## Western Kentucky University TopSCHOLAR ${ }^{\circledR}$

Spring 2019

# Factors that Promote Women Representation in State Legislatures 

Kara Lowry<br>Western Kentucky University, kara.lowry819@topper.wku.edu

Follow this and additional works at: https://digitalcommons.wku.edu/stu_hon_theses
Part of the Political Science Commons, and the Women's Studies Commons

## Recommended Citation

Lowry, Kara, "Factors that Promote Women Representation in State Legislatures" (2019). Honors College Capstone Experience/Thesis Projects. Paper 790.
https://digitalcommons.wku.edu/stu_hon_theses/790

# FACTORS THAT PROMOTE WOMEN REPRESENTATION IN STATE LEGISLATURES 

A Capstone Project Presented in Partial Fulfillment of the Requirements for the Degree Bachelor of Arts with Honors College Graduate Distinction at Western Kentucky Univeristy

## By

Kara Lowry
May 2019
*****

CE/T Committee:
Professor Jeffrey Budziak, Chair
Professor Victoria Gordon
Professor Christopher Keller

Copyright by
Kara Lowry
2019

I dedicate this thesis to all the strong women in my life who fight for what is right everyday.

## ACKNOWLEDGEMENTS

I would like to thank my advisors, Dr. Jeffrey Budziak and Dr. Victoria Gordon for their guidance and support throughout the process of this project. Without their expertise, this work would not have been possible. I would also like to thank my mentors, Jeanie Smith, Dr. Patricia Minter, and Dana Beasley-Brown for having the courage to run for office, and allowing me to be a part of that experience. I am inspired everyday by their bravery and their strength. I would also like to thank my best friend, Conner Hounshell, for consistently pushing me to reach my goals and always believeing in me. I would also like to thank my family for supporting me and providing me with the opportunities to become my best self.


#### Abstract

As more and more women run for elected offices, the need for information surrounding women in politics is growing. Scholars have extensively researched the factors that deter women from running for state legislature, but few have studied factors of the states and their populations that could potentially be promoting more female representation in state legislature. This research will compare the relationship between the state's geographical location, the education level of the population, and the religiosity of the population to the percentage of women serving in the state legislature as of 2018. Additionally, this study will examine how Donald Trump's presidency has affected the number of women in the state legislature as of 2019. The study has the potential to offer future women candidates the benefit of knowing what factors are working in their favor in their respective home states.


Keywords: women in politics, state legislatures, descriptive representation, gender roles

## VITA

## EDUCATION

Western Kentucky University, Bowling Green, KY<br>B.A. in Political Science - Mahurin Honors College Graduate<br>Honors Capstone: Factors that Promote Women Representation in State Legislatures<br>B.S. in Biology

May 2019

Oldham County High School, Buckner, KY
June 2015

PROFESSIONAL EXPERIENCE

Kentucky Democratic Party, Frankfort
Sept. 2018-
Organizing Intern
Nov. 2018

AWARDS \& HONORS
Summa Cum Laude, WKU, May 2019
President's List, WKU, 2015, 2016, 2018
Dean's List, WKU, 2017
Fellow in Public Affairs, Coro Pittsburgh, April 2019
Secretary of State's Commonwealth Ambassador Award, July 2015

PROFESSIONAL MEMBERSHIPS
Alpha Epsilon Delta (AED)
Phi Alpha Delta (PAD)
Pi Sigma Alpha (PSA)
INTERNATIONAL EXPERIENCE
Esteli, Nicarauga
Aug. 2016
Global Brigades Medical Brigade

## PRESENTATIONS

Lowry, K. (2019, March). Factors that Promote Women Representation in State Legislatures. Oral presentation presented at the WKU Student Research Conference. Bowling Green, KY.

## CONTENTS

Acknowledgements ..... iv
Abstract ..... V
Vita. ..... vi
Introduction ..... 1
Literature Review ..... 3
Location, Education Level, and Religiosity ..... 8
The 2016 Presidential Election ..... 16
Conclusion ..... 19
References ..... 20
Tables ..... 24
Figures ..... 36

## INTRODUCTION

Since the "Year of the Woman" in 1992, in which multiple women were elected to the United States Senate in response to the confirmation of Clarence Thomas to the Supreme Court, women representation in politics has been consistently growing at all levels of government (Pew Research Center 2018). Recent cultural phenomena, such as the \#MeToo movement and the Women's March, catapulted more women than ever to run for office in the 2018 midterm election, and has the potential to make a large jump in increasing women representation in government. As of March 8th, 2018, at least 575 women had registered to run for the House of Representatives, Senate, or governor of their state (Caygle 2018). In Kentucky alone, 92 women filed to run for the state legislature, which was a dramatic increase from 2016 when less than 40 women ran for seats (Watkins 2018). Research concludes that more women representation leads to more efficiency and cooperation in the government (Volden, Wiseman, Wittmer 2011). This suggests that as the number of women running for office, and winning their elections, continues to rise, more effective governance is likely to follow.

If greater representation in legislatures improves governance, why do we not see more women elected to the legislatures? The scholarship suggests that numerous barriers exist that make it harder for women to serve in legislatures. In order to ensure that the number of women in government continues to rise, it needs to be known which factors promote more women to be in governing bodies. If such factors exist, they could potentially be enhanced to produce more women in government, which would in turn, increase government effectiveness and descriptive representation in government for women. This thesis will investigate the effect of the location of the state, the average
level of education in the state, the average amount of religiosity in the state on the amount of women representation in the state legislatures as of 2018. These factors will be examined to determine if they contribute to some states having more women in their state legislature than other states. If these factors are determined to affect women representation in state legislatures, states can utilize some of the information to understand the factors they are dealing with, and work to combat or enhance, depending on the state, those factors to encourage more female representation.

This paper will also analyze the relationship between how each state voted in the 2016 presidential election and the number of women in the state's legislature as of 2019. This analysis will seek to discover if President Trump's presidency has had an impact on women representation in state legislatures. The day after President Trump's inauguration, over 100,000 people marched in Washington D.C. for the Women's March (Chenoweth and Pressman 2017). President Trump's derogatory comments towards women and his stance on reproductive rights had fueled women to take a stand against his presidency and his attitudes towards women (Shear and Sullivan 2018). This analysis will seek to answer if this opposition to President Trump that so many women across the country expressed, allowed for more women to be elected to their state's legislature in the 2018 midterm elections than expected, and if so, in which states did this occur.

## LITERATURE REVIEW

There has been extensive research regarding women in politics, especially after the "Year of the Woman" in 1992 when more women than ever were elected to the United States Congress. The relevant research for this project focuses on three topics: the benefits of descriptive representation, factors that hinder women from running for office, and the perception of gender roles in society.

## Benefits of Descriptive Representation

Descriptive representation is defined as "a constituent sharing physical traits with a representative" (Bowen and Clark 2014). There is extensive research debating the importance of descriptive representation in government, most of it surrounding women; however, descriptive representation in government symbolizes a more accessible political arena for all underrepresented groups. This expands groups' political participation and creates a sense of belonging within politics (Alexander 2012). For women specifically, research has shown that women are "more knowledgeable, engaged, and participatory when they see women running for and occupying public office" (Alexander 2012). One analysis suggests that "the presence of even a single female contesting or occupying a state-wide public office is enough to close the gender gap in political interest and political knowledge by more than half" (Burns, Scholzman, and Verba 2001). Another suggests that increased visibility of women politicians in the media enhances an interest in politics among young girls (Wolbrecht and Campbell 2006).

Descriptive representation also has the potential to begin to repair the history of exclusion from government women faced (Phillips 1995). This historical exclusion, paired with the still present underrepresentation of women in government, allows for men
and women to continue to believe that women are less capable of governing (Alexander 2012). More women serving in elected roles allows for the internalized concept that the reason women are not present in government is because they are "unfit to govern," to degrade, and begins to change assumptions about what a leader looks and acts like (Alexander 2012).

Descriptive representation enhances the trust and confidence women have in their democracy, and improves the perception of the capability women have to govern. It is vital that research continues to discover ways to increase the ability of women to get elected to office at all levels of government in order to reap the benefits for democracy and governance that descriptive representation holds.

## Factors That Hinder Women from Running for Office

Consistent with the lack of representation of women in politics, the research suggests that there are clear factors that prevent women from running for office as often as men do. The discrepancy begins after college when men are encouraged more likely to be encourage to run for political office (Politico 2017). Only $29 \%$ of women who participated in student government in college were later encouraged by at least one parent to run for political office, while $40 \%$ of men who participated in student government in college were later encouraged by at least one parent to run for political office (Politico 2017). A lack of encouragement from political actors follows after the lack of encouragement from parents. $49 \%$ of potential male candidates report being encouraged by political actors while only $39 \%$ of potential female candidates report being encouraged by political actors (Politico 2017).

If a woman is encouraged to run, the campaign trail presents new challenges that men do not face nearly as often. Almost nine out of ten women candidates affirmatively answered a survey question asking if that a woman's campaign experience differs from a man's (Baer and Hartmann 2014). Women experience an increased amount of criticism of their appearance, of questions about their qualifications, and of scrutiny about their home lives on the campaign trail (Baer and Hartmann 2014). Additionally, it is harder for women to acquire the funds needed to run a successful political campaign due to a lack of access to political networks and an unease with "certain aspects of the asking process" (Baer and Hartmann 2014). Because most women running for office are not incumbents, they do not have as much access to sponsors and mentors for their campaigns, making it even harder for them to get elected, and harder for them to pursue running in the first place (Baer and Hartmann 2014).

## Perceptions of Gender Roles

Almost all of the factors mentioned that hinder women from running for office can be traced back to a societal perception that women are, for some reason, less qualified than men to hold political office. This perception continues to thrive because of the patriarchal culture that is prominent in society. In the United States, this culture is prevalent among the Southern states and the Christian religions that dominate the country.

Research shows that traditional gender roles play an important part in determining the election of women to office in the Southern United States (Lublin and Brewer 2003). Women are "far less likely than men to win prestigious executive offices that grant their holder obvious power and discretion" (Bullock and Akins 1997). When women do win
elections in the South, they tend to be for offices that are "process-oriented with less discretion," such as auditor, clerk, and treasurer (Lublin and Brewer 2003). For national office, the states with the least number of women elected are concentrated in the South, with all of the Southern states in the bottom third of the country (Institude for Women's Policy Research 2016). Additionally, research shows that rural areas are less likely than urban areas to elect women to public office, especially in the South (Bullock and Akins 1997; Lublin and Brewer 2003). The data demonstrate the belief that women are not as qualified as men to hold positions of power in government and is prevalent in Southern states.

The belief in traditional gender roles is prevalent among those that are highly religious, and has been used to exclude women from politics around the world (Paxton and Hughes 2015). $58 \%$ of white evangelical Protestants in the United States agreed that "society is better off when men and women stick to the jobs and tasks they are naturally suited for" (Cox and Jones 2016). One study identified five dimensions of gender-role attitudes including, familial roles, extrafamililar roles, male/female stereotypes, social change, and gender-role preference, and found that "religious devoutness" among Americans was the most important variable for predicting gender-role attitudes (Morgan 1987). The importance of traditional gender roles can also be seen from the structure of the church itself in many Christian denominations. One survey found that of the people surveyed, most people said that men should fill the roles of pastors, and women should work with the children (Headrick, Johnson, and Reynolds 2015). The research shows that those that are highly religious tend to advocate for more traditional gender roles; therefore, are potentially less willing to support women running for office.

Convesely, research shows that a college education makes people more likely to accept women pursing nontraditional roles (Darcy, Welch, and Clark 1994). One study conducted on people that identify as Democrats shows that $69 \%$ of Democrats with a Bachelor's degree or higher say that men "have it easier" than women, while only $27 \%$ of Democrats with a high school degree or less said the same (Horowitz, Parker, and Stepler 2017). Regarding changing gender roles, $71 \%$ of Democrats with a Bachelor's degree or higher say that the evolving role of women in society has improved women's satisfaction with their lives while only $49 \%$ of Democrats with a high school education say the same. Republican views of changing gender roles also follow along education levels, with $62 \%$ of Republicans with a Bachelor's degree or higher saying that changes in gender roles have made it easier for women to be successful at work and only $49 \%$ of Republicans with less education agreeing (Horowitz, Parker, and Stepler 2017). The research shows that having a Bachelor's degree, or even some college, makes people more accepting of nontraditional gender roles, which could translate into them being more willing to vote for women running for political office.

This project works to expand on how, if at all, these perceptions of gender roles among those living in the South, holding a Bachelor's degree or higher, and reporting high religiosity still impact the number of women elected to the state legislature.

## LOCATION, EDUCATION LEVEL, AND RELIGIOSITY

## Hypotheses

## Hypothesis One

The first hypothesis is that southern states will have a lower representation of women in their state legislature. The null hypothesis is that there is not a relationship between a state's location and the percentage of women in their state legislature. It is being predicted that the patriarchal culture that historically thrives in southern states will cause a lower representation of women in southern state legislatures than northern state legislatures because less women in these states would be encouraged to run due to traditional views of men being in positions of power.

## Hypothesis Two

The second hypothesis is that the more educated the population of the state is, the more representation of women in their state legislature. The null hypothesis is that there is not a relationship between the education level of the state's population and the percentage of women in the state's legislature. It is being predicted that higher education not only gives more women the skills necessary to successfully run for political office, but also allows for the population to be more accepting of women candidates.

## Hypothesis Three

The third hypothesis is that the more women representation the less religious the population of the state. The null hypothesis is that there is not a relationship between the religiosity of the state's population and the percentage of women in the state's legislature. Similar to the first hypothesis, I predict that the patriarchal culture that is prevalent in religious cultures that dominate in the United States will cause less women to be
encouraged to run for political office, thus leading to less female representation in the state legislature.


#### Abstract

Data To answer how a state's geographical location, average level of education, and average level of religiosity affects the number of women in the state's legislature, the percentage of women in the state legislature of each of the 50 states as of 2018 is used as the dependent variable. The data used was from the Center for American Women and Politics at Rutgers University and the variable was named "womleg_2018." The number of women in state legislatures as of 2018 was utilized in order to provide the most recent numbers until the 2018 midterm election occurred. The mean percentage of women in the state legislature for all 50 states is $25.4 \%$ with a standard deviation of $7.5 \%$. The median percentage of women in the state legislature is $25.3 \%$. The mean and median are approximately the same value, meaning the data dispersion is not negatively or positively skewed.


## INSERT TABLE 1

## INSERT FIGURE 1

The average state legislature is composed of $25.4 \%$ women, and one standard deviation change in the average means a $7.5 \%$ change in the number of women in the state legislature. This large standard deviation shows that the percentage of women in the state legislature varies greatly among states. This is also indicated by the range of this variable. The lowest percentage of women representation in a state's legislature is $11.1 \%$ and the highest percentage is $40.0 \%$. This is a $28.9 \%$ range, which indicates a clear difference in women representation in the legislatures among the states.

The first independent variable is whether or not the state is in the South or not. This is a dichotomous variable and was named "south." The data identifies 34 nonsouthern states and 16 southern states. The states were sorted into non-southern and southern states based on the United States Census Bureau's classification. This means $68 \%$ of the states are non-southern and $32 \%$ are southern states.

## INSERT TABLE 2

INSERT FIGURE 2
INSERT FIGURE 3

The second independent variable is tested in the second hypothesis and is the percentage of the state's population that has at least a Bachelor's degree. This variable was named "BA_or_more." This variable was used because the research shows that the gap in gender role perception is largest and more prominent between a Bachelor's degree and a high school education. The mean percentage of the population with a Bachelor's degree or higher is $27.2 \%$ with a standard deviation of $4.7 \%$ The median percent of the population with a Bachelor's degree or higher is $26.5 \%$. The median is slightly less than the mean, meaning the dispersion of data has a slight positive skew.

## INSERT TABLE 3

## INSERT FIGURE 4

This means the average state has a population of $27.2 \%$ with Bachelor's degree or more, and one standard deviation change in the average for this study means a $4.7 \%$ change in the percentage of the population with a Bachelor's degree or higher. This standard deviation shows that the percentage of people with a Bachelor's degree or higher varies among states. This is also indicated by the range of this variable. The lowest percentage
of people with a Bachelor's degree or higher in a state's population is $17.3 \%$ and the highest percentage is $38.2 \%$. This is a $20.9 \%$ range, which indicates a clear difference in the percentage of the population with at least a Bachelor's degree among the states.

The third independent variable is the religiosity of each state. This variable classifies a state's religiosity as either low, medium, or high religiosity, and was called "religiosity3." The measures were based on religious observance among each state's population measured by a survey performed by Pew Research Center. This measure for religion was utilized because the research predominately focuses on the differences between those reporting high religiosity and low religious devotion. The use of three categories of religiosity allows for a more direct comparison of highly religious states and less religious states. The data classifies 17 states as having low religiosity, 17 states as having medium religiosity, and 16 states as having high religiosity. This means $34 \%$ of the states have low religiosity, $34 \%$ of the states have medium religiosity, and $32 \%$ of the states have high religiosity.

INSERT TABLE 4
INSERT FIGURE 5

## Results

After analyzing the data, the effect of each independent variable on the percent of women in each state's legislature can be interpreted, as well as how the independent variables relate to affect the percent of women in each state's legislature.

## Southern or Non-Southern State

First, a mean comparison of "south" and "womleg_2018" was conducted in order to test the relationship between the two variables.

## INSERT TABLE 5

The mean comparison supports the first hypothesis. The mean comparison concluded that the mean percentage of women in non-southern states' legislature is $28.0 \%$, and in southern states the mean is $19.9 \%$. This means that non-southern states have a higher percentage of women in their state legislature than southern states. In order to test the statistical significance of this relationship, error bars were generated.

## INSERT FIGURE 6

The error bars in Figure 6, show that the relationship is statistically significant because the bars do not overlap at any point on the $y$-axis. This means the null hypothesis is rejected. The upper and lower boundaries of the mean percentage of women in nonsouthern state and southern state legislatures was calculated by finding the standard error. Using these values, it can be said with $95 \%$ confidence that the mean average of women in state legislatures of non-southern states is between $25.7 \%$ and $30.3 \%$, and the mean average of women in state legislatures of southern states is between $17.2 \%$ and $22.7 \%$.

## Percent of Population with a Bachelor's Degree or Higher

In order to test the relationship between the percentage of the population of a state with a Bachelor's degree or higher and the percentage of women in the state's legislature, a correlation analysis was conducted.

INSERT TABLE 6

## INSERT FIGURE 7

The Pearson correlation coefficient is equal to .582 . This indicates a positive relationship between the percentage of women in the state legislature and the percentage of the state's population that has a Bachelor's degree or more, which supports hypothesis two. This
relationship is moderate to strong as indicated by the magnitude of the coefficient. Additionally, the correlation is statistically significant due to the p -value being .000 , which is less than .05 , the accepted value for $95 \%$ confidence. The scatterplot gives a visual representation of the correlation between these two variables.

## Religiosity

In order to test the relationship between the religiosity of the population of a state and the percentage of women in the state's legislature, a correlation analysis was conducted.

## INSERT TABLE 7

## INSERT FIGURE 8

The Pearson correlation coefficient is equal to -.546 . This indicates a negative relationship between the percentage of women in the state legislature and the religiosity of a state, which supports hypothesis three. The relationship is moderate to strong as indicated by the magnitude of the coefficient. Additionally, the correlation is statistically significant due to the p -value being .000 , which is less than .05 , the accepted value for 95\% confidence. The error bar graph gives a visual representation of the effect religiosity has on the percentage of women representation in state legislatures.

## Multiple Regression

A multiple regression analysis was conducted in order to control for the independent variables and gain a better understanding of the overall effect the independent variables have on the dependent variable.

INSERT TABLE 8
INSERT TABLE 9

By examining the R Square value in Table 12, it can be determined that three independent variables explain $45.2 \%$ of the variance in the percentage of women in the state's legislature. This means the three independent variables do not fully predict the percentage of women in that state's legislature, but offer a very compelling indication of the dependent variable.

The relationship between the "south" variable and the percentage of women in the state legislature is no longer statistically significant. The p-value is .076 , which is slightly above the accepted .05 for a $95 \%$ confidence interval. The relationship approaches, but does not reach, conventional levels of statistical significance; therefore, the null hypothesis cannot be rejected for hypothesis one.

When controlling for the other independent variables, the exact estimated effect changes for the percent of the population that has a Bachelor's degree or higher. The exact estimated effect of the percent of a state's population having a Bachelor's degree or higher has shifted from .925 to .614 . This now means that for every one percentage point increase in the percentage of the population that has a Bachelor's degree or higher in a state, it is expected the percentage of women in the state's legislature would increase .614 percentage points. The p -value for the percent of the state's population that has a Bachelor's degree or higher also changed from .000 to .005 ; however, this is still less than the accepted p-value of .05 for a confidence level of $95 \%$. Therefore, the relationship between the state's population that has a Bachelor's degree or higher and the percentage of women representation in the legislature is statistically significant, even when controlling for other variables.

The exact estimated effect of religiosity of a state on women in the state legislature has shifted from -5.002 to -1.701 . This now means that for every one unit increase in the religiosity of the state, such as going from a not very religious state to a moderately religious state, it is expected the percentage of women in the state's legislature would decrease 1.701 percentage points. However, the p-value for the religiosity of the state changed from .000 to .226 , which is far beyond the accepted pvalue of .05 for a $95 \%$ confidence level. This means, when controlling for the other independent variables, the null hypothesis cannot be rejected for hypothesis three.

## Interpretation

The analysis indicates that when not controlling for any other variables, the null hypothesis is rejected for all three hypotheses tested. When controlling for all of the independent variables tested, the null hypothesis for hypothesis one and the null hypothesis for hypothesis three cannot be rejected. The null hypothesis for hypothesis two is rejected.

The fact that hypotheses one and three must be rejected when controlling for the independent variables makes it less likely that the geographic location and religiosity of the state have an effect on the percentage of women representation in the state's legislature. On the contrary, the fact that hypothesis two is still accepted when controlling for the independent variables makes it likely that the percentage of the population that has a Bachelor's degree or higher has an effect on the percentage of women in the state's legislature.

## THE 2016 PRESIDENTIAL ELECTION

## Hypothesis

This analysis seeks to discover if Donald Trump's presidency has affected the number of women elected to state legislatures, and if so, in which states. The hypothesis is that Donald Trump's presidency has caused an increase in the percentage of women in state legislatures that is higher than the expected change in the percentage of women in the state legislatures. This hypothesis is based on the prediction that states will have elected more women to their state legislatures in response to Trump's presidency, specifically his treatment of women.

## Data

In order to calculate the expected change in the percentage of women in the state legislatures from the 2016 election to the 2018 election, a weighted average of the change from 2010-2012, 2012-2014, and 2014-2016 in each state was utilized. The data were collected from the Center for American Women and Politics at Rutgers University. The weighted average was calculated for each state and compared to the actual change in the percentage of women in that state's legislature after the 2018 midterm election. The weight of each change was based on the recency of the elections; therefore, the change from 2014-2016 was weighted the most and the change from 2010-2012 was weighted the least. The 2014-2016 average change was weighted .5 , the 2012-2014 average change was weighted .3 , and the 2010-2012 average change was weighted .2 . The weighted averages were then added together to get the expected change from 2016-2018 in the percentage of women representation in each state's legislature. The expected change from all states was averaged together to get a nationwide expected change in the percentage of
women in state legislatures, which was compared to the observed nationwide change in the percentage of women in state legislatures

## INSERT TABLE 10

## Results

The expected change in the percentage of women in each state legislature from 2016-2018 was compared to the actual change. Thirty-four of the fifty states experienced a larger increase in the percentage of women in their state legislature than what was expected. Fifteen of those were expected to decrease in the percentage of women in the state legislature, but instead experienced increases. One state, Illinois, saw an increase in the number of women in the state legislature less than the predicted percentage. Three states that were expected to decrease in the percentage of women in their state legislatures from 2016-2018 experienced a decrease less than what was expected. Eight states that were expected to experience an increase in the percentage of women in the state legislature experienced no change in the percentage from 2016-2018. Three states, Arizona, Kansas, and Virginia, were expected to increase the percentage of women in their state legislatures, but experienced a decrease in the percentage of women in their state legislatures from 2016-2018. Only North Carolina experienced an increase in the percentage of women in their state legislature equal to the predicted value. The nationwide expected 2016-2018 change of the percentage of women in state legislatures was $.75 \%$. The observed nationwide change was $3.24 \%$.

## INSERT TABLE 11

The difference between the expected change and observed change in the percentage of women in each state legislature from 2016-2018 was classified in to six
groups: no change, increased more than expected, decreased when predicted to increase, increased less than expected, decreased less than expected, and increased as expected. The most relevant categories to observe for the hypothesis being analyzed are "increased more than expected" and "decreased less than expected." Of the 34 states that increased the percentage of women in the state legislature more than expected, 19 of them casted their Electoral College votes for Donald Trump in the 2016 presidential election. All three of the states that decreased the percentage of women in their state legislature less than expected, casted their votes for Donald Trump in the 2016 presidential election.

## INSERT TABLE 12

## Interpretation

There was an observed nationwide change in the percentage of women in state legislatures from 2016-2018 that was almost five times larger than the expected change, and 34 individual states experienced an increase in the percentage of women in their state legislature larger than what was expected. The increase was not isolated only in states that cast their votes for Hillary Clinton in the 2016 presidential election. While this is a preliminary analysis, the data show that there is a possibility for Trump's presidency to have had an impact on the observed increase in the percentage of women in state legislatures being larger than the expected increase, but further analysis would be necessary to offer more support for this claim or to identify other factors that could explain this difference.

## CONCLUSION

This study is a preliminary work assessing three factors of a state's identity that could potentially be beneficial to increasing representation of women in the state legislature, as well as the effect of Donald Trump's presidency on the number of women elected to state legislatures in the 2018 midterm election. Not only can states utilize this data to understand where they fall among the other states, but also to see some factors that could potentially be beneficial for increasing women representation in the state legislature. This information can also be utilized by female candidates to gain knowledge on where their state falls, and if these factors will help or hinder them depending on the state they are running in.

With the surge of women running for political office, it is more important than ever that information regarding women in politics is being produced. The first analysis should be expanded on to include more variables among the states, including political party success and average income of the population in order to increase factors that can be used to predict the representation of women in a state's legislature. The second analysis should be expanded on by the conduction of formal statistical analyses in order to assess the concrete affect Donald Trump's presidency may have had on the number of women elected to each state's legislature, and in which states the biggest effects were experienced.

## REFERENCES

Alexander, Amy. 2012. Change in Women's Descriptive Representation and the Belief in Women's Ability to Govern: A Virtuous Cycle. Politics and Gender 8 (4): 437-464 http://www.journals.cambridge.org/abstract_S1743923X12000487.

Baer, Denise; Hartmann, Heidi; Lake, Celinda; and Carpenter, Bob. 2014. Shifting Gears: How Women Negative the Road to Higher Office. Cambridge: Political Parity.

Bowen, Daniel and Clark, Chirstopher. 2014. Revisiting Descriptive Representation in Congress: Assessing the Effect of Race on the Constituent-Legislator Relationship. Political Research Quarterly 67 (3): 695707. https://doi.org/10.1177/1065912914531658

Bullock, Charles, and Akins, Frances. 1997. "Women and Political Success with an Emphasis on the County Level." Paper presented at the annual meeting of the Southern Political Science Association. Atlanta, Ga.

Burns, Nancy; Scholzman, Kay; and Verba, Sidney. 2009. The Private Roots of Public Action. Cambridge: Harvard University Press, p. 354.

Caygle, Heather. 2018. "Record-breaking number of women run for office." Politico. https://www.politico.com/story/2018/03/08/women-rule-midterms-443267 (Accessed on April 30, 2018).

Center for American Women and Politics. 2011. Women in State Legislatures 2011. New Brunswick: Rutgers University.

Center for American Women and Politics. 2013. Women in State Legislatures 2013. New Brunswick: Rutgers University.

Center for American Women and Politics. 2015. Women in State Legislatures 2015. New Brunswick: Rutgers University.

Center for American Women and Politics. 2017. Women in State Legislatures 2017. New Brunswick: Rutgers University.

Center for American Women and Politics. 2018. Women in State Legislatures 2018. New Brunswick: Rutgers University.

Center for American Women and Politics. 2019. Women in State Legislatures 2019. New Brunswick: Rutgers University.

Chenoweth, Erica and Pressman, Jeremy. 2017. "This is what we learned by couting the women's marches." The Washington Post. https://www.washingtonpost.com/news/monkey-cage/wp/2017/02/07/this-is-what-we-learned-by-counting-the-womens-marches/?utm_term=.5869cc09088a (Accessed on April 12, 2019).

Cox, Daniel and Jones, Robert. 2016. Two Thirds of Trump Supporters Say Nation Needs a Leader Willing to Break the Rules. Washington DC: Public Religion Research Institude.

Darcy, Robert; Welch, Susan; and Clark, Janet. 1994. Women, Elections, and Representation. Lincoln: University of Nebraska Press, p. 45 .

Headrick, Maris; Johnson, Madison; Reynolds, Megan. 2015. "Religion’s Effect on Gender Roles." Undergraduate Research Journal for the Human Sciences 14. https://www.kon.org/urc/v14/headrick.html

Horowitz, Juliana; Parker, Kim; and Stepler, Renee. 2017. Wide Partisan Gaps in the U.S. Over How Far the Country Has Come on Gender Equality. Washington DC: Pew Research Center.

Institute for Women's Policy Research. 2016. Status of Women in the South: Political Participation. Washington DC: Institute for Women's Policy Research.

Lublin, David and Brewer, Sarah. 2003. "The Continuing Dominance of Traditional Gender Roles in Southern Elections." Social Science Quarterly 84: 379-396. doi:10.1111/1540-6237.8402010

Morgan, Mary. 1987. "The Impact of Religion on Gender-Role Attitudes." Psychology of Women Quarterly 11 (3): 301-310. https://doi.org/10.1111/j.14716402.1987.tb00905.x.

Paxton, Pamela. and Hughes, Melanie. (2015). Women, Politics, and Power: A Global Perspective. CQ Press.

Pew Research Center- Social and Demographic Trends. 2018. The Data on Women Leaders. Washington D.C: Pew Research Center.

Phillips, Ann. 1995. The Politics of Presence. Oxford: Oxford University Press.
Shear, Michael and Sullivan, Eileen. "'Horceface,' 'Lowlife,' 'Fat, Ugly': How the President Demeans Women." The New York Times. https://www.nytimes.com/2018/10/16/us/politics/trump-women-insults.html (Accessed on April 18, 2019).

United States Census Bureau. Census Regions and Divisions of the United States. Washington DC: U.S. Department of Commerce, Economics, and Statistics Administration.

Volden, Craig; Wiseman, Alan; and Wittmer, Dana. 2013. "When are Women More Effective Lawmakers Than Men?" American Journal of Political Science 57 (2): 326-341.

Watkins, Morgan. 2018. "After Trump's election and \#MeToo, nearly 100 women are running for Kentucky statehouse." The Courier Journal. https://www.courier-journal.com/story/news/politics/2018/02/16/trump-metoo-kentucky-women-running-legislature/1077231001/ (Accessed April 30, 2018).

Wolbrecht, Christina, and Campbell, David. 2007. "Leading by Example." American Journal of Political Science 51 (4): 921-39.

270 to Win. 2016. 2016 Presidential Election Results. https://www.270towin.com/maps/2016-actual-electoral-map

## TABLES

## Table 1: Descriptive Statistics of "Womleg_2018" Variable

| Women in State Legislatures 2018 |  | 50 |
| :---: | :---: | :---: |
| N | Valid |  |
|  | Missing | 0 |
| Mean |  | 25.4220 |
| Median |  | 25.3000 |
| Mode |  | $14.90^{\text {a }}$ |
| Std. Deviation |  | 7.51698 |

## Table 2: Descriptive Statistics of "South" Variable



## Table 3: Descriptive Statistics of "BA_or_More" Variable

| Percent college or higher |  |  |
| :--- | ---: | ---: |
| N | Valid | 50 |
|  | Missing | 0 |
| Mean |  | 27.1720 |
| Median |  | 26.4500 |
| Mode | $25.10^{\mathrm{a}}$ |  |
| Std. Deviation | 4.73187 |  |

a. Multiple modes exist. The smallest value is shown

## Table 4: Frequency Table for "Religiosity3" Variable

|  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: |
| Valid |  |  |  |  |
| Low | Frequency | Percent | Valid Percent | Cumulative <br> Percent |
| Mid | 17 | 34.0 | 34.0 | 34.0 |
| High | 17 | 34.0 | 34.0 | 68.0 |
| Total | 16 | 32.0 | 32.0 | 100.0 |

Table 5: Mean Comparison of "South" Variable and "Womleg_18" Variable
womleg_2018

|  |  |  |  |
| :--- | ---: | ---: | ---: |
|  |  |  |  |
| Southern state? | Mean | N |  |
| Nonsouth | 28.0000 | 34 | Std. Deviation |
| South | 19.9438 | 16 | 6.91573 |
| Total | 25.4220 | 50 | 5.68213 |

Table 6: Correlation of "BA_or_More" Variable and "Womleg_18" Variable

|  | Correlations |  |  |
| :--- | :--- | ---: | ---: |
|  |  | Percent college <br> or higher | womleg_2018 |
| Percent college or higher | Pearson Correlation | 1 | $.582^{* *}$ |
|  | Sig. (2-tailed) |  | .000 |
|  | N | 50 | 50 |
| womleg_2018 | Pearson Correlation | $.582^{* *}$ | 1 |
|  | Sig. (2-tailed) | .000 |  |
|  | N | 50 | 50 |

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7: Correlation of "Religiosity3" Variable and "Womleg_18" Variable

| Correlations |  |  |  |  |  |
| :--- | :--- | ---: | ---: | :---: | :---: |
|  | womleg_2018 |  |  |  | Religiosity |
| womleg_2018 | Pearson Correlation | 1 | $-.546^{* \prime}$ |  |  |
|  | Sig. (2-tailed) |  | .000 |  |  |
|  | N | 50 | 50 |  |  |
| Religiosity | Pearson Correlation | $-.546^{* *}$ | 1 |  |  |
|  | Sig. (2-tailed) | .000 |  |  |  |
|  | N | 50 | 50 |  |  |

**. Correlation is significant at the 0.01 level ( 2 -tailed).

Table 8: Model Summary for Multiple Regression Analysis of "South" Variable, "BA_or_More" Variable, "Religiosity3" Variable, and "Womleg_18" Variable

| Model Summary |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: |
| Model | $R$ | R Square | Adjusted $R$ <br> Square | Std. Error of the <br> Estimate |
| 1 | $.672^{\mathrm{a}}$ | .452 | .416 | 5.74491 |

a. Predictors: (Constant), Southern state?, Percent college or higher, Religiosity

Table 9: Multiple Regression Analysis Coefficients of "South" Variable, "BA_or_More" Variable, "Religiosity3" Variable, and "Womleg_18" Variable

| Coefficients ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | Unstandardized <br> Coefficients |  | Standardize <br> d <br> Coefficients <br> Beta | t | Sig. |
| 1 | (Constant) | 13.360 | 7.267 |  | 1.839 | . 072 |
|  | Religiosity | -1.701 | 1.386 | -. 186 | -1.227 | . 226 |
|  | Percent college or higher | . 614 | . 208 | . 387 | 2.952 | . 005 |
|  | Southern state? | -3.952 | 2.178 | -. 248 | -1.814 | . 076 |

a. Dependent Variable: womleg_2018

## Table 10: Weighted Changes in the Percent of Women in Each State Legislatrure

 and the Expected Change from 2016-2018| State | Weighted Change 2010-2012 | Weighted Change 2012-2014 | Weighted Change 2014-2016 | Expected Change 2016-2018 |
| :---: | :---: | :---: | :---: | :---: |
| Alabama | 0 | 0.21 | 0.35 | 0.56 |
| Alaska | 1 | 0 | 1.7 | 2.7 |
| Arizona | 0.24 | $\square$ | 2.2 | 2.44 |
| Arkansas | -1.04 | 0.9 | -0.35 | -0.49 |
| California | -0.32 | -0.27 | 0 | -0.59 |
| Colorado | 0 | 0.3 | -2 | -1.7 |
| Connecticut | -0.1 | -0.33 | -0.5 | -0.93 |
| Deleware | 0 | -0.48 | -1.6 | -2.08 |
| Florida | -0.12 | 0 | 0.3 | 0.18 |
| Georgia | -0.24 | 0.36 | 1.5 | 1.62 |
| Hawaii | -0.52 | -0.81 | 0 | -1.33 |
| Idaho | -0.2 | 0.57 | 1.45 | 1.82 |
| Illinois | 0 | 0 | 1.95 | 1.95 |
| Indiana | -0.12 | 0 | -0.35 | -0.47 |
| Iowa | 0.52 | -0.18 | 0.3 | 0.64 |
| Kansas | -0.74 | 0.36 | 1.85 | 1.47 |
| Kentucky | 0 | -0.42 | 0 | -0.42 |
| Louisiana | -0.84 | 0 | 1.4 | 0.56 |
| Maine | 0 | -0.18 | 2.45 | 2.27 |
| Maryland | -0.12 | 0.33 | 1.05 | 1.26 |
| Massachusset | 0.3 | 0 | -0.5 | -0.2 |
| Michigan | -0.4 | 0.6 | 2.05 | 2.25 |
| Minnesota | 0.4 | -0.15 | -0.75 | -0.5 |
| Mississippi | 0.46 | 0 | -1.15 | -0.69 |
| Missouri | -0.2 | 0.93 | -1.05 | -0.32 |
| Montana | 0.8 | 0.99 | -1.65 | 0.14 |
| Nebraska | -0.4 | 0.6 | 2.05 | 2.25 |
| Nevada | -0.32 | 1.89 | 2.4 | 3.97 |
| New Hampsh | 1.66 | -1.14 | -0.1 | 0.42 |
| New Jersey | 0.18 | 0.24 | 0.4 | 0.82 |
| New Mexico | 0.18 | -0.27 | 1.8 | 1.71 |
| New York | 0.18 | 0.69 | 1.9 | 2.77 |
| North Carolir | -0.12 | 0.18 | 1.15 | 1.21 |
| North Dakota | 0.42 | 0.63 | -0.35 | 0.7 |
| Ohio | 0.16 | 0.45 | -1.5 | -0.89 |
| Oklahoma | 0.12 | 0 | -0.3 | -0.18 |
| Oregon | 0.22 | 0.66 | 1.1 | 1.98 |
| Pennsylvania | 0.08 | 0.12 | 0.6 | 0.8 |
| Rhode Island | 0.34 | 0 | 2.25 | 2.59 |
| South Carolir | 0.7 | 0.18 | 1.2 | 2.08 |
| South Dakota | 0.58 | -0.57 | 0 | 0.01 |
| Tennessee | -0.3 | 0.21 | -0.75 | -0.84 |
| Texas | 0 | -0.33 | 0.25 | -0.08 |
| Utah | -0.2 | -0.27 | 2.4 | 1.93 |
| Vermont | 2.46 | 0 | -0.6 | 1.86 |
| Virginia | -0.28 | -0.24 | 5 | 4.48 |
| Washington | -0.28 | 0.81 | 2.05 | 2.58 |
| West Virginis | -0.3 | -0.45 | 0 | -0.75 |
| Wisconsin | 0 | 0 | -0.4 | -0.4 |
| Wyoming | 0.46 | -1.02 | -1.1 | -1.66 |
|  |  |  |  | Nationwide Expected Change: . 75 |

## Table 11: Expected Change in the Percentage of Women in Each State Legislature

from 2016-2018 and the Observed Change from 2016-2018

| State | Expected Change 2016-2018 | Change from 2016-2018 |
| :---: | :---: | :---: |
| Alabama | 0.56 | 0 |
| Alaska | 2.7 | 6.6 |
| Arizona | 2.44 | -2.2 |
| Arkansas | -0.49 | 4.4 |
| California | -0.59 | 4.2 |
| Colorado | -1.7 | 7 |
| Connecticut | -0.93 | 6.4 |
| Deleware | -2.08 | 3.2 |
| Florida | 0.18 | 3.8 |
| Georgia | 1.62 | 4.2 |
| Hawaii | -1.33 | 2.7 |
| Idaho | 1.82 | 0 |
| Illinois | 1.95 | 1.2 |
| Indiana | -0.47 | 2.7 |
| Iowa | 0.64 | 6 |
| Kansas | 1.47 | -1.8 |
| Kentucky | -0.42 | 5.8 |
| Louisiana | 0.56 | 0 |
| Maine | 2.27 | 4.8 |
| Maryland | 1.26 | 3.7 |
| Massachussets | -0.2 | 4 |
| Michigan | 2.25 | 10.8 |
| Minnesota | -0.5 | 0 |
| Mississippi | -0.69 | -0.5 |
| Missouri | -0.32 | 2.6 |
| Montana | 0.14 | 2 |
| Nebraska | 2.25 | 0 |
| Nevada | 3.97 | 12.7 |
| New Hampshire | 0.42 | 4.9 |
| New Jersey | 0.82 | 0 |
| New Mexico | 1.71 | 4.4 |
| New York | 2.77 | 4.7 |
| North Carolina | 1.21 | 1.2 |
| North Dakota | 0.7 | 2.9 |
| Ohio | -0.89 | 3.8 |
| Oklahoma | -0.18 | 8.7 |
| Oregon | 1.98 | 7.8 |
| Pennsylvania | 0.8 | 5.5 |
| Rhode Island | 2.59 | 6.2 |
| South Carolina | 2.08 | 0 |
| South Dakota | 0.01 | 2.2 |
| Tennessee | -0.84 | -0.7 |
| Texas | -0.08 | 2.8 |
| Utah | 1.93 | 3.8 |
| Vermont | 1.86 | 0 |
| Virginia | 4.48 | -0.7 |
| Washington | 2.58 | 3.4 |
| West Virginia | -0.75 | -0.7 |
| Wisconsin | -0.4 | 3.1 |
| Wyoming | -1.66 | 4.5 |
|  | Expected Nationwide Change: . 75 | Observed Nationwide Change: 3.24 |

Table 12: Observed 2016-2018 Change in the Percentage of Women in Certain State
Legislature and the Candidate Each State Casted Electoral Votes for in 2016

| State | Observed Change in Percentage of Women in State Legislature 2016-2018 v. Expected Change |  |
| :--- | :--- | :--- |
| Alaska | Increased more than expected | Red: Electoral College Votes Casted for Trump |
| Arkansas | Increased more than expected | Blue: Electoral College Votes Casted for Hillary |
| Califormia | Increased more than expected | Purple: Electoral College Votes Split |
| Colorado | Increased more than expected |  |
| Connecticut | Increased more than expected |  |
| Deleware | Increased more than expected |  |
| Florida | Increased more than expected |  |
| Georgia | Increased more than expected |  |
| Hawaii | Increased more than expected |  |
| Indiana | Increased more than expected |  |
| Iowa | Increased less than expected |  |
| Kentucky | Increased more than expected |  |
| Maine | Increased more than expected |  |
| Maryland | Increased more than expected |  |
| Massachussets | Increased more than expected |  |
| Michigan | Increased more than expected |  |
| Missisippi | Decreased less than expected |  |
| Missouri | Increased more than expected |  |
| Montana | Increased more than expected |  |
| Nevada | Increased more than expected |  |
| New Hampshire | Increased more than expected |  |
| New Mexico | Increased more than expected |  |
| New York | Increased more than expected |  |
| North Dakota | Increased more than expected |  |
| Ohio | Increased more than expected |  |
| Oklahoma | Increased more than expected |  |
| Oregon | Increased more than expected |  |
| Pennsylvania | Increased more than expected |  |
| Rhode Island | Increased more than expected |  |
| South Dakota | Increased more than expected |  |
| Tennessee | Decreased less than expected |  |
| Texas | Increased more than expected |  |
| Utah | Increased more than expected |  |
| Washington | Increased more than expected |  |
| West Virginia | Decreased less than expected |  |
| Wisconsin | Increased more than expected |  |
| Wyoming | Increased more than expected |  |

## FIGURES

Figure 1: Histogram of the Frequency of Data for "Womleg_18" Variable


Figure 2: Bar Graph of Frequency for "South" Variable


Figure 3: Classification of Southern States by the U.S. Census Bureau


Figure 4: Histogram of the Frequency of Data for "BA_or_More" Variable


Figure 5: Bar Graph of Frequencies of "Religiosity3" Variable


Figure 6: Error Bar Graph of "South" Variable and 95\% Confidence Interval of "Womleg_18" Variable


Figure 7: Scatterplot of "BA_or_More" Variable and "Womleg_2018" Variable


Figure 8: Error Bar Graph of "Religiosity3" Variable and 95\% Confidence Interval of "Womleg_18" Variable


