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Abstract

In contrast to the abundant research dealing with the general election effects of congressional redistricting, little work has examined how redistricting affects primary elections. This study analyzes the impacts of new constituent incorporation and district partisanship change on both incumbent and opposition party primaries. Greater numbers of new constituents enhance incumbent primary competitiveness, but have effects on opposition party competitiveness that are weaker and less consistent than the effects of anti-incumbent shifts in partisanship. The impacts of these variables, however, are conditioned by the seat's past general election safety. Prospective incumbent primary challengers weigh new constituent incorporation more heavily in their candidacy decisions when the seat is safer; prospective opposition party candidates attach greater weight to each redistricting variable when the seat is more marginal. All told, candidacy decisions of both kinds seem driven by strategic calculations of the likelihood that winning nomination will lead to November election success.

Despite the considerable attention devoted to the general election effects of congressional redistricting, no consensus has been reached on whether November incumbency safety in the aggregate is altered by the decennial redrawing of U.S. House district boundaries (LaRaja 2009, 211-12, 217). Depending upon the particular redistricting cycle being examined and the methodology applied to measure competitiveness, redrawing district lines has been found to increase overall general election competitiveness (Gopoian and West, 1984, 1085-94), to leave it largely unchanged (Glazer, Grofman, and Robbins, 1987, 693-701; Persily 2002, 660-66; Abramowitz, Alexander, and Gunning 2006a, 87-89; Abramowitz, Alexander, and Gunning 2006b, 95-96; Abramowitz, Alexander, and Gunning 2006c, 78-79), or to diminish it (Tufte, 1973, 549-53; Swain, Borrelli, and Reed 1998, 949-60; Cain, MacDonald, and McDonald 2004, 21-28; McDonald 2006a, 91-92; McDonald 2006b, 99-100).[1] In marked contrast, the many fewer studies touching on redistricting effects in primary elections concur in the judgment that the overall competitiveness of contests involving an incumbent is enhanced (Goodliffe and Magleby 2001, 65; Boatright 2013, 91; Boatright 2014a, 225). Incumbent primaries, to be sure, historically have experienced considerably lower levels of competition than have challenger party primaries or open seat primaries. Yet in the immediate aftermath of redistricting, when the electoral effects of boundary changes are most likely to be felt (Boatright 2014a, 189, 227), a non-trivial number of incumbents face at least a reasonably spirited contest for renomination. Of the 22 election years extending from 1970 through 2012, the three with the most incumbents receiving no more than 75 percent of the primary vote were in the immediate post-redistricting years of 1972, 1992, and 2012; the specific numbers of incumbents failing to

cross this 75 percent threshold ranged from the mid-50s in 1972 to the mid-80s in 1992 (Boatright 2014a, 174).[2]

This pattern of greater competition immediately following redistricting also carries over to renomination defeats themselves. Table 1, which begins with the 1992 election year that will mark the starting point for the subsequent analysis performed in this study, displays the proportions of incumbents losing their renomination battles and, by way of comparison, the proportions of those in the general election who lose. Because an incumbent defeat in a post-redistricting election must necessarily occur in cases where altered district lines pit two incumbents against one another, either in a primary or general election contest, we further calculate defeat rates with incumbent vs. incumbent contests excluded.

In Table 1, both columns of primary election statistics show greater renomination failure following redistricting, especially when incumbent vs. incumbent races are not accounted for. In the first column, 0.035 of incumbents lose, on average, in 1992 2002, and 2012, compared to 0.008 across the ten non-redistricting years. In the second column with two-incumbent races removed, the disparity continues, but less strongly: 0.024 vs. 0.008. General election defeats, on the other hand, are less responsive to redistricting, consistent with the disagreements cited above as to whether redistricting helps or hurts incumbent reelection. In the column including all general election contests, post-redistricting years see a marginal rise in defeats (0.054 vs. 0.049), while with two-incumbent races excluded, defeats are slightly less common after redistricting (0.043 vs. 0.049).

But while it is clear that incumbent primary competitiveness is increased by redistricting, research has not sought systematically to quantify the extent to which changes in the makeup of a district translate into more competition. A long line of research done on general elections has generated precise estimates of the difference that the two basic elements of redistricting—changing the underlying partisanship of the district, and bringing in new constituents previously unrepresented by the member—make on reelection margin (Crespin 2005, 257-59; McKee 2008, 126-29; Hood and McKee 2013 206-16; McKee 2013, 634-39).[3] In the case of primary competitiveness, change in partisanship likely is of minor relevance, except perhaps under the relatively rare circumstances where, as a consequence of making a district substantially more (less) marginal in partisanship, the utility of winning a nomination was altered in the eyes of potential intra-party competitors against the incumbent, thus making them less (more) likely to run.

The new constituents variable, however, certainly should take an electoral toll regardless of whether the incumbent is contesting the primary or general election. New constituents are unlikely to vote as solidly for the incumbent as are retained constituents, given the formers' lack of capacity to support the member on a "personal vote" basis; i.e., on the basis of familiarity with constituency service activities or of name recognition. This factor might even cost the incumbent a greater share of the primary than the general election vote, given that there would be less time to personally cultivate support from the appended areas of the district before the onset of the primary than before the onset of the November election.[4] As an extreme case in point, consider moderate Democratic incumbent Tim Holden, who as of 2012 had held on to his northeast Pennsylvania seat

for two decades. Two years earlier, for the first time in his congressional career, Holden faced a primary challenge, warding off a more liberal opponent by a 30 percentage point margin. But the 2012 redistricting plan, signed into law only four months before primary day, produced too much population disruption for Holden to overcome—a second challenger running to his left prevailed by 14 percentage points in a district composed of 79 percent new constituents (Toeplitz 2012, 887).

The standard practice of researchers when dealing with primaries simply has been to enter, in an equation including various possible determinants of primary competition, a dummy variable differentiating districts where boundary lines have been redrawn from districts left intact by the redistricting process. Boatright, whose recent book is the most comprehensive treatment of House and Senate primary elections, defends this practice by asserting that specific tabulations of district change resulting from redistricting are unlikely to be "more informative than simply noting that primaries tend to be more competitive in redistricting years" (2014a, 227).

Yet without relating measures of the magnitude of district change to incumbent primary outcomes, we cannot know how the effects of redistricting on incumbent primary competitiveness compare with the effects produced in the challenger party primary. Here, we can expect that change in underlying district partisanship, while having as noted above little effect on competition in the incumbent's primary, would have a strong impact on competition in the challenger party's primary, given the power of partisanship to determine incumbent vulnerability in the subsequent general election. Still another important question concerns whether partisanship change or the addition of new constituents has the greater effect on challenger party primary competitiveness; i.e., on

opposition politician calculations of the general election vulnerability of the seat and hence the desirability of contesting the nomination.

In this study, we shall jointly analyze the effects of district change on incumbent and challenger party primaries in the first election year following redistricting, at which time—as mentioned above—the electoral effects of redistricting are most pronounced. Consideration is only given to districts where there is two-party competition in the general election; i.e., where there is at least one candidate seeking the nomination of the challenger party.[5] The three most recent redistricting cycles of 1991-92, 2001-02, and 2011-2012 will be analyzed. The starting point is mandated by the fact that the 1991-92 cycle was the first for which the Geographic Correspondence Engine of the Missouri Census Center provided the necessary data on the number of new constituents added to a district by redistricting.

Data and Methods

Unlike the case with general elections, measuring the competitiveness of primary elections lends itself to a wide range of possibilities. Here, we have chosen four different measuring instruments, each of which has been employed in past research. The first three are very straightforward: the number of candidates in each primary, the proportion of the overall primary vote received by the member in the incumbent party primary (and by the first place finisher in the challenger primary), and the margin between these candidates' proportion and that received by the strongest competitor. (When run-off primaries are used to determine the eventual nominee, only votes received in the initial primary are considered.) The final measure, sometimes referred to as the index of "fractionalization," is defined as $1-\Sigma[(C_1)^2 +(C_2)^2+(C_3)^2+ - - - (C_n)^2]$, where the C_i's represent the vote

proportions received by the n candidates in a race (Boatright 2014a, 124-25; Boatright 2014b, 20). The fractionalization index, in contrast to the second and third measures above, has the virtue of incorporating information on all primary contenders, at the same time that, in contrast to the first measure, it reduces the contribution of candidates who only receive small shares of the vote (Herrnson and Gimpel, 1995, 119). Larger numbers of candidates and higher fractionalization scores, of course, signify greater competitiveness, while the opposite is true for the two primary margin measures.

Because our focus is on how redistricting-induced changes in district composition affect primary competitiveness, the dependent variable is most appropriately expressed as a change variable as well. We therefore compute for each incumbent the difference between the competitiveness of his/her primary in the immediate post-redistricting election and the competitiveness experienced as an incumbent two years earlier. Thus, the analysis is limited only to those incumbents who, in the post-redistricting election, have at least two terms of seniority. The inclusion of freshman members is precluded because of the very disparate electoral circumstances that freshmen encounter when they initially win nomination as a non-incumbent. These conditions, ranked in descending order according to the expected degree of competitiveness faced, are defeating a same-party incumbent, winning a primary in a district where a same-party incumbent is retiring, winning a primary where an opposition-party incumbent is retiring, and winning a primary where an opposition-party incumbent is running for another term. As a result, the inter-election change in primary competitiveness for freshmen would be highly variable for reasons having nothing to do with redistricting. Any greater threat posed by redistricting to renomination performance that might be posed by the shorter period of

time freshmen have to establish name recognition and discharge constituent service functions could well be drowned out by this inter-election volatility.[6]

Change in the competitiveness of the challenger party primary across the same two-year span is likewise used as the dependent variable in the paired equation for the other party.[7] Cases across the three sets of redistrictings will be combined together in the form of pooled cross-sectional time series analysis.[8]

Rather than estimating the incumbent and challenger party equations separately, we employ Zellner's Seemingly Unrelated Regressions (SUR) technique to estimate the equations as a multivariate system. The disturbance terms of the equations are likely to be correlated with one another, given the omission of unobservable explanatory variables that have similar effects on both types of primary competition. For example, perceptions arising during the two-year inter-election span that the incumbent has been neglecting constituent service functions in favor of Washington activities might stimulate the emergence of a primary challenger to the incumbent, as well as intensified competition for the challenger party's nomination. In the presence of such disturbance term correlation, the SUR procedure will lead to greater efficiency in estimation.

The two major independent variables in the equations, of course, are the degree to which the post-redistricting population of the House district is made up of previously unrepresented constituents, and change in underlying district partisanship. These variables are operationalized as follows:

New constituents (proportion of constituents in new district who previously were not represented by incumbent)[9]

Partisanship change (two-party vote proportion received in most recent pre-redistricting presidential election by presidential candidate of party opposite that of House member, subtracted from the opposition presidential candidate's two-party vote recomputed to fit new House district lines).

Measuring change in partisanship by way of the actual versus recomputed presidential vote corresponds to the standard technique applied in past research. (Expressing the partisanship change variable in terms of the non-incumbent party's presidential vote serves the purpose of consistency, in that more positive values on both redistricting variables mean more unfavorable tidings for the incumbent.) In the case of the 1991-92 and 2011-12 redistricting cycles, the applicable presidential tallies are those from the 1988 and 2008 elections, respectively. For the 2001-02 cycle, presidential election statistics from 2000 are used.

The control variables in the equations, like the variables for new constituents and partisanship shifts, are those with the ability to change the competitiveness of primaries from the pre-redistricting to post-redistricting year. Variables, on the other hand, that affect inter-district competition in a single election year, but are unlikely to affect inter-election change in competition, are not included in the equations. For example, members of more highly professionalized state legislatures are more reluctant than those in less professionalized bodies to relinquish their positions for the risks involved in a bid for Congress (Carson, Crespin, Eaves, and Wanless 2011, 472-74), but it is highly improbable that the level of professionalization in an individual state legislature could

change enough over a mere two year period to affect primary contestation.[10] The following control variables are used:

Seniority (number of years between incumbent's initial election to Congress and the post-redistricting election)

Scandal (1 if incumbent has been involved in scandal that first surfaced during the inter-election period; 0 otherwise)[11]

Growth in black population (1 if, in case of white Democratic representative, new district is at least 25 percent African-American and the percentage exceeds that before redistricting; 0 otherwise)

Change in type of primary system (1 if state moves from open to closed primary system during inter-election period; 0 if system stays the same; -1 if state moves from closed to open system)

Incumbent's party (1 if incumbent is Republican; 0 if Democrat)

2000-02 period (1 for primary competitiveness changes analyzed from 2000-02; 0 otherwise)

2010-12 period (1 for primary competitiveness changes analyzed from 2010-12; 0 otherwise)

Incumbent's party∗2000-02 period (incumbent's party interacted with 2000-02 variable)

Incumbent's party∗2010-12 period (incumbent's party interacted with 2010-12 variable).

We expect that as they accumulate greater seniority, incumbents will encounter accelerated levels of primary opposition. As Boatright points out, over time an expanding

pool of congressional aspirants may arise within the incumbent's party who are no longer willing to wait for the seat to open up (2014a, 120). Transgressions such as the House Banking scandal of early 1992 can markedly impair incumbent primary safety (Alford, Teeters, Ward, and Wilson 1994, 793-97; Jacobson and Dimock 1994, 606-16; Hirano and Snyder 2012, 7-9; Basinger 2013, 392-93; Boatright 2013, 24, 29, 33-34; Boatright 2014a, 189, 225). Among members seeking to retain their seats in 1992, almost one quarter with 100 or more overdrafts lost their renomination battle later that year (Jacobson 2013, 174). The black population growth variable takes into account cases where redistricting makes a white Democratic representative's district more heavily African-American and where the resulting percentage of the population is large enough to offer an African-American challenger at least some hope of victory. Branton has shown that minority candidates are more common in more heavily minority districts, and it might be expected that increases in their numbers would occur when redistricting afforded the opportunity to argue that effective advocacy on behalf of the expanded minority population required a minority member (2009, 464). Closed primary systems have been found to have more competition than do open systems (Brady, Han, and Pope 2007, 86; Boatright 2013, 90); hence, in the small number of cases where a new system is adopted during the pre-redistricting to post-redistricting period, transitions from open to closed systems should induce greater competitiveness, while transitions in the reverse direction should reduce competitiveness. The incumbent party variable and the two-time period dummy variables (with 1990-92 serving as the reference category) tap any differences in competitiveness existing between the parties and among the periods,

respectively. Finally, the two interaction variables allow for inter-party differences in competitiveness to vary according to the specific period being analyzed.

The above set of independent variables will be entered into the equations for both incumbent and challenger party primaries, with one exception. As mentioned above, greater seniority might stimulate more competition in the incumbent's primary because of growing numbers of potential intra-party challengers lacking the patience to simply wait until the member retires. In the challenger party primary, however, this factor does not apply. Empirically as well, Boatright (2014a, 153) finds that incumbent seniority has no bearing on competitiveness in the challenger party primary, an outcome that was replicated when we performed our own analysis. On the other hand, two variables that likewise were embedded in hypotheses specifically pertaining to incumbent primaries are included in both the incumbent and challenger party equations. The black population growth variable belongs in the challenger party equation, because a more heavily black Democratic district is likely to deter Republicans from entering their own party's primary. Also, competition for the challenger party's nomination might be whetted by the prospect of a scandal-impaired incumbent in the general election, just as scandal might encourage contesting the incumbent's own renomination.

The Impact of New Constituents and Change in Partisanship on Incumbent and Challenger Party Primaries

Table 2 presents the results of the SUR estimation. Two columns appear for each measure of primary competitiveness, the first pertaining to the incumbent primary and the second to the challenger party primary. Differences in the way redistricting affects the two types of primaries are readily apparent. In all four SUR analyses, incumbent

primaries become more competitive when a greater proportion of new constituents comprises the post-redistricting district. Every parameter is significant at the p<.01 level. The addition of new constituents, on the other hand, is considerably less important from the perspective of competition in the opposition party. While all parameters of this variable are properly signed, only that appearing in the equation employing the number of candidates as the dependent variable is significant. In contrast, the effect of district partisanship becoming less favorable to the incumbent's party is felt only within the challenger party primary. All parameters are significant at p<.01 or better, whereas none is significant in the incumbent primary equations.

To convey a sense of the average substantive impact of these redistricting variables in enhancing competition, at the bottom of Table 2 we have multiplied their mean values computed across all districts by their parameter values. Impacts are computed only in cases where the parameters are significant.[12] In a district experiencing the mean proportion of new constituents (0.236), an increase of 0.135 primary challenger opposing the incumbent can be expected, as well as an increase of 0.031 in the fractionalization index. With regard to the remaining two measures of change in competitiveness, where heightened competition is signified by negative parameters, the mean proportion of new constituents lessens the incumbent's share of the primary vote by 0.025 and his/her margin relative to that of the leading opponent by 0.04.[13] In the case of challenger party primaries, for which only the parameter in the first regression was significant, an increase of 0.114 candidate can be expected as a result of mean population change, somewhat below the level in incumbent primaries.

On the partisanship change variable, which only affected challenger party competitiveness, the average district experienced no net swing, so competition was unaffected in the aggregate. From the standpoint just of districts that did experience anti-incumbent shifts in partisanship, however, the mean such shift (0.027) multiplied by each of the four parameters yields a 0.131 gain in the number of challenger party candidates and a 0.027 increase in fractionalization, plus a drop of 0.023 in the challenger party frontrunner's share of the vote and a 0.038 reduction in the frontrunner's margin over the second place finisher. So for these districts, the impact of anti-incumbent partisanship change in bolstering challenger party competition is comparable to the impact of new constituents across all districts in increasing incumbent primary competition.

Finally, with regard to the control variables, higher seniority and scandal consistently work to stiffen competition for the incumbent. But while this is as hypothesized, there is no sign that incumbent scandal has a similar effect in making challenger party primaries more competitive. Also, competitiveness in neither kind of primary is affected by the variables involving growth in the black population or change in the type of primary system. The variables for party and time period, plus their interactions, indicate that inter-election changes in competitiveness during the more recent two periods have become less positive than those during the 1990-92 reference period, and that this has been particularly true for Democrats in challenger party primaries.

The key inference so far is that prospective candidates for congressional nomination look to different facets of the redistricting process in deciding whether to run, depending upon whether they belong to the incumbent or challenger party. Candidates

contemplating the formidable task of opposing an incumbent are sensitive to the number of new constituents who have been appended to the member's district. Those interested in the challenger party nomination are motivated more by the extent to which the partisanship of the new district has been tilted against the incumbent, perhaps understandable in light of the increasing centrality of district partisanship for general election outcomes in an era of intense polarization (Jacobson 2015). We have been dealing, however, with House districts irrespective of the incumbent's general election security. But what if the analysis were replicated only for more marginal districts? Lesser utility likely would adhere to winning the incumbent party nomination in such districts, while the opposite would be true with regard to the utility of winning the challenger party nomination. For this subsequent analysis, we select from within each period those incumbents whose margin in the pre-redistricting general election was below the mean overall incumbent margin recorded that year. SUR continues to be employed in the estimation, and the same independent variables as before enter the equations.

Table 3 confirms our expectations regarding the redistricting variables. In the incumbent primary equations, the magnitude of opposition to the member is still dependent upon the proportion of new constituents, but not so much as when districts regardless of marginality were considered. Regardless of the competitiveness measure, the parameter for the new constituents variable is smaller in size than before, and in the case of the incumbent's margin vis á vis that of the nearest opponent, the parameter slips narrowly outside of the significance range. Furthermore, when the mean proportion of new constituents in more marginal districts (0.243) is multiplied by the significant parameters, the impact of this variable on competitiveness is always less than in Table 2.

The most notable departure from the previous analysis is that the scandal variable, which always was significant at least at p<.01 when marginality was not taken into account, now fails to be significant in every incumbent party regression. Considered together with the weakening of the new constituents variable, this finding suggests that when the general election value of winning a nomination is lower, calculations about the incumbent's vulnerability in the primary become less relevant to prospective opponents' decision whether to take on the member. Finally, change in district partisanship continues to have no effect on incumbent party competitiveness.

In challenger party primaries, on the other hand, both redistricting variables now are more important than before in determining competitiveness. The new constituents parameter, which was only significant in Table 2 when the dependent variable involved the number of candidates, currently is significant in the fractionalization regression as well, and it falls barely shy of significance in the regression employing the winner's share of the primary vote (p=.056). Additionally, the size of all new constituents parameters is greater than in Table 2, as is the calculated impact for the number of primary candidates appearing at the bottom of the table (which is the only impact that can be compared with its counterpart in the prior analysis). Partisanship change, as was true in the analysis disregarding marginality, always is significant, and like the proportion of new constituents it has larger parameters in these more marginal districts. Despite the growth in these parameters, however, because mean change in incumbent party partisanship modestly benefits the incumbent (i.e., the value here is -0.009, where the negative sign denotes partisanship change in the incumbent's favor), competition in the average challenger party primary can be expected to diminish slightly. But if only districts with

anti-incumbent swings in partisanship are considered in computing the impact scores, the mean such anti-incumbent swing (0.021) makes for growth in competitiveness that exceeds the comparable levels found in Table 2. So in districts where the incumbent's more marginal performance in the preceding general election in and of itself points to better opposition party odds of flipping the seat, both the addition of new constituents and a partisan shift against the incumbent assume greater weight in calculations by prospective challengers of whether redistricting can provide the extra boost needed to actually win in November.

In Table 4, we present the analogous results just for districts in which the incumbent won reelection by margins above the mean in the prior pre-redistricting year. The main findings can be expected, of course, to counterbalance the results obtained in more marginal districts, meaning that we can move through them more swiftly than before. The proportion of new constituents affects incumbent party competitiveness more than it did in the previous table, and this is true of scandal as well. In contrast, the new constituents variable now is consistently insignificant for the challenger party, and partisanship change, while still retaining significance, has smaller parameters than before.[14] So the inference drawn from the Table 4 results complements what was inferred above. The greater the odds prior to redistricting that winning an incumbent party nomination will lead to victory in November, the more prospective primary challengers to the incumbent will rely upon indicators of the incumbent's renomination vulnerability in determining whether to run. For prospective candidates of the challenger party, better initial odds of incumbent party success in November mean that less reliance will be placed upon the proportion of new constituents or shifts in partisanship as a basis for

deciding whether to run, since it is very unlikely that such changes will be able to overcome the incumbent party's starting advantage.

Our final analysis focuses on primary contests in which redistricting pits two incumbents against one another, which were excluded from the prior analyses (along with the corresponding primaries of the non-incumbent party). Two-incumbent races afford another way to assay the electoral importance of retained constituents for primary competition. Specifically, we are interested in whether the incumbent with the greater new district proportion of previously represented constituents is electorally advantaged. Simple analysis directed at this question has been performed by Boatright, who finds that in incumbent vs. incumbent primaries from 1992 to 2012, the member retaining the greater share of constituents prevailed barely more than half the time (2014a, 229-30). We wish to move beyond this point, however, to see whether the specific numbers of retained constituents on each side make a difference on primary margins. We also differ from Boatright in employing multivariate analysis. Across the three redistricting cycles that are considered here, there are only 16 incumbent vs. incumbent face offs, so a very measured reading of the results is mandated.[15]

The dependent variable in Table 5 is the victor's proportion of the total primary vote. (This is the near-equivalent of the winner's share of the vote cast just for the two incumbent candidates, since in all but a small number of cases no non-incumbent entered the primary.) For the redistricting variable included in the equation, we use the proportion of constituents in the new district previously represented by the winner, minus the proportion previously represented by the loser. If retained constituents help explain primary outcomes, then this variable should positively affect the winner's margin. There

is no reason, of course, to think that the other component of redistricting—change in district partisanship—should matter in this intra-party analysis. As control variables, the party in which the primary takes place (1=Republican, 0=Democrat), and the difference between the seniority of the winner and the seniority of the loser are added. Earlier we found that non-incumbents were more likely to challenge higher seniority members in the primary, arguably because of mounting frustration over waiting for the member to retire. But nothing in that finding implies that seniority in and of itself impairs electoral performance; rather, we hypothesize that in the very different situation we are now facing where voting boils down to a choice between two incumbents, more senior incumbents will be better able to sell themselves to voters on the basis of the extra clout available to influence policy and bring economic benefits to the district.

In the OLS regression performed in Table 5, the difference between the winner's and loser's proportion of retained constituents is indeed significantly related to the winner's primary showing. For every 10 percent difference in retained constituents, the winner can be expected to gain an additional 0.92 percent of the vote. The signs of the remaining parameters show that Republican and Democratic winners in incumbent vs. incumbent primaries receive equal shares of the vote, and that a seniority edge for the winner is related to his or her electoral advantage. But the parameter of the latter variable falls too far shy of significance (p=.111) to make for confidence in the interpretation. All in all, the results of Table 5 and those of the previous analyses suggest the importance to incumbents of holding on to as many old constituents as possible, both from the standpoint of warding off potential renomination challenges (especially in safer districts),

as well as from the standpoint of defeating a fellow party incumbent in the relatively rare case where two members have been thrown together into the same district.[16]

Summary and Conclusions

Redistricting makes a difference on primary election competitiveness, but in ways that vary according to whether incumbent or opposition party primaries are involved. Furthermore, the effects of redistricting are conditioned by the marginality of the seat before redistricting. In both incumbent and opposition party primaries, potential challengers are strategic in the sense of weighing redistricting-induced changes more heavily in their decision whether to run when winning the nomination is more likely to lead to victory in the ensuing general election.

Those considering a primary challenge to an incumbent take into account the extent to which new constituents have been added to the district in assessing the incumbent's vulnerability to a renomination upset. But in districts that, based upon the pre-redistricting electoral outcome, appear less safe for the upcoming general election, the importance of new constituents as a factor in entering the primary is diminished. More new constituents do afford challengers greater opportunity to wrest the nomination from the incumbent. Yet the likelihood of such nomination subsequently leading to a seat in Congress will be lower in a more marginal district, thus contributing to placing less reliance on this redistricting factor as a determinant of the candidacy decision.

Prospective contenders for the opposition party nomination only modestly utilize the number of new constituents in deciding whether to run. Much more important to them in their candidacy decision are district partisanship shifts. Both forms of redistricting change take on added weight in the case of challenger primaries in more marginal

incumbent districts, given that sizable increments of new voters and of incumbent-unfriendly partisanship alteration in districts already less secure before redistricting can be the winning combination that tilts the election to the challenger party. So while redistricting poses less of a renomination threat to incumbents in more marginal districts, the more intense opposition party competition arising there in response to redistricting is likely to mean, on the downside, that the incumbent will then have to face a stronger general election challenger.

To be sure, many motives exist for entering a primary beyond the strategic goal of being elected to Congress that we have emphasized. Challengers may chiefly wish, for example, to promote strongly held issue positions or simply to fulfill a sense of civic responsibility. Such non-strategic motivations, it has been suggested, are most common in the case of primary challengers to incumbents (Canon 1990, 81-82). So it is all the more striking that our own results still largely point to the electorally-focused nature of prospective candidates' decisional calculus, even among those contemplating the long odds of defeating a Congress member for renomination. Perhaps for prospective intra-party challengers to incumbents, risking a primary challenge to an incumbent who must cope with numerous new constituents may not seem so electorally rash in the end, when pitted against the probability that delaying a run until after the seat opens up would then require victory over a large primary field of other open seat contenders.[17] And even an unsuccessful but credible challenge to the incumbent may lay the groundwork for nudging the member into premature retirement, letting the challenger stake a claim as heir apparent the next time around (Banks and Kiewiet, 1989, 1012-13).

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Table 1 Proportions of U.S. House Incumbents Defeated in Primaries and General Elections, 1992-2016

Election Year	Proportion of All Incumbents in Primaries Who Lose	Proportion of Incumbents in Primaries Who Lose—Two-Incumbent Primaries Excluded	Proportion of All Incumbents in General Election Who Lose	Proportion of Incumbents in General Election Who Lose—Two-Incumbent General Elections Excluded
1992	.052 (19/368)	.047 (17/364)	.069 (24/349)	.056 (19/339)
1994	.010 (4/387)	.010 (4/387)	.089 (34/383)	.089 (34/383)
1996	.005 (2/384)	.005 (2/384)	.055 (21/382)	.055 (21/382)
1998	.002 (1/402)	.002 (1/402)	.015 (6/401)	.015 (6/401)
2000	.007 (3/403)	.007 (3/403)	.015 (6/400)	.015 (6/400)
2002	.020 (8/398)	.013 (5/392)	.021 (8/390)	.013 (5/384)
2004	.005 (2/402)	.005 (2/402)	.018 (7/400)	.018 (7/400)
2006	.008 (3/398)	.008 (3/398)	.056 (22/395)	.056 (22/395)
2008	.010 (4/403)	.010 (4/403)	.048 (19/399)	.048 (19/399)
2010	.010 (4/396)	.010 (4/396)	.138 (54/392)	.138 (54/392)
2012	.033 (13/392)	.013 (5/376)	.071 (27/379)	.060 (22/369)
2014	.013 (5/395)	.013 (5/395)	.033 (13/390)	.033 (13/390)
2016	.013 (5/392)	.010 (4/390)*	.021 (8/387)	.021 (8/387)
Mean 1992-2016	.014	.012	.050	.047
Mean 1992, 2002, & 2012	.035	.024	.054	.043
Mean, Except 1992, 2002, & 2012	.008	.008	.049	.049

Note: Entries in parentheses are number of incumbent losers divided by total number of incumbents running in electoral situation outlined at top of column. 1992-2014 statistics derived from Jacobson and Carson (2016, 37), supplemented by information on two-incumbent races taken from *CQ Almanac* (which was the source of all 2016 statistics).

* Court-ordered redistricting in North Carolina resulted in one Republican incumbent vs. incumbent primary in 2016.

Table 2 Effects of New Constituent Addition and Partisanship Change on Inter-Election Shifts in Primary Competitiveness, 1990-92 to 2010-12

	Index of Fractionalization		Number of Primary Candidates		Proportion of Primary Vote Won by Incumbent or Challenger		Diff. between Vote for Incumbent/Challenger and Strongest Opponent	
Variable	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**
New constituents	.571 (.233)**	.485 (.286)*	-.107 (.036)**	-.052 (.059)	-.168 (.065)**	-.048 (.105)	.130 (.047)**	.078 (.069)
Partisanship change	.448 (1.093)	4.867	.180 (.167)	-.847 (.277)**	.346 (.303)	-1.389 (.490)**	-.141 (.220)	1.000 (.324)**
Seniority	.013 (.005)**	- - -	-.002 (.001)**	- - -	-.004 (.001)**	- - -	.003 (.001)**	- - -
Scandal	1.038 (.228)***	.144 (.279)	-.164 (.035)***	.004 (.058)	-.250 (.063)***	.019 (.102)	.145 (.046)**	.001 (.068)
Growth in black population	-.004 (.345)	.136 (.423)	.057 (.053)	-.029 (.088)	.136 (.096)	-.014 (.155)	-.077 (.069)	.050 (.102)
Change in type of primary system	-.195 (.357)	.295 (.466)	-.013 (.055)	-.032 (.097)	-.071 (.099)	-.055 (.171)	-.020 (.072)	.024 (.113)
Incumbent's party	.090 (.153)	.134 (.187)	-.036 (.023)	-.002 (.039)	-.057 (.042)	.011 (.069)	.043 (.031)	-.009 (.045)
2000-02 period	-.244 (.133)	-.640 (.162)***	.038 (.020)	.130 (.034)***	.060 (.037)	.220 (.060)***	-.041 (.027)	-.161 (.039)***
2010-12 period	-.415 (.141)**	-1.248 (.173)***	.076 (.022)***	.198 (.036)***	.121 (.039)**	.297 (.063)***	-.087 (.028)**	-.241 (.042)***
Incumbent's party* 2000-02 period	-.039 (.205)	-.170 (.251)	.040 (.031)	.005 (.052)	..067 (.057)	-.012 (.092)	-.045 (.041)	.005 (.061)
Incumbent's party* 2010-12 period	-.004 (.223)	.885 (.273)**	.012 (.034)	-.172 (.057)**	.027 (.062)	-.282 (.100)**	-.011 (.045)	.224 (.066)**
Constant	.033 (.129)	.432 (.131)**	-.007 (.020)	-.081 (.027)**	-.019 (.036)	-.137 (.048)**	.002 (.026)	.096 (.032)**
R^2	.074	.131	.100	.090	.080	.073	.070	.096
Impact of New constituents	.135	.114	-.025	- - -	-.040	- - -	.031	- - -
Impact of Partisan-ship change at Overall Mean	- - -	.000	- - -	.000	- - -	.000	- - -	.000
Impact of Partisan-ship change Only at Mean Value for Districts with Anti-incumbent Shifts	- - -	.131	- - -	-.023	- - -	-.038	- - -	.027

Note: Equations based on SUR estimation. N of cases for all equations is 611. One-tail tests used to determine significance of New constituents through Change in type of primary system variables; two-tail tests apply to all other variables. Impacts equal mean value of redistricting variable multiplied by parameter of variable (significant parameters only).
***Significant at .001 level; **significant at .01 level; *significant at .05 level.

Table 3 Effects of New Constituent Addition and Partisanship Change on Inter-Election Shifts in Primary Competitiveness, 1990-92 To 2010-12

	Index of Fractionalization		**Number of Primary Candidates**		**Proportion of Primary Vote Won by Incumbent or Challenger**		**Diff. between Vote for Incumbent/Challenger and Strongest Opponent**	
Variable	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**
New constituents	.488 (.291)*	1.084 (.391)**	-.097 (.048)*	-.127 (.080)	-.138 (.089)	-.170 (.141)	.103 (.062)*	.175 (.092)*
Partisanship change	2.387 (1.582)	7.581 (2.124)***	.052 (.263)	-1.133 (.433)**	.285 (.484)	-1.931 (.766)**	-.041 (.339)	1.319 (.499)**
Seniority	.020 (.007)**	- - -	-.003 (.001)**	- - -	-.005 (.002)**	- - -	.004 (.001)**	- - -
Scandal	-.128 (.314)	-.367 (.423)	-.062 (.052)	.125 (.086)	-.102 (.096)	.245 (.153)	.023 (.067)	-.143 (.099)
Growth in black population	-.590 (.459)	-.101 (.614)	.083 (.076)	.033 (.125)	.155 (.140)	.110 (.222)	-.121 (.098)	-.031 (.144)
Change in type of primary system	-.315 (.513)	-.239 (.804)	-.027 (.085)	.004 (.163)	-.104 (.157)	-.051 (.290)	-.063 (.110)	-.036 (.188)
Incumbent's party	.121 (.190)	.073 (.253)	-.048 (.032)	.006 (.052)	-.074 (.058)	.019 (.091)	.063 (.041)	-.025 (.059)
2000-02 period	-.172 (.184)	-.707 (.245)**	.021 (.031)	.134 (.050)**	.031 (.056)	.225 (.088)*	-.016 (.039)	-.163 (.058)**
2010-12 period	-.324 (.174)	-1.453	.064 (.029)*	.195 (.048)***	.099 (.053)	.276 (.085)**	-.065 (.037)	-.244
Incumbent's party* 2000-02 period	-.195 (.265)	-.183 (.355)	.076 (.044)	.012 (.072)	.127 (.081)	.000 (.128)	-.095 (.057)	-.007 (.083)
Incumbent's party* 2010-12 period	.307 (.307)	1.126 (.416)**	.014 (.051)	-.174 (.085)*	.036 (.094)	-.271 (.150)	-.012 (.066)	.248 (.098)*
Constant	.000 (.166)	.443 (.180)*	.001 (.028)	-.086 (.037)*	-.003 (.051)	-.143 (.065)*	-.013 (.035)	.101 (.042)*
R^2	.067	.183	.075	.108	.060	.089	.061	.120
Impact of New constituents	.119	.263	-.024	- - -	-.034	- - -	.025	.043
Impact of Partisan-Ship change at Overall Mean Value	- - -	-.068	- - -	.010	- - -	.017	- - -	-.002
Impact of Partisan-ship change Only at Mean Value for Districts with Anti-Incumbent Shifts	- - -	.159	- - -	-.024	- - -	-.041	- - -	.028

Note: Equations based on SUR estimation. N of cases for all equations is 320. One-tail tests used to determine significance of New constituents through Change in type of primary system variables; two-tail tests apply to all other variables. Impacts equal mean value of redistricting variable multiplied by parameter of variable (significant parameters only). ***Significant at .001 level; **significant at .01 level; *significant at .05 level.

Table 4 Effects of New Constituent Addition and Partisanship Change on Inter-Election Shifts in Primary Competitiveness, 1990-92 To 2010-12 (Safer Districts Only)

	Index of Fractionalization		Number of Primary Candidates		Proportion of Primary Vote Won by Incumbent or Challenger		Diff. between Vote for Incumbent/Challenger and Strongest Opponent	
Variable	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**	**Incumbent Party**	**Challenger Party**
Partisanship change	-.812 (1.589)	3.970 (1.828)*	.299 (.230)	-.950 (.391)**	.468 (.414)	-1.552 (.690)*	-.299 (.312)	1.143 (.465)**
Seniority	.005 (.008)	- - -	-.001 (.001)	- - -	-.002 (.002)	- - -	.002 (.002)	- - -
Scandal	2.055	.666 (.363)	-.255	-.114 (.078)	-.383	-.193 (.137)	.255	.145 (.092)
Growth in black population	.216 (.511)	.403 (.588)	.077 (.074)	-.104 (.126)	.192 (.133)	-.157 (.222)	-.097 (.101)	.147 (.150)
Change in type of primary system	.028 (.479)	.810 (.551)	-.012 (.069)	-.085 (.118)	-.054 (.125)	-.111 (.208)	.023 (.094)	.100 (.140)
Incumbent's party	.018 (.241)	.198 (.276)	-.013 (.035)	-.017 (.059)	-.024 (.063)	-.005 (.104)	.011 (.047)	.018 (.070)
2000-02 period	-.218 (.187)	-.532 (.216)*	.047 (.027)	.117 (.046)*	.081 (.049)	.196 (.081)*	-.058 (.037)	-.147 (.055)**
2010-12 period	-.421 (.225)	-.944 (.258)***	.083 (.033)*	.209 (.055)***	.138 (.059)*	.338 (.097)**	-.102 (.044)*	-.241 (.066)***
Incumbent's party* 2000-02 period	.154 (.310)	-.184 (.356)	-.010 (.045)	.008 (.076)	-.016 (.081)	-.007 (.134)	.021 (.061)	.004 (.091)
Incumbent's party* 2010-12 period	-.081 (.332)	.586 (.380)	-.009 (.048)	-.182 (.081)*	-.010 (.086)	-.325 (.144)*	.013 (.065)	.211 (.097)*
Constant	.031 (.193)	.451 (.189)*	-.014 (.028)	-.078 (.041)	-.033 (.050)	-.133 (.071)	.015 (.038)	.094 (.048)
R^2	.184	.099	.168	.096	.134	.083	.118	.096
Impact of New constituents	.182	- - -	-.031	- - -	-.052	- - -	.041	- - -
Impact of Partisan-ship change at Overall Mean Value	- - -	.036	- - -	-.009	- - -	-.014	- - -	.010
Impact of Partisan-ship change Only at Mean Value for Districts with Anti-Incumbent Shifts	- - -	.119	- - -	-.029	- - -	-.047	- - -	.034

Note: Equations based on SUR estimation. N of cases for all equations is 291. One-tail tests used to determine significance of New constituents through Change in type of primary system variables; two-tail tests apply to all other variables. Impacts equal mean value of redistricting variable multiplied by parameter of variable (significant parameters only). ***Significant at .001 level; **significant at .01 level; *significant at .05 level.

Table 5 Effect of Difference between Candidates' Proportions of Retained Constituents on Winning Primary Margin in Incumbent vs. Incumbent Matchups

Variable	OLS Coefficient
Difference between proportion of constituents previously represented by winner and proportion previously represented by loser	0.092 (.051)*
Party of winner	0.000 (.028)
Difference between seniority of winner and seniority of loser	0.001 (.001)
Constant	0.573 (.017)***
R^2	0.320
N of cases	16

Note: Equations based on OLS estimation. One-tail tests used to determine significance of all variables (except for Constant).
***Significant at .001 level; **significant at .01 level; *significant at .05 level.

[1] Note, however, that Persily after his article was written came to the conclusion that the subsequent 2001-02 round of redistricting did in fact work to enhance incumbent safety (2005, 81).
[2] Likewise, the competitiveness of opposition party primaries tends to increase in election years immediately following redistricting (Boatright 2014a, 152, 155, 225).
[3] These two changes certainly are not autonomous of one another, in that line drawers intending to alter partisanship often will be compelled, especially in the case of underpopulated districts, to bring in constituents from surrounding districts who largely support the party to be strengthened. In the case of overpopulated districts, however, altering partisanship frequently will be a matter for the most part of removing constituents heavily of the party that is to be weakened. At the extreme, partisanship in the latter type of district could be appreciably transformed absent any influx whatsoever of new constituents.
[4] See Boatright for a discussion of these activities, such as setting up district offices in the newly affixed areas (2004, 448-49).
[5] Districts in Connecticut, Utah, and Virginia where a convention nominating system was used by one or both parties are not included in the analysis.
[6] Note, however, that as we point out later, Boatright makes the case that renomination problems for more senior incumbents should, in general, be more common.
[7] Of course, this means that two-party competition must have existed in both the pre-redistricting and post-redistricting elections used to compute change in competitiveness.
[8] Vermont Representative Bernie Sanders, who was an Independent in both the 2000 and 2002 elections, is excluded from the analysis done for this pair of elections. He likewise is excluded from the 1990-92 analysis for the same reason (besides the fact that he was not an incumbent in 1990). Virgil Goode of Virginia, the other member serving as an Independent during the period we cover, was excluded from the 2000-02 analysis because of his Independent status in 2000 (he switched to

the Republican party in 2002) and because the Democratic challenger in both years was selected by convention.

[9] The data provided by the Missouri Census Center's Geographic Correspondence Engine are in the form of the individual number of constituents transferred into a new district from each applicable district of the old Congress. For the average incumbent, the number of all such transplanted constituents made up 0.244, 0.219, and 0.250 of the new district in 1992, 2002, and 2012, respectively, with a mean across all three Congresses of 0.236.

[10] The advantages of the "first differences" approach we are employing in this study, which obviates the need to be concerned about the effects of observable or non-observable time-invariant independent variables, are discussed at greater length by Liker, Augustyniak, and Duncan (1985).

[11] The list of scandals for the 1990-92 and 2000-02 periods comes from Basinger, Brown, Gulati, and Harris (2013, 8-26); the list for 2010-12 is taken from Basinger (2014, 26-27).

[12] Even though the concern of this study has been with redistricting-induced effects on primary competitiveness, we can make use of the equation in Table 2 dealing with change in the incumbent's margin relative to that of the leading opponent to assess the importance of the new constituent variable across a range of values in producing renomination defeat itself. Here, predicted inter-election change for each member is computed by employing his/her actual values on all independent variables save new constituents, where we first assign to every member a value equal to one standard deviation below the overall mean of .236 (i.e., 0.236-0.184=0.052). Then, equipped with each member's resulting predicted change in relative margin, we determine the number of cases for which such change would have meant renomination defeat in the post-redistricting primary. For example, if the predicted inter-election change were a 0.2 reduction in relative margin for an incumbent winning renomination by 0.15 before redistricting, the incumbent would consequently be expected to lose by 0.05 two years later. The same procedure is then repeated, but with new constituents values set at 0.236 for all members, and finally with new constituents values set at 0.236+0.184=0.420 for all members. Across this two s.d. range of New Constituents values, which encompasses 68.3 percent of the cases, the expected number of renomination losses would be one at 0.052, three at 0.236, and six at 0.420. So the addition of new constituents across the range does indeed have a modest impact in eroding members' normally pronounced chances of survival.

[13] As Boatright (2014a, 149) indicates, a single candidate race for the challenger party nomination might imply the existence of a strong contender who had discouraged other candidates from entering, or a situation in which party leaders had been the source of such discouragement in an effort to maximize party unity. Overall, however, he concludes that non-competitive challenger party primaries reflect low perceived odds of capturing the seat in November. See Lazarus for a further demonstration of this point (2005, 447).

[14] The impact on incumbent primaries of the new constituents variable (with a mean value of 0.229) is, of course, likewise greater than it was before. With regard to the impact of partisanship change on challenger party primaries, the variable's positive mean value (0.009) signifies a modest partisanship shift against the incumbent party, as opposed to the shift of the same magnitude favoring this party in Table 3. Thus, the average impact of partisanship change in safer seats is to make challenger party primaries more rather than less competitive. When only districts with anti-incumbent swings are considered, the impact of partisanship change on challenger party competition is slightly greater in three of the analyses than it was in Table 3. This, however, is simply because the average magnitude of these anti-incumbent party swings in safer districts (0.030) is greater than the average magnitude in more marginal districts (0.021).

[15] As in the preceding analyses, we continue to exclude cases where a single primary encompassing all candidates irrespective of party was held, rather than a separate primary for each party. This meant omitting two of California's "top two" primaries in 2012 (the Democrat vs. Democrat races in the 30th and 44th districts), and one of Louisiana's "blanket" primaries that same year (the Republican vs. Republican race in the 3rd district).

[16] We repeated the procedure outlined in footnote 12 in order to gain a sense of the substantive importance of the constituent retention variable across a range of values in determining renomination success. Here, each case was assigned its actual values on the winner's party and seniority difference variables, while all cases on the retained constituents variable received values

equal to one s.d. below the mean, the mean, and one s.d. above the mean, respectively. In all three simulations, the expected renomination winner was, in fact, the incumbent who actually won. Of course, the ability of change in the retained constituents variable over the two s.d. range to affect the incumbent winner is handicapped by the small number of cases analyzed here, in contrast to the much larger number of cases analyzed in Table 2.

[17] Banks and Kiewiet (1989, 1009-13) find empirical support for this conjecture in the case of "weak" primary challengers to incumbents (defined in terms of having no prior political experience). Weak challengers constituted a heavy majority of all challengers to incumbents in their 1980-84 data set.