FEMALE CANDIDATES AND VOTER TURNOUT:

An Empirical Study on the Effects of Nontraditional Candidate Spending on Voter Behavior

"I pledge I have acted honorably,"

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Abstract:

Previous work demonstrates that female candidates have worse voter outcomes than their male counterparts along with more stereotypes enforced towards female candidates by voters. This gender inequality leads to increasing the divides between genders and leads to unfavorable social outcomes. I examine how female candidate spending affects voter turnout rates during the 2018 U.S. House election. The main focus is on female candidate spending because the 2018 midterm had set a record "first" for female candidate wins along with being the most expensive midterm election in history. I use data from the Census and the Federal Election Commission to examine candidate and voter characteristics from 10 randomly selected states. I run a two stage least squares regression to show how candidate spending for female candidates affects voter turnout in district level races. My analysis shows that the variables that affect voter turnout significantly is percent poverty level, percent Black, and percent of high school graduates. My analysis shows no significant relationship between female candidates and increased voter turnout. In conclusion, if a district has a high poverty level, then voter turnout decreases.

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Background

My motivation for conducting this research began after the Georgia Gubernatorial Election of 2018 between Stacey Abrams and Brian Kemp. During their election campaigns, Brian Kemp released a series of commercials revealing controversial opinions. An example would be an advertisement featuring Kemp stating that he drives a truck to allow him to pick up illegal criminals and deport them himself. I questioned if the increased number of voters were due to Brian Kemp's ads or because a Black D woman was running against him as a Democrat. In the 2014 Gubernatorial election, there were 2,550,216 votes casted for the governor election, but in 2018 the total number of votes casted increased to 3,939,328 total votes (General Election Results). On average, Georgia had a turnout of more than 61 percent in all counties (General Election Results). I wanted to look into what may have caused this increase between midterms whether from a policy change or an increase in campaign spending and voter awareness. Another motivation for this study stems from the lack of diversity with respect to representation in the political arena especially since there is a small percentage of candidates who are from nontraditional groups. By nontraditional candidates, I am referring to candidates who identify as women and/or are underrepresented minorities: Black, Indigenous, People of Color (BIPOC). Since there is a gap in the literature correlating with both women and minority candidates and election success, I hope to expand the literature with my findings.

The U.S. House General Elections in 2018 also caused a shift in party majority from Republicans to Democrats, with Democrats gaining 40 seats to hold a total of 235 seats while the Republicans hold 199 seats (*The New York Times*). This election also included historical firsts such as Massachusetts's and Connecticut's first Black woman in Congress, Tennessee's first elected woman to the Senate, America's first two Muslim women in Congress, and America's youngest woman ever elected to Congress (Epstein and Scott). This election was also the most expensive midterm election in history with "total spending surpassing \$5.7 billion...by candidates, parties, committees, PACs, and outside groups" (*OpenSecrets.org*). Spending done by House candidates exceeded \$1.653 billion with Democratic candidates outspending Republican candidates by over \$341 million (*FEC.org*).

Voter turnout is the percentage of eligible voters who go out to cast a ballot during an election. Voter behavior is a way to track and predict voter turnout and provides a better understanding as to how voters will react in certain scenarios. By understanding voter behavior, candidates are able to appeal to more eligible voters and attempt to influence their participation and their vote. Additionally, it is difficult to get voters to spend time researching the candidates which makes advertising even more essential to get voters to turnout. Since most voters believe their vote will not be the deciding factor in an election, they are less willing to go out of their way to vote and are also less likely to research their candidates, ultimately remaining rationally ignorant. Rational ignorance is defined as the act of refraining from acquiring information when the cost of educating oneself exceeds the expected benefit the information will provide (Downs 139). Campaign spending is a way to reach out to the voters and offer them accessible information which serves as an incentive for them to turn out to vote. The main focus of my research will be on the 2018 U.S. House elections and how spending during campaigns affects voter turnout when there are nontraditional candidates running.

Literature Review

My literature review can be grouped into two categories. These main groups are, first, looking at gender stereotypes of the candidates and their effects on perception of political ideologies; the second group examines the impact of candidate spending on either election outcomes or voter turnout. The first group examines how voter perception of candidates and their ideologies change for women and underrepresented minorities candidates. Some examples of these stereotypes include women being seen as either too liberal or too emotional when it comes to controversial issues. Some of the articles in my literature review also examine the candidate's visibility and how it is affected by campaign expenditures.

Jeffrey Koch (2000) examines how gender affects voter perception of a candidate's political ideology. He examines data from the 1988, 1990, and 1992 Pooled Senate Election Study (SES) and finds that gender affects citizens' perceptions and that effect manifests differently in each party. Koch measures these ideology scores using the American National Election Study (ANES) seven-point ideology scale and compares it to the Americans for Democratic Action (ADA) hundred-point liberal scale. Koch runs a multivariate model and uses ideology scores along with candidate visibility to come to his conclusion. The stereotypes examined are that female candidates are seen as more liberal and emotional versus their male counterparts. For Democratic female candidates, the stereotypes increased the ideological distance between the candidate and the citizens, causing the voters to view the candidates as being more liberal. This resulted in more moderate and independent citizens voting Republican (Koch 426). However, for Republican female candidates, the gender stereotypes reduced the ideological distance between them and the citizens on the liberal scale and increased their electoral prospects (Koch 414).

Koch (2002) examines the characteristics of both the voter and the candidate in order to see if gender has an effect on the inference of candidates' ideologies. In his model, he examines the effects incumbency and campaign expenditures have on how much research voters conduct. In his study, Koch uses data from the 1994, 1996, and 1998 American National Election Studies (ANES) and runs a multivariate regression model that examines the number of female candidates, political awareness, high visibility, and candidate's ideology along with interactions of those variables (Koch 458). Koch concludes that higher candidate visibility causes voters to use gender stereotypes more and believe women candidates are more likely to be liberal no matter the party (Koch 457). He also finds that citizens tend to draw on stereotype impressions when inferring the ideologies of women candidates despite having high visibility since that category-based impression formation is viewed as "cognitively lazy or most likely to occur when the supply of information is low" which connects back to rational ignorance (Koch 460).

However, Kathleen Dolan (2014) examines gender stereotypes and its effects on voter decision and finds that gender stereotypes of women have little impact on voting decisions. She uses results from a 2010 survey designed to look at gender stereotypes, candidate evaluations, and voting behavior in U.S. House elections (Dolan 96). Dolan concludes that the political party of the woman candidate is more important in shaping a voter's decision than gender stereotypes (Dolan 96).

Ditonto, Hamilton, and Redlawsk (2014) find that the effects of gender on voter's choice comes from the differences in information search by the voter (Ditonto, et al. 335). They come to this conclusion by testing the effects of a candidate's gender using two datasets collected from Dynamic Process Tracing Environment (DPTE), and they find that when it comes to a woman candidate, voters search for more information about "compassion issues" and seek more competence-related information (Ditonto, et al. 353). This relates to Koch's 2002 article about candidate visibility to the public. What is missing from these articles is specific demographic characteristics of the voters along with a greater focus on how these candidates become more visible and through what means (types of advertising). Monika McDermott (1998) argues how a candidate's race and gender influence voting decisions for voters in low-information elections (McDermott 895). McDermott uses the 1989 and 1990 Los Angeles Times Poll to examine how voters use stereotypes against candidates in two different ways. One way being that voters view Black and women candidates as more liberal which is consistent with other literature on gender. Black candidates are seen as more concerned with minority issues while women candidates are seen as more dedicated to honest government (McDermott 914).

Kira Sanbonmatsu (2002) examines how gender stereotypes affect voting when two candidates are involved. She uses survey data from a telephone survey she conducted from March-April 2000 in Ohio due to the state having a similar demographic to the United States (Sanbonmatsu 22). In her model, she controls for attitudinal and demographic variation that can affect gender related attitudes such as race, gender, education, religion, and political affiliation (Sanbonmatsu 24). She describes voters as having a gender schema which means the voters' "hypotheses about the beliefs, traits, and issues…based on candidate gender" (Sanbonmatsu 21). This leads to a preference for either female or male candidates. Sanbonmatsu understands that these beliefs change as society and the political arena change, and a replication of this model would shed light if there has been a shift in beliefs toward women two decades later.

In summary, Koch, Dolan, McDermott, and Sanbonmatsu take into account the effect gender stereotypes have on voter decisions. Sanbonmatsu, Dylan, and Koch did not consider the role race may have when combined with gender in their studies. Ditonto did include gender in her research and finds voters focus more on researching certain issues for female candidates. Ditonto, Hamilton, and Redlawsk included a "nonwhite" variable in one of their regressions, but it is not sufficient to test the interactive effect the two may have on voter turnout and outcomes. McDermott examines the effect of both race and gender, but this is still missing the connection to advertising. Ditonto, et al. (2014) does not take into account advertising done by the candidates, but rather the amount of information a voter searches for in order to form opinions about the candidates. This allows candidates to have more control on how much information they put out on themselves or how the opponent may present other candidates to voters depending on how much each candidate is willing to spend on that information output.

Now in the second category that focuses on voter turnout, Franklin Gilliam Jr. (1985) examines the influences on voter turnout rates for congressional elections held in nonpresidential election years. He focuses on the election of 1978 where he runs two models with the first being voter turnout as a function of factors within the race and the second model explaining turnout as a function of electoral conditions in the state (Gilliam 339). In his first model, the variables he examines are party competition, campaign spending, education, region, race, and urbanism (Gilliam 341). In his second model, the variables used were state margin, closing date, referendum, education, region, race, and urbanism (Gilliam 343). Gilliam uses several variables that overlap those in my own model specifically voter race, voter education, and region. Gillaim finds that "region continues to explain the differences in turnout across congressional districts" while race and education of voters play a role as well (Gilliam 387). He finds that the most significant influence on voter turnout is mobilizing efforts of candidates and the expected margin of competition for the congressional seats between the primary candidates (Gilliam 387).

Kevin Milligan and Marie Rekkas (2008) look at campaign spending limits, especially incumbent spending limits, for candidates in Canadian federal elections. They first show that spending limits are binding on mostly incumbent candidates and then show the impact of incumbent spending on electoral vote shares (Milligan et. al 1351). They find that "higher spending is found to lead to greater vote share" while higher limits on spending lead to fewer close races, lower voter turnout, and fewer candidates running (Milligan et. al 1373). Despite the study being done for a different country, I believe the results aid in revealing the impact spending has on election results.

Robert Hogan (2013) examines the effect campaign spending has on voter turnout in state elections. He examines 20 states over two election cycles to analyze the influence of candidate spending on voter turnout by running an OLS regression (Hogan 840). He finds that variation in turnout is not a reflection of citizen characteristics and attitudes but rather the "presence of a presidential campaign...along with spending by candidates in high-profile statewide elections" have a stronger influence on the variation (Hogan 852).

In summary, Gilliam, Milligan and Rekkas, and Hogan all examine the impact campaign spending has on voter turnout and all find that there is a positive relationship between the amount a candidate spends on voter turnout. Both Milligan and Rekkas and Hogan examine fully how incumbent spending affects voter turnout which is something to consider when examining each district race. Hogan's look at two separate election cycles (one during a presidential election year and one without) shows the difference between turnout between the two cycles. Since I am looking at a non-presidential election year, this literature reveals that voter turnout is not as likely to high compared to looking at 2016.

Data

In this paper, I am conducting my research by collecting data from the 2018 U.S. Representative Congressional district campaigns and elections through surveys, budgets, and census data. I am using several datasets that were merged into one master set to examine both candidate characteristics and voter characteristics. I am using two datasets from the Federal Election Commission for all Federal elections in 2018 which provides a list of candidates during all U.S. Primary Elections along with the receipts, disbursements, cash on hand, and debts owed during their campaign (FEC.org).

This is then merged with another FEC dataset that breaks down candidate characteristics such as the candidate's political party, incumbency status, and percentage and total number of votes received. I am also using Census datasets that examine the voter characteristics for each district within the sample size. This has information such percent of education levels, race, gender, poverty level, age, and total votes per district compared to eligible citizens who can vote (Census). Since I wanted my data on district level, I went into each district and combined the total amount of candidate spending. I also needed to identify which districts had a female and/or an incumbent running.

For the purposes of this paper, I limited the sample size to only 82 congressional districts across 10 randomly selected states. These states are Arizona, Florida, Idaho, Louisiana, Maryland, Massachusetts, New Hampshire, North Carolina, Tennessee, and Utah. The map below shows the distribution of the randomly selected states.

Figure 1 AMCharts



Table 1 provides a distribution for the candidate characteristics across the 82 districts. I limited the number of candidates by only including the two primary candidates in each district (one Democrat and one Republican candidate) while ignoring the write-in votes and any other parties. There were districts that had several candidates running or only one candidate running, so those were excluded from the sample. Under these constraints, the sample size shows that of all the districts, only about 46 percent had a female candidate running, about 81 percent of the districts had an incumbent running, but less than 5 percent of the districts had a female incumbent running. The gender gap between male and female candidates is large, especially in terms of incumbent status. This gap is continued in Table 1 which also shows average disbursements per district is nearly \$2.5 million, but average spending in districts with a female candidate is nearly \$1.4 million.

Statistics	Mean	Min	Max
Female	46.42857	0	1
Incumbent	80.95238	0	1
Female Incumbent	4.7619	0	1
Spending (in thousands)	\$2,486.712	\$199.1633	\$12,463.96
Female Spending (in thousands)	\$1,388.137	0	\$12,463.96

Table 1: Candidate Characteristics

Table 2 provides a summary of the distribution for voter characteristics such as race, education, and poverty level. On average, voter turnout in districts is around 49.5 percent with

the minimum being 29 percent in Arizona's 7th Congressional district and the max being 62 percent in Florida's 22nd Congressional district. The other variables are also in percentages across districts. For example, on average the districts had 11 percent of their population below the poverty level.

Statistics	Mean	Min	Max
Voter Turnout	49.50836	29.02494	62.01248
White Non-Hispanic	68.20238	19.3	94.8
Hispanic	11.76548	1.5	68.1
Black	15.6274	0.5	68.4
Asian	2.526506	0.5	8.9
High School Graduate	27.84048	14.9	39.2
Men	48.19405	45.3	51.2
Below Poverty Level	11.02262	5.2	21

Table 2: Voter Characteristics

Methodology

I created a smaller sample size from the total U.S. districts available by using a random number generator that chose 10 states at random. While cleaning the datasets, I created and transformed binary variables for the candidate characteristics that were not provided such as female (1 if so, 0 if other) and incumbent status (1 if so, 0 if other). From there, I created interactive variables between female and incumbent and female and spending variables.

Disbursements by districts will be used to estimate spending since it is the closest representation of the spending done by candidates.

I run a two stage least squares (2SLS) or instrumental variable (IV) regression to control for the potential endogeneity of candidate spending as captured disbursements in the regression equation explaining voter turnout. In the first equation spending, the endogenous variable, is modeled as a function of candidate characteristics and percent of Black, percent of White Non-Hispanic, and a stochastic error term.

Spending = $\beta_0 + \beta_1 Fem + \beta_2 Incumbent + \beta_3 Fem * Inc + \beta_4 Black + \beta_5 White NH + u$

Based on the literature, I expect negative a relationship between incumbency and disbursements based on the findings from Milligan and Rekkas (2008). The second stage equation, voter turnout is a function of both candidate characteristics, voter characteristics, and the predicted spending from the first stage:

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 $Voter Turnout = \beta_0 + \beta_1 Spending + \beta_2 BelowPoverty + \beta_3 Female * Spending + \beta_4 Black + \beta_6 Men + \beta_7 HSGrad$

The voter characteristics I use are district-level percentages. For education, I only used the percent of total high school graduates within the sample instead of looking into higher education for simplicity and to avoid potential multicollinearity between explanatory variables.

Milligan and Rekkas, and Hogan show that incumbents increase voter turnout. I expect a positive relationship between income, education, incumbent, and spending with voter turnout.

Since income has a positive relationship as supported by Hogan and Gilliam, I expect the poverty level to have a negative relationship with voter turnout (Hogan 851; Gilliam). I also expect a positive relationship between female candidates and voter turnout as supported in Sanbonmatsu's (2002) findings that voter decisions are based on a candidate's gender.

<u>Results</u>

Spending	Coef.	St.Err.	t-	p-	[95% Conf	Interval]	Sig
			value	value			
Female	771100.94	643402.2	1.20	.234	-510345.59	2052547.5	
Incumbent	-749590.5	793810.57	-0.94	.348	-2330601.3	831420.27	
Fem*Incumbent	660101.53	1119877.3	0.59	.557	-1570327.4	2890530.5	
White NH	-26611.013	25401.541	-1.05	.298	-77202.567	23980.541	
Black	-46488.937	25190.015	-1.85	.069	-96659.2	3681.326	*
Constant	5275059.4	2200334.9	2.40	.019	892712.71	9657406.1	**
Mean dependent	var 2	2522958.490	SD depe	endent va	r R 2	524864.959	
R-squared		0.103	Number	of obs		82.000	
F-test	UI	I 2.584	Prob > I	S I	ТҮ	0.033	
Akaike crit. (AIC)	2652.435	Bayesia	n crit. (B	IC)	2666.875	

Table 3: First Stage Regression Results

*** p<.01, ** p<.05, * p<.1

Table 3 shows the results of the first stage regression for disbursements. For example, the results can be read as, if a district has an incumbent running, then district campaign spending decreases by \$749,590.5. Only the coefficient on the percent Black voters in the district is statistically significant, but only at the 10 percent level. The results do not conflict with the previous literature for the incumbent variable which shows that incumbents usually spend less during campaigns since they are already established. The summary data show that districts with

female candidates had less spending on average, but the regression shows that total expenditures for a district with at least one female candidate to spend more. However, this result is not significant.

Voter Turnout	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Female	2.178	1.566	1.39	.168	942	5.297	
Spending	002	.001	-1.49	.141	004	.001	
Female*spending	0	0	-0.38	.707	001	0	
Black	116	.049	-2.36	.021	214	018	**
Poverty	938	.162	-5.77	0	-1.261	614	***
HS Graduate	266	.112	-2.38	.02	49	043	**
Men	-1.224	.64	-1.91	.06	-2.499	.051	*
Constant	131.728	30.612	4.30	0	70.732	192.725	***
Mean dependent var 49.556			SD o	lependent	var 6.579		
R-squared	0.55	53	Nun	nber of obs	s D 82.00	0	
F-test	10.890		Prob	$Prob > F \qquad 0.000$			
Akaike crit. (AIC)	U490		EBaye	esian crit.	(BIC) 509.9	65	

Table 4: Second Stage Regression Results

***p<.01, **p<.05, *p<.1

The second regression table shows the results for voter turnout as a function of both candidate characteristics and voter characteristics along with the estimated spending variable from the first stage. The point estimate on the percentage of people below the poverty line, living in the district, is statistically significant at least the 1 percent significance. A one percentage point increase in people living below the poverty will reduce voter turnout by just under one percentage point, or approximately 0.93 points. The significance is also seen with the R-squared value which shows the model explaining 55 percent of the variation in voter turnout. The

estimated coefficients that are statistically significant at least at the 10 percent level are the percent of men per district, while the estimated coefficient on percent of high school graduates and percent Black statistically significant at the 5 percent level. Both the spending and female times spending variables are practically zero and show no effect on voter turnout, but they are also not significant. The fact that a candidate's gender does not affect voter turnout is consistent with previous literature. As found by Dolan, the gender of candidate is not as important as the candidate's political party when it comes to shaping a voter's decision (Dolan 96).

To reiterate, my hypothesis to test what extent female candidate's spending would increase voter turnout. My analysis did not reinforce this hypothesis. Instead what I found was that the most significant variable is the percent below poverty level which has an inverse relationship with voter turnout. As seen in the scatter plot graph below, in districts with a higher percentage below the poverty level have a lower voter turnout. My results did reinforce that incumbents spend less on elections because they do not need to inform voters as much since they are already established as an elected official.





Limitations:

My largest limitation was the restriction of the sample size due to time. Instead of examining all 435 available districts, I created a random sample of only 84 districts. By not using the full extent of the data, I may not be able to capture the full extent of the effects. For example, the Midwest states were not picked to be in the sample. I believe there may be other things to capture since Gilliam finds that region explains the difference in voter turnout across districts (Gilliam 387).

The random sample may not have captured the marginal effects in the voter characteristics in things such as age, race, or education. For example, the sample size included 1 percent of voters who were Islander, but if states on the West Coast were included then that may have changed. This also goes towards certain candidate characteristics such as party and amount spent during their campaign which depends on the district the candidate is running in. I also limited my sample to the two dominant parties in the race if available. Some districts only had one person running with a write-in vote or several candidates from the same and different parties, but I limited the other districts to only the primary Republican and Democratic candidate in each district.

Conclusion

In conclusion, my initial research question, how female candidate spending during election campaigns affects voter turnout, showed no significant relationship. There is a significant effect on voter turnout by percent of poverty level, percent Black, and percent high school graduate. Given the literature, I expected spending and female candidates to influence the voting population, but there does not seem to be a significant relationship in this model. One possible reason why the findings might contradict prior research is the scope of the question and the data available.

Next steps would be to examine districts across years and without an incumbent running and see if there is a difference in candidate spending and/or voter turnout. This may allow for a look into whether past candidates with similar characteristics can influence how current candidates are being viewed. It also brings into question whether a female incumbent or female Democrat has an impact on voting decisions similar to Koch and Dolan's findings.

In the end, focusing on the turnout for the 2018 U.S. House election has been insightful in connecting the impact of female candidate spending on voter turnout. Despite my hypothesis not being supported, female candidates still face an uphill battle when it comes to leveling the playing field in elections and votes. Further examination of the data will prove useful in looking at other influences on voter turnout and the disadvantages female candidates encounter to increase representation and potentially reduce gender disparities.

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Works Cited

"Browse Candidates for House." FEC.gov,

www.fec.gov/data/candidates/house/?election_year=2018&election_full=True&is_active candidate=true.

- Ditonto, Tessa M., Allison J. Hamilton, and David P. Redlawsk. "Gender Stereotypes, Information Search and Voting Behavior in Political Campaigns." *Political Behavior*, vol. 36, no. 2, June 2014, pg. 335-358.
- Dolan, Kathleen. "Gender Stereotypes, Candidates Evaluations, and Voting for Women
 Candidates: What really Matters?" *Political Research Quarterly*, vol. 67, no. 1, March 2014, pg. 96-107.
- Downs, Anthony. "An Economic Theory of Political Action in a Democracy." *Journal of Political Economy*, vol. 65, no. 2, April 1957, pg. 135-150.
- Epstein, Kayla and Eugene Scott. "The historic firsts of the 2018 midterms." *The Washington Post*, Nov 7, 2018. https://www.washingtonpost.com/politics/2018/11/07/historic-firstsmidterms/. Accessed Nov 3, 2020. **ERSIT**

"General Election November 4, 2014."10 November 2014.

https://results.enr.clarityelections.com/GA/54042/149045/en/summary.html, Accessed 23 September 2020.

"General Election November 6, 2018."17 November 2018.

https://results.enr.clarityelections.com/GA/54042/149045/en/summary.html, Accessed 23 September 2020.

Gilliam, Franklin D. "Influences on Voter Turnout for U.S. House Elections in Non-Presidential Years," vol. 10, no. 3, Aug 1985, pg. 339-351.

- Hogan, Robert E. "Campaign Spending and Voter Participation in State Legislative Elections." *Social Science Quarterly*, vol. 94, no. 3, September 2013, pg. 840-864.
- Koch, Jeffrey W. "Do Citizens Apply Gender Stereotypes to Infer Candidates' Ideological Orientations?" *The Journal of Politics*, vol. 62, no. 2, May 2000, pg. 414-429.
- Koch, Jeffrey W. "Gender Stereotypes and Citizens' Impressions of House Candidates'
 Ideological Orientations." *American Journal of Political Science*, vol. 46, no. 2, April 2002, pg. 453-462.
- McDermott, Monika L. "Race and Gender Cues in Low-Information Elections." *Political Research Quarterly*, vol. 51, no.4, Dec.1998, pg. 895-918.
- Milligan, Kevin and Marie Rekkas. "Campaign Spending Limits, Incumbent Spending, and Election Outcomes." *The Canadian Journal of Economics*, vol. 41, no. 4, Nov. 2008, pg. 1351-1374.
- OpenSecrets.Org. "Most Expensive Midterm Ever: Cost of 2018 Election Surpasses \$5.7 Billion," *OpenSecrets.Org.* <u>https://www.opensecrets.org/news/2019/02/cost-of-2018-election-5pnt7bil/</u>. Accessed Nov. 12, 2020.
- Sanbonmatsu, Kira. "Gender Stereotypes and Vote Choice," *American Journal of Political Science*, vol. 46, no. 1, Jan. 2002, pg. 20-34.
- U.S. Census Bureau. "Population and Voting Rates for Congressional Districts: 2018." *The United States Census Bureau*, 3 Feb. 2020, www.census.gov/data/tables/timeseries/demo/voting-and-registration/congressional-voting-tables.html.
- "U.S. House Election Results 2018." *The New York Times*. May 2019. https://www.nytimes.com/interactive/2018/11/06/us/elections/results-houseelections.html. Accessed Nov. 3, 2020.

"Visited States Map." *AmCharts*. https://www.amcharts.com/visited_states/#US-AZ,US-FL,US-ID,US-LA,US-MA,US-MD,US-NC,US-NH,US-TN,US-UT. Accessed May 8th, 2021.



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