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A Reexamination of Women's Electoral Success in Open Seat Elections: The Conditioning Effect of Electoral Competition

Tiffany D. Barnes[a], Regina P. Branton[b], and Erin C. Cassese[c]

[a]University of Kentucky, Lexington, Kentucky; [b]University of North Texas, Denton, Texas; [c]West Virginia University, Morgantown, West Virginia

ABSTRACT

This article reexamines gender differences in electoral outcomes. We consider whether electoral competition has a differential impact on the electoral fortunes of male and female quality candidates. This study uses an original data set containing detailed candidate information for US House open seat primary and general elections between 1994 and 2004. The results indicate that when multiple quality candidates enter the race, female quality candidates are at a greater disadvantage than their male counterparts. The results suggest that null findings from previous work are a product of the way the relationship between gender and electoral outcomes is typically modeled.

KEYWORDS

Women and politics; female congressional candidates; quality challengers; primary elections; general elections

Worldwide, a mere 20 percent of the members of national legislative bodies are female (Inter-Parliamentary Union [IPU] 2016). In some regions of the world, women have fared better in their efforts to be elected to their national governing body. For example, 41 percent of the members of national legislative bodies in Nordic countries are female, whereas only 14 percent of the members of national legislative bodies in Pacific countries are female (IPU 2016). Currently, the United States ranks 97th in the percentage of women serving in the national legislature (IPU 2016). Indeed, only 19.4 percent of the members of the US Congress are female (IPU 2016).

Extant research identifies many factors that influence women's election to legislative office, including institutional rules, such as electoral systems, gender quotas, and incumbency (Reynolds 1999; Rule 1987; Schwindt-Bayer 2005). Proportional representation electoral systems have greater gender parity than single member district systems (Engstrom 1987; Matland and Brown 1992; Rule 1987). Gender quotas also serve to increase female representation (Jones 1996, 2009; Krook 2004, 2006; Schwindt-Bayer 2009). One challenge women face is the entrenched incumbency advantage (Murray 2008; Norris 1993; Norris, Vallance, and Lovenduski 1992; Schwindt-Bayer

CONTACT Tiffany D. Barnes tiffanydbarnes@uky.edu Department of Political Science, University of Kentucky, 1615 Patterson Office Tower, Lexington, KY 40506, USA.

2005). Indeed, challengers are rarely successful at unseating an incumbent, particularly in systems with strong personal vote-seeking systems like the United States (Carson, Engstrom, and Roberts 2007; Cox and Katz 1996; Parker 1980). Yet, with few exceptions, scholars have not examined how electoral competition influences women's electoral success. In this article we argue competition conditions the effect of gender on electoral outcomes. We posit that when facing a quality opponent, male quality candidates will fare better than female quality candidates.

To evaluate our expectations, we compare the fate of male and female quality candidates in US House open seat primary and general elections from 1994 to 2004 (Branton 2009). We take into account not only the presence of one or more opposition candidates but also the quality of these competitors. Specifically, we examine whether victory rates for men and women are conditioned on the competitiveness of the opposing candidates.

We propose that this approach (i.e., accounting for the size and quality of the opposition) more fully captures contest-level factors at play in US House elections. By comparing the electoral fates of male and female quality candidates facing various levels of electoral competition—ranging from no quality candidates (non-competitive) to four quality candidates (highly competitive)—our work offers a detailed view of women's electoral fortunes. The picture that emerges is more easily reconciled with the literature focusing on the public's evaluations of female candidates, which suggests they encounter obstacles on the path to office.

Specifically, when we account for the quality of opponents in open seat elections, we find that quality female candidates do not fare as well as quality male candidates. This is important, because while previous research has failed to uncover gender disparities in election outcomes, we show that significant gender differences do emerge when the quality of the opposition candidate field is taken into account. We demonstrate that nonincumbent female quality candidates face obstacles that incumbent females do not. In short, women's success is conditional on the quality of the opposition they face. This finding has clear implications for female candidates running in US House elections. Because it is extremely uncommon for a challenger to defeat an incumbent, open seat elections present a rare opportunity for women to make gains in numeric representation in the US House. Nonetheless, the results from our analysis show that quality female candidates running in open seat elections are less likely to win than are quality male candidates. This suggests it is even more difficult for women to make inroads in the US Congress than previously expected.

The conditional nature of gender differences

Research on female candidates in American politics finds that when women run, they win (Burrell 1994; Darcy, Welch, and Clark 1994; Fox 2000; Seltzer,

Newman, and Voorhees Leighton 1997). After accounting for partisanship and incumbency, women and men are equally likely to win elections. Indeed, these studies show that gender does not affect general (Burrell 1994; Palmer and Simon 2001) or primary (Gaddie and Bullock 2000; Lawless and Pearson 2008; Seltzer, Newman, and Voorhees Leighton 1997) election outcomes. Moreover, research by Dolan (2014) finds that gender stereotypes are less important than political party in shaping voter evaluations of candidates and their vote choice. These relationships are not surprising in light of extant research that shows that media coverage is becoming less gender biased (Bystrom et al. 2004), campaign advertisements reveal few gender differences (Sapiro et al. 2009), and female candidates themselves are unlikely to focus their campaign around gender-stereotyped issues (Dolan 2005). Under some circumstances, female candidates are even outpacing their male counterparts in campaign contributions (Crespin and Deitz 2010).

Nonetheless, a substantial body of research shows that voters display a number of biases toward female candidates. These biases range from associations between gender and ideological extremity (Huddy and Terkildsen 1993; Koch 2000; 2002; McDermott 1997), issue competence (Alexander and Andersen 1993; Dolan 2009; Koch 1999; Lawless 2004; Leeper 1991; Matland 1994; Rosenwasser et al. 1987), leadership traits (Eagly and Carlie 2007; Huddy and Terkildsen 1993), and even a generalized preference for a male-dominated government (Dolan and Sanbonmatsu 2009). This research maintains that these gender-based perceptions hold implications for electoral outcomes in that they reduce the likelihood that individuals will cast their votes for female candidates (Sanbonmatsu and Dolan 2009).

Furthermore, recent work suggests the absence of a gender gap in electoral outcomes belies the fact that female candidates face a more arduous path to office (Fulton 2012; Lawless and Pearson 2008; Palmer and Simon 2006). For instance, district demographics, such as partisanship and geographic location, influence the likelihood of women's success in congressional elections (Fulton 2012; Matland and King 2002; Ondercin and Welch 2009; Palmer and Simon 2006). Research also suggests that women face more competitive primary and general elections than male candidates (Berch 2004; Lawless and Pearson 2008; Milyo and Schosberg 2000; Palmer and Simon 2005; 2006; Sanbonmatsu 2006).

The behavior research finds evidence of voter bias toward female candidates, and the electoral research increasingly recognizes the difficulties female candidates face in seeking office. This naturally leads to questions regarding the conclusion that electoral outcomes are gender neutral. We propose that the null relationship found in past work is a product of the way the relationship between gender and electoral outcomes is typically modeled. Extant research commonly tests the direct effect of gender on electoral outcomes, which implicitly assumes a uniform effect. This approach overlooks the fact

that not all electoral contests are created equal. Indeed, this is exactly what the electoral research suggests vis-à-vis the obstacles female candidates face when seeking office (Fulton 2012; Lawless and Pearson 2008; Palmer and Simon 2006). We propose that the relationship between gender and electoral outcomes is conditioned by electoral competition. When this conditional relationship is taken into account, disparities in election outcomes become evident.

The literature shows that female candidates face more competitive elections than their male counterparts (Lawless and Pearson 2008; Milyo and Schosberg 2000; Palmer and Simon 2006; Sanbonmatsu 2006). For instance, Palmer and Simon (2006) find that female incumbents are more likely to face opposition in primary and general elections than are male incumbents, who are more likely to run unopposed. Milyo and Schosberg (2000) also find that female incumbents are more likely to face high-quality challengers in general elections than male incumbents. Lawless and Pearson (2008) similarly observe that female candidates typically draw a larger, and ostensibly more competitive, candidate field in congressional primary elections.

These findings implicitly suggest female candidates are able to successfully navigate more competitive elections. Why might this be the case? To some extent, strategic entry decisions may mitigate against more competitive races with larger candidate fields. There is some evidence to suggest that female candidates hold themselves to higher standards when determining their own electoral viability and deciding whether to enter a race (Fox and Lawless 2004; Fulton 2012). Women candidates are also very strategic in their choice of districts and tend to select contexts that are conducive to victory (i.e., women-friendly districts) (Ondercin and Welch 2009; Palmer and Simon 2006).

While the selection process that operates at the point of emergence plausibly benefits women candidates, the extent of the benefit such strategic choices actually provide is unclear. There is some evidence to suggest that a female candidate's entry itself is what triggers an expansion of the candidate field. Palmer and Simon (2005) note: "As much as a candidate's gender serves as a cue for voters, it can serve as a cue for potential opponents. Women candidates, especially incumbents, may be initially perceived as easier to defeat and may face a more competitive environment (147–48)." Similarly, Lawless and Pearson (2008) argue that women face more difficult electoral environments because "potential competitors recruiters, and gatekeepers consider women more vulnerable (69)," noting that women not only draw a larger field in their own primaries but typically increase the size of candidate field the opposing party's primary race as well. Thus, while women may hold themselves to high standards and choose races wisely, their entries send strategic signals to potential opponents and change the

competitiveness of the race. As a result, women do not necessarily enter the race with an accurate sense of the competition they will ultimately face.

Women's abilities to weather this heightened competition is the subject of this article. Existing work on this topic indicates the effect of competition on electoral outcomes is smaller for female candidates than for male candidates, because they manage to win despite the larger candidate fields they face. While this research suggests that the relationship between gender and electoral outcomes is conditioned on the level of electoral competition, the relationship has not been evaluated empirically. As such, it is premature to conclude that female candidates weather competition better then male candidates. While female candidates are more likely to draw opposition in general elections and more likely to face a larger candidate field in primary elections (Lawless and Pearson 2008; Palmer and Simon 2005), this does not necessarily equate to heightened competition. In other words, not all candidates are equal. A large body of work in the congressional elections literature notes that quality candidates are more likely to emerge in open seat races and are more likely to win than political amateurs (Canon 1990; Green and Krasno 1988; Jacobson and Kernell 1983). Furthermore, the presence of a quality candidate serves to heighten competition in US House elections.[1]

As such, when considering if competition conditions the effect of gender on electoral outcomes, it is important to account for the quality of the opposing candidates, not simply the number of opposing candidates. Herein, by accounting for the quality of the opposition, we test this proposition and address an important question: are gender differences in congressional election outcomes conditioned on the quality of the opposition?

Data and method

To evaluate the proposed conditional gender effects, we examine quality candidate electoral success in US House elections from 1994 to 2004. We use a candidate-level data set that includes information on the gender, partisanship, and prior office-holding experience of each candidate in US House primary and general elections (Branton 2009). Several sources were used to construct the candidate-level data set. Federal Election Commission (FEC) US House election reports were used to construct a complete list of candidates who ran in the primary and general election.[2] The FEC reports provide the names of all candidates, their partisan affiliations, and their vote shares in the primary and general election. Next, *CQ Weekly Report, The Almanac of American Politics, Politics in America*, and online resources (candidate campaign and personal websites, Lexis-Nexis, and Newsbank) were used to compile demographic information—gender and prior office-holding experience—on each candidate. Finally, in a limited number of cases, personal correspondence with the candidates served to complete the data set.

These data allow us to conduct a 10-year study of all quality candidates in open seat US House elections.[3] The data set includes 554 candidates running in 279 open seat primary elections and 279 candidates running in 136 open seat general elections.[4] Furthermore, the data allow us to identify the type of opposition each candidate faced in the open seat primary and general elections. In other words, the data provide information on the number of quality and nonquality opponents a quality candidate faced in the primary and general election.

In this study we focus on quality candidates in open seat contests for practical reasons. First, the extant literature on elections provides substantial evidence that incumbents have a large advantage over their opposition.[5] As such, challenger candidates—male or female—rarely defeat incumbents.[6] Second, extant research commonly notes that there are no gender differences in electoral success among incumbents.[7] This suggests if gender differences do exist, they are most likely to emerge in races lacking an incumbent.[8] Third, previous research[9] shows that quality candidates are more likely to win than political amateurs.[10] Together, this research suggests if women are to increase their descriptive representation in the US House, it will likely occur when female quality candidates emerge in open seat elections (Hoffman, Palmer, and Gaddie 2001). Thus, the focus on these elections seems warranted and necessary.

The congressional elections literature has used several different quality candidate measures.[11] The most commonly used measure of candidate quality is previous experience in elective office (Carson, Engstrom, and Roberts 2007; Jacobson 2004). Jacobson (2004) demonstrates that the dichotomous measure of quality candidate (prior office-holding experience versus no experience) performs as well as more nuanced measures of candidate quality. This approach is more parsimonious and offers a comparable level of substantive information. As such, we use the dichotomous approach so that a nonincumbent candidate who has held an elected position is referred to as a quality candidate.[12]

To begin, we offer a discussion of the descriptive statistics presented in Table 1. During the observed time period, a total of 72 female quality candidates ran in Democratic primaries, whereas 42 female quality candidates ran in Republican primaries. From 1994 to 2004 female quality candidates represent 26.9 percent of Democratic primary quality candidates, but only 14.7 percent of Republican primary quality candidates.[13] A similar trend emerges in the general election, where female quality candidates comprise 20.8 percent of all quality candidates in open seat elections. During the observed time period, female quality candidates represent 23.4 percent of Democratic general election quality candidates, whereas women represent 17.9 percent of Republican general election quality candidates.

Table 1. Quality Candidate Opposition.

	Democrats		Republicans	
	Female	Male	Female	Male
Primary Election				
N Cases	72	196	42	244
% No QC Opponents	19.4	25.0	26.2	20.5
Mean QC Opponents	1.81	1.49	1.14	1.41
General Election				
N Cases	34	111	24	110
% QC Opponent	47.1	55.9	66.7	54.5

Note. "QC" refers to quality candidate.

Table 1 also shows that female quality Democrats, those women most likely to succeed in gaining a seat in the US House, face more competition in the primary election than any other type of candidate.[14] Nineteen percent of quality female Democrats who run in open seat primary elections face no quality candidates; whereas 25 percent of quality male Democrats face no quality candidates.[15] Quality female Democrats face an average of 1.81 quality opponents in Democratic primaries, whereas quality male Democrats only face 1.49 quality opponents on average. Yet, in the general election, this asymmetry is reversed: 47 percent of quality female Democrats face a quality opponent, whereas almost 56 percent of quality male Democrats face a quality opponent. By contrast, quality female Republicans face a mean of 1.14 quality opponents, and quality male Republicans face a mean of 1.41 quality opponents. Moreover, 26.2 percent of quality female Republicans face zero quality candidates, whereas only 20.5 percent of quality male Republicans face no quality candidates in the primary election. In the general election almost 67 percent of quality female Republicans face a quality opponent, whereas almost 55 percent of male quality Republicans face a quality opponent.

These descriptive statistics highlight that Democratic and Republican female quality candidates both face heightened electoral competition, but the competition emerges at different stages in the election.[16] Democratic female quality candidates experience heightened competition in the primary, but Republican female quality candidates experience heightened competition in the general election. These observations naturally lead to the question of how competition influences the probability of a female candidate's success in primary and general elections.

To evaluate whether the effect of gender on electoral outcomes is conditioned on political competition, we estimated candidate-level electoral success in primary and general elections by party.[17] This approach controls for differences across parties, which offers a more detailed view of gender differences. The dependent variable in each model is a dichotomous measure coded "1" if a candidate won the election and "0" if the candidate lost the election. Given the binary nature of the dependent variable, we use logistic regression to estimate the models.[18] The

independent variables of interest are Female Candidate and Number of Quality Opponents. Female is a binary variable coded "1" if the candidate is female and "0" if the candidate is male. Quality Opponent is a count of the number of opposing candidates that have prior office-holding experience.[19] As noted, we propose that the relationship between gender and electoral outcomes is conditioned on political competition (i.e., the presence of quality opposition). Thus, the models include an interaction between Female and Number of Quality Opponents.

The models also include several control variables: nonquality opponents, redistricted, women-friendly district, partisan context, and female representation in state legislatures.[20] To control for heightened competition due to the number of nonquality candidates, we created a measure that is a count of the number of nonquality opponents.[21] Extant research indicates that redistricting produces more open seat races, an increased number of candidates, and fewer uncontested seats (Jacobson 1997; Kiewiet and Zeng 1993).[22] As such, the models include a binary variable, redistricted, which is coded "1" if a district is redrawn or newly created.[23]

We also include Palmer and Simon's (2006) women-friendly district measure in the model.[24] Palmer and Simon (2006) argue female candidates—Democratic and Republican—are more likely to win in districts that are urban, non-Southern, Democratic, geographically small, racially or ethnically diverse, affluent, highly educated, and middle class. They refer to districts that fit this profile as "women-friendly districts" because they contain the political, demographic, and geographic characteristics common to districts where female candidates have been elected. We created the measure for both Democrats and Republicans as outlined in Palmer and Simon (2006). The indices range from 0 to 11, with lower values reflecting districts that are less women-friendly and higher reflecting districts that are more women-friendly.

To control for partisan context, we include a dichotomous variable that denotes if the outgoing member of Congress (MC) is a Democrat or Republican.[25] In the Democratic candidate models, "In-Party Seat" is coded "1" if the seat is held by a Democrat and "0" otherwise. In the Republican candidate models, "In-Party Seat" is coded "1" if the seat is held by a Republican and "0" otherwise. In open seat races, the candidate from the party of the current MC may have an electoral advantage. Given that party is, in essence, a constant in primary elections, the impact of this variable should show a greater impact in the general election models. The model also includes an indicator of the percentage of women serving in the state legislature. This measure is included to control for state context in which women are more likely to be elected. Finally, each model includes year dummy variables, with 1994 serving as the baseline category. We include these temporal control variables to control for unmeasured events (Beck, Katz, and Tucker 1998) in an election year that may influence electoral outcomes.[26]

Results

Table 2 offers the logistic regression estimates for Democratic and Republican quality candidate success in open seat primary elections and general elections. The first column presents the results for Democratic quality candidates in open seat primary elections. The second column offers the estimates for Democratic quality candidates in open seat general elections. The third column presents the results for Republican quality candidates in open seat primary elections. The fourth column offers the estimates for Republican quality candidates in open seat general elections. The baseline category in each of the models is a male quality candidate.

Table 2. Quality Candidate Success in US House Elections.

	Democrats		Republicans	
	Primary	General	Primary	General
Female	1.17^{C}	−1.95^{C}	0.27^{C}	13.45^{C}
	(0.63)	(0.68)	(0.62)	(0.69)
Quality Opp.	−0.48^{C}	−1.87^{C}	−0.79^{C}	−1.53^{C}
	(0.10)	(0.54)	(0.13)	(0.72)
Female X Quality Opp.	-0.92	0.68^{C}	−0.42^{C}	−14.77^{C}
	(0.31)	(1.11)	(0.52)	(1.08)
Non-Quality Opp.	−0.14*	—	−0.33***	—
	(0.07)		(0.10)	
In-Party Seat	0.02	0.68*	0.25	0.33
	(0.22)	(0.40)	(0.23)	(0.56)
Women Friendly District	−0.05	0.47***	−0.07*	−0.11
	(0.04)	(0.11)	(0.04)	(0.10)
% Female State Legislature	0.02	0.03	0.01	−0.06*
	(0.01)	(0.04)	(0.01)	(0.04)
Closed Primary	0.28	—	0.21	—
	(0.19)		(0.22)	
Redistricted	−0.38	−1.42	0.25	1.60
	(0.48)	(1.07)	(0.45)	(1.38)
1996	−0.10	1.71**	0.13	−1.59*
	(0.27)	(0.71)	(0.30)	(0.93)
1998	0.17	1.92***	−0.03	−1.41
	(0.26)	(0.80)	(0.32)	(0.95)
2000	0.15	0.23	−0.13	−0.31
	(0.30)	(0.74)	(0.34)	(0.99)
2002	−0.07	1.56**	0.12	−0.27
	(0.40)	(0.79)	(0.31)	(1.09)
2004	0.65*	2.79***	−0.05	−0.96
	(0.36)	(0.73)	(0.29)	(1.07)
Constant	0.30	−2.50***	0.93**	4.98***
	(0.41)	(0.88)	(0.46)	(1.32)
N Case	268	145	286	134
Wald χ^2	75.07***	50.17***	49.54***	820.21***

Notes. ***$p < .01$; **$p < .05$; *$p < .10$. As noted in the text, the parameter estimates and standard errors on the interactions are conditional; as such, the size and significance of the effect cannot be determined on the basis of the parameter estimates and standard errors presented. The *C* is placed beside Female, Quality Opp., and Female X Quality Opp. to reflect that these estimates are conditional on the values of the other variables in the interaction. The columns present logistic regression parameter estimates and robust standard errors in the parentheses (clustered at the congressional district level).

The interaction between female and quality opposition means that the overall effect of each of these variables depends on the value of the other. The coefficient and standard error on the interactions are conditional; thus, the size and significance of the effect cannot be determined on the basis of the parameter estimates and standard errors presented in Table 2 alone. As such, we estimate predicted probabilities and standard errors as outlined by Brambor, Clark, and Golder (2006). Table 3 presents the predicted probabilities and the difference in probabilities for Democratic and Republican quality candidates at varying levels of quality opposition.[27] In general, the probabilities indicate that although gender differences do exist, they are not universal.

The analysis shows that when quality candidates face quality opponents, important gender differences do emerge for Democrats. In the top left quadrant of Table 3, we report the predicted probability of victory for female and male quality candidates in open seat Democratic primary elections.[28] When quality Democratic candidates face only one quality opponent in the primary, men and women do equally well. Both win about 50 percent of the time. When the competition gets more heated, and multiple quality candidates enter the race, women are severely disadvantaged. When female quality candidates face two opponents, they only have a .24 probability of winning, compared to their male counterparts with a probability of .38.[29] This .14 (two-tailed p value < .05) difference in probabilities indicates men are 58 percent more likely to win than their female counterparts. This advantage grows even steeper as the size of the candidate pool increases. When quality candidates face three quality opponents, men have a .20 (two-tailed p value < .001) higher probability of winning than women.

These scenarios are particularly important to consider given that female quality candidates typically face multiple quality opponents in Democratic primary elections (see Table 1). Twenty-eight percent of female quality Democratic candidates face two quality opponents in the primary, whereas 23 percent of male quality Democratic candidates face two quality opponents. Thirty-two percent of quality female Democratic candidates face three quality

Table 3. Probability of Electoral Success: Conditioned on Competition.

	Democrats			Republicans		
	Female	Male	ΔProb	Female	Male	ΔProb
Primary Elec.						
One QC	0.56	0.50	0.06 (0.10)	0.38	0.42	−0.03 (0.10)
Two QCs	0.24	0.38	−0.14(0.07)**	0.15	0.24	−0.09 (0.10)
Three QCs	0.07	0.27	−0.20 (0.05)***			
General Elec.						
QC	0.16	0.40	−0.24 (0.12)*	0.44	0.75	−0.31 (0.16)*

Notes. "QC" refers to quality candidate. ***p < .01; **p < .05; *p < .10. ΔProb gives the change in predicted probability of winning an election between male and female quality candidates and the standard errors on ΔProb are presented in parentheses. All control variables are set to the mean.

opponents in the primary, whereas 23 percent of quality male Democrats face three quality opponents in the primary.

The bottom left-hand quadrant shows that Democratic female quality candidates competing in the general election face the same disadvantage. Once they make it to the general election, if they face a quality opponent, on average their probability of winning is .24 (two-tailed p value < .054) lower than their male counterparts. That is, men win about 40 percent of the time; meanwhile, women win only 16 percent of the time. Again, this finding shows the distinctive obstacles that female Democrats face in general elections with quality opposition compared to their male counterparts.

Turning to the Republican side of Table 3, the findings indicate the conditional effect does not hold for Republican candidates in the primary election model. This implies that Republican female candidates are not disadvantaged in primary elections when facing quality opposition. Although female Republican candidates' likelihood of success when facing competition is lower than for men in the primary elections, this difference does not attain a conventional level of statistical significance.

However, when quality Republican candidates face quality opponents in the general election, important gender differences do emerge. In the general election, female Republican quality candidates facing a quality opponent are less likely to win than male Republican quality candidates. Indeed, with all other covariates set to their means, the probability of a female Republican quality candidate defeating a Democratic quality opponent in an open seat general election is .44, whereas the probability of a male Republican quality candidate defeating a male Democratic quality opponent is .75. In essence, female Republican quality candidates have a .31 (two-tailed p value < .062,) lower probability of succeeding in this type of race then their male counterpart. Indeed, male Republican quality candidates are 70 percent more likely to win a general election when facing a quality opponent than their female counterparts.[30]

Conclusion

Research on women in American politics generally concludes that when women run, they perform as well as their male counterparts (Burrell 1994; Darcy, Welch, and Clark 1994; Fox 2000; Seltzer, Newman, and Voorhees Leighton 1997). Extant research argues that the low levels of female descriptive representation are instead due to factors, such as structural barriers (Darcy, Welch, and Clark 1994), gender differences in political recruitment (Sanbonmatsu 2006), and gender differences in political ambition (Lawless and Fox 2010). Although we agree these factors do impede advances in female descriptive representation, we have demonstrated that the electoral playing field is not as level as commonly portrayed in the existing literature. Our study advances the field's understanding of how a candidate's gender

influences his or her success by illustrating how competition conditions electoral outcomes. In this respect, our approach provides a better understanding of women's chances of success and one more easily reconciled with past research on voter biases.

Past research on women's congressional bids has not fully considered the effect of electoral competition on electoral success. Because our analysis accounts for both the number and quality of opposition candidates in open seat elections and directly models the moderating effects of candidate gender, we are able to provide a clearer picture of how women fare when facing different levels of competition. Our results show that the effects of competition on female candidates are relatively complex. Specifically, we find that a conditional effect of competition emerges at different points in the electoral process for Democratic and Republican women. Democratic women tend to experience a more competitive primary. They face far more quality candidates than do Republican women, and they are much less likely to compete in a primary election where there are no other quality candidates.[31] Our multivariate analysis suggests that this heightened competition drives down support for Democratic women. Republican women, by contrast, are unaffected by the addition of quality candidates at this juncture. Instead, they face more competitive general elections, and the conditional effect of competition is apparent there. Nearly 67 percent of Republican women face a quality candidate in the general election compared to only 47 percent of Democratic women. While the impact of competition emerges at different stages during an election cycle, these results suggest that female candidates are disadvantaged when running against quality candidates, regardless of their party identification.

Our results also indicate that in both primary and general competitive elections, Democratic male quality candidates are significantly more likely to win than are Democratic female quality candidates. Furthermore, in competitive general elections, Republican male quality candidates are significantly more likely to win than are Republican female quality candidates. Given that these results are based on the performance of quality candidates in open seat elections, these findings have particularly important implications for the plight of women's numeric representation in the US House. Because it is rare that a challenger is successful at unseating an incumbent, open seat elections are the races where women have the best chance of increasing their numeric representation in Congress. Yet our analysis shows that female quality candidates—those women with the best chance of winning—do not win at rates comparable to male quality candidates.

Our findings raise questions about the literature's prevailing optimism regarding women's electoral fortunes. By effectively modeling the conditional effects of competition and candidate sex, we uncover evidence that, in some cases, women are disadvantaged. Ultimately, it is premature to conclude gender equity has been attained in the congressional arena. Doing so creates the impression that

everything that needs to be done in terms of recruitment, mentoring, and fundraising opportunities has already been accomplished, and concerns about women's descriptive representation are unfounded. Our results show this is not the case and point to the clear need for additional research on women's congressional bids.

For instance, the relationship between electoral competition and candidate emergence warrants further study. Future research should examine the conditions under which female quality candidates emerge in primary races and how the entrance of a female candidates influences the composition of the field of opposing candidates (see Lawless and Pearson 2008; Sanbonmatsu 2006). Moreover, it is important to understand the extent to which female quality candidates are more likely to emerge in open seat districts where a woman previously held the seat or in districts with "women-friendly" characteristics (Palmer and Simon 2006).

Future research might also reconsider another piece of the conventional wisdom: women are just as effective at fundraising as men (Burrell 2005; Fiber and Fox 2005). Crespin and Dietz (2010) find that female Democratic candidates benefit from female donor networks and as a result, they are at least as successful at fundraising as are male candidates. Yet female Republican candidates do not fare as well as male candidates. Nonetheless, our findings temper some of the optimism associated with female Democrats' fundraising success. Parity in fundraising, or a modest female advantage, does not appear to be sufficient to offset the disadvantage associated with heightened competition in the primary and general election. Further research on the relationship between fundraising and competition is required to better understand why some female quality candidates are defeated in primary elections and also to identify the point at which spending can start to offset the effects of heightened partisan competition.

Although our analysis focuses on US House elections, this approach is generalizable to other electoral settings, particularly those with strong personal vote-seeking systems where voters choose between individual candidates (e.g., open list proportional representation systems). Do gender differences—conditioned on the quality of their competition—emerge in other electoral settings? If so, do these differences vary as a function of electoral systems? It may be the case that conditional gender differences in single member district systems, like the US House, are muted when compared to conditional gender differences in systems with stronger personal vote-seeking incentives. In single member district systems, gender differences as a function of quality competition may be less severe because there is some limit to the number of viable quality candidates that emerge in a single district, whereas in multi-member district systems, female candidates may be more disadvantaged as the pool of quality candidates increases. Indeed, our research shows that women are more severely disadvantaged than men as the number of quality candidates increases.

Notes

1. For examples, see Jacobson 2004; Jacobson and Kernell 1983; Krasno and Green 1988.
2. The FEC election reports contain the certified election results for all 435 congressional districts in a given election (for an example, visit: www.fec.gov/pubrec/fe2000/2000house.htm).
3. Our analysis is limited to elections from 1994 to 2004 because of data limitations. We were unable to compile the necessary information for the entire set of candidates for the 1992 election. We are in the process of completing this task for elections from 2006 to 2012.
4. The analysis includes only candidates who received more than 5 percent of the vote in the primary election to focus on "serious" candidates (Berry and Canon 1993; Canon 1978).
5. See Cox and Katz 1996; Erikson 1971; Jacobson 2004; King and Gelman 1991; Schwindt-Bayer 2009.
6. In the observed time period, more than 95 percent of incumbents successfully sought reelection.
7. For greater detail, see Matland and King 2002; Palmer and Simon 2006.
8. We estimated the incumbent models as well, and the results indicate there are no significant gender differences among incumbents.
9. For examples, see Canon 1990; Green and Krasno 1988; Jacobson and Kernell 1983.
10. For the observed time period, 61 nonquality candidates won the general election and only 2 were female. We estimated the primary election models for Democrat and Republican nonquality candidates. The results indicate there are no significant gender differences among Democrat or Republican nonquality candidates. Because of the limited number of cases, we were unable to estimate a model for the general election outcome.
11. For examples, see Bond, Covington, and Fleisher 1985; Jacobson and Kernell 1983; Krasno and Green 1988.
12. Fulton (2012) develops a measure of incumbent quality based on a 1998 survey of party activists and potential challengers. Survey respondents assessed the character, accomplishments, and skills of a subset of incumbents. This approach offers valuable insight, but it is not possible to obtain for nonincumbent candidates.
13. See Elder (2008) for a discussion of the factors contributing to gender imbalance in Congress.
14. We do not account for female quality candidates facing off due to data limitations. In the observed time period, there are only 2 Republican primary races, 10 Democratic primary races, and 3 general election races that included more than one female candidate. Our results are robust to the exclusion of these cases.
15. A two-tailed test indicates that quality female Democrats are significantly more likely than quality male Democrats to face a quality candidate.
16. We are not suggesting that male candidates are generally protected from competitive races. Indeed, open seat races are often highly competitive—for both male and female candidates. We are merely suggesting that the percentage of races in which female candidates face opposition is higher than males.
17. To further demonstrate the conditional nature of the proposed relationship, we estimated the models excluding the interaction term—the additive models. These results and corresponding predicted probabilities are presented in the Appendix.
18. All models are estimated in STATA 13 using logit. The standard errors are estimated using the Huber-White method (Huber 1967) and are clustered by congressional district. We use the Huber-White sandwich estimator to adjust the variance-covariance matrix to correct for heteroscedasticity and serial dependency.

19. The quality opponent measure varies from 0 to 4, with a mean of 1.6 for Democratic primaries, and the measure varies from 0 to 4, with a mean of 1.4 for Republican primaries. The mean number of quality opponents or Democrats in the general election is 0.54, and the mean number of quality opponents for Republicans in the general election is 0.57.
20. We also estimated auxiliary models, including a campaign spending measure. The results of these models are substantively and statistically consistent with the results presented here.
21. We also re-estimated the primary models, including an interaction between female and nonquality opponents. Their interaction was nonsignificant. The inclusion of the interaction had no substantive impact on the models.
22. We estimated the models excluding the redistricting variable. The results regarding gender differences are consistent with those including the redistricting variable.
23. We also account for "off-year" redistricting (before and after 2002). A nontrivial number of districts required "off-year redistricting"; as such, it is important to account for these changes.
24. We also estimated the models without the women-friendly measure. In this iteration we included several political and demographic measures, such as the South, district-level percent vote for the Republican presidential candidate, district-level percent college educated, and district-level percent urban. This approach produces results consistent with the results presented here.
25. The "women-friendly district" measure accounts for district-level percent vote for the Republican presidential candidate. We include this measure to further control for the partisan context of each district.
26. We estimated the models alternating each election year as the baseline. The results for all the nontemporal variables remained consistent across each estimation. As expected, only the coefficients and standard errors on the temporal dummies varied. We also estimated the models excluding the temporal dummies. The results are substantively consistent with the results presented herein.
27. nlcom was used to generate the probabilities. Control variables are set to their mean values.
28. Both male and female quality Democrats have a high probability of winning primaries that include no quality candidate(s) (i.e., when facing only nonquality opponents). In this scenario, females have a significantly higher probability (.22); however, we urge a word of caution because this finding is based on only 14 instances in which a female quality Democrat faces only nonquality opponents. Furthermore, the general election outcome results indicate that there is no significant gender difference in races that include only nonquality opponents.
29. The predicted probabilities reflect the average probability of a single male or female candidate winning when facing a certain number of quality opponents. When considering a race with three candidates, a female candidate on average has a .23 probability of winning, whereas a male candidate has on average a .38 probability of winning. Thus, in this type of race the two opposing candidates facing a female quality candidate have a combined .77 probability of winning, and the two opposing candidates facing a male quality candidate have a combined .62 probability of winning.
30. This result is based on a small set of observations. As such, we conducted additional tests to lend additional evidence. A simple t-test does reveal that female Republican quality candidates are significantly less likely to win the general election when facing a quality opponent than male Republican quality candidates (t-statistic: 2.13 and two-tailed p value: .04). Indeed, 43.8 percent of Republican female quality candidates facing a quality opponent in the general election won their races, whereas 71.7 percent of the Republican male quality candidates facing a quality opponent in the general election succeeded.
31. This is not to say that the primary process is easy for Republican women. Fewer Republican candidates run to begin with, and those who do run face a myriad of

challenges. For a review see the Political Parity Report The GOP Gender Gap: Clearing the Primary Hurdles. (http://www.politicalparity.org/wp-content/uploads/2014/11/GOP-Gender-Gap-8.pdf).

Notes on contributors

Tiffany D. Barnes is an Assistant Professor of Political Science at the University of Kentucky. Her research focuses on gender and politics, comparative political institutions, and Latin American politics. Her book, *Gendering Legislative Behavior: Institutional Constraints and Collaboration* (Cambridge University Press, 2016) uses interview evidence and archival data from Argentina, to examine why and when women collaborate in congress. Her other work appears in the *Journal of Politics, Comparative Political Studies, Political Research Quarterly, Politics & Gender,* and *PS: Political Science & Politics.*

Regina P. Branton is a Professor of Political Science at University of North Texas. Her research focuses on race and ethnicity, political behavior, electoral politics, and methods of social science research. Her research appears in the *Journal of Politics,* the *American Journal of Political Science, Political Research Quarterly,* and has been funded by grants from the Dirksen Congressional Center, APSA Fund for Latino Scholarship, James A. Baker III Institute for Public Policy, the Center of Spanish Language Media and the Immigration Research and Policy Center at the University of North Texas.

Erin C. Cassese is an Associate Professor of Political Science at West Virginia University. Her research interests lie broadly in American politics and political behavior, with an emphasis on gender, public opinion, and representation. Her work appears in the *Journal of Politics, Legislative Studies Quarterly, PS: Political Science & Politics, Politics & Gender* as well as in edited volumes such as *Women and Legislative Representation.*

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Appendix: Additive models and predicted probabilities

Table A. Quality Candidate Success in US House Elections.

	Democrats		Republicans	
	Primary	General	Primary	General
Female	–0.25	–1.66***	–0.16	–0.88
	(0.32)	(0.54)	(0.40)	(0.54)
Quality Opp.	–0.69***	–1.74***	–0.83***	–1.93***
	(0.09)	(0.48)	(0.13)	(0.71)
Non-Quality Opp.	–0.13*	—	–0.34***	—
	(0.08)		(0.10)	
In-Party Seat	0.04	0.70*	0.23	0.40
	(0.21)	(0.41)	(0.23)	(0.55)
Women-Friendly District	–0.03	0.46***	–0.08**	–0.12
	(0.03)	(0.11)	(0.04)	(0.10)
% Female State Legislature	0.02	0.03	0.01	-0.06*
	(0.01)	(0.04)	(0.01)	(0.04)
Closed Primary	0.26	—	0.22	—
	(0.18)		(0.22)	
Redistricted	-0.37	-1.40	0.22	1.62
	(0.51)	(1.06)	(0.45)	(1.28)
1996	–0.12	1.71**	0.14	–1.76*
	(0.27)	(0.71)	(0.30)	(0.95)
1998	0.26	1.91***	–0.04	-1.45
	(0.24)	(0.78)	(0.32)	(0.95)
2000	0.15	0.25	–0.10	–0.54
	(0.28)	(0.74)	(0.33)	(0.94)
2002	0.04	1.56**	0.17	–0.48
	(0.38)	(0.78)	(0.30)	(1.03)
2004	0.58**	2.74***	–0.03	–1.14
	(0.36)	(0.71)	(0.29)	(0.99)
Constant	0.47	–2.61***	1.01***	5.36***
	(0.41)	(0.89)	(0.46)	(1.33)
N Case	268	145	286	134
Wald χ^2	80.25***	46.30***	49.19***	31.91***

Notes. ***$p < .01$; **$p < .05$; *$p < .10$. As noted in the text, the parameter estimates and standard errors on the interactions are conditional; as such, the size and significance of the effect cannot be determined on the basis of the parameter estimates and standard errors presented. The *C* is placed beside Female, Quality Opp., and Female X Quality Opp. to reflect that these estimates are conditional on the values of the other variables in the interaction. The columns present logistic regression parameter estimates and robust standard errors in the parentheses (clustered at the congressional district level).

Table B. Probability of Electoral Success: Conditioned on Competition.

	Democrats			Republicans		
	Female	Male	ΔProb	Female	Male	ΔProb
Primary Elec.	0.36	0.41	-0.05 (0.07)	0.34	0.37	-0.04 (0.09)
General Elec.	0.23	0.61	-0.38 (0.10)***	0.74	0.87	-0.13 (0.10)

Notes. "QC" refers to quality candidate. ***$p < .01$; **$p < .05$; *$p < .10$. ΔProb gives the change in predicted probability of winning an election between male and female quality candidates and the standard errors on ΔProb are presented in parentheses. All control variables are set to the mean.