Female Representation and Social Spending

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Abstract: This paper aims to examine factors that affect government social spending in the United States. It will examine the relationship between characteristics of elected officials, like gender and race and party affiliation, and external factors like the economic conditions and mean age of the population. Since women and minorities are underrepresented in positions of power and leadership in the United States and often among the most disadvantaged segment of the population, this paper hopes to focus on the relationship between these factors. The analysis suggests that the number of female representatives in Congress, in addition to the mean age of the population and the unemployment rate, has a significant effect on the level of social spending authorized by the government.
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I. Introduction

The question of whether women are capable leaders in government has been the topic of debate for much of history. Today, as more women begin to make their way into national leadership positions, it has become clear that both men and women can be effective leaders in government; however, do the two genders have different priorities when it comes to governing? A pivotal study on the Swedish parliament over a period of twenty years found that 52% of women parliamentarians cited family policy, social policy, elderly care, or health care as matters of personal interest, while only eleven percent of men in parliament expressed interest (Wängnerud, 2009). Does this trend hold true for the United States? Are female congressional members more likely to favor policies that will lead to higher social spending?

Women are historically and consistently underrepresented in positions of power and leadership in the United States. As of 2015, women hold 19.3% of the seats in the House of Representatives and 20.0% of the seats in the Senate. Among the many challenges to achieving equality between women and men in the United States, one of the more significant obstacles is promoting the leadership of women in these sectors. With the broader perspective encompassed by a more diverse body of leadership that comes with equal representation in government, does the proportion of social expenditures in government spending increase? This paper hypothesizes that an increase in the number of female representatives in government will correlate with higher social spending per capita.

This hypothesis is tested using cross-sectional time-series data from the United States between 1980 and 2013. The dependent variable is social spending per capita and the independent
variables include number of female representatives, the number of racially diverse representatives, the unemployment rate, the average age of the population and whether the Legislative Branch had a Republican or Democratic majority.

The paper is organized as follows: The literature review discusses current existing literature regarding factors affecting social spending and highlights gaps in the literature. Then the theoretical framework is discussed. Third, the paper will examine the data and discuss the results of the econometric analysis. Then results are interpreted. The paper concludes by discussing the implications of the results and suggestions for future research.

II. **Literature Review**

Social spending in this study refers to funds governments set aside for social programs addressing issues relating to old age, health, family, active labor market programs, unemployment, housing and other social policy areas. Many social programs are designed to offer assistance to the poor or needy, and may include allotments for housing, food, and medical care. Depending on the needs of the individual, social programs typically offer either permanent or temporary assistance.

The ultimate goal of most government social spending programs is the eventual elimination of poverty and disparate inequality. People who live in poverty often need help to improve their situation, and governments in most developed countries are responsible for providing that assistance. Some welfare programs require that the recipient participate in programs designed to help them gain employment. This is sometimes required to discourage using social spending programs as a way of life, but rather as a steppingstone to eventual self-reliance.

Governments often set aside funds to help their citizens remain healthy and to offer medical assistance to those who cannot afford it on their own. In the U.S., government-funded health
clinics offer free or reduced pricing on some wellness programs such as immunizations, addiction management, and weight loss. Depending on age and income level, needy citizens may qualify for other health programs such as Medicaid or Medicare. Some countries, such as the United Kingdom and Canada, offer universal health care for all their citizens, regardless of age or income level. The recent passage of the Affordable Care Act in the United States aims to increase the quality and affordability of health insurance, lower the uninsured rate by expanding public and private insurance coverage, and reduce the costs of healthcare for individuals and the government. It introduced mechanisms like mandates, subsidies, and insurance exchanges.

Social spending is a partisan issue and many factors at the legislative level and beyond combine to determine the ultimate level of spending and the composition of the spending. This paper aims to examine the factors that affect social spending in the United States.

A. **Effects of Female Representation**

Diverse representation in government is important for many reasons. Without a balanced representation between the genders, the concerns and interests that come from a variety of people’s experiences will not be given equal attention in government. Studies have shown that when the presence of women increases, both substance and shape of politics change. Compared to male elected officials, women tend to prioritize social issues over other policy areas. One study examined 2000 data from a survey of the Canadian public and found clear differences in political beliefs and priorities between men and women (Gidengil, 2003). The study found that among the eight issues surveyed, healthcare (along with social welfare programs) showed the widest gap in opinion between the genders: 90% of women rated healthcare as an important issue, while only 78% percent of men responded the same way. Having children surprisingly had no effect
women’s views on healthcare (Gidengil, Trimble, Nadeau, & Nevitte, 2003), so this paper will not examine motherhood as an explanation for interest in social spending.

Another study measured the average gender difference in preferences toward various policies. Policies involving the use of force have resulted in gender differences that have been consistently relatively large. Sex differences in opinion toward other policies, like regulation and public protection have been approximately half as large. However, the salience of these issues has increased greatly for women over time. This means that differences in preferences have increased in ways consistent with the interests of women and the priorities of women’s movements (Shapiro, 1986). Of female parliamentarians, 75 percent mentioned healthcare, family policy, social policy or elderly care when campaigning for election, compared with only forty-four percent of men (Wängnerud 2009). This implies a belief among female politicians that addressing healthcare in their campaigns may appeal to their voters and help to get them elected or reelected. Therefore, women will be more likely to favor policies that will make healthcare more accessible to the general public, increasing usage of health facilities and increasing overall health expenditures. However, does this internal support for promoting social policies translate into real increases in social spending at the Congressional level?

There is a small sector of economic and political scholarship that has focused on the relationship between increased female representation and increased social spending. One study, focusing on Switzerland, showed that there are large gender gaps in the areas of health, environmental protection, defense spending and welfare policy which typically persist even controlling for socio-economic characteristics. The study also found that female policy makers have a substantial effect on the composition of public spending (Funk, 2010). Other studies reveal that women in states with the highest percentages of female representatives introduce and pass more
priority bills dealing with issues of women, children, and families than men in their states and more than their female counterparts in low-representation legislatures (Thomas, 1991).

Proportional representation of gender in political bodies contributes to creation of legislation promoting gender and racial equality. Equal representation of men and women in positions of power have been shown to help facilitate the inclusion of issues commonly linked to female experience that would not otherwise be placed at the forefront of public-policy agendas. However, although the literature indicates that women have a stronger interest in the promotion of social issues, it has not suggested that the percentage of women in government is a determinant of social expenditures. The direct influence of a female representative on the passage of a bill that is favorable to social spending is challenging to quantify, so this paper seeks to test the idea that the number of female representatives in Congress is correlated with increased social spending and to address this specific gap in the existing literature.

B. Racial Diversity in Congress

Welfare policy in the American states has been shaped profoundly by race, ethnicity, and representation. Diversity is found to have an effect on policy even when controlling for factors traditionally used to explain variation in state spending levels, such as party competition, lower class mobilization, ideology, and state capacity (Johnson, 2014). One study African American and Latino state legislators will mitigate the more restrictive and punitive aspects of welfare reform and also highlighted the overlapping and interdependent nature of gender and race/ethnicity, and suggested that legislative women of color will have the strongest countervailing effect on state welfare reform compared to other women or men of color (Reingold, 2012).
A related study investigated the agenda-setting behavior of female and black state legislators, and examine whether women and blacks are as successful as white men in passing legislation. Using a six-state, three-year sample, the study tested a descriptive representation model in which group members (blacks and women) represent group interests above and beyond the extent motivated by constituency and party pressures. This study can be used to suggest the capability of minorities to be able to effectively represent diverse interests at the Congressional level. In conclusion, there is not much literature that suggests any significant relationship between the level of diversity in Congress and social spending.

C. Exogenous Factors: Aging Population and Economic Conditions

The term social expenditures is multi-faceted and in this paper it encompasses the level of national public spending allocated for issues relating to old age, health, family, active labor market programs, unemployment, housing, and other social policy areas. The history of social spending in the United States has fluctuated over time and not only as a result of changing political attitudes. Much of the growth in social spending over the years has occurred as a result of exogenous factors, including historical events that required the government to spend more than it normally would to keep the country functioning and demographic changes that have affected the minimum level of financial commitment the government has towards its citizens.

According to Keynesian economic theory, government spending should be increased during times of recession. Keynes advocated what has been called countercyclical fiscal policies, that is, policies that acted against the tide of the business cycle: deficit spending when a nation's economy suffers from recession or when recovery is long-delayed and unemployment is persistently high, and the suppression of inflation in boom times by either increasing taxes or cutting back on government outlays. During times of recession, the U.S. government implements fiscal
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stimulus packages, or increases government spending. Two stimulus packages were passed during the recent recession. The Economic Stimulus Act of 2008 was primarily comprised of tax cuts and rebates, but The American Recovery and Reinvestment Act of 2009 included direct spending in infrastructure, education, health, and energy, federal tax incentives, and expansion of unemployment benefits and other social welfare provisions.

Entitlement spending, which includes government pensions, healthcare and welfare, started out at the beginning of the 20th century at 0.4% of GDP (Chantrill, 2015). Entitlement spending was negligible until the Great Depression of the 1930s. In response to the Great Depression, President Roosevelt and the New Deal increased welfare spending to 1.5% of GDP by the mid-1930s and over 2.0% on the eve of World War II in 1940. In 1950, entitlement spending had reached 3.3% of GDP, mostly welfare, and by 1960 entitlement spending had reached 5% of GDP as the portion of the population collecting Social Security started to grow as well. In 1965 Congress passed Medicare, Medicaid and the Great Society programs, and as a result entitlement spending exploded, exceeding 11% of GDP in 1976. By the early 1980s, entitlement spending reached 13% of GDP and pensions spending stabilized at a little over five percent of GDP, with welfare spending stabilized at 3-4% of GDP. But healthcare spending sustained a steady rise, from 3% of GDP in 1980 to 5% of GDP in 2000. Since 2000, entitlement spending has increased, peaking briefly at 18% of GDP in 2010, with pension spending at 6.4% of GDP, health care at 7.3% GDP and welfare spending at 4.5% of GDP in the aftermath of the Great Recession of 2007-09. In the 2010s welfare spending has contracted but health care and pensions spending has increased. In 2015 pension spending is estimated at 6.8% GDP, health care spending is estimated at 7.5% GDP, and welfare spending is estimated at 2.6% GDP (Chantrill, 2015). With the
initiation of government entitlement programs over time, a certain minimum level of social spending must be maintained over the years.

Second, one of the great achievements of the twentieth century is a dramatic rise in life expectancy. The population structure is a key driver of social spending. Countries with a young population are much less likely to have higher social-spending-to-GDP ratios than countries with older populations, but have a greater share of education spending. For examples, life expectancy in the US has increased from 45 in 1902 to 75.7 in 2004 (Department of Health and Human Services). Increased life expectancy combined with declining birth rates have caused many to worry about the cost of an aging population. An increase will result in an increase in the dependency ratio. If the retirement age remains fixed, and the life expectancy increases, there will be relatively more people claiming pension benefits and less people working and paying income taxes, which will increase social spending. There will also be increased government spending on health care and pensions, which also affect the level of social spending (Lloyd, Sherlock, 2000). In conclusion, exogenous events and characteristics of the population, like age, should be considered in the model to account for increases in social spending unrelated to the factors of interest.

D. Democratic Control

The Democratic Party has long supported fiscal spending and increasing taxes in order to support social programs. This value represents a key difference between the Democratic and Republican parties, which seeks to limit taxes and minimize spending by limiting expenditure to essential functions. A study that covers fifteen liberal democracies between 1960 and 1987, showed that parties of the left do spend a little more than parties of the right, although the difference only emerges for majority governments whose party composition remains unchanged over a number of years, an indication that it takes time for parties to affect total spending (Blais, 1993).
Another study indicates that the number of democratic voters is an important predictor of the amount of federal dollars being spent in a budget overall (Levitt, 1995). Programs initiated in the latter half of the 1970s, a time of solid democratic control, exhibit the greatest bias towards Democrats; while programs initiated in the Reagan era display no such bias. This paper concluded that parties in the United States play an important, but limited, role in determining the distribution of federal dollars (Levitt, et al).

One paper finds that the governing parties skew the distribution of funds in favor of areas that provide them with the strongest electoral support. This suggests that parties have an electoral incentive to skew the distribution of funds to influence future election results, and the mechanism through which this works is the mobilization rather than conversion of voters in a fixed electorate (Ansolabehere, 2006). In addition, increased spending in a county increases voter turnout in subsequent elections. For the purpose of this paper, this would indicate that the Democratic Party would focus funding on the people who vote for them, who are traditionally more socially liberal, which would indicate that Democratic Party control would lead to an increase in social spending.

Alternatively, studies have shown that there is no statistically conclusive evidence that Democratic control of the federal government results in higher levels of total social spending (Faricy, 2011). Faricy developed and tested a theory that political parties’ choice between indirect and direct social expenditures is primarily motivated by a desire to alter the balance between public and private power in society. The results show that Republican control of the legislature results in a higher ratio of indirect to direct social spending, so the Democratic Party might push for increases in social spending politically, but the ultimate transfer of welfare to the people may not be significantly affected. In conclusion, the literature shows that Democratic Party control
Congress may have an impact on the amount and distribution of government spending allocated to social issues, but it may take an extended amount of time and the overall welfare transfer to the people may not be significantly affected.

E. Summary of Literature

There is a general consensus in the literature regarding the importance of increased female representation in the government, either as a measure of gender equality or a means to achieve gender equality through the improvement in the political status of women. Some studies have also found that in addition to promoting a variety of perspectives and giving a voice to underrepresented groups of society, reducing gender inequality and improving the status of women may actually contribute to higher rates of economic growth and greater macroeconomic stability (Stotsky, 2006).

The studies concerning the relationship between number of female representatives in political power in the U.S. and the amount of the budget allocated to social spending are relatively outdated and this has led me to examine how this relationship has changed over the past decade, in light of the economic conditions and the slowly increasing percentage of women in Congress.

III. Data and Theoretical Model

The data I will be utilizing for my analysis will be cross-sectional time series data analyzed with a linear regression. The dependent variable will be the percentage of national public spending allocated for social spending (OECD Statistics, 2014). The independent variables are the number female representatives in Congress (Congressional Research Service, 2014), the level of democratic control in the government (Democratic Control Index; Roper, 2014), the number of racially diverse members of Congress (Congressional Research Service, 2014), the percent of the population over 65 (U.S. Census Bureau, 2014), and economic conditions measured with the
yearly unemployment rate (Bureau of Labor Statistics, 2013). The data is collected over 34 years for a time period of 1980-2013.

The dependent variable measures the percent of U.S. GDP spent on issues relating to old age, health, family, active labor market programs, unemployment, housing, and other social policy areas (OECD Statistics, 2014). The number of female representatives is measured per year in both the Senate and the House of Representatives (Congressional Research Service, 2014). The level of Democratic control in the government is measured using binary variables for when the House of Representatives, Senate, and Executive Branch have a Democratic majority (1) (Congressional Research Service, 2014). The proxy for the racial diversity in Congress is the cumulative number of African American, Asian American, and Hispanic American representatives (Congressional Research Service, 2014). The percent of the U.S. population over 65 represents the aging population structure; population includes all residents regardless of legal status or citizenship, except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of the country of origin (U.S. Census Bureau, 2013). The proxy for measuring the current economic conditions is the yearly U.S. unemployment rate (Bureau of Labor Statistics, 2013). The descriptive statistics are shown in Table 2.

With these seven explanatory variables, the multiple regression model to be tested can be written as follows:

$$\%SocSpY_0 = B_0 + B_1Frep + B_2Race + B_3U + B_4Age + B_5House + B_6Senate + B_7Exec + E$$

The expected signs of $B_1, B_2, B_3, B_4, B_5, B_6, B_7$ are all positive.

IV. Econometric Results and Interpretation

Initial results of the econometric regression displayed potential positive serial correlation with a Durbin-Watson statistic of 1.68, so results reported in Table 3 were corrected using the
Prais-Winston technique with a transformed Durbin-Watson statistic of 1.94. Multicollinearity is confirmed by high simple correlations between all variables, except for the Democratic control binary variables, and high VIF statistics for $Frep$, $Race$, and $House$. The very high R-squared and the fact that many variables are characterized by a time trend suggests the possibility of nonstationarity. Dickey-Fuller tests confirmed stationarity in all variables except for $Senate$. The model was tested for heteroskedasticity using the Breusch-Pagan test, and the chi-squared value indicated that heteroskedasticity was not a problem.

The initial estimated regression model is:

$$\%SocSpY_0 = 1.496 + 0.036Frep + 0.025Race + 0.498U + 0.556Age - 0.414House + 0.303Senate - 0.042Exec + E$$

All variables had positive coefficients as predicted, except for $house$ and $exec$. After the initial regression, $U$, $Age$, and $Frep$ emerge as the most significant variables in predicting $PSocSp$ at the 1% and 5% levels, respectively. The R-squared value was very high, 0.9819, and the F-value for overall fit was 201.14, significant at the 1% level. After evaluating these results, a stepwise regression was conducted which added these three variables and the results are reported in Table 3 in the second model.

$$\%SocSpY_0 = -1.293 + 0.054Frep + 0.832Age + 0.456U$$

In this model, all three variables emerged with positive coefficients and were significant at the 1% level in predicting the percent of GDP spending dedicated to social spending. The second model had an R-squared value of 0.979, meaning that about 98% of the variation in the data could be explained by the model and an F-value for overall fit of 465.36, significant at the 1% level. The R-squared barely decreased from the first model to the second, indicating the strength of the three variables in the second model and the relative unimportance of the other independent variables ($Race$, $House$, $Senate$, $Exec$).
V. Conclusion

We can conclude from this study the significance of three variables in determining the level of social spending in the United States: the level of female representation in government, the mean age of the population, and the unemployment rate, a proxy for economic conditions. The model reiterates the fact that as the population ages, entitlement spending must increase, as well as the demand for healthcare. In addition, it also confirms that social spending in the form of stimulus spending will increase during harsh economic conditions.

The divergence in the signs of the coefficients in the first model for house and exec could possibly be explained by the much larger number of representatives in the House, so small increases or decreases in Democratic representation may only have a marginal impact on the composition of social spending. Due to the fact that only one person occupies the Executive Branch at a time and the importance of having a Democratic majority in Congress during a Democratic presidency in order for the party to be very effective at promoting social policies may explain why these variables have a negative coefficient.

This study confirms the theory that female representation has a different effect on social spending than male representation. Whether this is a result of individual female representatives having different policy priorities and how much of an impact women as a whole have on Congressional spending remains to be examined in future studies. It can be concluded that there is a significant relationship between the level of female representation in Congress and social spending. If the quality and funding behind social programs continues to increase and results in inequality reduction, then perhaps one day, there will be equal representation in the government as well.
VI. Appendix

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSocSp</td>
<td>% of national public spending spent on issues relating to old age, health, family, active labor market programs, unemployment, housing and other social policy areas</td>
</tr>
<tr>
<td>Age</td>
<td>% of the population over 65</td>
</tr>
<tr>
<td>U</td>
<td>Yearly unemployment rate</td>
</tr>
<tr>
<td>FRep</td>
<td>Number of female representatives in Congress</td>
</tr>
<tr>
<td>Race</td>
<td>Number of African American, Asian American, and Hispanic American representatives in Congress</td>
</tr>
<tr>
<td>Democratic Control</td>
<td>Binary variables for Democratic (1) control of the House of Representatives, Senate, and Executive Branch</td>
</tr>
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</table>
Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>PSocSp</td>
<td>34</td>
<td>14.96765</td>
<td>1.94059</td>
<td>12.8</td>
<td>19.3</td>
</tr>
<tr>
<td>Age</td>
<td>34</td>
<td>12.41638</td>
<td>0.5498954</td>
<td>11.2884</td>
<td>13.96147</td>
</tr>
<tr>
<td>U</td>
<td>34</td>
<td>6.464706</td>
<td>1.640562</td>
<td>4</td>
<td>9.7</td>
</tr>
<tr>
<td>FRep</td>
<td>34</td>
<td>55.17647</td>
<td>26.95841</td>
<td>18</td>
<td>96</td>
</tr>
<tr>
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<td>17.01821</td>
<td>27</td>
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<tr>
<td>House</td>
<td>34</td>
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<td>0.5039947</td>
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<td>1</td>
</tr>
<tr>
<td>Senate</td>
<td>34</td>
<td>0.529412</td>
<td>0.5066404</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Exec</td>
<td>34</td>
<td>0.411765</td>
<td>0.4995542</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
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Table 3: Regression Results for PSocSp

<table>
<thead>
<tr>
<th>psocsp</th>
<th>_cons</th>
<th>age</th>
<th>u</th>
<th>frep</th>
<th>race</th>
<th>house</th>
<th>senate</th>
<th>exec</th>
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<tbody>
<tr>
<td>Coef.</td>
<td>-1.1831</td>
<td>0.831356</td>
<td>0.452141</td>
<td>0.0527</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>-0.57</td>
<td>(4.6)**</td>
<td>(11.39)**</td>
<td>(13.45)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
R^2 \quad 0.979 \quad \text{adj R}^2 \quad 0.976 \quad F \quad 465.36 \quad n \quad 34 \quad DW \quad 1.94
\]

| Coef.  | 1.496414 | 0.556238 | 0.497996 | 0.035705 | 0.024968 | -0.41413 | 0.302648 | -0.042 |
| t      | 0.66 | (2.5)** | (10.98)** | (2.68)** | 1.31 | -1.16 | 1.96 | -0.33 |

\[
R^2 \quad 0.9819 \quad \text{adj R}^2 \quad 0.975 \quad F \quad 201.14 \quad n \quad 34 \quad DW \quad 1.68
\]

Notes: statistically significant at 1% (***), 5% (**), 10% (*) levels
VII. Bibliography


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