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Running Comes Before Winning: Explaining the Gender Differential in State Legislatures

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Abstract

What factors influence the likelihood that a woman runs for, wins, and holds political office across the country? Is it easier to explain why a woman runs in, than that she ultimately represents, a certain district? I compare a series of state-level and district-level independent variables and relate them to two different dependent variables: that a woman ran for a district seat, and that a woman represents a district. I explore what, and how much, political geography and contextual factors can explain. My preliminary findings show that it is easier to explain the probability that a woman runs, than that if she wins, and that cultural rather than institutional factors tend to be more statistically significant. I compare my findings to those of the past, and consider how they reflect the changing role of women and what they mean for the future of female political representation. The key to increasing female political representation may be encouraging more women to run by understanding the decision as a personal but also environmental one, combining "political ambition" and "political geography" approaches.

Introduction

In this paper, I explore why women remain greatly underrepresented in American politics as officeholders. I begin by describing the background of this problem, its historic and systemic nature along with meaning and significance not just for women but American politics and society as a whole. I continue by looking at previous research that has been done in this area. In approaching this issue, I look at each state legislative district across the country, noting if a woman ran for that seat in its most recent election[1] and if a woman held that seat before the November 2016 election. I analyze a series of factors, on the district and state level that are either cultural, institutional, or demographic in nature, searching for those with predictive qualities as to why women are more prominent politically in some areas than others. My findings show that, using this style of analysis, we can explain what state and district conditions influence whether woman ran for a district seat, more than if a woman currently holds the seat. In both models, cultural and demographic, rather than institutional and structural, variables are more indicative, which I break down and discuss in further detail. The institutional factors that were important related to the availability of political opportunity for women. I contemplate what this means for the future of women in politics, and how stakeholders can best work to solve the problem and achieve gender equity in political representation.

Background

As far back as the Revolution and our country's founding, American women have been involved in a politics. However, it has largely been through means outside the scope of

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[1] I indicated if a woman ran in that district's most recent election. For some districts, that was the general election was back in 2012 or 2014, given different term lengths. If the most recent election for that district seat was a special election, I considered that the most recent election.

formal influence and institutional power, in organizing, volunteer, and grassroots capacities. Women have historically been denied both access to, and the attainment of, formal legislative, executive, and judicial power. Barriers to women's entrance and success in the public sphere and political arena are systemic, both social and legal: they are reinforced by traditional gender roles along with the historical denial of property rights and the right to vote for women. The first female member of Congress, Jeanette Rankin, was elected in 1916, just four years before the 19th Amendment granting women the right to vote was ratified. The passage of this amendment was the culmination of a 72-year-old battle thought to begin in 1848 at Seneca Falls. It was not until 1975 that the first woman, Ella Grasso of Connecticut, was elected to the position of governor in her own right.

This legacy can still be seen as the long struggle to achieve gender equality in politics continues. Over the course of 84 years from Rankin's election in 1916 to the end of the 20th century, a total of 200 women have been elected to the United States Congress. The election of 1992 saw the entrance of 28 new women elected into Congress, essentially doubling representation overnight. The proportion of total women state legislators nationwide increased from 4.5 percent in 1971, to just above 20 percent in 1995. However, despite these gains in the late 20th century, women today remain vastly underrepresented in American politics.

The disparity in gender representation today persists at the federal, state, and local level and across all branches of government. It has also stagnated and in many cases, reverted and gotten worse. As indicated in the graph below, the total proportion of women among state legislators decreased from 24.5 percent in 2010 to 23.3 percent in 2011. Women accounted for 9.1 percent of state legislators in 1977, a statistic that later

plateaued at around 21.5 percent in 1997 (Hogan, 2001). Today, women make up an

average of 24.2 percent in state legislatures.

Women in State Legislatures
% of Total Legislators
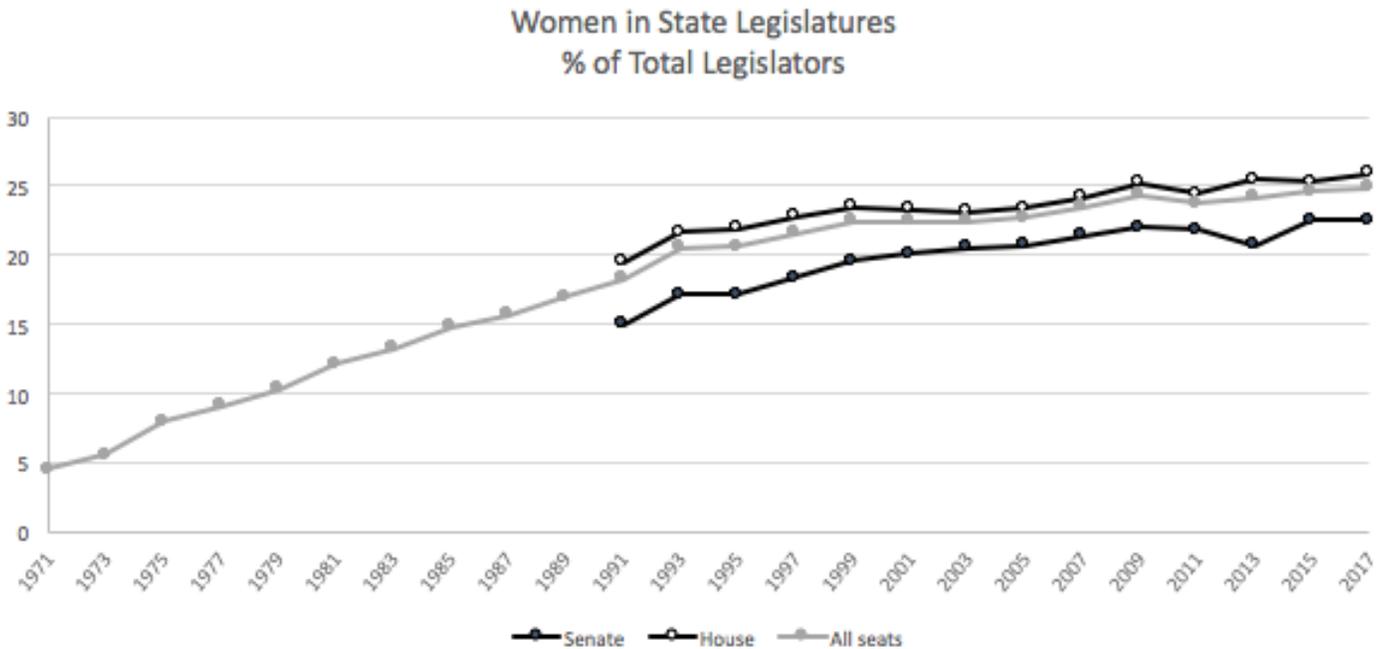
Looking within states and at their respective legislatures, there is wide variation

across the country. In some of these states, the representation of women in their state

legislatures has also fallen during recent years (CAWP, 2014). In no state has the

percentage of women serving exceeded 50 percent, with Vermont as the highest with 41.1

percent in 2014 and Louisiana ranking last with 12.5 percent (CAWP, 2014). In the 2008

elections, women constituted 54 percent of voters, however only made up 24 percent of

state legislators. Similarly on the municipal level, of the 1,392 mayors of U.S. cities with

populations over 30,000, 245, or 17.5 percent were women (U.S. Conference of Mayors

2015).

These gaps are notable for their scope, existing across all levels of government, and depth. They are also both systemic and interrelated. The absence of women serving on the state and local level feeds into a lack of women on the federal level. As women who entered politics during the wave of the 1990s retire, there is concern that there are not enough young women to take their places. The current, 114th Congress, sworn in just under 100 years after women were granted the right to vote, is only 19.4 percent female (CAWP, 2016). Women made up just over 50 percent of the United States population in 2015, yet less than one-fifth of Congress (U.S. Census, 2015). Following the November 2016 election, the number of 104 women serving in this body remained exactly the same. The stark and persistent gender gap leaves the United States ranking 33rd in terms of women in the national legislature among 49 high-income countries, according to Pew Research Center, and 97th overall when compared to a total of 193 other parliamentary countries, according to the Inter-Parliamentary Union. Although women have served as heads of state of other countries, the United States has yet to elect a female president.

"Understanding why more women do not hold elective office is an important normative question with implications for the legitimacy of our democracy," writes Sanbonmatsu (2009, 792). The gender gap prevents our political system from exemplifying the American values of representative democracy and self-governance. Furthermore, research shows that women tend to govern more collaboratively and effectively than men as legislators – a bipartisan coalition of women credited with putting together the compromise that ended the 2013 federal government shutdown. Craig Volden and Alan E. Wiseman find in 2009 that female members of congress have higher Legislative

Effectiveness Scores than men. Women legislators pass twice as many bills than men on average.

The benefits of electing more women have been described both in terms of real and symbolic representation. In "Not All Cues Are Created Equal," Lonna Rae Atkeson finds support for the hypothesis that female citizens in states with visible female candidates show higher rates of political engagement. Exposure to women in positions of power can lead to eventual desensitization and reduction of backlash, along with increases in girls' personal self-belief and ambitions. The social and psychological impact of seeing women in leadership is not just limited to the United States, a study looking at the impact of gender quotas on village councils in India finding a "role model" effect. Seeing more women on village councils led to diminishing of gender gaps in educational attainment, along with changes in girls' personal aspirations and parental expectations.

Now in particular, it is important to study the reasons underlying the lack of women in politics, stagnated progress, and what it means for the future. This is especially important given the question of how the effects of Hillary Clinton's failed presidential campaign will manifest. Many academics have sought to explain the gap and thus subsequently how it may be closed in the future. They have identified different phenomenon and factors that underlie it, and may contribute to its prevalence. This body of research spans decades, many of their proposed explanations holding true throughout and others reflecting the changing status of women during this period. I outline this research in the next section, and explain how it has led to my primary research question: what factors influence the probability that a woman runs for, and holds, political office across the

country? I explore two primary schools of thought, concerned with this question: first, the "political ambition" approach, and second the "political geography" approach.

Literature Review

Political Ambition

Gender socialization and the "political ambition gap" have been cited as fundamental deterrents for women in politics. Richard Fox and Jennifer Lawless employ this political socialization approach in studying the gender gap; arguing that repeated experiences from a young age create gendered expectations that ultimately alter behavior, particularly political ambition (2015). At age 13, young men and women show similar rates of political ambition; around 35 percent of both say that they would consider running for office. By age 25, the gap between men and women's views on this widens. Over 70 percent of men say they would consider running for office, compared to just over 40 percent of women.   Low political ambition in females is a principle deterrent against the emergence of female candidates, thus influencing the level of representation on all levels. In both of the years 2004 and 2010, Fox and Lawless survey potential candidates – all men and women which fall within the social eligibility pool - and find significant gender differences. Women are less likely to be encouraged to run and less likely to see themselves as qualified. These differences and gendered perceptions of the self lead to significant gender differences in candidate emergence, and constitute additional barreirs for women.

Similarly, in *More Women Can Run for Office*, Carroll and Sanbonmatsu expand upon differences in political ambition and the decision to run between men and women. They argue that for women, more so than men, running for office is a relational decision: "more likely to be influenced by the beliefs and reactions, both real and perceived, of other people

and to involve considerations of how candidacy and office holding would affect the lives of others with whom the potential candidate has close relationships." (2013, 16) In a survey of non-incumbent state legislative candidates, 55.9 percent of the women were "pure recruits" who had not seriously thought about running for the legislature before someone else suggested it to them, compared to 29.7 percent of men. Men were more likely to be "self-starter" candidates (38.6 percent of the male candidates,) compared to 22.3 percent of the women.

The discussion of gender differences in political ambition, and the effect on rates of candidate emergence, spans back decades. Robert A. Bernstein (1986) was among the first to explore the concept with a gendered lens when he analyzed why women were becoming less competitive in primaries for the U.S. House of Representatives. He attributed the trend to differences in ambition: not only were more men running in the primaries, they were also much younger. Bernstein ends with the question, "Will more ambitious women be choosing a career in politics in the future?" (163). He ultimately predicts that unless more do, it is unlikely women's political representation will increase.

Political Geography

The aforementioned studies focused on "political ambition" have an intrinsic focus, studying the candidates, and potential candidates, themselves and their personal decision-making processes. These researchers may take a more individual and independent focus, and say that more women must be encouraged to run to close the gender political gap. Others, however, have looked at the significance of context beyond socialization, studying the specific cultural, institutional, and demographic environments in which women are elected, and make such decisions to run. There is consensus that environment and "political

geography" matter; certain factors which vary across states and districts influence the likelihood of female candidate emergence and success. The question becomes which factors are most explanative, in what ways, and how they may have changed over time.

For example, Palmer and Simon create an index of "women friendliness" based on eleven demographic characteristics, and find that it is highly predictive in explaining House of Representatives districts' history and current likelihood of electing women. Based on their findings, women are more likely to be successful in districts with higher proportions of college graduates, lower proportions of blue-collar workers, and higher median incomes, that are outside the South and are smaller, more urban along with more racially and ethnically diverse. This suggests that "the political glass ceiling is not simply a function of incumbency: it is about districts and their receptivity to female candidates" (2008, 30).

Pyeatt and Yanus (2014) compile data from state legislative districts across the country between the years 2001 and 2010. They find Palmer and Simon's 2008 definition of "women friendly districts" for the U.S. House of Representatives to also be applicable to state legislative districts. Pyeatt and Yanus control for institutional variables, and incorporate political, geographic, ethnic, and socio-economic indicators into their "women friendliness index." Based on their analysis, women are more likely and more likely to win in districts that are more liberal, Democratic, urban, racially and ethnically diverse – important demographic indicators that also inform culture. Districts in the southern region are less likely to see women candidates and representatives. The institutional controls follow predictions and fall in line with past studies: multimember districts increase the likelihood of females winning, increasing their emergence as candidates although not by as

much; the more a legislature is professionalized the less likely women run or are elected; and face more favorable probabilities in lower chambers.

Scholars have also explored these institutional aspects of "political geography," structural factors that vary from state to state, in more detail. They have looked at those associated with different electoral systems and degrees of legislative professionalism. The effect of term limits on the representation of women is also of interest for academics. Many political scientists have predicted that the introduction of term limits in state legislatures would be to the advantage of women: increasing the number of women serving by increasing the degree of legislative turnover, and thus decreasing the power of incumbents, who tend to be males. Michele Swers (2001) finds this "incumbency factor" to be a great obstacle in the election of women: women win fairly as often as men when running in similar races, however men are more likely to be incumbents. Susan J. Carroll and Krista Jenkins (2001), however, describe a complicated story. They find a difference in the effects of term limits on women serving in the state house versus state senate. Women running for term-limited state senate seats have had more success, due to the "pipeline effect," the idea that when senior female elected officials retire, younger female candidates can be recruited to that their place. Yet in their longitudinal analysis, Carroll and Jenkins find that of the six states that implemented term limits for the state house in 1998, a total of 48 incumbent women were forced to leave their seats while 43 women were elected into the seats vacated by them as well as other term-limited incumbents.

Sanbonmatsu similarly takes a state-level approach, hoping to complement individual-level studies of candidates (2002). Sanbonmatsu hypothesizes that social eligibility theory, the size of the pool of "qualified" candidates, and political opportunity

structures that vary from state to state affect female candidate emergence. She finds that

states' female labor force participation rates are positively related to the prevalence of

women candidates. Length of legislative sessions, a component of legislative

professionalism, and traditional party organizations, in which elites have more control as

"gatekeepers" are negatively related – although affecting Democratic and Republican

women differently.

Elder (2012) uses state-level data and explores ideological and partisan aspects of

political geography further. She argues they create different electoral outlooks for men

compared to women, and that they can partially explain differences in representation

between Democratic and Republican women and overall underrepresentation. Different

political cultures around the country impact the ability to produce, recruit, and support

women elected officials both on elite party and local levels. "The Republicanism of the

state's electorate and the professionalism of the legislature, as well as the influence of the

Christian Right, only work to the detriment of Republican women," Elder writes,

"Meanwhile factors thought to foster women's representation overall, such as women's

presence in the eligibility pool, the strength of women's groups within a state, and the

implementation of term limits only work to boost the representation of women within the

Democratic party" (7).

Rule uses data about women's representation in state general assemblies between

the years 1974 and 1984. She finds that Republican Party dominance of the legislature,

moral state political culture, higher AFDC payments, and no second primary are continually

favorable for women. Democratic dominance of state legislature, particularly in former

Confederacy states, and traditional Southern culture are continually unfavorable.

Comparing the year 1984 with earlier years in the study, Rule notes changes in certain factors' impacts: small assembly size in high population states and low income states are no longer unfavorable, while individualistic state culture, multimember assembly districts, women in U.S. congress, women in the labor force, professional women, and prominence of the National Organization of women are identified as new contextual conditions aiding women's recruitment. These findings suggest that a mix of factors is significant, however most tend to relate to culture.

Arceneaux (2001) elaborates on how distinct attitudes that vary across the country may work to constrain political opportunities for women and perpetuate the gap in political leadership. In addition to political culture and ideology, he looks specifically at states' attitudes about traditional gender roles. He was influenced by studies that show, "women are more likely to run in states and regions in which voter show less bias against women candidates, or where gender roles are less traditional," (146), and finds political culture, ideology, and gender attitudes all have related but distinct impacts.

Hogan conducts a similar study in 2001. However instead of using percentages of women serving in state houses and senates as the dependent variable, he uses state legislative seats themselves as the unit of analysis. Hogan investigates both state and district level variables, and how they affect the probability that a woman was elected to a particular seat. His findings also suggest that variables included in the institutional and electoral model have a limited effect, although legislative professionalism stands above the rest, becomes becoming significant and strongly negatively correlated, in the combined model once all factors are taken into account. His project is the first to look at such demographic variables in detail. Variables pertaining to political culture and education are

the strongest: moralistic culture (as also in Rule's study), women's labor force participation, urban population, percent college educated, percent of white-collar workers, and percent of minorities all found to be positive influences - women's labor force participation and urban population do become insignificant in the combined model. Traditionalistic political culture is found to negatively relate to the likelihood a woman is elected, with statistical significance.

As for the institutional and structural factors, higher chamber (State House versus State Senate, where elections for the Senate are typically more competitive), population of district, distance from capital, and percent of farmers in the district population are statistically significant with a negative impact. The greater number elected per district, as seen in states with multimember districts, the greater likelihood a woman is elected. These factors have an impact of smaller magnitude than the other significant factors, although they still tell an important story – with chamber and number elected being fairly strong throughout. Moralistic and traditionalistic political culture remain the strongest indicators overall, in opposite directions.

This research suggests that context, not just political ambition, matters, and that there are specific, measurable factors that vary between districts and states that can explain the likelihood that a woman runs for and is elected to state legislative office. Three aforementioned past studies – Rule (1990), Hogan (2001), and Pyeatt and Yanus (2014) – have used similar methodologies, logistic regressions, to measure such factors' impact on probabilities across the country. Looking across different time periods, similar factors maintain their predictive quality. This body of literature demonstrates that throughout the past three decades, there are distinguishable trends and similarities when answering why

women remain underrepresented in American politics. These trends are important given their persistence and their implications. Women are significantly less likely to emerge as candidates than men. Differences between women's respective political environments translate into differences in the proportions of women running and ultimately representing different areas. Candidate emergence and candidate success are two distinct phenomena, although the former certainly informs the later.

Once a woman makes the individual decision to run, there is also literature about how her treatment as a candidate may differ from her male counterpart. Barbara C. Burrell (1995) looks at data of men and women's success rates and relative performance in open seat primaries from 1968 through 1992 and found no statistical significant differences, except in 1992 when female candidates actually outperformed men. "It is their lack of presence (i.e., the scarcity of female candidates), not their performance that has made primaries a weak link in increasing the number of women in the U.S. Congress," Burrell explains (55). Although they may have similar success rates, female candidates face a different set of perceptions in the public eye. This presents unique challenges for female candidates in winning over voters compared to their male counterparts, which they must overcome to have similar success rates.

Hypotheses

These studies do leave open-ended questions, however, such as if these relationships between certain factors and women's political success have changed in recent years, and if so in what ways. Below, I include a table of my hypotheses for how each independent variable will impact the two dependent variables in my regressions using up-to-date data. I came to these predictions based on the past research that shows a

fundamental cause of the political gender gap is the fact that women are far less likely than men to run for office. There is the relative low likelihood that women, from a young age, show political ambition and a desire to run for public office. It is current gendered political socialization discourages women from doing so, which is borne from cultural factors and expectations. Together the cultural, socioeconomic, and ideological variables included in my analysis help craft these gendered environments. For instance, in my theory, the greater history a state has of women in highly visible political positions, the more normalization of women in positions of political power would be. Socioeconomic variables also have cultural implications, although more indirectly. For example, districts that are more urban and have higher levels of educational attainment tend to be more liberal and accepting of nontraditional gender roles. For the variables that are more institutional in nature, I predict that those which increase political opportunities available to potential female candidates will increase their prevalence and overall success.

Drawing upon Hogan's findings in 2001 concerning the relationship between Elazar's state culture categories and female representation, we predict the following hypotheses.

H1: Districts in states with Moralistic Culture will have higher probability of a female candidate and female representative that those in states with Individualistic Culture.

H2: Districts in states with Traditionalistic Culture will have a lower probability of a female candidate and female representative than those states with Individualistic Culture.

The next set of hypotheses are predictions about how the status of women within a state affects female representation in different districts. As discussed above, Elder (2012)

and Sanbonmatsu (2013) show how the size of the pool of eligible female candidate impacts the level of representation; to operationalize this, we included the female labor force participation rate as the traditional measure and expect the same findings. To look at social eligibility more broadly, we also included the percent of women in managerial/professional roles, and predict this will also have a positive effect.

We additionally wanted to capture the a more cultural perspective of the status of women within states, more directly than measures of political culture do alone. We believe that measures which indicate a more progressive environment for women would lead to higher levels of political success. Hogan included states' historic support for the ERA in his analysis, and we additionally included a political leadership score and the female voting rate.

H3: Districts in states with higher rates of Female Labor Force Participation will have a higher probability of a female candidate and female representative.

H4: Districts in states with higher rates of Female Voting will have a higher probability of a female candidate and female representative.

H5: Districts in states with higher percentages of Women in Managerial/Professional Roles will have a higher probability of a female candidate and female representative.

H6: Districts in states with higher Female Political Leadership Scores will have a higher probability of a female candidate and female representative.

H7: Districts in states with historic support for the ERA will have a higher probability of a female candidate and female representative.

We also look at institutional elements. Hogan (2001) found that legislative professionalism has a negative impact on female political representation. Elder (2012) concludes that term limits help women as well, and we expect to see these to both hold true. In this analysis we consider monetary competitiveness and the cost of race unlike other similar regression-based studies. Based off literature that says women are averse to fundraising for political reasons, and the fact that women have historically been shut out of top party structures and resources, we make our hypotheses.

H8: The greater the compensation of legislators, a component of more professional legislatures, the lower probability of seeing a female candidate and female representative.

H9: The greater the resources available to legislators, another component of more professional legislatures, the lower probability of seeing a female candidate and female representative.

H10: The longer length of session, another component of more professional legislatures, the lower probability of seeing a female candidate and female representative.

H11: The greater monetary competiveness of races within a state, the lower probability of seeing a female candidate and female representative.

H12: The greater cost of races in a state, the lower probability of seeing a female candidate and female representative.

H13: If a district is in a state with term limits on their legislators, the greater probability of seeing a female candidate and female representative.

The above hypotheses relate to the state-level variables we took into consideration. We additionally looked at a series of district-level variables that relate to either socioeconomic status, racial diversity, urbanization, ideology, and political opportunity.

As for the socioeconomic variables, poverty, median income, and educational attainment are all interrelated. Poverty has not been looked at directly in prior studies, however given the findings of Palmer and Simon (2008), Hogan (2001), and Rule (199) regarding the relationship between education and income levels and female political success, I predict the following.

H14: The higher poverty level within a district, the lower probability of a female candidate and female representative.

H15: The higher the median income of a district, the higher probability of seeing a female candidate and female representative.

H16: The higher levels of educational attainment of a district, the higher probability of a female candidate and female representative.

Racial diversity has not been studied directly in terms of female representation. However, we consider that because places of racial diversity tend to be more urban, they may be more progressive culturally.

H17: The higher level of racial diversity within a district, the higher probability of a female candidate and female representative.

We also look at how urbanization affects female political success. Urbanization relates to other socioeconomic variables, yet we look at it separately. Consistently in previous studies, urban areas tend to lead to more female political success as see in Hogan (2001), Pyeatt and Yanus (2012), and Palmer and Simon (2008).

H18: The higher percent of a district population living in an urban area, the higher probability of seeing a female candidate and female representative.

H19: The higher percent of a district population employed in agriculture, the lower probability of seeing a female candidate and female representative.

H20: The greater land area of a district, the lower probability of seeing a female candidate and female representative.

H21: The higher population density of a district, the higher probability of seeing a female candidate and representative.

We also included measures of culture on the district level, in addition to those on the state level aforementioned. For the same reasons, we predict that indicators of a more progressive and liberal will lead to higher rates of female political success. The more contemporary study by Pyeatt and Yanus finds Democratic partisanship to help women, although in the past, such as in Rule's (1990) study Republican party dominance was.

H22: The greater Democratic partisanship of a district, the higher probability of a female candidate and a female representative.

H23: The lower the Tausanovitch and Warshaw score, which is indicative of a more liberal culture, the higher probability of a female candidate and female representative.

Lastly, we include a district's school age population as a measure of political opportunity for women within the district. Although this variable has not been looked at before, women are known to run before or after they raise children.

H24: The higher school age population within a district, the lower probability of seeing a female candidate and representative.

The above hypotheses are summarized in the table below.

Table 1. Hypotheses of Independent Variables for Dependent Variable 1 and 2:
Probability that a Woman Runs and Represents

State Level Variables	District Level Variables

Political Culture
   -   Moralistic Culture +
   -   Traditionalistic Culture –
Women's Role
   -   Labor Force Participation +
   -   Female Voting Rate +
   -   Percent of Women in
       Managerial/Professional Roles +
   -   Political Leadership Score +
   -   Support for ERA +
Institutional
Legislative Professionalism
   -   Compensation –
   -   Resources –
   -    Length of Session –
Cost
   -   Monetary Competitiveness –
   -   Cost of Race –
Political Opportunity
   -   Term Limits +
	Socioeconomic
	   - Poverty -
	   - Median Income +
	   - Educational Attainment +
	Racial Diversity
	   - Range and Standard Deviation +
	Urbanization
	   - Percent Urban +
	   - Percent employed in Agriculture –
	   - Land Area –
	   - Population Density +
	Ideology
	   - Democratic Partisanship +
	   - Tausanovitch and Warshaw –
	Political Opportunity
	   - School Age Population -

Research Design and Methods

Intrigued by the overall gender gap in political representation in the United States, I am seeking to explain why women are more likely to run in and represent certain state legislative districts than others. The wide variation between states' levels of female representation in their legislatures leaves much room for analysis, allowing me to study the factors that systemically vary between states and districts and their impacts.

To recap, my research question is: What factors influence the probability that a woman runs for, as well as wins and holds, political office across the country? I will also investigate the sub-questions: 1) Do cultural, institutional, or socioeconomic factors tend to be more explanative? 2) Is it easier to explain, using this sort of statistical analysis, why a

woman runs, than that a district ultimately has a female representative? I will compare my findings to the past studies of Rule (1990), Hogan (2001), and Pyeatt and Yanus (2014) to see if and how such answers have changed over time. I will also use my findings to make predictions about the future of female political representation, analyzing trends and predictions about factors that are shown to be significant.

To explore this question, I have created an original dataset using SPSS software, Statistical Package for the Social Sciences. This has enabled me to enter and use the most recent data available as of September 2016, right before the 2016 general elections, and to incorporate previously unconsidered factors.

Using a methodology similar to Robert E. Hogan in "The Influence of State and District Conditions on the Representation of Women in U.S. State Legislatures" (2001), I look at each state legislative seat, or district, as the unit of analysis and run a series of bivariate logistic regressions. This dataset allows me to provide an extensive "snapshot" of the current status of women in terms of state legislative representation. However unlike in his study, I look at two different dependent variables, as Nicholas L. Pyeatt and Alixandra B. Yanus (2014) do in their longitudinal study. My analysis includes data for each state legislative district in 37 states, a sample totaling 5,436 districts for all the states included in this study. The ten states with multimember districts were excluded, along with California and Louisiana for their use of runoff primaries, and Nebraska's unicameral legislature.

For each district, I assign a binary variable of 0 or 1 for the two dependent variables of 1) if a woman ran as a candidate in the most recent general election for that seat, and 2) if a woman is holding that seat as of before the November 2016 election. A value of 0 means a man holds that seat, and that there was no woman present in the most recent race for it. A

value of 1 indicates a woman holds that respective seat, and that a woman was present in its most recent general election. Data given by Project Vote Smart provides the names of each state legislator in the country by their district and gender as of October 2016, right before the November 2016 election. Using public information available on the website Ballotpedia, I individually researched and determined if a woman ran and was present in the most recent race for that district.

This allows me to measure the relative impact of independent variables in different models on those two probabilities, that a woman ran for that seat (Dependent Variables 1) and that a woman holds it (Dependent Variable 2), in terms of magnitude, direction, and statistical significance. I run regressions for each independent variable, and then in combined models. I include the two individual regressions for each independent variable, along with those for one full combined model of district variables, one of state variables related to political culture without district variables and one with, and one of state variables related to the status of women without district variables and one with. In the combined models, I exclude certain independent variables when necessary due to collinearity. However, they are available in the accompanying dataset for those interested.

A seat based analysis allows for a more detailed and accurate description and thus of independent variables that are better understood on the district than state level, particularly variables relating to demographic measures that can vary greatly throughout a single state. My findings for Dependent Variables 1 and Dependent Variables 2 are interrelated by their nature, a woman running being necessary for a woman to ultimately represent a district, and I will interpret them in this manner.

Independent variables in the state model will quantify relevant aspects of both the states' social and political culture, and institutional environment. I consider variables relating to political culture, women's role, and state institutions. I include a categorical measure of political culture developed by Daniel Elazar in 1984, which divides states into three subcultures: moralistic, traditionalistic, and individualistic. States with moralistic cultures tend to see government as a positive force and put society and the common good before the individual. This is contrasted with individualistic state cultures that see government in practical terms, making private concerns more prominent. Traditionalistic state culture sees politics government as related to the maintenance of traditional social and family norms. To recap, Hogan in 2001 finds the existence of a moralistic culture to have a statistically significant positive effect for women, and traditionalistic culture to have a negative one. In my study, I use individualistic state culture as a baseline, and focus on comparing moralistic versus traditional cultures.

I also include indicators of women's role in each state, which show it is either more progressive or traditional in either a political or economic sense. This includes a score of the state's historical support for women's rights, based on a study of the ratification debates over the Equal Rights Amendment. States are categorized for either ratifying the Equal Rights Amendment, or failing to ratify (including later rescinding of previous ratification). To measure social eligibility pool theory, I also include states' 2015 female labor force participation rate and the percentage of women employed in managerial and professional occupations in that state. This is available from the Institute for Women's Policy Research's "Status of Women in the States 2015 national report. Furthermore, from that same report, I include the average percentage of women who voted that state, along

with a self-created aggregate score of the states' history of women in highly visible political positions. For each female Governor and United States Senator, elected in her own right since the 1970s, I add one point. These scores range from 0 to 4.

In the state model, I also include variables that describe the institutional framework within which legislative candidates run, are elected, and eventually serve across each individual state. Differences in state constitutions provide room for comparative analysis. I look at legislative professionalism, cost of races, and political opportunity. I measure legislative professionalism across states as proposed by Bowen and Greene. Scholars have traditionally measured legislative professionalism, the degree to which serving in a legislature is similar to a full time job, using an aggregate index. Bowen and Greene argue, and show, how this can be problematic, as different components in the index can have varied and contradictory effects. As such, I measure legislative professionalism using three separate measures: legislative compensation considered as legislators' base salary, time in session, and resources available to legislators. Recent data on legislative compensation by state is available from the National Conference of State Legislatures. Time in session is the average number of days the legislature met in 2013, 2014, and 2015, to account for special sessions. For states with per diem compensation rates, I multiplied the per diem rate times the average session length of those three years. Resources available to legislators is operationalized as each legislature's total number of full time staff, divided by the number of legislators. This is also available in 2015 data from the National Conference of State Legislatures.

For the cost of race, I will also include the percentage of races within a state that were monetarily competitive. I average the percentage from the years 2013 and 2014,

using data from the National Institute on Money in State Politics. A race is considered monetarily competitive if the top fundraiser raised no more than twice that of their opponent. I also include as independent variables the average amount of money raised by each race within a state's top fundraising candidate (similarly using a 2013 and 2014 average from the National Institute on Money in State Politics). This demonstrates the expected cost of a race for prospective candidates, and the amount they will have to commit to fundraising or self-funding. Lastly in the state model, I operationalize political opportunity by categorizing states whether they have term limits or not, and the length of their state and house sessions.

There is also a series of district-level variables I include. They either measure socioeconomic statuses, racial diversity, urbanization, ideology, or political opportunity. The socioeconomic variables are percent of families in the district below the poverty level, median income, and percent in the district with a college degree. All of the data was found from the United States Census, accessed using the American FactFinder search program with the most recent data available. To measure racial diversity of a district, standard deviation between the district's white, African American, and Hispanic population is calculated and included as its own independent variable. Urbanization is operationalized as the urban percent, percent employed in agriculture, land area, and population density. District ideology will include a measure of partisanship operationalized as the Republican share of the presidential vote in that district in 2012 and ideology measured as a score estimated for each states' legislative districts by Tausanovitch and Warshaw in "Measuring Constituent Policy Preferences in Congress, State Legislatures, and Cities" in 2013. Tausanovitch and Warshaw use survey data to measure constituents' policy preferences

and relate to ideology. I also include school-age population as a district variable, to potentially indirectly measure political opportunity for women – as women tend to run later in life than men, after raising children.

Findings

Below are the results from the regressions we ran for each dependent variable and in two separate models were created. The first model includes variables relating to state culture, whereas the second includes those variables that speak to the status of women within the states.

Table 2. State (Political Culture) and District Variable Combined Model: Female Candidate

Independent Variable	Coefficient	Significance
Moralistic Culture	.356	.004
Traditionalistic Culture	-.034	.747
Legislative Resources	.004	.701
Monetary Competitiveness	.007	.066
Cost of Race	0	.858
Term Limit	.367	0
School Age Population	.011	.218
Urban Population	.006	0
Democratic Partisanship	.011	.018
Diversity	0	.936
Tausanovitch and Warshaw	-.362	.013
Poverty	-.019	.001

Table 3. State (Political Culture) and District Variable Combined Model: Female Representative

Independent Variable	Coefficient	Significance
Moralistic Culture	.221	.121
Traditionalistic Culture	.087	.475
Legislative Resources	0	.997
Monetary Competitiveness	.004	.405
Cost of Race	0	.952
Term Limit	.245	.012
School Age Population	.007	.43
Urban Population	.008	0
Democratic Partisanship	.022	.001
Diversity	.004	.225
Tausanovitch and Warshaw	-.336	.143

Poverty	-.008	.155

As the above two tables demonstrate, more variables were significant in explaining the likelihood of a female candidate, than that of a female representative. The state-level variables that were significant for the first dependent variable was the existence of moralistic culture, term limits, and monetary competitiveness; all of which were in positive directions. More district-level variables were significant: with a greater urban population, greater Democratic partisanship, more liberal Tausanovitch and Warshaw scores, and lower rates of poverty all leading to the greater likelihood of a female candidate. As for there being a female representative, the variables that remained significant were term limits, urban population, and Democratic partisanship.

Table 4. State (Status of Women) and District Variable Combined Model: Female Candidate

Independent Variable	Coefficient	Significance
Female Labor Force Participation	.020	.277
Female Political Leadership Index	.004	.958
ERA Score	.061	.638
Legislative Resources	-.004	.863
Monetary Competitiveness	.009	.086
Cost of Race	0	.948
Term Limit	.457	0
School Age	.008	.45
Urban Population	.006	.001
Democratic Partisanship	.011	.032
Diversity	.002	.463
Tausanovitch and Warshaw	-.321	.037
Poverty	-.016	.006

Table 5. State (Status of Women) and District Variable Combined Model: Female Representative

Independent Variable	Coefficient	Significance
Female Labor Force Participation	.033	.066

Female Political Leadership Index	-.014	.832
ERA Score	-.197	.128
Legislative Resources	.018	.388
Monetary Competitiveness	.003	.529
Cost of Race	0	.606
Term Limit	.323	.005
School Age	.002	.815
Urban Population	.008	0
Democratic Partisanship	.022	.001
Diversity	.006	.090
Tausanovitch and Warshaw	-.364	.092
Poverty	-.005	0

These above two tables of the Status of Women model similarly show that more variables were significant in explaining whether or not there was a female candidate, than whether or not there was a female representative. The same variables – term limits, urban population, Democratic Partisanship, Tausanovitch and Warshaw scores, and poverty – are significant and in the same direction. It is interesting to note that these indicators of the Status of Women within states – the female labor force participation rate, Female Political Leadership Index, and ERA score – were not significant.

We additionally calculated predictive probabilities using the first State Culture model, which is another way to present and understand these findings. These predictive probabilities represent how a change in one variable affects the probability of seeing either a female candidate, or a female representative in the district. For each dependent variable, we calculated a baseline probability by creating a hypothetical district where each variable was set at its average. Each bar on the graph represents what the new probability of seeing either a female candidate or representative would be if the variable was changed. For example, if you were to introduce term limits, it would change the probability that a

woman runs for office in that district from 32.37 percent to 40.74 percent. Furthermore, we then created hypothetical "most friendly" and "least friendly" districts for women, to see how putting all the variables in favor of female candidate emergence and success, or against, would impact the probability of each.

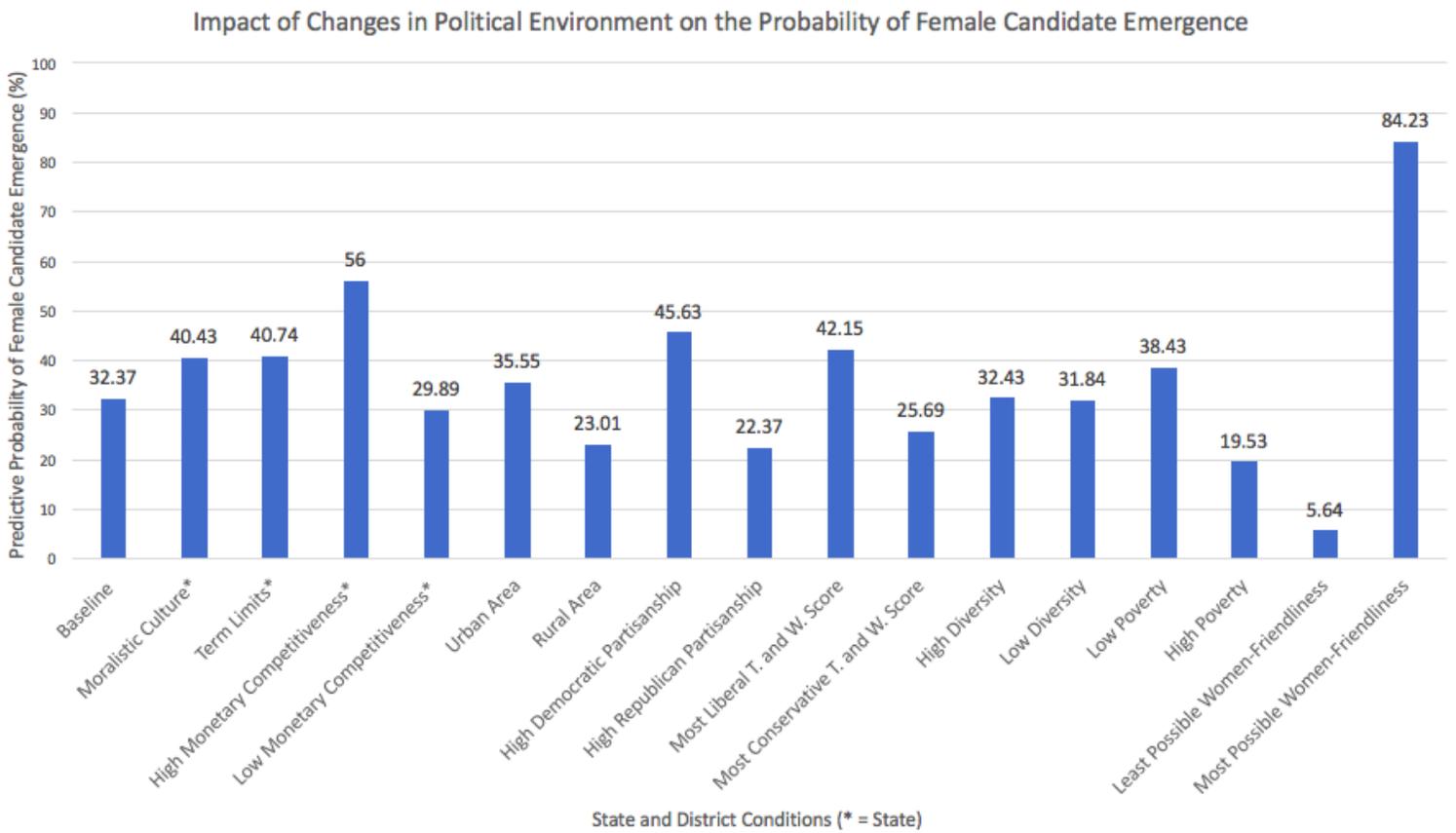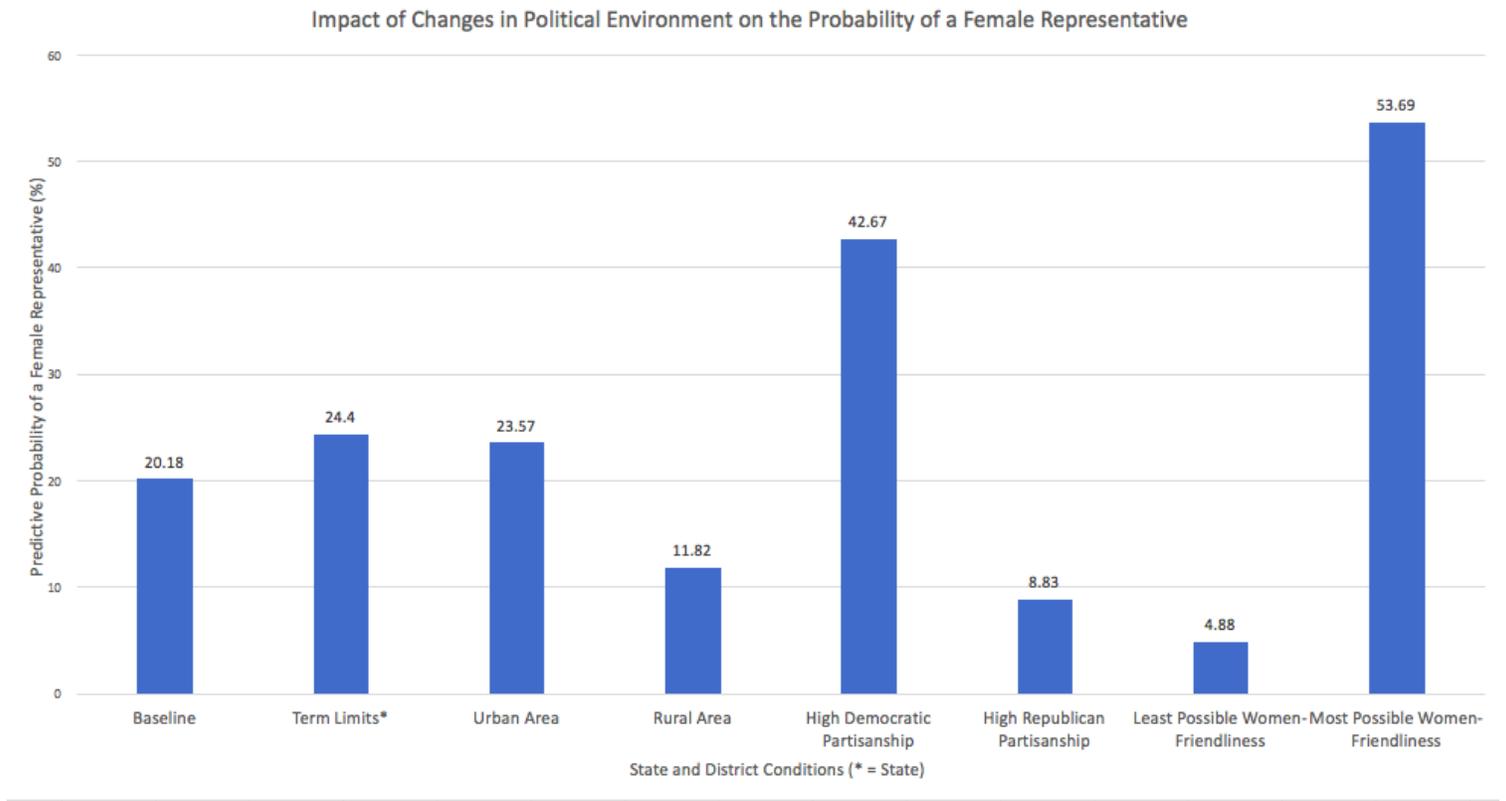*Figure 1. Predictive Probabilities for Female Candidates*

Impact of Changes in Political Environment on the Probability of Female Candidate Emergence

Figure 2. Predictive Probabilities for Female Representatives

Analysis and Discussion

Overall, the main takeaway of the findings across all models is that it is easier to explain the probability that a woman runs for office in a district than that she represents a district. This supports the idea that the two are related, but separate phenomenon. The "political ambition" explanation certainly remains a leading theory, however these findings show that political geography matters as well. As shown in the above graphs of predictive probabilities, the likelihood of seeing both a female candidate and representative changes drastically based on a series of factors, with a major gap between the hypothetical least and most women-friendly districts.

The factors that were consistently the most predictive and important related either to 1) political opportunity or 2) the cultural environment. Also, throughout all regressions variables measured on the district level tended to be more predictive than those on the state level. The variables on the district level more directly measured the context women run and are elected in, and tended to be more cultural and socioeconomic than institutional. The independent variables that consistently were the most impactful for both dependent variables are the level of poverty, urban population, Democratic partisanship, and Tausanovitch and Warshaw scores all within each separate district, along with the monetary competiveness of races statewide and existence of state legislative term limits.

On the district level, variables' direction and significance both remained relatively constant when comparing them to the likelihood a woman ran for office and that she holds it in different models. For state level variables, the change between the two dependent variables was more apparent. For example, when looking at the state (political culture) combined model, three variables were significant for the first dependent variable (existence of traditionalistic culture, monetary competitiveness, and term limits), but in the subsequent regression table for dependent variable 2, only traditionalistic culture was significant. Similarly, the change was also noticeable for the state (status of women) variable combined model: four variables were significant in relation to dependent variable 1 (female labor force participation, ERA score, monetary competitiveness, and term limits), but in relation to dependent variable 2, only female labor force participation and term limits remained so. On the whole, it is also interesting to note that the Political Culture model was more explanative than the Status of Women model. This may be because the

measures of political culture did a better job of capturing the status of women within a state or area than traditional measures of the status of women.

In all models, the greater the urban population in a district, the more likely a woman is to run and to be a district's state legislator. Theoretically, this makes intuitive sense: urban areas tend to be more highly educated and wealthier. However, there may also be a more direct, political reason: urban areas tend to be more liberal and vote Democratic, two factors that also greatly support female candidates. Democratic partisanship is one of the only other two variables (along with term limits) that was significant throughout all models for both dependent variables.

The more Democratic a district is, the more likely women are to run and hold office. This is a relatively new phenomenon; Rule's 1987 study found that Republican dominance of the legislature was favorable for women, looking at the years 1974 to 1984. One reason may be that today women are more likely to associate, and subsequently run, as Democrats rather than Republicans, and are thus more likely to be electorally successful in Democratic districts. Although it has been changing gradually, the Democratic Party still maintain an advantage with women. In a 2012 Pew Research Center study, 37 percent of women identify themselves as Democrats, compared to 24 percent as Republicans and 33 percent as Independents. Parties' candidate recruitment strategies may be another reason: prominent groups that encourage women to run and provide campaign resources, such as EMILY's List, tend to be Democratic.

Furthermore, partisanship is also reflective of a broader culture within districts. Democratic districts tend to have more progressive ideologies, positive Tausanovitch and Warshaw scores, which may be more tolerant of non-traditional gender roles and more

favorable towards women in positions of power. A 2016 study done by FiveThirtyEight in partnership with Morning Consult surveyed over 2,000 registered voters and asked if they would be more likely to vote for a male or female candidate and found a party gap. 28 percent of Democratic women and 23 percent of Democratic men said they would be more likely to vote for a woman, compared to 29 percent of Republican women and 42 percent of Republican men who said they would likely vote for a man over a woman. Except when for two regressions (state political culture combined and state status of women combined, both for Dependent Variable 2), a district's Tausanovitch and Warshaw was notably negative and significant. This means the more conservative a district's ideology, the less likely women ran or represented the district.

Another interesting finding, that has not previously been looked at nationwide across state legislative districts in this way, is that monetary competitiveness races had a significant impact on female political success. The direction, however, ran counter to my hypothesis: the more monetary competitiveness within a state, the more female political success. My prior reasoning was that more monetary competitiveness would mean less women, as women historically have been shut out of elite party structures and have had more difficulty raising money for their campaigns than men. This is both due to differences in top-level party support men and women tend to receive, and an aversion to asking for women in general. In a 2014 report by Political Parity, "62 percent of women said 'money/fundraising/campaign infrastructure' was the biggest barrier they would face running from higher office" (23). Fundraising demands certain remains a problem in reality, however monetary competitiveness may have an indirect impact, that gives it a positive relationship for both dependent variable 1 and dependent variable 2. Open races

tend to be more monetarily competitive, and in that way, monetary competitiveness can be measure indicating increased political opportunity for women. I did not differentiate between open and non-open races in my study, which can be a goal of future research. The cost of race was also a positive variable in a noticeable number of regressions – also counter to my hypotheses - but not in the same degree as monetary competitiveness. The reasoning for the positive relationship is similar to that aforementioned, as more competitive and open races see more money spent by candidates. However, different costs of living between states can also be an explanation that leads to different costs of race. For example, it is more expensive to run in a state with a higher median income, and higher median income correlates with more female candidates in general.

The presence of term limits also correlated strongly with more women candidates and more women legislators. Term limits also speak to the principle of political opportunity: by term-limiting out incumbents, who disproportionately tend to be male, there are more opportunities for women to run and take their place. Monetary competitiveness and term limits are the two most influential variables that are more institutional in nature, and they both relate to the same theme. Notably, no variables relating to legislative professionalism – length of session, legislative compensation, and legislative resources – were significant in any of the models or regressions. This starkly counters past research and Hogan's as recent as 2001, which suggest that women are more likely to be successful in states that have legislatures which are more informal and part-time.

Another noteworthy finding is that diversity of a district seems to have a mixed effect. At first when looking at the variable alone, the more diverse a district, the less likely

women are to be politically successful. However in the combined models, the relationship turned positive or insignificant. At first, I had hypothesized that more diverse districts would see more women, as they may tend to be more tolerant, progressive, and Democratic-leaning. However, there are additional elements of district diversity that may not be captured in this measure: for instance, there is the question of which groups exactly make up the district, and whether or not they tend to vote in blocs. District diversity may be correlated to socioeconomic variables, as well, which can have a stronger and more direct effect.

Strengths and Weaknesses

There are distinct strengths of approaching the political gender gap in this way and the question of why women remain underrepresented. The first strength of my research methodology is its seat-based analysis. Using each state legislative district as the unit of analysis allows for more accuracy, and facilitates differentiating between state and district level variables. It also gives me an extensive amount of data from across the country to work with and draw meaningful conclusions from. My study also benefits from using the most recent available, and including previously unconsidered variables. I consider significantly more variables than included in other studies. Examples are differences in campaign finance across the country, and a measure of states' history of female political leadership. My study is also distinct in that I am looking at two different dependent variables. This will allow me to explain the two different phenomena – the likelihood that a woman runs and the likelihood that she wins – more accurately, and see if there is any relationship.

A main challenge of my research methodology, however, is making sure the variables included in fact are reflective of what they hope to measure and operationalize. This is a challenge for many quantitative studies. For example, culture is a difficult thing to quantify, which is why I included a variety of indicators hoping to capture it from different angles. For instance, I include the Tausanovitch and Warshaw scores to measure the ideology side, demographic information to measure diversity, and indicators of the status of women in each state. Lastly, another weakness of my study is that it is missing a longitudinal perspective, as it is a "snapshot" of state legislative districts around the country at this moment in time. This means I will not be able to compare how other women have fared in those districts in the past. However, I will be able to compare districts to one another in the present and make conclusions that way. Also, I will be able to compare my findings to those of past studies to get a sense of changes over time.

Another weakness of my study is that races are not categorized by if there was an incumbent present or if it was an open-seat race. Although measured indirectly using political opportunity variables, this is expected to be an important in influencing female political success and can be the inspiration for future studies, or the potential addition to this existing database. Furthermore, for control purposes I did not include states with multimember legislative districts or states with unique primary systems. This also can be the source of future research.

Conclusion

Creating political opportunities is important, however it is critical that environments support women to take advantage of those opportunities. The fact that women are less likely to run for office is a distinct phenomenon and leads to much of the

political leadership gap. Context matters; this low likelihood is very much influenced by environment and cultural factors that vary across the country and from district to district. However, there is still much that remains unexplained. There seems to be an intangible element I was not able to capture in my analyses – and much less variables were consistently statistically significant than I predicted. This is in addition to the fact that the experiences of women across the country are extremely varied. Similarly, there are reasons why both male and female candidates may be more or less likely to run in a certain district, such as incumbency advantage and trickle-down effects of national politics that I was not able to measure. However, even though there are significant differences in races and districts across the country that I did measure and there still were several significant statistical relationships show that the problems facing women in politics are systemic and widespread.

My findings suggest that the key to increasing female political representation in 2017 may be encouraging more women to run by understanding the decision as a personal but also contextual one. This includes recruiting more women for office, along with providing mentorship and campaign and party resources. Considering that a majority of the significant variables were cultural in nature, change needs to happen on the social level, and it may be more gradual. The relationship between the status of women in general and political representation has been established for some time. As women have had more educational and career opportunities, their political representation has increased. However, this is in part why it is so concerning that the number of women in politics has stagnated in recent years.

Such trends relating to the status of women have similarly stagnated since early 2000, and the impact of the 2016 presidential election on women's attitudes towards politics remains to be seen. David Rotschild and Tobias Konitzer surveyed teenage girls and show mixed results. Twenty-two percent said Hillary Clinton's candidacy for president made them more likely to want a leadership position in their careers, and 17 percent said it made them less. On the whole, beyond what is just shown in this study, I predict Clinton's candidacy will have a positive effect on inspiring women and normalizing female leadership. Yet the backlash is a reminder of what still lies ahead, very real and to an extent not many expected, or at least hoped it to be in 2017. In good news, there was an increase in the number of women of color elected. Those in search of optimism might do good to celebrate this, and think how not too long ago many women even doubted they would see a female president in their lifetime - yet saw the first nominee of a major political party. As the saying goes, "You can't be what you can't see" - and if we are going to have a female president, she'll have to first become a candidate.

References

Arceneaux, K. (2001). The "Gender Gap" in State Legislative Representation: New Data to Tackle an Old Question. *Political Research Quarterly, 54*(1), 143-160.

Atkeson, Lonna Rae. (2003). "Not All Cues Are Created Equal: The Conditional Impact of Female Candidates on Political Engagement." *Journal of Politics,* 65(4), 1040-1061.

Bae, Denise et al. "Shifting Gears: How Women Navigate the Road to Higher Office." Research Report published by Political Parity, July 2014. https://www.politicalparity.org/wp-content/uploads/2014/05/Shifting%20Gears%20Report.pdf

Bernstein, Robert A (1986). "Why Are There so Few Women in the House?" The Western Political Quarterly, 39(1), 155-164.

Bialik, Carl. "Are You More Likely To Vote For a Woman or a Man?" *FiveThirtyEight*,

February 2016.

Burrell, Barbara C (1995). *A Woman's Place Is In The House: Campaigning for Congress in the Feminist Era*. University of Michigan Press.

Carroll, Susan J. and Krista Jenkins (2001). "Unrealized Opportunity? Term Limits and the Representation of Women in State Legislatures." *Women & Politics*, 23(4), 1-30.

Carroll, Susan J., and Kira Sanbonmatsu. (2013). "Gender and the Decision to Run for Office." *More Women Can Run: Gender and Pathways to the State Legislatures*. Oxford UP.

Elder, Laurel (2012). "The Partisan Gap Among Women States Legislators." Journal of Women, Politics, & Policy, 33(1), 65-85.

Fox, Richard and Jennifer Lawless (2004). "Entering the Arena? Gender and the Decision to Run for Office." *American Journal of Political Science*, 48(2), 264-280.

Fox, Richard and Jennifer Lawless (2010). "Gendered Perceptions and Political Candidacies: A Central Barrier to Women's Equality in Electoral Politics." *American Journal of Political Science*, 55(1), 59-73.

Fox, Richard and Jennifer Lawless (2015). *Running from Office: Why Young Americans are Turned Off To Politics*. Oxford: Oxford Univeristy Press.

Hogan, R. (2001). The Influence of State and District Conditions on the Representation of Women in U.S. State Legislatures. *American Politics Research, 29(*1), 4-24.

King, James D (2002). "Single-Member Districts and the Representation of Women in American State Legislatures: The Effects of Electoral System Change." *State Politics and Policy Quarterly*, 2(2), 162-175.

Palmer, B. and Simon, D. (2008). Breaking the Political Glass Ceiling: Incumbency, Redistricting, and the Success of Women Candidates. *Thomas Jefferson Law Review*, 21(29), 29-52.

Pew Research Center. "Partisan Polarization Surges in Bush, Obama Years: Trends in Party Affiliation." June 2012.

Pyeatt, Nicholas L, and Yanus, Alixandria B. (2014). "Breaking the Statehouse Glass Ceiling: Examining Women-Friendly Districts in the State Legislatures". Prepared for 2014 Annual Meeting of the State Politics and Policy Organized Section of the American Political Science Association, Bloomington IN, May 15-17.

Rule, Wilma (1990). "Why More Women Are State Legislators." *The Western Political Quarterly*, 43(2), 437-448.

Sanbonmatsu, Kira. (2002). Political Parties and the Recruitment of Women to State Legislatures. *The Journal of Politics* 64(3), 791-809.

Swers, Michele. (2001). "Research on Women in Legislatures." *Women & Politics*, 23(1), 167-185.