

**The Primary Reason for Women's Under-Representation?
Re-Evaluating the Conventional Wisdom**

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When women run in general elections for the U.S. House of Representatives, they win at approximately the same rates as their male counterparts. With the exception of studies of selected congressional districts in particular years, however, scholars have virtually ignored the gender dynamics of the congressional primary process. In this paper, we fill this void, analyzing data from 1958 to 2004 to test hypotheses about women's victory rates and levels of primary competition. Our analysis results in an additional explanation for women's under-representation: the congressional primary process. Although women generally do not win primaries at lower rates than their male counterparts, women in both parties face more primary competition than do men. Gender neutral victory rates, then, are not the result of a gender neutral primary process. Women have to be "better" than their male counterparts in order to fare equally well.

The Primary Reason for Women's Under-Representation? Re-Evaluating the Conventional Wisdom

A central question in the study of women in politics is the relationship between gender and electoral success. Although the first congresswoman, Jeanette Rankin (R-MT), was elected in 1916, as late as 1970, only 10 women served in the United States Congress. And up until the 1970s, nearly half of all congresswomen were elected following the deaths of their husbands (Gaddie and Bullock 2000). During the last decade, the numbers of women running for and attaining political office significantly increased. In 2007, 16 women serve in the U.S. Senate and 71 women serve in the U.S. House of Representatives. These numbers represent an eightfold increase since World War Two and a threefold increase in just the last few decades. The fact remains, however, that men comprise 84 percent of the United States Congress, and the United States ranks 67th worldwide in the percentage of women in the national legislature (Inter-Parliamentary Union 2006). It comes as no surprise, therefore, that scholarly research and journalistic commentary focus not only on women's increasing electoral success, but also on the relative paucity of women elected to Congress.

Research shows that when women run for Congress, women win at the same rates as their male counterparts. What, then, explains the dearth of women candidates and elected officials? Initially, scholars attributed women's exclusion from the political sphere to discrimination and overt bias against women candidates (Githens and Prestage 1977; Kirkpatrick 1974; see also Witt, Paget and Matthews 1994). Over the course of the last twenty years, however, cultural attitudes toward women in politics have evolved and an increasing number of women have sought and won election to public office (Dolan 2004; Woods 2000; Boxer 1994). Indeed, in contemporary congressional elections, after controlling for incumbency status and a variety of

district demographics, women face no systematic bias at the polls (Smith and Fox 2001; Fox 2000; Duerst-Lahti 1998; Cook 1998; Seltzer, Newman and Leighton 1997; Carroll 1994; NWPC 1994). Rather, structural barriers, most notably the incumbency advantage (enjoyed mainly by men) and the proportion of women in the “pipeline” professions that typically precede political careers, are now offered as the main explanations for the low number of women office holders (Thomas and Wilcox 1998; Carroll 1994; Clark 1994; Darcy, Welch and Clark 1994; Darcy and Choike 1986). More recent studies also indicate that women’s lower levels of political ambition may account for their scarcity among candidates and elected officials (Lawless and Fox 2005; Fox and Lawless 2004).

Structural barriers and lower levels of political ambition indeed contribute, in varying degrees, to the gender disparities in the composition of U.S. political institutions. Before we dismiss bias against female candidates as an explanation for women’s under-representation, though, we must examine the winnowing process that precedes *general* elections. Analyses of women’s electoral fortunes have focused almost exclusively on end-stage assessments of the electoral process. There are some notable exceptions. Burrell (1994) examines women’s presence in primary elections from 1968 to 1992. Gaddie and Bullock (2000) analyze women’s electoral success in open seat primaries from 1982 to 1992. Matland and King (2002) present data pertaining to women’s performance in open seat primaries from 1990 to 2000. And Palmer and Simon (2006) show the rise in the number of women running and winning primaries and offer excellent descriptive analyses of incumbent congresswomen and the primaries in their districts from 1956 to 2004. But even these exceptions tend either to present aggregate data with little sophisticated multivariate analysis, or limit themselves to certain types of races in selected cycles. Hence, even though winning a congressional primary is a prerequisite to running in the

general election, the extant literature does not adequately assess the gender dynamics of the primary process.

Based on a rich, new data set that includes all House candidates in primary elections from 1958 to 2004, we fill this void in the literature and offer the first systematic, multivariate assessment of how women fare in congressional primaries *of all types* over time. Our findings reveal a paradox of women's low entry rates and high victory rates in congressional primaries. Generally speaking, women in both major political parties win primaries as often as do their male colleagues. In fact, in some recent cycles, Democratic women win more often than their male counterparts. Although these results may seem encouraging for women's numeric representation, we offer additional evidence that primary competition is more difficult for women than it is for men. Thus, our analysis sheds new light on the large gender gap in men and women's political ambition and representation in our political institutions.

A Gendered Congressional Primary Process? Background and Hypotheses

In U.S. congressional elections, candidates must be entrepreneurs who build their own personal followings. Explicit linkages to political party organizations and platforms, as well as other support networks, are at the candidates' discretion. This "candidate-centered" model is particularly prominent in the organizational structure of contemporary congressional primaries (Jacobson 2004).¹ Indeed, party organizations tend not to choose nominees, and they rarely provide resources in primary campaigns.² To compete, candidates must raise money, build coalitions of support, create campaign organizations, and develop campaign strategies. Although all candidates, regardless of sex, face hurdles in emerging as viable candidates in this

entrepreneurial environment, the candidate-centered system in the United States may pose greater challenges for women than for men.³

Foremost, navigating the candidate-centered congressional primary process involves relying on and utilizing the types of skills, experiences, and characteristics that have historically been impressed upon men but discouraged among women. Women, in essence, still tend not to be socialized to possess the qualities the modern political arena demands of its candidates and elected officials. Whereas men are taught to be confident, assertive, and self-promoting, cultural attitudes toward women as political leaders, expectations of women's family roles, and the overarching male exclusiveness of most political institutions leave an imprint that suggests to women that it is often inappropriate to possess these characteristics (see Lawless and Fox 2005). The degree to which traditional gender socialization manifests itself in the congressional primary process is unknown, although we speculate that it will be more evident at the primary stage of the electoral game, since candidates least able to adapt the qualities voters demand will not make it to the general election.

Even when women overcome some of these obstacles, they may still have a more difficult time than men building name recognition because they tend not to be as well known in political circles. In general, women are less likely than men to be recruited to participate in politics (Burns, Schlozman and Verba 2001). And among politically active individuals who represent the top tier of professional accomplishment, they are less likely than men to receive encouragement and support to run for office from elected officials, community leaders, and political activists (Lawless and Fox 2005; see also Sanbonmatsu 2002; Niven 1998). Certainly, technological changes, including mass mailing and the spread of television, allow candidates the possibility of spreading their message and building a following apart from the party or their links

to the political establishment. But it is plausible that women candidates may have less name recognition and credibility than men when they announce their candidacies and, thus, more ground to cover over the course of the campaign.⁴

Finally, congressional primaries tend to be low turnout, low visibility affairs. We have long known that citizens tend to pay only passing attention to politics, retain only minimal amounts of political information, and often lack the ability to organize the limited amount of political information they do have (Bartels 1996; Delli Carpini and Keeter 1996). Accordingly, in order to assess candidates, individuals invoke myriad heuristics. In general elections, voters can rely on partisan cues to make their vote choice, particularly when they lack other information (Rahn 2003). In congressional primaries, all candidates provide the same party cue, so voters rely on other cues, of which gender is one of the most straightforward (McDermott 1998; 1997). Because women candidates and office holders are generally perceived as more liberal than men candidates of the same party (Koch 2000; McDermott 1998; 1997; Alexander and Andersen 1993), gender stereotyping may pose particular challenges for women in primaries. King and Matland (2002), relying on data from a national survey, show that both male and female Republican party identifiers are less likely (11 percent and 14 percent respectively) to vote for a fictitious female Republican candidate than a fictitious male candidate.

For these reasons, we expect that women will be disadvantaged in the congressional primary process. More specifically, we test the following two overarching hypotheses:

Electoral Success Hypothesis: *Women's victory rates and vote margins will be lower than those of their male counterparts from 1958 to 2004. The gaps will be more pronounced among Republicans and narrow over time.* Based on the aforementioned literature, it is reasonable to expect that women will not fare as well as men in congressional primaries.

Because the political landscape and opportunity structure for women have improved over time, though—the women's movement of the 1970s served as a critical catalyst in expanding opportunities for women, for example—we should see a concomitant decrease in the extent to which men outperform women. Republican women may disproportionately suffer in primaries, whereas Democratic women may not. After all, voters view women in both parties as more liberal than men. While Republican primary voters tend to over-represent the party's conservative base, Democratic primary voters tend to over-represent the party's liberal base.

***Electoral Competition Hypothesis:** Female candidates, particularly Republicans, will face more challenging primary competition than will their male colleagues.* We hypothesize that women run in more difficult electoral environments because potential competitors, recruiters, and gatekeepers consider women more vulnerable (Palmer and Simon 2006; Sanbonmatsu 2006). This means that women will not only draw a larger crowd in their own primaries, but also that they will be more likely to draw a crowd in the other party's primaries when they run as incumbents. Women may also be more likely to challenge other women in all types of primary contests, so as to neutralize the disadvantages they may face associated with being a woman in a congressional primary.

Operationalizing these hypotheses will allow us to assess the gender dynamics of the congressional primary process, an endeavor that is long overdue and key to understanding women's numeric under-representation and gauging prospects for women's full integration into U.S. political institutions.

The Data Set

We base our analyses on primary election candidates and results for the U.S. House of Representatives from 1958 to 2004. We rely on a new data set that includes 33,094 primary candidates running in 19,221 primary contests. We drew the name of every candidate and his/her vote total from each year's *Book of States*.⁵ Perhaps the most laborious aspect of the data collection process entailed discerning each candidate's sex. In many cases, the *Book of States* lists only a first initial, so we searched newspaper records of candidacies in each district in each year, as well as contacted various Secretaries of State and Boards of Election. In the 302 cases in which, despite our best efforts, we were unable to determine the candidate's sex, we dropped the individual from the analysis.⁶ We coded each candidate's state, district, party, sex, vote total, and incumbency status. We arranged the data so that we can analyze outcomes at both the candidate and district levels.⁷

From 1958 to 2004, a total of 2,648 women ran in primaries for the U.S. House of Representatives; women comprised 8 percent of the total House primary candidates. Of the 19,221 primary contests we examine, 87 percent were comprised only of men. Twelve percent of the races included one woman, and one percent (195 races) included more than one woman.

Despite women's under-representation as candidates, the results presented in Table 1 reveal that the number of women running in congressional primaries has increased markedly since 1958. The first substantive jump in women's candidacies happened in 1972, in concert with the rise of the women's movement. The biggest jump in the number of female candidates occurred in 1992's "Year of the Woman," as has been well documented (see Cook, Thomas and Wilcox 1994). That year, a total of 219 women ran in primaries, compared to 116 women in the previous cycle.⁸ By 2004, the total number of women in primaries had dipped slightly to 198,

although women comprised 16 percent of total candidates, and the number of women winning general elections continued to increase because of the incumbency advantage.

Table 1 about here

Table 1 also illustrates that women running in congressional primaries are disproportionately Democratic. This partisan primary gap predates the partisan gap inside Congress, which widened after the 1992 elections. From 1958 to 2004, Democratic women comprise 60 percent of the total pool of female candidates; and in every cycle except 1982, Democratic women outnumber Republican women. The gap begins to widen in 1972, as a handful of Democratic women, perhaps inspired by the women's movement, entered primaries. Although the partisan gap narrowed in the 1994 and 1998 cycles, it has widened since. Further, the *overall number* of Democratic primary candidates is higher than the number of Republican primary candidates. Of the total pool of 33,094 primary candidates, women represent 7 percent of the 14,878 Republicans; they comprise nearly 9 percent of the 18,095 Democrats. Even if national political parties tend to stay out of primary elections, it may be that local Democratic party leaders and activists are playing a stronger role than their Republican counterparts in recruiting and funding women candidates (see Sanbonmatsu 2006).

Gender and Electoral Success: Primary Victory Rates and Vote Margins

Contrary to our expectations, women's primary victory rates and vote margins are not significantly lower than those of their male counterparts. Table 2 presents the victory rates of female and male primary candidates by year and by party. These data include races in which primary candidates win without any opposition. Overall, women and men win at approximately the same rates (57 percent of the time for women, compared to 59 percent of time for men). We

identify minor variations across party: Republican men outperform Republican women (63 percent success rate, compared to 60), whereas Democratic women have a very small edge over their male counterparts (56 percent to 55 percent). None of these small differences, however, is statistically significant.

Table 2 about here

We do uncover larger differences when we turn to an analysis of victory rates over time. During the 1960s, 1970s, and 1980s, male candidates won their primaries more often than female candidates did, particularly among Democrats. In three election cycles during this time, Republican women were significantly less likely than men to win primaries. In six of these election cycles, Democratic women were significantly less likely than men to win their races. The data reveal a rather dramatic change throughout the course of the last decade, though. Democratic women have won more often than Democratic men in every primary election cycle since 1992, and Republican women have won more often than Republican men since 1996.

The data tell a similar story at the district level. Tables 3 and 4 present data on districts with at least one woman competing in a primary. The first column shows the total number of districts with one or more female candidate, by year. A Republican woman consistently won in districts with a woman in the primary at least 60 percent of the time beginning in 1996 (although Republican women began winning more than half the districts with a woman candidate as early as 1962). In Democratic primaries since 1990, a woman won in at least 60 percent of the districts in which at least one woman competed (see column 2). The jagged rise in women's victory rates over time is propelled, in large part, by the increase in female incumbents. But there has also been an increase in the number of primaries sending non-incumbent women to the general election (as shown in the third and fourth columns of Tables 3 and 4).

Tables 3 and 4 about here

Each of these findings withstands controls for other predictors of primary election success. We find no systematic bias against women candidates after we control for incumbency (Jacobson 2004) or whether a non-incumbent candidate ran in the previous election cycle, both of which increase the likelihood of victory. The results also hold after controlling for the total number of candidates in the party's primary, which we expect would decrease the vote share of every candidate.

The top half of Figure 1 presents the coefficients and 95 percent confidence intervals from logistic regression equations for each year predicting whether a Republican candidate won the primary; the bottom half presents the results among Democratic candidates.⁹ The regression coefficients and standard errors, as well as measures of each model's goodness of fit, appear in Appendix A1. As more female candidates enter primaries, the confidence intervals decrease and our estimates become more precise. Among Republicans, women are at a statistically significant disadvantage only in 1960. In other cycles, the coefficients vacillate above and below zero, but they do not achieve statistical significance. Among Democrats, the results are striking. In 1986, women are at a significant disadvantage, but in four election cycles—2004, 1996, 1994, and 1992—women win primaries significantly more often than do their male counterparts.¹⁰

Figure 1 about here

A similar relationship exists between sex and vote share in congressional primaries from 1958 to 2004. The top half of Figure 2 presents the ordinary least square regression coefficients for the effect of being female on vote share among Republican candidates in every election cycle; the bottom half presents the results among Democratic candidates. We include the same control variables in these analyses (see Appendix A2 for the regression coefficients, standard

errors, and goodness of fit). Although there is variation over time, illustrating that models that aggregate across years do not adequately capture the dynamics in particular election cycles, the variation does not systematically help or hurt women. Among Republicans, gender does not exert a statistically significant impact on vote share in primary elections, with the exception of 1960. Democratic women were again at a distinct disadvantage only in 1986. With the exception of 2004, in every election since 1990, Democratic women receive more votes than Democratic men in congressional primaries.¹¹

Figure 2 about here

Across all primaries in the last half century, at the most general level, the conventional wisdom that scholars have applied to general elections applies to congressional primaries: when women run, women win and receive votes at rates equal to their male counterparts, all else equal. Our analysis reveals, however, that there is variation across parties and over time and, as we will show, the competition poses more obstacles for women to overcome.¹²

Gender and Electoral Competition: The Primary Landscape and Size of the Field

For the majority of incumbents facing primary challenges, the incumbency advantage, name recognition, and the perquisites of office minimize the threat of their partisan challengers. Indeed, congressional scholarship that analyzes members' electoral motivations and strategic behavior focuses on general elections (e.g., Mayhew 1974). But primary elections can actually pose the greatest threat to members representing solidly partisan congressional districts. And when incumbents retire or die and their seats are vacated, primaries attract many qualified candidates and generate fierce competition. Our analysis uncovers clear evidence that women face more competition in all cases; it does not matter whether they run as incumbents,

challengers, or for open seats. This finding makes the victory rates we present above all the more impressive.

Perhaps the best gauge of a competitive landscape is whether a candidate even faces a competitor in the primary. Among male candidates from 1958 to 2004, more than 37 percent ran unopposed in their primary or advanced to the general election without a real contest. Among female candidates during the same time period, 35 percent avoided an opponent in the primary. While the difference is not large, it does suggest that women are slightly less likely than men to get a free pass from fellow partisans to the general election. Perhaps women lack the connections within the political establishment that could ward off primary opponents. Thus, women are more likely to find themselves devoting energy to fighting candidates who are leveling attacks at them from different directions at two different stages of the congressional election process.

An additional gauge of primary competition for incumbents and challengers alike is the size of the field. We hypothesized that because women are viewed as more vulnerable, they will be more likely to attract a crowd and, accordingly, face more competition in primaries; and the data support this expectation. In all Republican primaries with a woman, the mean number of Republican candidates is 3.9. In Republican primaries without a woman, the mean number of candidates is only 2.2. This pattern emerges in Democratic primaries as well. Democratic primaries in which a woman competes include, on average, 4.3 candidates. In primaries with only Democratic men, the mean number of candidates is 2.5. The differences in these means achieve conventional levels of statistical significance ($p < .05$).

These results are not driven exclusively by open seat contests. Like Palmer and Simon (2006), we find that female *incumbents* are more likely than men to generate a crowded field (see

also Simon and Palmer 2005). The data presented in Table 5 reveal that female incumbents of both parties attract more opposition than do their male counterparts in the other party's primary (differences significant at $p < .05$). Incumbent Republican congresswomen attract more candidates than do men in Republican primaries as well. Differences in views toward women's roles between each party's activists may help explain our findings.

Table 5 about here

Gender also plays a role in the congressional primary process in that women have become increasingly likely to challenge one another in their own party's primaries. Granted, only 1.4 percent of Democratic primaries and 0.6 percent of Republican primaries include more than one woman candidate.¹³ But as Figure 3 illustrates, the total number of these races in each election cycle has trended upward over time. Even in 1992, which represents the peak of women challenging women in primaries for both parties, there were only 28 such races. Although we do not want to overstate the implications of these findings – indeed, a primary with more than one woman candidate is a very unusual event – it is important to note that this phenomenon may ultimately stymie some of the potential gains an increasing number of women candidates have on women's overall numeric representation. That is, when women run against women, women defeat women. This may be particularly true for Democrats, who, with the exception of the early 1980s, have always been more likely than Republicans to see multi-woman races.

Figure 3 about here

A similar trend emerges when we turn to the other party's primary; women are significantly more likely to enter primaries to challenge a female incumbent of the other party. In Democratic primaries to challenge a Republican congresswoman, the mean number of women is .25, compared to an average of .15 women running to challenge a Republican congressman.

Among Republicans, an average of .20 women run in primaries to challenge a Democratic congresswoman in the general election, compared to an average of .09 women who run to challenge a Democratic man. Party leaders, electoral recruiters, and gatekeepers—in addition to women candidates, themselves—may view a woman challenging another woman in the general election as less daunting; the presence of two women may diffuse any gender biases in the course of the general election campaign. The presence of another woman may also nullify any gender advantage a female candidate might have among a subset of voters.

Although our data cannot speak to whether the presence of a female primary candidate attracts other women to the race, or instead, whether women tend to enter races that are also attractive to other women, the fact remains that women are more likely than men to face a crowded primary field, and that crowd is more likely to include a woman.

Discussion and Conclusion

Conventional wisdom derived from the literature on women's electoral success holds that congressional elections yield gender neutral results. That is, when women run in congressional elections, they win at rates equal to those of their male counterparts. Until now, there has been no systematic, multivariate analysis of primary elections in all types of congressional races over time. Our results show that the gender dynamics of the primary election process complicate the conventional wisdom.

On the one hand, the results are consistent with findings that emerge from studies of general elections. Overall, there appears to be no widespread, aggregate bias against women candidates running in congressional primaries. Granted, the effect of sex varies from election to election and across party. Before the 1980s, women in both parties rarely ran, and when they

did, they occasionally fared significantly worse than their male counterparts. Since 1990, however, Democratic women have tended to garner a greater vote share than their male colleagues. Increased party polarization, then, while criticized by Washington pundits and political scientists alike, seems to have helped Democratic women in congressional primaries. When primary voters seek the most partisan—and, therefore, the most liberal—option, they rely on a combination of stereotypes and voting histories that advantage women candidates. Women are viewed as more liberal than men, and Democratic congresswomen are, in fact, more liberal and loyal to their party than their male counterparts. According to *Congressional Quarterly*, Democratic women's party loyalty scores have consistently been higher than men's. Republican women do not enjoy the same advantages with their party's ideological voters, but they generally do not fare worse than their male counterparts. Notably, these results emerge from an unequal playing field, as women face more crowded primaries and a more difficult primary election terrain.

On the other hand, our results indicate that prospects for near-term parity for women in elective office are bleak. Men comprise the vast majority of primary candidates and, unlike the slow but steady increase in the number of women elected to the U.S. House of Representatives in general elections, the number of women entering primaries is actually decreasing, albeit slightly. Further, the gains we have seen in the number of women candidates have been among Democrats. In the 2006 congressional election cycle, for instance, 70 percent of the women who sought their party's nomination were Democrats. If we are to achieve true gender parity and numeric representation for women, then women must emerge from both political parties as candidates in primary elections. Finally, women are more likely to enter primaries in which they

would challenge a woman in the general election; there is no net gain for women's numeric representation when women compete against women.

Taken together, our results suggest that primary elections are not gender neutral. And it is likely that these primary election dynamics affect the initial decision to run for office. The candidate-centered system in the United States, in other words, may hamper women's entrance into public office (Davis 1997; Darcy, Hadley and Kirksey 1993), especially when they need to run in a primary contest. Only the most qualified women may be willing to take on a primary battle, winnowing women from the field before the contest begins. It is, therefore, not surprising that the women who emerge from primaries to compete in general elections are more likely than men to have electoral experience and fundraising success (Pearson and McGhee 2004). To make it through the primary process, women must be stronger candidates, or at least candidates who are willing to endure greater challenges, and more challengers, than their male counterparts face. Women, in other words, have to be "better" than men in order to fare equally well.

Endnotes

¹ Party-centered elections characterized the U.S. electoral landscape in the 19th century and gradually faded in the 20th century. In the 19th century, parties printed and handed out ballots, state and local parties controlled nominations, and a norm of rotation made it clear to those nominated that they were subordinated to the party. The party also controlled the key resources necessary for electoral success: strong party organizations ran candidates' campaigns, and voters relied almost exclusively on the party label in general elections. While party cues in vote choice have experienced a significant resurgence in the last decade, primaries today are largely candidate-centered. Hand in hand with other party reforms, direct congressional primaries spread across the U.S. starting in the early 1900s, making the United States unique among democracies for having voters, as opposed to party elites, choose the party standard bearer to compete in the general election.

² This is true for the vast majority of races we consider. There are, however, some notable exceptions in recent cycles. Dominguez (2005) shows that congressional campaign committees may get involved in primaries for competitive seats.

³ It is important to recognize that other democracies with relatively patriarchal histories and proportional party list electoral systems tend to see a greater proportion of women in politics because they do not have the winner-take-all and single-member district systems prevalent in the United States (Matland 1998; Norris 1994; Rule 1987). This is not to say, however, that systems of proportional representation with party lists do not have costs of their own. Jane Mansbridge (1999, 652) explains that such systems often facilitate party collusion that leads to noncompetitive races and voter demobilization. Overall, however, she concludes that

proportional party list systems are a “flexible” way to promote descriptive representation and women’s candidacies.

⁴ Granted, it is possible that, under certain circumstances, the still existent novelty of women in politics at the national level provides them with more coverage than they might otherwise receive. We thank an anonymous reviewer for raising this point.

⁵ Even after the creation of the Federal Election Commission and the concomitant filing requirements, candidates who do not exceed a minimum threshold of campaign fundraising (\$5,000 in 2006) are not required to file. Collecting data from FEC reports would, therefore, bias our results, as we would miss the weakest candidates.

⁶ Most of these individuals ran in the earliest cycles, where there were very few women.

⁷ King and Matland (2003) demonstrate that analyzing the presence of a woman in a primary can be a superior measure of women’s electoral success. If two women compete in the same primary, the rate of women’s success at the candidate level in that race would be 50 percent, whereas the rate of women’s success at the district level would be 100 percent.

⁸ It is important to note, however, that in this “unique” election cycle, the most significant explanations for women’s victories in general elections were hardly unique. Notably, 1992 was a redistricting year, creating a record number of open seat contests in the modern era (Gaddie and Bullock 2000). Most of the new congresswomen won open seats; only 2 of 41 female challengers defeated incumbents, a rate comparable with the general rate of incumbent defeats. In addition, the women who won were “high quality” candidates, *i.e.*, those with experience (Jacobson 2004).

⁹ We analyze gender effects using separate logistic regression models for each year so that we can account for idiosyncratic factors unique to each congressional election cycle, as well

as variation in the cycle-to-cycle emergence of women candidates. In these analyses, we omit any case in which a candidate ran unopposed.

¹⁰ These results are not driven by incumbency. If we focus exclusively on Republican primaries in open seat districts, sex is never a statistically significant predictor of candidate victory. The only difference, therefore, pertains to 1960. Overall, women were at a disadvantage in 1960; when we restrict the analysis to open seats, though, it is not possible to estimate coefficients for 1960, since every woman who ran in an open seat race lost the primary. When we turn to Democratic primaries, the results are once again largely consistent when we compare the full set of races to primaries in open seat districts. In two years – 1958 and 1964 – we cannot estimate coefficients for open seat races because all the women who ran lost. The other differences pertain to 1992, 1994, and 1996. When we restrict the analysis to open seat contests, sex is a positive predictor of candidate victory, but it is significant at $p < .10$, as opposed to $p < .05$, a likely result of the smaller number of cases included in the analysis. In 43 of the 48 models we estimate, therefore, the statistical results are the same regardless of whether the race is an open seat contest. And in the 5 races where the results are not entirely comparable, the substantive and statistical differences are modest at best.

¹¹ Once again, our results are not an artifact of incumbency. Comparing our analyses of all Republican primaries to Republican primaries in open seat districts, we find only one minor difference. Overall, women were at a disadvantage in 1960; when we restrict the analysis only to open seats, the coefficient is negative, but it is not statistically significant. In Democratic primaries, women are at an overall advantage in 1996, 1998, 2000, and 2002. In open seat primaries, the coefficients are all positive, but not statistically significant.

¹² In time series cross-sectional random effects models of vote share among Republicans, the coefficient for sex across all races does not reach statistical significance except in the 1958 – 1970 time period, where it is negative. Among Democrats, time series cross-sectional random effects models indicate that the effect of sex in increasing vote share is not as large as the effect of running as an incumbent, but it is, nonetheless, statistically significant at $p < .01$ from 1992 – 2004. See Appendix B for these pooled models.

¹³ Ten percent of Republican primaries include one woman (920 races), 0.5 percent include two women (49 races), and 0.1 percent include three women (9 races). On the Democratic side, 13 percent of the races have one woman candidate (1,297 races), 1.1 percent include two women (110 races), 0.2 percent include three women (18 races), and 0.1 percent include more than three women candidates (7 races).

Appendix A1: Logistic Regression Results Predicting Candidate Victory for Republicans

Year	Coefficient on Candidate Sex	Percent Cases Correctly Predicted	Pseudo-R²	Number of Cases
1958	.440 (.721)	72.5	.227	258
1960	-3.181 (1.254) *	70.1	.257	295
1962	.072 (.659)	66.0	.146	321
1966	.555 (.919)	70.3	.214	283
1970	-.490 (1.128)	73.4	.331	286
1972	-.366 (.605)	67.7	.197	362
1974	-.078 (.613)	74.5	.310	329
1976	-1.436 (.735)	69.7	.237	366
1978	-.272 (.615)	67.0	.187	339
1980	.150 (.497)	68.2	.178	409
1982	.482 (.427)	67.8	.177	342
1984	-.002 (.420)	68.5	.198	298
1986	.188 (.475)	66.9	.172	248
1988	.110 (.540)	68.3	.189	279
1990	-.243 (.504)	69.4	.237	288
1992	-.203 (.317)	72.3	.208	607
1994	.074 (.300)	73.3	.239	543
1996	.190 (.355)	78.0	.341	501
1998	.518 (.403)	76.2	.331	349
2000	-.305 (.471)	71.9	.267	359
2002	.303 (.370)	77.7	.317	413
2004	.624 (.349)	75.2	.343	380

Appendix A1: Logistic Regression Results Predicting Candidate Victory for Democrats

Year	Coefficient on Candidate Sex	Percent Cases Correctly Predicted	Pseudo-R²	Number of Cases
1958	-.119 (.513)	72.7	.247	480
1960	.798 (.568)	78.5	.428	446
1962	-.258 (.649)	77.8	.354	523
1964	-.868 (.682)	80.2	.397	530
1966	-.140 (.806)	79.5	.422	464
1968	-.180 (.571)	80.2	.451	556
1970	1.179 (.773)	75.2	.301	428
1972	-.397 (.394)	77.7	.321	642
1974	-.114 (.360)	78.6	.324	768
1976	.401 (.381)	83.4	.445	736
1978	.542 (.384)	80.6	.407	581
1980	.253 (.421)	81.0	.426	538
1982	.145 (.415)	76.0	.329	499
1984	-.230 (.340)	80.8	.477	604
1986	-1.447 (.483) *	80.3	.509	569
1988	.416 (.372)	77.7	.419	394
1990	.543 (.348)	80.2	.499	348
1992	.513 (.260) *	78.0	.300	650
1994	.832 (.312) *	80.3	.435	517
1996	.760 (.288) *	75.9	.294	469
1998	.379 (.396)	76.1	.386	272
2000	.725 (.378)	75.1	.309	301
2002	.380 (.347)	77.0	.357	352
2004	.687 (.318) *	75.1	.356	370

Note: Models control for incumbency, total number of candidates in the race, and whether the (non-incumbent) candidate ever sought that position in a previous election cycle. For Republicans, models for 1964 and 1968 are not estimated because of multicollinearity problems. Levels of significance: * p < .05; ** p < .01.

Appendix A2: OLS Regression Results Predicting Candidate Vote Share for Republicans

Year	Coefficient on Candidate Sex	Adjusted R²	Number of Cases
1958	.065 (.073)	.318	257
1960	-.155 (.056) **	.393	294
1962	-.018 (.060)	.361	320
1964	-.088 (.065)	.337	318
1966	.055 (.082)	.408	282
1968	-.130 (.071)	.376	340
1970	-.073 (.081)	.391	285
1972	-.067 (.053)	.285	361
1974	.056 (.049)	.483	328
1976	-.055 (.044)	.383	365
1978	-.008 (.051)	.354	338
1980	-.006 (.043)	.357	408
1982	.045 (.040)	.372	341
1984	.026 (.036)	.371	297
1986	.036 (.040)	.402	247
1988	.057 (.042)	.454	278
1990	-.002 (.039)	.441	287
1992	.035 (.022)	.389	606
1994	-.004 (.021)	.456	542
1996	.015 (.027)	.469	500
1998	.040 (.032)	.478	348
2000	-.020 (.036)	.467	358
2002	-1.581 (1.752)	.037	383
2004	.014 (.031)	.439	358

Appendix A2: OLS Regression Results Predicting Candidate Vote Share for Democrats

Year	Coefficient on Candidate Sex	Adjusted R²	Number of Cases
1958	-.010 (.047)	.358	479
1960	.056 (.045)	.502	445
1962	-.068 (.046)	.484	522
1964	-.068 (.041)	.516	529
1966	-.030 (.051)	.457	463
1968	-.005 (.040)	.511	555
1970	.072 (.063)	.479	427
1972	-.035 (.029)	.453	641
1974	-.010 (.024)	.523	767
1976	.008 (.024)	.588	735
1978	.018 (.029)	.556	580
1980	.009 (.030)	.558	537
1982	.008 (.033)	.475	498
1984	-.022 (.024)	.594	603
1986	-.092 (.027) **	.580	568
1988	.041 (.032)	.501	393
1990	.078 (.029) **	.529	347
1992	.093 (.020) **	.480	649
1994	.091 (.021) **	.572	516
1996	.059 (.024) *	.452	468
1998	.072 (.033) *	.499	271
2000	.086 (.034) *	.456	300
2002	5.260 (2.440) *	.089	342
2004	.037 (.028)	.480	351

Note: Models control for incumbency, total number of candidates in the race, and whether the (non-incumbent) candidate ever sought that position in a previous election cycle. Levels of significance: * p < .05; ** p < .01.

**Appendix B: Congressional Primary Candidate Vote Share, By Election Era:
Generalized Least Squares Regression Coefficients (and Standard Errors)**

Republican Candidates

	<u>1958 – 1970</u>	<u>1972 – 1990</u>	<u>1992 – 2004</u>
Sex (Female)	-.057 (.026) *	.012 (.014)	-.108 (.399)
Previously Ran for this Seat	.017 (.013)	.028 (.009) **	.668 (.427)
Total Number Candidates in Race	-.056 (.015) **	-.055 (.002) **	-.281 (.076) **
Incumbent (Year Dummies)	.327 (.015) **	.356 (.013) **	1.632 (.464) **
Constant	.530 (.015) **	.531 (.013) **	9.927 (.534) **
R ²	.363	.386	.131
Wald Chi-Square	1193.90 **	2038.40 **	486.80 **
Number of Observations	2103	3260	3102

Democratic Candidates

	<u>1958 – 1970</u>	<u>1972 – 1990</u>	<u>1992 – 2004</u>
Sex (Female)	-.017 (.017)	-.005 (.009)	.820 (.314) **
Previously Ran for this Seat	.035 (.010) **	.019 (.007) **	.998 (.416) *
Total Number Candidates in Race	-.045 (.002) **	-.040 (.001) **	-.098 (.062)
Incumbent (Year Dummies)	.358 (.009) **	.435 (.010) **	2.241 (.355) **
Constant	.451 (.012) **	.433 (.010) **	.260 (.425)
R ²	.4754	.539	.139
Wald Chi-Square	3087.95 **	6628.79 **	463.65 **
Number of Observations	3427	5679	2904

Note: These regression coefficients and standard errors yield from times series cross-sectional random effects GLS models. The coefficients and standard errors on the year dummy variables are not displayed, but are available from the authors. Levels of significance: * p < .05; ** p < .01.

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Table 1: Women Running in Congressional Primaries, by Party, 1958 – 2004

Year	All		Republicans		Democrats	
	Number Women	Percent Women	Number Women	Percent Women	Number Women	Percent Women
1958	42	3 %	12	2 %	30	4 %
1960	47	4	23	4	24	3
1962	41	3	15	3	26	3
1964	44	3	16	3	28	3
1966	35	3	13	2	21	3
1968	45	3	14	2	31	4
1970	31	3	14	3	17	3
1972	79	5	23	4	56	6
1974	93	6	29	5	64	7
1976	100	6	32	5	68	7
1978	78	6	31	5	47	6
1980	84	6	37	6	47	6
1982	100	7	50	8	50	6
1984	133	10	56	10	77	10
1986	135	10	50	9	85	11
1988	103	8	43	8	60	9
1990	116	10	45	8	71	12
1992	219	12	85	10	134	15
1994	204	13	93	12	111	15
1996	210	14	79	10	130	18
1998	170	14	74	12	96	17
2000	160	13	59	9	101	17
2002	181	14	71	10	110	18
2004	198	16	81	12	117	19
TOTAL	2648	8	1045	7	1601	9

Table 2: Primary Victory Rates by Sex and Party, 1958 – 2004

Year	All		Republicans		Democrats	
	Women	Men	Women	Men	Women	Men
1958	57 %	57 %	58 %	63 %	57 %	54 %
1960	57	63	48 #	66	67	60
1962	54	58	53	64	54	54
1964	34 *	60	38 *	66	32 *	55
1966	69	63	77	67	62	59
1968	47 #	59	43 #	65	48	54
1970	75	64	71	68	78 #	62
1972	42 *	56	52	64	38 #	50
1974	45	53	59	65	39	46
1976	48	52	50	63	47	45
1978	56	57	68	64	49	52
1980	56	57	62	60	51	54
1982	54	58	60	61	48	55
1984	50 *	60	64	67	39 *	54
1986	48 *	63	72	71	34 *	56
1988	60	66	72	67	52 #	64
1990	59 *	68	67	69	54 *	67
1992	48	47	46	48	49	45
1994	60 *	52	53	53	66 *	51
1996	58	55	58	54	59	56
1998	73 *	65	70	62	75	68
2000	73 *	64	64	63	78 *	64
2002	64	60	59	58	66	61
2004	64	63	65	62	65	62
TOTAL	57	59	60	63	56	55

Note: Cells contain the percentage of candidates winning their congressional primaries. The difference of means between men and women is statistically significant at # $p < .10$; * $p < .05$.

Table 3: Female Republican Candidates' Success by District

Year	Primaries with Female Candidate(s)	Percent of Primaries with Winning Female Candidate	Total Female Candidate Victories	Non-Incumbent Female Candidate Victories
1958	12	58 %	7	4
1960	23	48	11	4
1962	15	53	8	5
1964	16	38	6	2
1966	13	77	10	7
1968	14	43	6	3
1970	10	100	10	6
1972	22	55	12	11
1974	29	59	17	15
1976	32	50	16	12
1978	31	68	21	18
1980	35	66	23	19
1982	43	70	30	20
1984	53	68	36	26
1986	48	75	36	26
1988	41	76	31	19
1990	43	70	30	22
1992	75	52	39	26
1994	84	58	49	36
1996	73	63	46	31
1998	69	75	52	33
2000	57	67	38	24
2002	64	66	42	24
2004	76	67	51	29
TOTAL	978	64	627	422

Table 4: Female Democratic Candidates' Success by District

Year	Primaries with Female Candidate(s)	Percent of Primaries with Winning Female Candidate	Total Female Candidate Victories	Non-Incumbent Female Candidate Victories
1958	28	61 %	17	6
1960	24	67	16	8
1962	26	54	14	8
1964	27	33	9	4
1966	21	62	13	5
1968	28	54	15	11
1970	14	100	14	10
1972	54	39	21	15
1974	60	42	25	16
1976	61	53	32	22
1978	42	55	23	13
1980	46	52	24	16
1982	43	56	24	16
1984	71	42	30	20
1986	77	38	29	19
1988	55	56	31	21
1990	62	61	38	24
1992	110	60	66	47
1994	99	74	73	42
1996	100	76	76	55
1998	90	80	72	40
2000	95	83	79	43
2002	96	76	73	35
2004	103	74	76	47
TOTAL	1432	62	890	543

Figure 1: The Effect of Sex on Election Outcome in Congressional Primaries: Logistic Regression Coefficients and 95 Percent Confidence Intervals

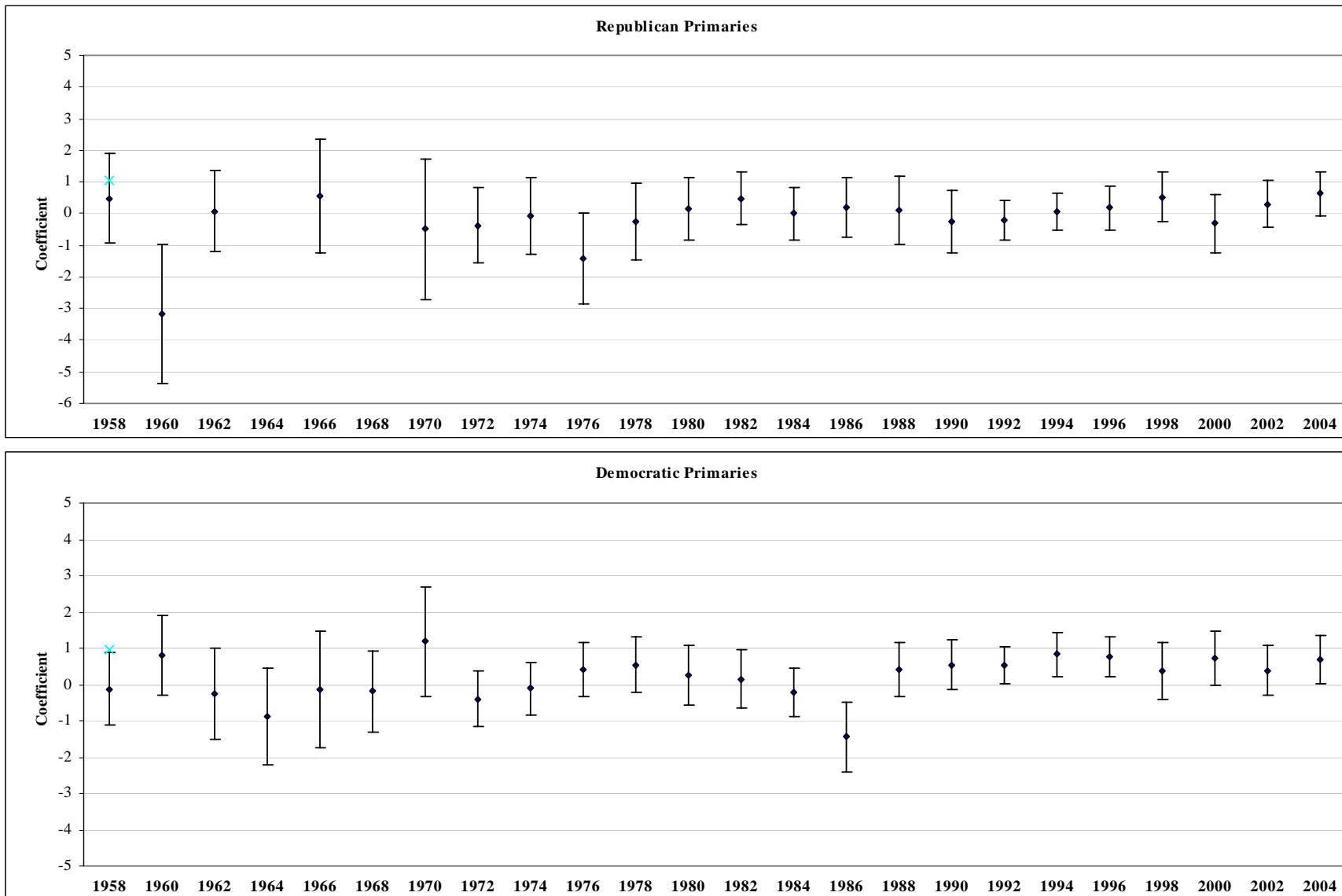


Figure 2: The Effect of Sex on Vote Share in Congressional Primaries: OLS Regression Coefficients and 95 Percent Confidence Intervals

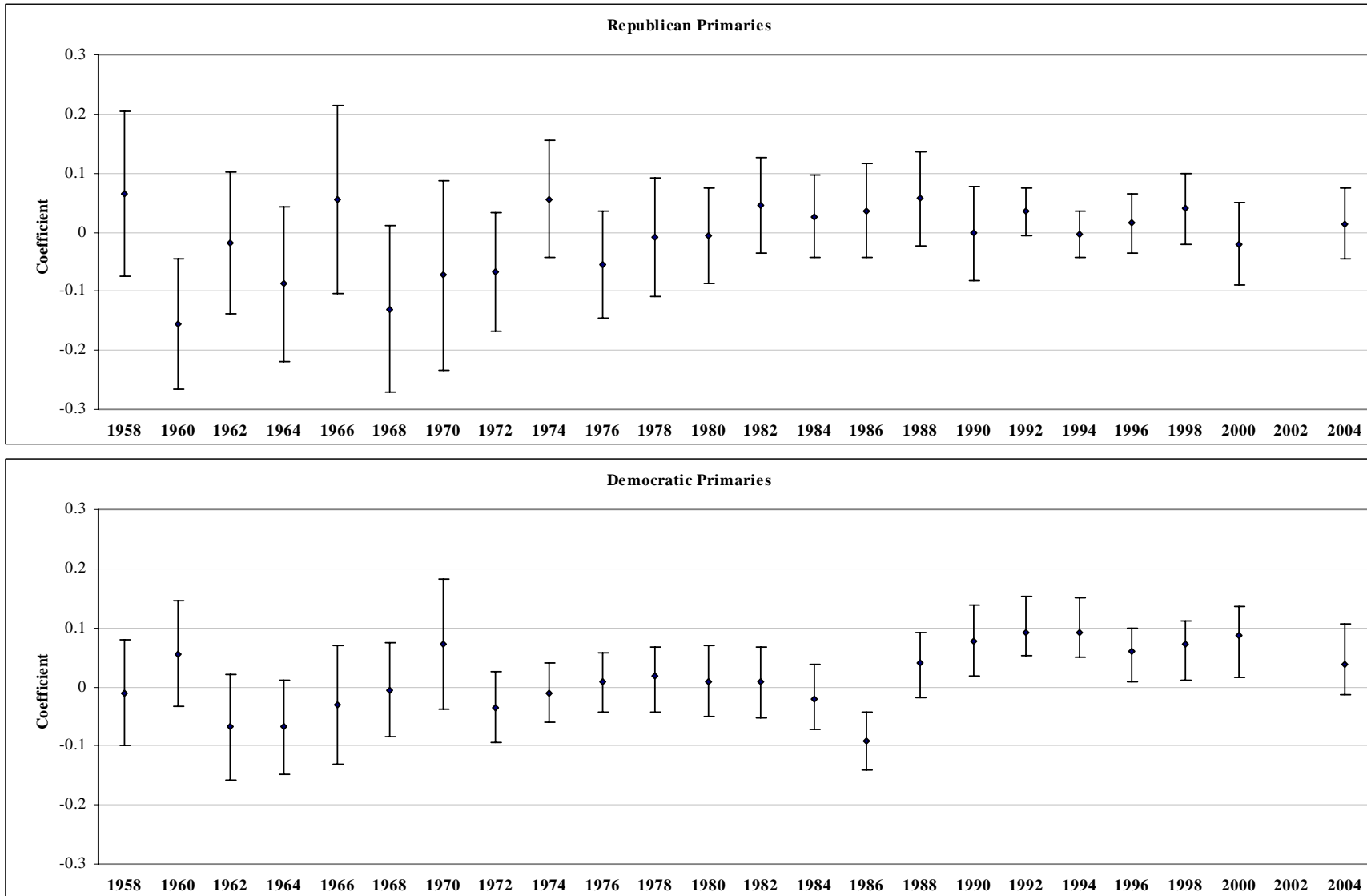


Table 5: Gender Differences in Incumbents' Primary Competition

	Mean Number of Candidates	
	In Own Primary	In Other Party's Primary
Female Republican Incumbents (N=200)	1.7	1.5
Male Republican Incumbents (N=3547)	1.6	1.3
Female Democratic Incumbents (N=355)	1.5	1.6
Male Democratic Incumbents N=4845	1.6	1.3

Figure 3: Women Challenging Women: Congressional Primaries with More Than One Woman Candidate, 1958 – 2004

