’s analysis with the somewhat restricted sample of respondents,
adding in a further wrinkle: Could the respondent have voted for her preferred party? Defining
strategic voters as Choi did, 16.7% of voters were classified as strategic in my sample, not far off
from Choi’s 18.9%. However, as it turns out, the clear majority of those voters are what I term
constrained voters, those who could not vote for their preferred party. Indeed, more than one in
ten respondents were not in a position to vote for their preferred party.

[Table 2 about here]

Thus, the picture presented by the individual-level data changes quite considerably in
light of the revised figures. Many of the voters who might appear strategic in aggregate-level
data because they vote in districts that produce Duvergerian outcomes in the context of a
multiparty system are, in fact, forced into this behavior because of the collusion of elites who
narrow the field of candidates. Based on the column second from the right, one would estimate
that 31.0% of respondents were in a position to potentially vote strategically since they did not
believe that their preferred party was not the likely winner. Of these, 60.8% voted for a non-
preferred party. However, based on the revised figures in the far right column, once voters who

46 To reiterate, just because a voter believes another party is likely to win does not mean she should necessarily vote
strategically. If she believed her preferred party were likely to come in second, she would arguably have little reason
to strategically desert her preferred candidate.
could not vote for their preferred party are excluded, only 39.0% choose to abandon their preferred party. Again, given that we do not know whether these respondents expected their preferred party to come in second or to be a sure loser and we do not know whether they, in fact, opted to vote for a party that they perceived to have a better chance of winning, this figure on strategic voting is almost certainly an upper bound.

As an illustration of the importance of elite collusion, consider the state of Tamil Nadu where 34 of 39 electoral districts in the national election exhibited an ENP of less than 2.5. These frequent Duvergerian outcomes in a state with a resoundingly multiparty system might suggest pervasive strategic voting (or endorsement). In fact, we see very little evidence of this. Of the 408 respondents in the sample from Tamil Nadu, 3.4% voted for their preferred party even though they did not believe it to be the likely winner, 5.1% abandoned their preferred party whom they did not see as a likely winner even though they could have voted for the party, and 36.5% were unable to vote for their preferred party. Of the 149 constrained voters who could not cast a ballot for their preferred party, 146 preferred a party that was part of one of the state’s two main electoral alliances in 2004. Further, of these 146, 132 voted for one of their preferred party’s alliance partners. Although constrained voters could arise because a voter prefers a party that is entirely absent in her state—perhaps if she formed her political preferences as a young person and then migrated somewhere else—the pattern in where constrained voters are located is consistent with where election alliances were most extensive in 2004. In the major states where party competition most closely approximates bipartyism the share of constrained voters is never above 2.5%. By contrast, in states with major pre-election alliances in 2004, the shares are much higher.

The online appendix includes details on these alliances.

See the online appendix for the alliances in 2004 and the shares of constrained voters.
All told, once pre-election alliances are taken into account, individual-level evidence suggests that the majority of instances in which voters vote for a party other than their preferred party are ones in which they *cannot* vote for their preferred party. Admittedly, these voters could still be voting strategically within the set of choices available to them, but given where most of these constrained voters reside, many of them only had two major-party options available in their districts. Thus, the individual-level data are consistent with the claim that Duvergerian outcomes in a state like Tamil Nadu likely reflect elite collusion rather than strategic voting.

7. Discussion

This article has highlighted two important empirical findings. First, Duvergerian outcomes in India rarely occur when multiple credible candidates contest a seat. Second, pre-election alliances—a crucial tool through which elites reduce the number of credible candidates in a race—strongly predict the size of the district-level party system. Theoretically, this article has pointed to an important but overlooked mechanism underpinning Duverger’s Law: elite collusion. Rather than refrain from forming third or fourth (or fifth or sixth!) parties or unilaterally withdraw from races in which they do not expect to win, party elites can collude with one another to narrow the field of credible candidates. Although the aim of such elite collusion is to maximize the likelihood that alliance partners win the largest possible share of the seats they contest, Duvergerian outcomes are also a frequent result. Importantly, while the data presented in this article cannot say how many voters in India vote strategically, it has argued that strategic voting is an unlikely explanation for Duvergerian outcomes in India.

The findings presented here have implications for the study of Duverger’s Law, strategic voting, and Indian politics. First, with respect to Duverger’s Law, this article points to the need
to consider a broader array of mechanisms that are at work in linking electoral rules to party system outcomes. So far, most research on Duverger’s Law has focused on strategic voting (or endorsement). But, as this article has shown, either strategic voting in India is uncommon or it is common but does not result in voters successfully converging on two candidates. India’s SMDP system undoubtedly exerts a tremendous impact on election outcomes, but primarily through a mechanism that has so far been overlooked. More broadly, the Indian case highlights the importance of party elites in bringing about Duvergerian outcomes and the need to focus on the “pre-entry” phase of politics.

Second, the data presented in this article also have implications for the study of strategic voting. The findings from India are inconsistent with what we would expect to see from an electorate widely engaged in successful strategic voting. This does not mean that voters do not vote strategically. Indeed, the findings from the previous section indicate that a reasonable share of voters—almost 40%—who believe their preferred party is unlikely to win opt not to vote for their preferred party if given the opportunity to do so. It may be that many Indian voters are strategic. But, given the infrequency with which they successfully converge on the two leading candidates, it appears that they are often ill equipped to achieve their strategic ends and converge on the two leading candidates.

Indeed, given recent work on strategic voting, perhaps it should not be a surprise to find that Indian voters do not seem particularly adept at using strategic voting to converge on two candidates, as Duverger predicted. Research from a variety of settings has shown that strategic voters labor under considerable uncertainty when voting strategically,⁴⁹ are overly optimistic

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about the performance of their preferred party,\textsuperscript{50} and are often wrong about a party’s likelihood of winning.\textsuperscript{51} All of this suggests major obstacles for voters anywhere who wish to converge on one of the two leading candidates in their district. Indian voters face even greater challenges. Although public opinion polls are often thought to matter in helping voters coordinate on leading candidates,\textsuperscript{52} such public opinion polling at the district-level is all but entirely absent in India. Moreover, India is characterized by the frequent emergence of new parties and high levels of electoral volatility, which should impede voters’ ability to coordinate on leading candidates.\textsuperscript{53} In short, this study suggests that future research ought to continue down the path of recent studies aimed at understanding the informational requisites for successful strategic voting—that is, strategic voting in which voters successfully identify and vote for a more viable candidate than their preferred candidate.

Third, this article sheds light on Indian politics by focusing attention on pre-election alliances. Currently, most Indian states have multiparty systems, meaning that Duvergerian outcomes will, in most places, occur only when seat-sharing agreements diminish the number of credible candidates contesting in each seat. Consequently, fully understanding variation in the nature of district-level electoral competition requires uncovering why parties sometimes coordinate and other times do not. For instance, consider the southern state of Kerala and the northern state of Uttar Pradesh, both of which have extremely fragmented party systems. However, in Kerala, most major parties coalesce into one of two main electoral alliances, ensuring that most electoral districts in the state exhibit two-party competition at the district level. By contrast, in Uttar Pradesh, the state’s main parties rarely ally, typically producing three-

\textsuperscript{50} Blais, “Why Is There So Little Strategic Voting in Canadian Plurality Rule Elections?”
\textsuperscript{51} Merolla and Stephenson, “Strategic Voting in Canada.”
\textsuperscript{53} Crisp et al., “Electoral Contexts that Impede Voter Coordination.”
and four-cornered competition across most districts. What explains this variation in parties’ willingness to cooperate and collude? So far, scholars of Indian politics have done little to answer this question. However, understanding when and where elites successfully collude will go a long way toward better understanding the dynamics of party competition in India.
Figure 1. Election Outcomes by Number of Major-Party Candidates
Figure 2. SF Ratios in Indian State Elections by Margin of Victory in Previous Election

![Bar Graphs]

- **Uncompetitive (Margin > 20%)**
- **Competitive (Margin 10-20%)**
- **Close (Margin < 10%)**
Figure 3. District-Level ENP Comparing No Alliances and All Parties in Alliance

No Parties in Alliance

All Parties in One of Two Alliances

bandwidth = .8

bandwidth = .8
**Table 1. Alliances Predict District-Level Party System Size**

<table>
<thead>
<tr>
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<th>District ENP: Pooled</th>
<th>District ENP: Fixed Effects</th>
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<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
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<tr>
<td>Number of Alliances</td>
<td>.318***</td>
<td>.318***</td>
</tr>
<tr>
<td></td>
<td>(.064)</td>
<td>(.099)</td>
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<tr>
<td>State ENP</td>
<td>.144</td>
<td>.139***</td>
</tr>
<tr>
<td></td>
<td>(.094)</td>
<td>(.008)</td>
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<tr>
<td>Constant</td>
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<td>1.320***</td>
</tr>
<tr>
<td></td>
<td>(.178)</td>
<td>(.222)</td>
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<td>R-squared</td>
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<td>0.1800</td>
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<tr>
<td></td>
<td>36,314</td>
<td>36,314</td>
</tr>
</tbody>
</table>

|                      | (3)                  | (4)                        |
| Number of Alliances  | .298***              | .298***                    |
|                      | (.099)               | (.009)                     |
| State ENP            | .139***              | .188***                    |
|                      | (.008)               | (.008)                     |
| Constant             | .909***              | 1.479***                   |
|                      | (.071)               | (.038)                     |
| Controls             | Y                    | N                           |
| R-squared            | .3741                | 0.1665                     |
|                      | 21,219               | 24,795                     |

|                      | (5)                  | (6)                        |
| Number of Alliances  | .209***              | .203***                    |
|                      | (.009)               | (.009)                     |
| State ENP            | .188***              | .124***                    |
|                      | (.008)               | (.008)                     |
| Constant             | 2.224***             | 1.653***                   |
|                      | (.027)               | (.049)                     |
| Controls             | N                    | N                           |
| R-squared            | 0.1665               | 0.1705                     |
|                      | 24,795               | 21,219                     |

|                      | (5)                  | (6)                        |
| State ENP            | .124***              | .124***                    |
|                      | (.008)               | (.008)                     |
| Constant             | 1.653***             | 1.653***                   |
|                      | (.049)               | (.049)                     |
| Controls             | Y                    | Y                           |
| R-squared            | 0.1840               | 0.1840                     |
|                      | 21,219               | 21,219                     |

Standard errors are in parentheses. In models (1) and (2), standard errors are clustered by state, in models (3) and (6) by electoral district. Controls in models (3) and (6) include variables for the district-level ENP in the previous election (Lagged District ENP), whether the election is also a national election year (NATELEC), whether the party system is only national parties (NATTYPE), and whether the party system is a mix of national and regional parties (MIXTYPE), and year. Model (3) also includes state dummy variables. *** p<0.01, ** p<0.05, * p<.01
Table 2. Voter Type in 2004 INES

<table>
<thead>
<tr>
<th>Voter type</th>
<th>Preferred party = Likely Winner</th>
<th>Preferred party = Vote Choice</th>
<th>Preferred party = Contesting</th>
<th>Choi (2009)</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sincere</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>64.4%</td>
<td>73.2%</td>
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<tr>
<td>Irrational</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>4.6%</td>
<td>2.4%</td>
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<tr>
<td>Expressive</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>12.1%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Strategic</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>18.9%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Constrained</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>--</td>
<td>11.7%</td>
</tr>
</tbody>
</table>

N

10,459 9,441

54 I take these terms from Choi. However, because he has two types of expressive voters, I label one group sincere (those who simply vote for their preferred party, which they expect to win) and the other expressive (those who vote for their preferred party in spite of expectations that it will lose).
Online Appendix

Table A1. Number of Credible Candidates Predicts Duvergerian Outcomes

<table>
<thead>
<tr>
<th></th>
<th>DV: Duvergerian Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Number of Candidates</td>
<td>-1.129***</td>
</tr>
<tr>
<td></td>
<td>(.118)</td>
</tr>
<tr>
<td>State ENP</td>
<td>-0.231</td>
</tr>
<tr>
<td></td>
<td>(.163)</td>
</tr>
<tr>
<td>Ethnic Cluster</td>
<td>-0.868*</td>
</tr>
<tr>
<td></td>
<td>(.460)</td>
</tr>
<tr>
<td>Ethnic Group</td>
<td>-0.034</td>
</tr>
<tr>
<td></td>
<td>(.030)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.628***</td>
</tr>
<tr>
<td></td>
<td>(.251)</td>
</tr>
<tr>
<td>State dummies</td>
<td>N</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.1415</td>
</tr>
<tr>
<td>N</td>
<td>36,314</td>
</tr>
</tbody>
</table>

All models are logistic regressions. Standard errors clustered by state are in parentheses.  
*** p<0.01, ** p<0.05, * p<.01

*Duvergerian Outcome* takes a value of 1 if a district has an ENP of 2.5 or less, and 0 otherwise.  
*Number of Candidates* is the number of candidates contesting in the seat from parties winning more than 5% at the state level. *Ethnic cluster* is a state-level time-invariant measure of ethnic heterogeneity tabulated by Heath (2005). *Ethnic Group* is also a state-level measure of ethnic heterogeneity based on the 1971 Indian National Election Study and presented in Chhibber and Kollman (2004). Both measures do not have variables for Chhattisgarh or Jharkhand (both formed after 2000), which means that observations for both states are dropped in models (3) and (4). Model (3) is the basis for the predicted probability described in the main text.
### Table A2. Alliances Predict Duvergerian Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Duvergerian Outcome</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Number of Alliances</td>
<td>-.851***</td>
<td>-.742***</td>
<td>-.522***</td>
</tr>
<tr>
<td></td>
<td>(.166)</td>
<td>(.230)</td>
<td>(.027)</td>
</tr>
<tr>
<td>State ENP</td>
<td>-.189</td>
<td>-.287***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.196)</td>
<td>(.022)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.395***</td>
<td>2.910***</td>
<td>5.913***</td>
</tr>
<tr>
<td></td>
<td>(.489)</td>
<td>(.551)</td>
<td>(.149)</td>
</tr>
<tr>
<td>Controls</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.0980</td>
<td>0.1089</td>
<td>0.2615</td>
</tr>
<tr>
<td>N</td>
<td>36,314</td>
<td>36,314</td>
<td>21,219</td>
</tr>
</tbody>
</table>

This table replicates models (1) – (3) in Table 1 in the main text, but with *Duvergerian Outcome* as the dependent variable. All models are estimated using ordinary least squares. All observations are pooled. I do not replicate the fixed effects models from Table 1 because a large number of observations get dropped because there are a number of districts where all observations are 1 or all observations are 0. In models (1) and (2), standard errors are clustered by state, in model (3) by electoral district. Controls in model (3) include variables for the district-level ENP in the previous election (*Lagged District ENP*), whether the election is also in a national election year (*NATELEC*), whether the party system is only national parties (*NATTYPE*), whether the party system is a mix of national and regional parties (*MIXTYPE*), year, and state dummy variables. *** p<0.01, ** p<0.05, * p<.01
## Table A3. State-level Analysis

<table>
<thead>
<tr>
<th></th>
<th>District Mean ENP: Pooled</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Number of Alliances</td>
<td>.353*** (.058)</td>
<td>.297*** (.092)</td>
<td>.190*** (.050)</td>
</tr>
<tr>
<td>State ENP</td>
<td>.112 (.096)</td>
<td>.153* (.080)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.767*** (.165)</td>
<td>1.429*** (.227)</td>
<td>1.047** (.400)</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.3435</td>
<td>0.4386</td>
<td>0.8214</td>
</tr>
<tr>
<td>N</td>
<td>163</td>
<td>163</td>
<td>146</td>
</tr>
</tbody>
</table>

This table replicates models (1) – (3) in Table 1 in the main text, but with District Mean ENP as the dependent variable. This variable is the mean ENP across all districts in a state. Units of observation are therefore states, not electoral districts. All models are estimated using ordinary least squares. All observations are pooled. I do not replicate the fixed effects models from Table 1 because the inclusion of state dummies in model (3) is essentially equivalent to using fixed effects. Standard errors are clustered by state. Controls in model (3) include variables for the district-level ENP in the previous election (Lagged District ENP), whether the election is also in a national election year (NATELEC), whether the party system is only national parties (NATTYPE), whether the party system is a mix of national and regional parties (MIXTYPE), year, and state dummy variables. *** p<0.01, ** p<0.05, * p<.01
<table>
<thead>
<tr>
<th>State</th>
<th>Alliance 1</th>
<th>Alliance 2</th>
<th>% Constrained Voters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>INC-TRS-CPM-CPI</td>
<td>TDP-BJP</td>
<td>18%</td>
</tr>
<tr>
<td>Bihar</td>
<td>JD(U)-BJP</td>
<td>RJD-LJNSP-INC</td>
<td>45%</td>
</tr>
<tr>
<td>Kerala</td>
<td>CPM-CPI-KEC-JD(S)</td>
<td>INC-MUL-KEC(M)</td>
<td>13%</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>INC-NCP</td>
<td>SHS-BJP</td>
<td>23%</td>
</tr>
<tr>
<td>Orissa</td>
<td>BJD-BJP</td>
<td>--</td>
<td>21%</td>
</tr>
<tr>
<td>Punjab</td>
<td>SAD-BJP</td>
<td>--</td>
<td>17%</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>DMK-INC-PMK-MDMK-CPM-CPI</td>
<td>AIADMK-BJP</td>
<td>37%</td>
</tr>
<tr>
<td>West Bengal</td>
<td>CPM-RSP-FBL-CPI</td>
<td>AITC-BJP</td>
<td>16%</td>
</tr>
</tbody>
</table>

AIADMK = All India Anna Dravida Munnetra Kazhagam
AITC = All India Trinamool Congress
BJD = Biju Janata Dal
BJP = Bharatiya Janata Party
CPI = Communist Party of India
CPM = Communist Party of India (Marxist)
FBL = Forward Bloc
INC = Congress
JD(S) = Janata Dal (Secular)
JD(U) = Janata Dal (United)
KEC = Kerala Congress
KEC(M) = Kerala Congress (M)
LJNSP = Lok Jan Shakti Party
MDMK = Marumalarchi Dravida Munnetra Kazhagam
MUL = Muslim League
NCP = Nationalist Congress Party
PMK = Pattali Makkal Katchi
RJD = Rashtriya Janata Dal
RSP = Revolutionary Socialist Party
SAD = Shiromani Akali Dal
SHS = Shiv Sena
TDP = Telugu Desam Party
TRS = Telangana rashtra Samithi
Notes on replication of analysis in Choi (2009)

In replicating Choi’s analysis, I drop all respondents for whom a specific party was not recorded for any of the three relevant questions (vote choice, preferred party, likely winner). This means dropping those coded as voting for an independent (as there may be multiple independents contesting, and it is impossible to know which one the respondent is referring to) and those who were coded as having voted for a “smaller party” or “regional party alliance” as it is similarly unclear which precise party the respondent intended in each of the three questions.

Specifically, respondents were dropped if the following responses were recorded for any one of the questions about vote choice, preferred party, and likely winner: regn pty alliance (78), other small pty (90), independent (96), other smaller party (97), dk (98), blank/refused (99). Responses are listed exactly as they are recorded in the data, with the response number in parentheses.

Having dropped these observations, I arrive at 10,324 respondents, whereas Choi reports 10,459. The share of strategic voters that I identify, based on his definition, is fairly similar. I find 17.5%, versus the 18.8% that he reports. If I exclude only don’t knows (“dk”, response number 98) and blanks (“blank/refused”, response number 99), I arrive at 11,534 respondents.

Furthermore, I exclude 35 observations in which a voter responded with a party that I could not confidently match to a party in existence at the time of the election that was active in the respondent’s state. These were (with response numbers in parentheses): kcvp (63), nnd (84), rsnm (87), loktantrik cong. (92), gondwara (95). I list below the reasons why these were dropped.

- **kcvp (63):** Six respondents provided this answer as either a vote choice or likely winner. There is a party called the Kannada Chalavali Vatal Paksha. It did not contest the 2004 election, and therefore could not have been a likely winner or a vote choice. The KCVP is a party associated with the state of Karnataka but all of the observations concerned are respondents in either Bihar (three respondents) or West Bengal (three respondents). Moreover, none of these identify as Kannada speakers, suggesting that they are not migrants from Karnataka.

- **nnd (84):** Six respondents provided this answer as a likely winner. This acronym would be consistent with the Naga National Democratic Party; however, it did not contest the 2004 election and could not therefore be a likely winner. Additionally, the six respondents who gave this response are from West Bengal (four respondents), Sikkim (one), and Gujarat (one) and none offered responses about their native language consistent with them being migrants from Nagaland.

- **rsnm (87):** Three respondents provided this answer to one of the relevant questions. This acronym is consistent with the Rajasthan Samajik Nyaya Manch, which was a regional party in Rajasthan. It was in existence at the time of the 2004 election, but it did not contest and could not therefore be a likely winner or vote choice. Two of the respondents who provided this answer were not from Rajasthan (rather, one each from Andhra Pradesh and Sikkim) and were not Hindi speakers (as would be expected if from Rajasthan). One respondent was from Rajasthan, and offered this as a preferred party but not likely winner or vote choice. This response therefore makes sense. However, since the other two responses do not, I drop all respondents that include this response option.
• **loktantrik cong. (92):** Eleven respondents provided this as their answer for the likely winner or preferred party. The Loktantrik Congress was a party active in the state of Uttar Pradesh. However, it merged with the Samajwadi Party in 2001 and did not therefore contest the 2004 national elections. Moreover, the respondents giving this as a response are all from outside of Uttar Pradesh (six from West Bengal, one each from Himachal Pradesh, Manipur, Goa, and Orissa), and none indicate that they speak Hindi or another language that would be consistent with these respondents having migrated from Uttar Pradesh.

• **gondwara (95):** Ten respondents provided this as their answer for one of the three relevant questions. One of these also answered one of the relevant questions by mentioning “loktantrik cong.” The party with the closest name to “gondwara” is the Gondvana Ganatantra Party. However, this party is already listed as a response option 69. Moreover, the respondents who provided this as their answer are not from Madhya Pradesh, where the party is based, nor do they speak Gond. Five respondents are from Karnataka, two from Kerala, and one each from Manipur, West Bengal and Chhattisgarh. The GGP has contested in Chhattisgarh, but not the other states. I was therefore uncertain whether this was the same response as response 69 (ggp).

Lastly, I drop 19 observations that had the number of their electoral district misrecorded such that the respondent is from an electoral district that does not exist. These were seven respondents listed as from PC-19 in Gujarat, five from PC-48 in Himachal Pradesh, five from PC-61 in Mizoram, and two from PC-19 in Punjab.