14

Pooling or Its Absence: Nomination and Alliance Behavior

This chapter extends the "vote management" theme of Chapter 13. It does so through two further tasks. First, we look further at the nomination behavior of parties under OLPR and SNTV. Recall from Chapter 13 that SNTV gives parties an incentive to manage intraparty competition, because of the absence of vote pooling. In OLPR, there are few incentives for such vote management, with a key caveat that we introduce as this chapter's second task.

As explored in Chapter 13, vote management can mean either restricting the number of candidates nominated by a party, or intervening in the competition between candidates in order to affect the distribution of votes among them. A party might pursue both vote-management practices in succession: first choose a number of candidates, then attempt to equalize across a realistically electable subset of them.

If parties have incentives to manage votes in either or both senses, then it has consequences for how concentrated the party's votes are on its winners. For instance, suppose a party nominates five candidates in an eight-seat district. During the course of the campaign, it becomes apparent that only three realistically can be elected. What might it do? It could seek to shift votes from two weaker candidates and encourage voters to give their votes to the three strongest ones, as equally as possible. In that way, it would tend to have the bulk of its total vote concentrated on its three winners.

If, on the other hand, the party had no such vote-management incentives – for instance, under OLPR – then it probably would have nominated (at least) eight candidates in the first place, and it would not worry about some candidates having weak vote-earning ability. It would allow *laissez-faire* competition, as we defined it in Chapter 13. The end result would be a smaller percentage of its votes concentrated on its winners than in the prior example.

The caveat to the *laissez-faire* assumption under OLPR is that sometimes "list" and "party" are not synonymous. That is, lists may be presented by alliances, in which case some candidates are from one party and some from others. All the parties and their candidates pool votes, but the candidates of the various parties win only if they obtain preference-vote totals in the list's – that is, the alliance's – top s (where s is the number of seats won by the alliance list).

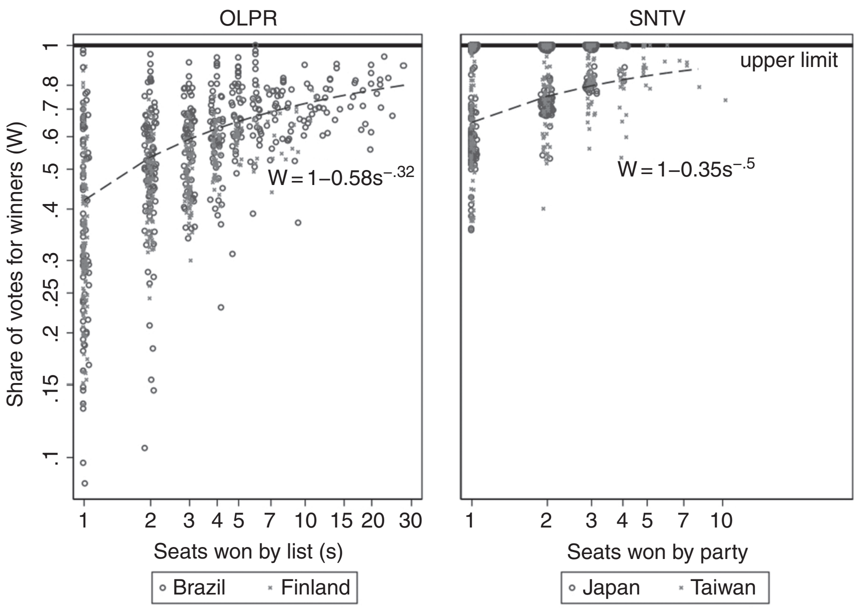

FIGURE 14.1 Share of votes for winning candidates (*W*) by number of seats (*s*), OLPR (left panel) and SNTV (right panel)

We demonstrated in Chapter 6 (in particular, Table 6.3) how this process works in Finland. In this chapter, we will explore the process in more detail, noting that for the parties inside an alliance list, the competitive incentives are *as if the system were SNTV*. Thus parties in alliances, and in particular the smaller partners, under OLPR, have incentives to manage their vote. That means they, too, should tend to concentrate votes on their winners.

To offer a preview of what we mean by vote concentration, consider the patterns shown in Figure 14.1. The figure contains two panels, with the left being OLPR systems and the right SNTV. In each panel, data points for two systems are combined: Brazil and Finland for OLPR and Japan and Taiwan for SNTV. The horizontal axis is the number of seats won by the list (OLPR) or party (SNTV).[1] The vertical axis is the share of the votes on the list or party won by the winning candidates.[2]

[1] The axis labels for SNTV stop at ten because we have no parties in such a system with more than ten seats won in a district. The scales remain the same, however, to allow ready visual comparison across systems.

[2] For present purposes – comparing electoral-system effects – we do not differentiate alliances from single-party lists in the OLPR cases. A statistical test shows no difference at the list level. Below we explore patterns for *parties* inside such lists.

The best-fit lines for logarithmic values are reported; the equations are empirical[3] (see the Appendix to this chapter). They are not logical models, but they represent the precise pattern expected: for any given number of seats won, the OLPR winners tend to have a lower share of their list's votes, while the SNTV winners have a higher share of their party's votes. The pattern suggests vote management by parties under SNTV – intervening to limit votes going to hopeless candidates – in contrast to the more *laissez-faire* competition under OLPR. We now turn to a fuller elaboration of the incentives behind the patterns shown in Figure 14.1. Then we turn our attention to multiparty alliance lists under OLPR.

HOW PARTIES CONCENTRATE THEIR VOTE – OR DO NOT

In Chapter 13, we investigated the number of candidates a party runs, for a given district magnitude, under either OLPR or SNTV formula. We further saw how individual candidates' preference-vote shares are shaped by the number of candidates, developing and testing logical models for both first and last winners. In this section, we look at a related aspect of vote management: *to what extent do parties under each system concentrate votes on whatever number of candidates they ultimately elect?*

The surest way to avoid maldistribution of votes within a party is to avoid nominating too many in the first place. We saw that in Chapter 13 that, on average, parties under SNTV tended to nominate $c'=(2M)^{0.5}$. This stood in contrast to OLPR, where vote pooling gives parties the luxury of nominating as many candidates as the law permits.

Ideally, parties under SNTV would nominate only as many as they believe they can elect. However, information may be uncertain about what that number is, or campaign context may work against the party's ability to elect all its candidates between the time nominations are settled and votes are cast. One strategy, then, would be for the party to play it safe and risk an *undernomination error*.[4] At the extreme, this means nominating only one candidate. We saw in Chapter 13 that many parties do have $c'=1$, even though some (unknown share) of these parties may have had enough votes to elect two or more candidates – provided they had been able to ensure relatively equal vote totals among them. Even some of those that have $c'>1$ may undernominate, having fewer than they could have elected but playing it safe.

Some of those parties that nominate $c'>1$ are sure to commit an *overnomination error*, having more candidates than they prove able to elect. Some may even do so deliberately, and have many excess candidates. A party

[3] The SNTV regression is run excluding parties that run only one candidate. (There are no such cases under OLPR.)

[4] For a full development of the concepts of errors under SNTV, see Cox and Niou (1994) and Cox and Shugart (1995).

under SNTV that nominates more than *M* candidates is clearly not pursuing a rational seat-maximization strategy. Even nominating *M* is usually overnomination, given that few parties will win *M* seats (when *M* is more than about two). Yet we saw from Figure 13.1 that parties having *M* or more candidates is surprisingly common, and at any $c'>1$, there is always the risk that the number is too many, for the party's voter support.

A question raised by this analysis is why a party under SNTV would ever nominate more than it can elect. Of course, one answer is that it may lack information about how many is the right number. However, there are so many cases of parties nominating "extra" candidates that uncertainty is probably not the sole explanation. Few nominate *M* and even fewer more than *M*. Yet, if *M* is much greater than two, there are many cases with well over *s*, the number of seats actually won. While we can't be sure of the reasons, two likely ones are (1) inability to control fully their own nominations, and (2) the need to groom future candidates and keep their supporters happy in the meantime.

Some parties may not be able to stop surplus candidates from running. Either they do not have legal control over their labels – as was the case in Colombia (Shugart, Moreno, and Fajardo 2007) – or the candidates whose endorsements they might deny would run anyway under another label or as independents (the latter having been particularly common in Japan). Parties may calculate that it is better to keep such candidates inside their tent than to let them undermine the party from outside,[5] even though their running may also undermine it from the inside! It is a tradeoff that SNTV makes especially acute.

Every incumbent will eventually leave office, it can be said safely. Thus parties need future talent, and some of these may run to test the waters even before there is an open slot for them. In the meantime, they are cultivating votes that may be useful to elect them as a party representative in the future. Again, it is a tradeoff: accept the risk that these candidates' running now may siphon some votes off the leading candidates and lead the party to commit an "error," versus having such a restricted field of candidates that the party looks unappealing to voters, especially those who will be needed in the future once an incumbent departs. For these reasons, parties under SNTV must engage in both forms of vote management that have been the focus of our analysis in Chapter 13 and so far in this one: restrict nominations (while sometimes remaining above their expected *s*), and attempt to equalize votes across their most viable candidates (while pushing the surplus candidates' votes down as best they can).

[5] Kasuya (2009: 100-101) mentions exactly such a logic for parties in the Philippines when they declare a "free zone", endorsing more than one candidate despite $M=1$ (which results in the same vote-management dilemmas as SNTV, $M>1$).

Now, having seen how parties in OLPR and SNTV differ in their vote-management practices, we turn to a class of open lists in which both tendencies are present. When lists are open and contain candidates of two or more parties, the intralist allocation is also an interparty allocation. That is, lists are of alliances, rather than strictly parties, and the multiple parties present on the list each win as many seats as they have candidates who place in the list's top *s* in preference votes. These systems, used in Brazil and Finland, are thus hybrids of D'Hondt (used to allocate seats among lists based on pooled votes) and SNTV (used to allocate seats to parties within each alliance).[6] In the next section, we consider how these systems of alliance lists affect both the interparty and intraparty dimensions.

ALLIANCES IN OPEN LISTS: THE INTERPARTY DIMENSION OF INTRALIST COMPETITION

We now turn our attention to patterns of alliance politics under OLPR. The chapter has two sections devoted to this topic. In this first one, we look at the interparty dimension of systems in which some lists contain candidates of two or more parties. In doing so, we ask how the hybrid of OLPR and SNTV results in systematically more winning parties than would be expected if all lists consisted of a single party's candidates. In the second section on alliance politics, we return to the intraparty dimension by looking at the nomination and vote-management behavior of parties competing with alliance partners.

In analyzing the interparty dimension of alliances, we are pursuing an extension of the themes of Chapter 10, which looked at district-level patterns of competition among parties. We find that our two fundamental quantities, *M* and *S*, once again predict how many parties appear in districts where alliance lists can contain two or more parties apiece. These quantities enter through the same district embeddedness factor, *k*, developed in Chapter 10. Thus, while alliance politics might seem arcane, this section of the chapter knits together some key findings of preceding chapters on both national and district-level party systems.

Alliances are very common in at least three OLPR systems: Brazil, Chile, and Finland.[7] In Chile, electoral competition is mainly between two nationwide

[6] The effects of the D'Hondt/SNTV hybrid on the interparty dimension was explored in the appendix to Chapter 7. Other rules are possible within open alliance lists. For instance, parties could be allowed to pool their own candidates' votes first before seats are allocated to candidates. Such a reform has been discussed in Finland (Raunio 2005:487), but not adopted. Alternatively, if more than a single preference vote is permitted, the intralist allocation could be MNTV (as defined in Chapter 3) instead of SNTV. Our analysis will consider only those where it is SNTV (and there is no sub-list pooling on the allied parties).

[7] For works that detail this feature of each of these systems, see: Machado (2009, 2012); Carey (2002), Siavelis (2002, 2005); Raunio (2005), von Schoultz (2018). There are also alliance lists in Poland (discussed in Chapter 1), but we lack sufficiently fine-grained data to include them in this analysis.

alliances, each of which consists of several parties. These alliances divide up the nominations among their component partners across districts. All districts have just two seats,[8] and lists contain no more than two candidates, thus two different parties in each alliance present candidates in any given district. In Finland and, especially, Brazil, district magnitude is higher. Moreover, lists frequently contain more candidates than the magnitude of the district. Further complicating the system, alliances may differ from district to district. Any two parties that are in alliance in one district may compete on separate lists in another district, and join with a different set of partners in yet another.

We already saw earlier in this book, in Table 6.3, an example from Finland of how competition among parties and their candidates might result in more parties than lists winning seats, given that lists may contain candidates of two or more parties. In that specific example, we saw four parties winning seats on three lists. We now turn to a systematic analysis of this tendency of the number of winning parties to exceed the number of winning lists. It might be that it would appear random – subject to the peculiarities of specific parties and candidates. On the contrary, this analysis shows that the patterns are predictable.

In district-level analysis in this book (Chapter 10), we have used the *alliance-list* as the unit of analysis. That is, in testing whether the actual number of seat-winning parties (N'_{S0}) and other quantities follows the expected logical relationship, we substituted "list" or "alliance" for "party." The reason for doing so is that if we are interested in effects on the "interparty" dimension, we want to count the electoral agent to which the electoral system directly allocates seats. In OLPR (as also in closed-list PR), that entity is the list, regardless of whether the candidates on it are all identified with the same label or some with distinct partisan labels.[9]

In Chapter 10 we confirmed the very first logical model mentioned in this book, Equation 1.1:

$$N'_{S0} = M^{0.5},$$

that is: the number of parties (of any size) that win in a district tends to be, on average, the square root of the district magnitude. Also in Chapter 10, we developed the concept of a district's embeddedness in the wider assembly electoral system; this effect is represented by our factor, k, which takes the assembly size into account. See Chapter 10 and its appendix for details.

[8] In 2015, Chile adopted an electoral reform that will increase district magnitude. See https://fruitsandvotes.wordpress.com/2015/01/14/chilean-electoral-reform/

[9] By contrast, at the national level, it is not possible to count electoral agents (actual or an effective number) based on alliances in Brazil or Finland, because the alliances are not consistent across districts. In Chile, on the other hand, one can make an accurate count of nationwide alliance lists because the partnerships into which parties enter are consistent across districts in any given election (and also have been quite stable across time).

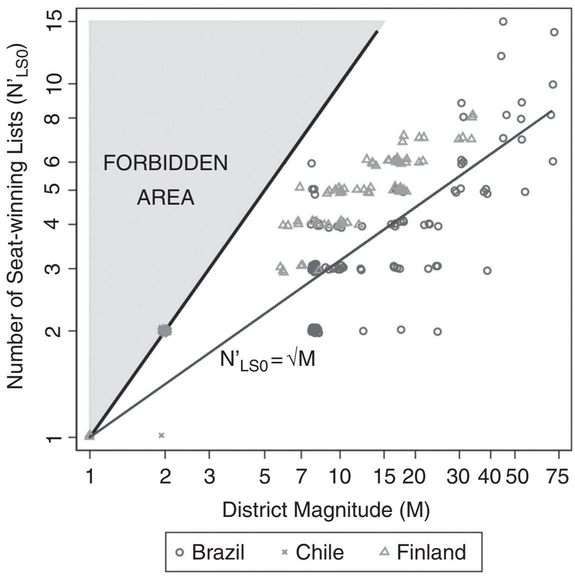

FIGURE 14.2 Number of lists winning seats (N'_{LS0}) against district magnitude

As the confirmation of Equation 1.1 in Chapter 10 showed, we do not need the embeddedness factor to account for N'_{S0}, but we do need it for all of the other district-level relationships investigated in that chapter, including the size of the largest party and the effective numbers of parties (both votes and seats). Here, with our focus on the *intralist* dimension, we perform three interrelated tests. The first is to verify that the number of *lists* winning at least one seat is around the square root of M for our three OLPR cases that use alliances: Brazil, Chile, and Finland. Our visual test of Equation 1.1 (Figure 1.2) excluded cases with a presidential executive. Thus it included Finland, but not Brazil and Chile.[10] Then we ask what the effect is of M on the number of *suballiance parties*, by which we mean the number we have once the alliances are disaggregated into their components. Finally, we do the same for the *effective* number of suballiance parties.

In Figure 14.2 we see the plot of the number of seat-winning lists, designated N'_{LS0}, and the district magnitude (M). The diagonal line in the graph corresponds to $N'_{LS0}=M^{0.5}$. A regression yields a coefficient of 0.543, rather than the expected 0.5, but this is an immaterial deviation from the expectation.[11] Finnish data points (triangles) tend to be high, but the overall

[10] As reported in the appendix to Chapter 10, the relationship is not statistically distinct in presidential systems.

[11] The reported result is a no-constant regression, because run with a constant the result violates the anchor point: $N_{LS0}=1.41M^{0.412}$. However, this result is due only to the inclusion of the Chilean

pattern is close to the expectation of Equation 1.1, when we use as our unit of observation the list. Now, what if we use the party, whether it presents its own list or is one of two or more components of an alliance list? We turn to this question next.

When lists may consist of two or more parties pooling their votes in alliance lists under OLPR, what should we expect for the number of seat-winning parties? In order to differentiate the concept of "party" here from the definition applicable more widely (where we use N'_{S0}), here we will use N''_{S0}, where the double prime mark signifies that we have now moved below the level of the district into the alliance lists. Thus N''_{S0} represents the district-level number of distinct party labels that win seats (whether on their own list or that of an alliance).

Given Equation 1.1, just confirmed on the number of *lists* even for cases where alliances are common, it must be that $N''_{S0} \geq N'_{LS0}=M^{0.5}$. The question is, how much greater N''_{S0} is than N'_{LS0}. We already have seen that the district embeddedness factor, k, is not needed for N'_{LS0} (as it was not needed for N'_{S0} in Chapter 10). Here we posit that N''_{S0} requires the incorporation of k:

$$N''_{S0} = M^k. \tag{14.1}$$

Equation 14.1 states that the number of distinct party labels winning in a district, on their own or alliance lists, is the district magnitude, raised to the district's embeddedness factor. In other words, the size of the assembly in which a district is embedded affects systematically how many *parties* win under alliance OLPR systems, even though it does not have such an effect on the number of *lists* that win. Before we see if this is correct, why might it be so?

The intuition is that parties decide whether to join an alliance in any given district *because they are viable elsewhere*, where they sometimes may run alone. Our theory of embeddedness, articulated in Chapter 10, is that parties bring resources in from districts where they are stronger to districts where they are weaker. This results in various district-level indicators being systematically different in a low-magnitude district of a large assembly than they would be in an "isolated" district of the same magnitude. The same logic should apply to parties under alliance OLPR, except that here the idea of parties "bringing in resources" means showing their flag in the district *through alliance partnership*. Many of these parties would not win seats in their weaker districts if they ran their own list. Worse, they might displace seats away from a potential partner to a party that both they and the potential partner like less (vote-splitting). By running on an alliance list, they pool their efforts. Moreover, if they play the "SNTV game" they can win a seat even on

districts, which as Figure 14.2 makes clear, almost always have N_{LS0}=2, whereas we might expect more cases of N_{LS0}=1 to balance it out. If Chile is dropped from the regression we get $N_{LS0}=1.17M^{0.478}$, with the constant insignificant. Moreover, if we use random effects, we get a $N_{LS0}=1.16M^{0.510}$, even with Chile included.

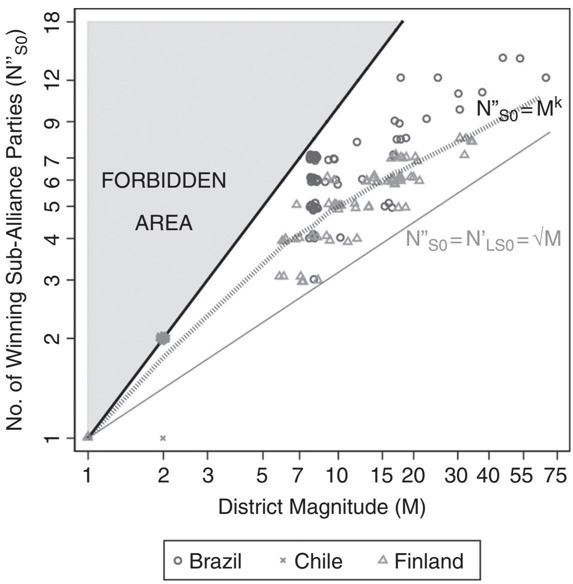

FIGURE 14.3 The effect of a district's magnitude (M) and embeddedness (k) on the number of seat-winning parties (N''_{S0}), whether running alone or on alliance lists

a vote share that would be too low to win if running their own list. Thus viability outside the district should lead to parties winning seats in districts through alliances. If so, then the embeddedness factor should affect N''_{S0}, the total number of such parties winning in a district, in line with Equation 14.1.

To run a regression to test Equation 14.1, we enter $k\log M$ as our independent variable, following similar procedures performed in Chapter 10. The result we obtain is:

$$\log N''_{S0} = 0.029 + 1.054k\log M \quad [R^2 = 0.915;\ 233\ \text{obs.}].$$

The constant term, 0.029, is hardly different from the expected zero, and the coefficient on $k\log M$ includes the expected 1.00. Thus we can consider Equation 14.1 confirmed.

In Figure 14.3 we graph the result. This graph has the familiar kinky dotted line that we have seen several times in Chapter 10. It results from the varying k at different values of M. As in the preceding figure, we distinguish the data points of our three alliance OLPR cases with different symbols. We see that the kinky dotted curve, which represents our regression-confirmed Equation 14.1, follows the data points reasonably well. Moreover, even though not all seat-winning lists are alliance lists (except in Chile), we find that it is always the case that $N''_{S0} > M^{0.5}$, shown with the thin gray line, other than the relatively few cases in Chile where $N''_{S0}=1$, and of course the Åland Islands in Finland, where $N''_{S0}=M=1$.

Of course, we are not normally interested in the number of parties of any size that win. The size-adjusted number is of greater interest. For that we have the effective number, and thus we can apply it to suballiance parties just as we have previously to parties and party lists. What should we expect? From the sequence of logical models developed in Chapter 10, we have the steps needed to derive a quantitative model for the effective number of seat-winning parties. Equation 10.5 says:

$$N'_S = M^{2k/3}.$$

However, recall that the first link in this chain was Equation 1.1, $N'_{S0} = M^{0.5}$. We already know from Equation 14.1 in this chapter that for suballiance parties, $N''_{S0} = M^k$. This alters the entire sequence by having an additional k in the exponents we multiply as we substitute one equation into another.[12] When we do so, we obtain:

$$N''_S = M^{4kk/3} \tag{14.2}$$

The regression test produces the following equation:

$$\log N''_S = 0.010 + 1.403k^2 \log M \quad [R^2 = 0.831;\ 243 \text{ obs.}].$$

The coefficient, 1.4, is very close to the expected 1.33, which is in the coefficient's confidence interval. Thus the effective number of seat-winning parties below the level of alliances in our three OLPR countries in which multiparty lists are common follows the same logical pattern as in simpler list-PR systems. The provision for alliances inflates the party system at the district level, but not in a way that is chaotic or unpredictable, once we take into account the logic of embeddedness.

In Figure 14.4 we graph the result. The thicker kinky curve is the regression-confirmed Equation 14.2. The thinner dashed line is Equation 10.5, the equation that takes into account embeddedness of a district in the national electoral system, but does not take into account the further embeddedness of suballiance parties frequently winning seats on multiparty lists. Of course, there is considerable scatter, given that the intralist SNTV-style allocation need not follow from district magnitude; it is governed only by how many candidates of a suballiance party make it into a given list's top *s*. In particular, the highest-*M* Brazilian districts are higher than Equation 14.2 leads us to expect. Nonetheless, we able to approximate the pattern through our logical modeling techniques and so incorporate into our larger set of logical relationships a seemingly quirky allocation method like the combination of interlist D'Hondt and intralist SNTV used in Brazil, Finland, and Chile.

[12] Using the same sequence as in Chapter 10, only starting with Equation 14.1 instead of Equation 1.1, we have: $s'_1 = N'_{S0}{}^{-k} = M^{-kk}$; and $N_s = s_1{}^{-4/3} = (M^{-kk})^{-4/3} = M^{4kk/3}$.

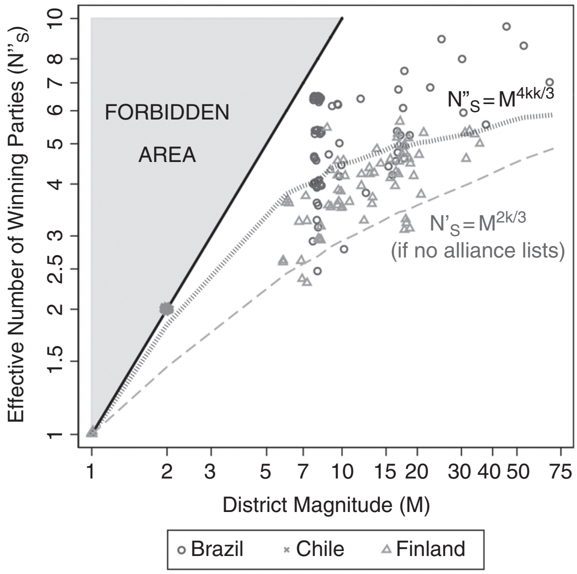

FIGURE 14.4 The effect of a district's magnitude (M) and embeddedness (k) on the effective number of seat-winning parties (N''_S), whether running alone or on alliance lists

TABLE 14.1 *Actual and effective numbers of lists and suballiance parties in Southern Savo, Finland, 2007*

***M*=6, *k*=0.702 (from *S*=200)**	Number of seat-winning lists $N'_{LS0}=\sqrt{M}$	Effective number of seat-winning lists $N'_{LS}=M^{2k/3}$	Number of suballiance parties $N''_{S0}=M^{k}$	Effective number of suballiance parties $N''_{S}=M^{4kk/3}$
Expected	2.45	2.31	3.52	3.25
Actual	3	3	4	3.6

For actual votes cast for winning candidates in this district, refer to Table 6.3.

We can return to the example from Table 6.3 and ask how alliance politics affected the outcome, and how the analysis of this section sheds light on the example. In that case, we had a six-seat district, Southern Savo in 2007, in which three lists won seats, including four parties. In Table 14.1, we apply the models of Chapter 10, for district-level *lists*, and of this chapter, for district-level suballiance *parties*. In a district of M=6, we expect the number of winning lists, N'_{LS0}, to be $6^{0.5}$=2.45 on average. Given that this quantity is a raw number, not the effective number, this means it could be expected to be two or three in any given election. In the actual case (shown in Table 6.3), we have N'_{LS0}=3. Because this actual whole-number value is larger than the expected average, we can expect that all other output values will be likewise somewhat higher than model predictions. But how much?

For other outputs at the district level (see Table 10.1), we need the embeddedness factor, k. For this M=6 district and Finland's 200-seat assembly, it works out to k=0.702. Thus we expect the effective number of seat-winning lists to be 2.31. In fact, it was 3.00, as each of the three lists won two seats. Now, we turn to the suballiance parties, and the models that we developed in this chapter. We expect the number of such parties, N''_{S0}=3.52 and the effective number, N''_S=3.25. The actual values in the example were 4 and 3.60, respectively.

Note that the one additional party winning due to alliance lists is in line with the expectation (3.52 being almost exactly one more than 2.45), adjusted for the chain of outputs having started with the actual value, N'_{LS0}=3. The effective number of suballiance parties in the example, 3.60, is only slightly larger than the expected. It is, however, *much larger than we would expect if there were no alliances* (2.31). In this way, what would seem like "randomly high" fragmentation in this district, or in others like it, if we ignored alliances, turns out to be very close to the alliance-adjusted expectation.

The results shown in this section offer insights into *how the intraparty dimension affects the interparty dimension*. For instance, if these countries did not use open lists with alliances, there would not be the opportunity for small parties to maintain their independent identity and vote-seeking activities while still pooling their efforts to common seat-winning entities (lists). It is remarkable that these seat-winning "entities" (lists) still tend to number $\sqrt{M}$, as Figure 14.2 showed for three countries that use such an electoral system.

The wider point is that when we count the number of parties, or estimate their effective number, at the *national* level, that number will be unusually high. The national counts routinely are based on the distinct parties and will include many that won only by having a relatively small vote share that happened to clear the top-s in some district-level list of the alliance in which they ran. Thus the open-list system, with alliances, generates a further fragmentation of the party system beyond even what high-magnitude PR supports. It does so because some of the parties are able to win, SNTV-style, by placing a successful candidate on an alliance list.

In Brazil, with its large magnitudes, the result is that the effective number of suballiance parties (N''_S) averages almost twice the effective number of lists (N'_{LS0}). When we look back at the nationwide level in Brazil, we see that the country's N_S tends to be 1.75 to 2.02 times what the Seat Product Model would predict. The implication from our findings in this section is that much of this excessive fragmentation can be traced to the district-level alliance politics, and their being embedded in such a large assembly. Brazil, one of the world's largest democracies and (in)famous for its high party-system fragmentation, looks less exceptional once we take into account how its electoral system affects alliances.[13]

Having established how the electoral system affects the (effective) number of lists and parties in systems where these two quantities are not necessarily the same, we now turn to the strategy of parties on the intraparty dimension. This next and final section returns to themes seen earlier in the chapter regarding nominations and vote concentration.

THE INTRAPARTY DIMENSION OF ALLIANCE POLITICS: NOMINATION AND VOTE-MANAGEMENT

Earlier in this chapter, we showed that parties under SNTV tended to concentrate their votes on their winning candidates, in contrast to parties under OLPR. Now we can run a similar analysis for parties in alliance lists, by turning to the intraparty dimension of parties on alliance lists.

The small parties in alliance should exhibit an SNTV-style logic. We previously have noted that parties under SNTV face the dilemma that their collective vote shares do not determine how many seats they win in a district (unlike in PR-list systems). Rather, the number of seats a party wins under SNTV is simply the number of its candidates who obtain top-M vote shares, where M is the magnitude of the district. For parties running on joint lists under OLPR, it is the same, except we need to refer to the top-s vote shares. That is, lists win their collective s seats based on their combined votes, and then in each list the top s candidates in preference votes are the winners. (The example in Table 6.3. demonstrated how this works.) A small party that fails to ensure it has a candidate with one of the s highest vote shares within the list will have a "sucker's payoff": its votes may have been critical to winning s seats (rather than s–1 or some smaller number), yet it wins no seats for itself.

As a result of these SNTV-style incentives in alliance lists, we should see small parties concentrating their votes on winners, whereas the larger ones should show relatively less concentration. (We cannot say there should be no concentration, because everyone is playing by SNTV rules on the intralist dimension; the challenge of vote management is less acute for large parties, given that they have more votes to pool and hence more room for error, but still present.)

[13] In Chapter 15 we make a similar observation about alliances under FPTP in the case of India.

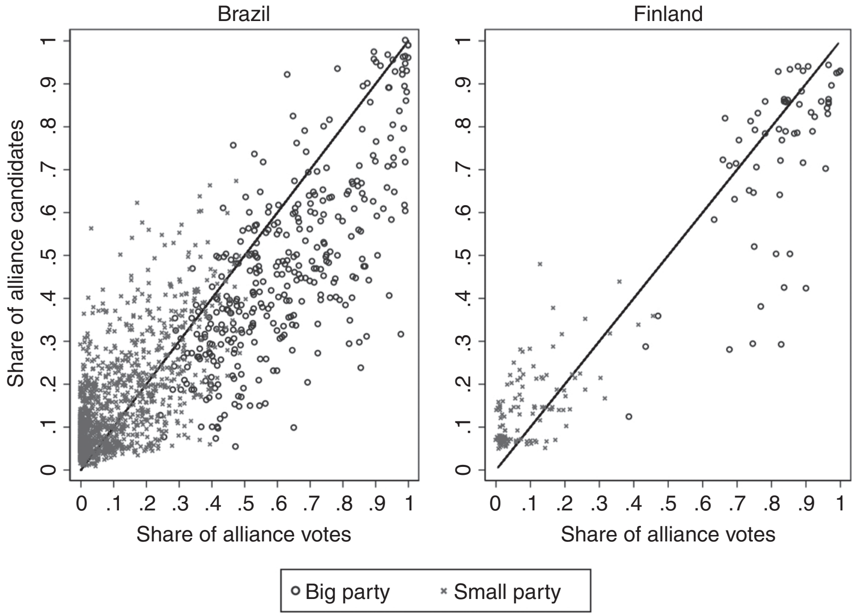

FIGURE 14.5 Nomination behavior of big and small parties in alliance lists: Brazil and Finland

Before considering concentration, which implies managing the vote across some number of candidates greater than the party can elect, we start with nomination behavior. We define as a "small" party any party that is in an alliance but is not the party with the most cumulative votes within the list. That is, every alliance list has one "big" party – the one with the highest intralist vote total – but a list may have more than one small party.

In Figure 14.5 we see the share of the list's total candidates contributed by the big party and any small parties in an alliance on the *y*-axis. On the *x*-axis is the share of votes accumulated by the big and small parties. The two-panel figure shows Brazil on the left and Finland on the right. Of interest here is whether small parties are tending to nominate conservatively, given that most of them will not elect more than one candidate on the list.[14]

Small parties are shown with light gray small *x* symbols, while the circles indicate the big party in each alliance. Because most of the small parties appear

[14] We recognize that causality can run in either direction between these variables. The votes obtained by a party should tend to increase as it has more candidates, all else equal. We place the candidate share on the y-axis because we expect that when alliance deals are struck, all parties to the deal have a reasonably accurate estimate of which one will be the larger, and thus the causality is stronger from (expected) vote share to candidate share, even though (actual) vote share is observed only after the election.

above the thick dark equality line, we can conclude that they tend to have a share of candidates that exceeds their share of the alliance's votes. This is true in both countries, but especially in Finland. Correspondingly, the big party tends to have a smaller share of candidates than votes. The evidence thus is that small parties tend to nominate more candidates than they plausibly could elect, even if all their candidates had equalized votes.

We might pause here and ask, why would a party overnominate to an alliance list? After all, in doing so, it risks the sucker's payoff, which we defined earlier as a party contributing to the number of seats the list wins (through vote pooling), yet electing no candidate of its own. Perhaps the answer is that a party does not look like a *party* if it nominates only one candidate. Even the small alliance partners need to show they are serious by nominating more than a token candidate.

This motivation is similar to the "show the flag" notion that we discussed in Chapter 10. There we developed models of how district-level outputs, such as the effective number of parties, are systematically affected by the district's embeddedness in a larger assembly. The logic for small parties overnominating to alliance lists is similar: both in districts within a larger assembly electoral system and in alliances within a district, parties have incentives to compete even for seats they will not win, in order to demonstrate their seriousness.[15]

As we saw in the preceding section of this chapter, open lists with provision for alliances systematically increase the number of parties (whether running on their own lists or in alliance). This pattern is possible only because of the ability of these parties, particularly the small ones, to manage their internal competition in what is essentially a system of SNTV on the intralist dimension. In the next step in our analysis of alliance politics, we tie these strands together by returning to the level of candidate competition.

Once a party has excess candidates on the list of the alliance it has joined, it must turn its attention to the next stage of competition – vote management. This is the phase in which intraparty competition for these parties is similar to the SNTV dynamics we investigated earlier. Thus we now replicate the analysis we did for OLPR and SNTV, only now turning our attention to parties within alliances under OLPR.

If a small party overnominates, then it might seek to concentrate its votes on a subset of realistically electable candidates. Thus we ask whether small parties in alliances show evidence of playing this SNTV-style vote-management

15 Another motivation is that the alliance agreement struck with the bigger party may demand a certain minimum number of candidates, so as to bring additional votes to the list as a whole. The larger party may not object to its partner having several candidates, given that it is the most likely beneficiary of a partner playing the role of sucker. If we are right about parties wanting to "show the flag" even if it means overnominating, then the small party also does not object to its larger partner's demand for additional candidates, as whatever votes they pull for the alliance increase the perceived seriousness of the small party.

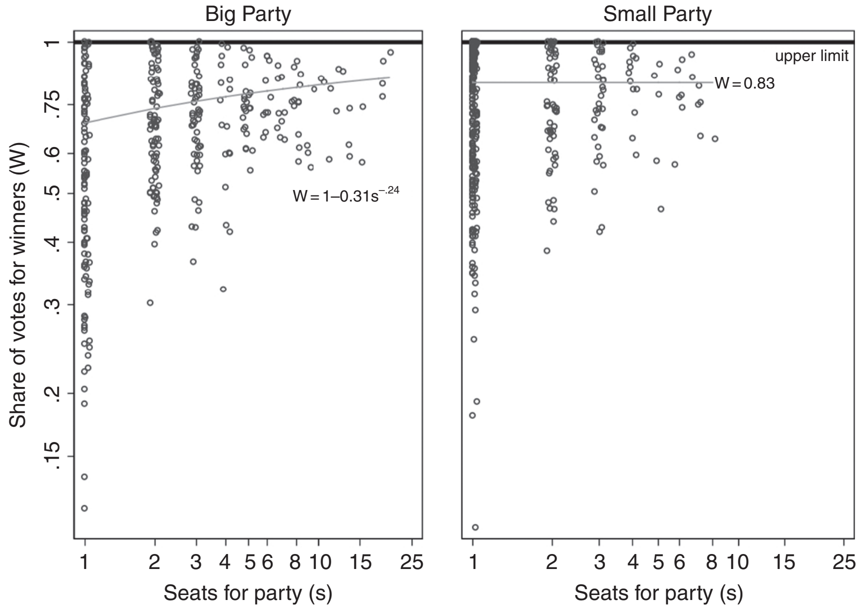

FIGURE 14.6 Share of party vote concentrated on winning candidates for parties in alliances: Big versus small parties in Brazil

strategy. Do they tend to concentrate votes on those candidates who actually won? Large parties, which face a less acute vote-management imperative, should be less likely to exhibit such concentration.

In Figure 14.6, we see the pattern for Brazilian parties in alliances. When we compare the big parties (left panel) with the small (right), we see a pattern similar to that we saw earlier in comparing OLPR to SNTV. Each panel includes the plot of a regression estimation. For the big parties, there is a significant increase in votes concentrated on winners the more seats the party wins, as we expect for OLPR parties. The best fit is W=1–0.31$s^{-0.24}$. For small parties in alliance, there is both the expected higher intercept and a totally insignificant effect of seats won; the best fit to this scattered plot is simply W=0.83.

Thus small parties in alliance behave even more like SNTV parties than parties in SNTV itself! That is, whereas we saw a small but significant upward slope for SNTV parties (Figure 14.1, right panel), there is no relationship between seats and vote concentration for small parties on alliance lists. The difference between big and small parties in Figure 14.6 is not great, but it is statistically significant. Even the big parties are playing an SNTV-style game with their partners, and have incentive to concentrate more than the list as a whole does (or than a single-party list would).

As for Finland, we do not have a similar graph because the small Finnish alliance partners rarely run more than two or three candidates on a list and almost always win no more than one seat. The Finnish pattern is consistent with the theory, however: large parties, on average, have 54.8 percent of their votes concentrated on winners; small parties have an average of 86.7 percent of their votes concentrated on their (usually one) winner. This is the essence of the "SNTV" strategy: a small party attempts to avoid wasting many votes on the intraparty dimension.[16] To the extent they succeed in doing so, they result in increasing the number of parties that win seats in a district, relative to the expectation for nonalliance settings, as we saw in the preceding section.

CONCLUSIONS AND IMPLICATIONS FOR DESIGN OF INTRAPARTY RULES

Our two chapters on intraparty competition have deepened our understanding of how electoral systems and party strategy affect vote distribution. The core principle on which systems like open list proportional (OLPR) and single nontransferable vote (SNTV) are based is the assumption that voters should have choice of more than just a party. That is, parties, as collective actors, are not the only agent of representation; individual candidates are agents, too, and voters may not be indifferent as to which candidates of a party represent them. So-called flexible-list systems (see Chapter 6) are also based on this principle, but they allow some combination of candidate-preference votes and party-provided list ranks to be mixed into the final determination of who gets elected to whatever seats a party wins. All of these systems – SNTV, open lists, and flexible lists – differ from closed lists, in that the latter system gives voters no choice within the party: the voter must accept or reject the list of candidates as a whole. Parties under closed lists still may nominate candidates so as to appeal to specific constituencies that prefer some candidates over others (see examples in Chapter 6), but the voter is not able to favor some candidate over another through any sort of intraparty vote.

We showed that there are fundamental differences in party strategies under OLPR and SNTV, with parties in the latter system exhibiting efforts to manage their competition. There are two principal ways to manage intraparty competition: restrict the number of candidates, and seek to equalize votes across whatever number of candidates the party expects to be able to elect. Under OLPR, on the other hand, parties can tolerate *laissez-faire* internal competition – if the party is concerned only with seat-maximization. The reason is that vote pooling on the list means that no increase in the number of candidates and no inequality of their vote totals can undermine the party's collective seat-winning potential when votes pool on a list.

[16] We are unable to carry out a similar analysis on Chile, because any party in an alliance has only one candidate, given M=2 and the restriction of lists to a maximum of two candidates.

Turning to alliance lists, we saw that parties under alliance lists engage in vote concentration as well. By playing the SNTV game, they can enhance their prospects of winning seats within the list. Despite the seeming idiosyncrasy of a given party's success or failure at vote concentration, we found that even the number of parties – whether with their own list or with candidates on an alliance – remains predictable. We see once again that our district embeddedness factor from Chapter 10 accounts for the number of parties under alliance open lists. Thus we saw that the interparty and intra*list* dimensions are connected.

The analytical tools and conclusions of this chapter likely apply more widely than to just those cases that have explicit multiparty alliance lists like the cases we focused on here. While systems of open alliance lists are not common, we suspect that many parties under OLPR consist of factions or other intraparty groupings that evolve to promote their preferred candidates. If so, then they should be observed to engage in similar strategies to avoid wasting their own votes. This would be a promising avenue for scholars of countries with OLPR systems (but no alliances of distinctly branded parties) to pursue – for instance, in Colombia, Indonesia, Peru, and other open-list systems.

For designers of electoral systems, the results of these chapters offer some implications. One is already well known, but has not been demonstrated as systematically and comparatively as we did: parties under SNTV tend to limit the number of candidates they nominate to fewer than the district magnitude, and to take steps to equalize votes among their candidates (or a realistically electable subset). In this way, SNTV considerably limits effective competition, compared to other systems that allow voters to cast preference votes for candidates below the level of the party. A survey of academic specialists (Bowler and Farrell 2006) revealed SNTV to be the least preferred system. We share the skepticism.[17] On the other hand, the same survey showed specialists tend to rate OLPR quite high.[18]

Our analysis offers some cautions to consider in designing OLPR systems. With large district magnitudes, the preference vote share of first winners can be very low. Our Figure 13.2 showed that under 15 percent of the party's combined vote is not uncommon when $M>15$; for last winners (Figure 13.4), the percentage is very often under 5 percent. Relatedly, in this chapter we saw that substantial vote shares for parties in OLPR tend to be cast for losing candidates. Perhaps this is not a problem. Voters may be indifferent among the candidates of the list they select, and with vote-pooling, no vote for a trailing candidate can help elect a candidate of a different list instead. On the other hand, the entire premise of systems that give voters a choice below the level of the list is that voters are not indifferent. Hence, high magnitude OLPR may leave many voters feeling unrepresented. It also may make the choice set

[17] It might be noted that both of us were among the 170 respondents surveyed.
[18] It ranked as specialists' third choice, after MMP and STV.

unwieldy, leading to suboptimal choices in the first place (Cunow 2014). One potential solution, aside from using smaller district magnitude, might be to restrict the number of candidates to fewer than *M*. Apparently no systems have such a provision, but it could be useful to limit intraparty vote fragmentation. Tentatively, we might propose a limit of $2+M^{3/4}$, rounded up.[19]

Even if voters might be relatively indifferent among candidates within one party, what if the list actually contains candidates from two or more parties? Alliance lists raise the stakes for voters who may prefer one of the competing parties on the alliance list over another: they now have some risk, a la SNTV, of spreading their votes in such a way that they hurt their favored party's chances. The process of connecting votes to party seats might even appear chaotic. Logical models and graphs introduced in this chapter showed that, far from being chaotic, there actually are predictable patterns for interparty competition within alliance lists. The evidence suggests that the number of parties – both actual and effective – can be very high for a given district magnitude when alliances are allowed, especially if assembly size is large (because of the effects of embeddedness on the individual district's politics). Thus if extreme party fragmentation is not desired, OLPR with alliances should be allowed only in relatively modest district magnitudes, unlike the very large districts used in Brazil and some parts of Finland.

Both SNTV and the hybrid of OLPR and SNTV (i.e., alliance lists) are relatively complex systems. Yet we have seen that their complexity does not prevent their being modeled, even on the intraparty/intralist dimension, using tools such as we have used for the interparty dimension in preceding chapters. The votes for candidates and sublist parties remain limited by, and largely predictable from, the constraints of available seats. In the next section of the book, we turn to questions of how well models for simple systems can be extended to account for other forms of complexity.

Appendix to Chapter 14

This appendix displays the results from regression discussed in Chapter 14.

Table 14.A1 shows the regressions for the equations plotted in Figure 14.1, which plot the share of votes for winning candidates (*W*) by number of seats (*s*)

[19] In a twenty-seat district, this would mean a limit of twelve candidates per list, which ought to be sufficient to provide choice without making that choice overwhelming. The same limit, with $M \leq 5$, would allow *M* candidates, or slightly more (thereby allowing *more* choice than most present cases of open lists have in very low-*M* districts). It might be noted that in our dataset, the highest *M* for which any party won all seats was five. (In countries where members who enter the cabinet must give up their assembly seats, there could be provision for a short supplementary list to be used only in cases where the number of candidates on the initial list proved insufficient.)

TABLE 14.A1 *Seats won by list or part and vote concentration, OLPR and SNTV Dependent variable: log(1–W); i.e., the log of votes accumulated by losing candidates*

VARIABLES	(1) OLPR	(2) SNTV (c>1)
Seats won by party/list, logged	–0.319***	–0.492***
	(0.0224)	(0.0597)
	[–0.363 – –0.275]	[–0.610 – –0.375]
Constant	–0.236***	–0.456***
	(0.0121)	(0.0229)
	[–0.260 – –0.212]	[–0.501 – –0.411]
Observations	801	374
R-squared	0.259	0.169

Robust standard errors in parentheses.
95 percent confidence intervals in brackets.
*** p<0.01

won by the list (OLPR) or party (SNTV). The dependent variable is first transformed, so as to be $1-W$, which is then logged. We use the losers' votes (one minus winners' votes) because otherwise the regression would yield absurd values of $W>1$ for high values of s. We should never run regressions that would yield logically impossible values for our outcome variable; see Taagepera (2008), particularly p. 110.

In **Table 14.A2**, we see four regressions testing our models for how the number of lists and suballiance parties are affected by district magnitude. Regressions One and Two are for the number of seat-winning lists (N'_{LS0}); the expected value of the coefficient on log$M$ is 0.5, and the constant is expected to be statistically indistinct from zero.

Regression One omits the case of Chile, where all districts have M=2. Results are consistent with logical expectations. If we include Chile, the regression yields a significant constant term that leads to absurd results (as noted in the chapter), due to how commonly we find two winning lists in Chilean districts. We can rerun the regression with the constant suppressed, in order to respect the mandatory anchor point of N'_{LS0}=1 when M=1. When we do so, it does not matter whether Chile is included or not; Regression Two includes the country in a no-constant regression.

Regression Three is for the number of *party labels* that win seats, whether on their own list or that of an alliance (N''_{S0}). Here, as explained in the chapter, we need to take the district's embeddedness factor, k, into account. Thus the input

TABLE 14.A2 *Regressions for number of list and parties at district level, systems with alliance lists*

	(1) No. seat-winning lists (excl. Chile)	(2) No. seat-winning lists (incl. Chile)	(3) No. of parties, including suballiance parties	(4) Effective No. of parties, including suballiance parties
District magnitude, logged	0.478	0.543		
Expected: 0.5	(0.0347)	(0.0276)		
	[0.398 – 0.558]	[0.481 – 0.606]		
k * magnitude, logged			1.054	
Expected: 1.000			(0.0370)	
			[0.971 – 1.138]	
k^2 * magnitude, logged				1.404
Expected: 1.333				(0.0884)
				[1.204 – 1.603]
Constant	0.0679		0.0294	0.0104
Expected: 0	(0.0448)		(0.0143)	(0.0254)
	[–0.0355 – 0.171]		[–0.00300 – 0.0618]	[–0.0471 – 0.0678]
Observations	178	231	233	243
R-squared	0.506	0.943	0.915	0.831

Robust standard errors in parentheses.
95 percent confidence intervals in brackets.

TABLE 14.A3 *Seats won by party and vote concentration, big versus small parties under OLPR in Brazil*
Dependent variable: log(1–W); i.e., the log of votes accumulated by losing candidates

VARIABLES	**(1)**
Big party	0.278***
	(0.0553)
seats for party, logged	–0.0368
	(0.112)
Interaction	–0.199*
	(0.115)
Constant	–0.787***
	(0.0450)
Observations	667
R-squared	0.048

Robust standard errors in parentheses.
*** p<0.01

variable is the $k^*\log M$; the expected coefficient should be 1.000, which is confirmed by the regression result. The constant is statistically significant, but is close to the expected zero. In Regression Four, the outcome of interest is the effective number of parties, including suballiance parties (N''_S); as explained in the chapter, now we need as our input variable, $k^{2*}\log M$; its expected coefficient is 1.333, which is within the 95 percent confidence interval of the regression's estimate of 1.4. The constant is approximately zero, and insignificant, as expected.

In **Table 14.A3**, we report a regression with an identical dependent variable as in Table 14.A1. In this case, the regression is for a single case, Brazil. It is an interactive specification, in order to test whether there is a significant difference in the patterns for big and small parties within alliances (as defined in the chapter). An inspection of the marginal effect of the big-party dummy shows that there is a significant effect for parties winning fewer than about three seats. The equations that result for big and small parties are plotted in Figure 14.6.