2009

From the suburbs to the house: The metropolitan–rural population and the success of women candidates

Elizabeth A. Stiles
John Carroll University, estiles@jcu.edu

Larry Schwab
John Carroll University

From the suburbs to the house: The metropolitan–rural population and the success of women candidates

Elizabeth A. Stiles

Larry Schwab

Department of Political Science, John Carroll University, 20700 North Park Blvd., University Heights, OH 44118, USA

Abstract

We analyze the voting behavior of metropolitan and rural residents in relation to women's legislative representation. Examining election data on the U.S. House and all lower state houses, we find that the greater the metropolitan population in a legislative district, the more likely it is to be represented by a woman. We extrapolate from these findings that the modern increase in women's representation can be attributed in part to the rural-to-suburban shift in population and legislative seats.

The population shifts among cities, suburbs, and rural areas was one of the most significant demographic changes in the United States during the past 70 years. Rural areas decreased, suburbs increased, many older central cities declined, and several sunbelt cities expanded. These population shifts and equal-population redistricting significantly changed the metropolitan–rural distribution of legislative seats. For example, Table 1 shows the rural and metropolitan changes in the U.S. House from 1963 (districts based on the 1960 census) to 2001 (districts based on the 1990 census) and 2003 (districts based on the 2000 census). Whereas metropolitan (urban, urban–suburban, and suburban) districts increased from 184 (42% of the total districts) in 1963 to 252 (58%) in 2001 and 275 (63%) in 2003, rural districts declined from 160 (37%) in 1960 to 83 (19%) in 2001 and 65 (15%) in 2003.

Table 1. Metropolitan–Rural composition of U.S. House Districts 1963, 2001 and 2003.

	1963	2001	2003
Urban	93	70	67
Urban–Suburban	26	30	27
Suburban	65	152	181
Mixed	74	100	95
Rural	160	83	65
At Large	17	0	0
Total	435	435	435

The largest part of this change was the enormous shift of districts from the rural areas to the suburbs. Whereas the rural districts declined by nearly 100, suburban districts increased by more than 100. This shift in seats represents about one-fourth of the House seats. A rural-to-suburban shift in districts also occurred in many state legislatures, especially in states that are not predominately rural (see Appendix A for definitions of terms used above).

These metropolitan–rural district changes may affect politics in many ways. In this study, we examine two aspects of this issue. First, we examine the voting behavior of metropolitan and rural voters in relation to female candidates. Second, we focus on the question of whether the rural-to-suburban shift in seats improved the chances of women being elected to legislatures. We examine these questions by analyzing the success of women candidates in elections for the U.S. House of Representatives and the state legislatures.

1. Review of the literature

The impact of various factors on the election of women representatives is a significant aspect of the study of gender politics. Research findings indicate that some factors increase, while others decrease, the possibility that women will be elected to legislatures in the United States.

1.1. State legislatures

1.1.1. Region and population size

Women's electoral success varies across regions. The highest percentage of women in state legislatures is in the Northeast, and the lowest is in the South. Women made gains in western legislatures during the past 20 years (Norrander & Wilcox, 2005).
State population is another factor that has been examined. Whereas research from the 1960s and 1970s indicates that women are likely to win in states with small populations (Diamond, 1977, Rule, 1981 and Werner, 1968), later studies show no relationship between states' population and female representation in state legislatures (Norrander & Wilcox, 1998).

1.1.2. Structural factors

While Hill (1981) discovers that women's representation is low when legislative salaries are high, Rule (1981)and Sanbonmatsu (2002) find no relationship between salaries and female representation. Whereas several researchers find women gain office more in part-time rather than full-time state legislatures (Hill, 1981,Nechemias, 1985, Rule, 1981 and Squire, 1992), Norrander and Wilcox (1998) discover that the length of sessions does not matter. Diamond (1977) finds that women are more likely to win in states where there is less competition for careers in state legislatures. While some studies indicate that there is a negative relationship between more professionalism in legislatures (e.g., more staff) and the representation of women (e.g., Squire, 1992), others show that the level of professionalism in legislatures does not affect the success of women candidates (Norrander & Wilcox, 1998).

1.1.3. Cultural factors

Most studies indicate that the cultural environment is a key factor in the election of women because women win fewer legislative seats in states with more traditional cultures. Hill (1981) finds that cultural factors (e.g., states with traditional cultures) have much more influence on women being elected to state legislatures than structural factors (e.g., length of session and constituency size). Nechemias (1985) also concludes "that political culture is by far the most influential factor behind women's differential success in capturing state house seats" (128). Similarly, Norrander and Wilcox (1998) conclude that the general state ideology is the strongest predictor of the number of women in state legislatures. Norrander and Wilcox (2005) also find that liberal voters are more likely to elect women representatives.

1.1.4. Campaign and election factors

Several studies suggest that women do better where party officials participate more in the recruitment of candidates (Darcy and Schramm, 1977, Flammang, 1985 and Volgy et al., 1986), campaign costs are lower, and parties give strong support to their candidates (Norrander & Wilcox, 2005). However, other findings suggest that party activity in elections is unrelated to the representation of women in legislatures (Norrander & Wilcox, 1998). On the parties, earlier research suggests that Republican areas elect more women state legislators (Rule, 1981 and Werner, 1968), while later research shows that Democratic areas are more supportive of women candidates (Norrander & Wilcox, 2005).
Some results show that female candidates gain in states with higher turnover (Norrander & Wilcox, 1998), while other findings indicate no gains for women in these states (Norrander & Wilcox, 2005). Some analysts (e.g., Reed and Schansberg, 1995 and Thompson and Moncrief, 1993) speculate that term limits help women candidates because it creates more open seats. However, Norrander and Wilcox (2005) conclude that term limits have only a small impact on the election of women to state legislatures. In addition, most studies show that women are more likely to be elected in multimember districts (Arceneaux, 2001, Carroll, 1994, Hogan, 2001, Matland and Brown, 1992 and Norrander and Wilcox, 1998). Some type of balancing of male and female candidates may be taking place in this situation (Darcy, Welch, & Clark, 1994). Also, some research indicates that women are more successful in states with small legislative districts (Hill, 1981, Matland and Brown, 1992, Nechemias, 1985, Nechemias, 1987, Rule, 1981 and Werner, 1968).

1.1.5. Socio-economic factors

Female candidates are more likely to win in areas with higher levels of education and higher income (Nechemias, 1987 and Norrander and Wilcox, 1998) and in states that spend more on education and welfare (Rule, 1981). They also have more success in states with more professional women and more women in the workforce (Norrander and Wilcox, 2005 and Sanbonmatsu, 2002).

On the metropolitan–rural factor, the results are mixed. Werner (1968) discovers that in the 1960s women won the most state legislative seats in rural states. Most of the large urbanized states elected only a few women to their legislatures. These findings lead Werner to conclude that equal-population redistricting may make it more difficult for women to get elected. “The consequences of reapportionment across the nation, while lessening the impact of the rural vote, may also reduce the number of women in some state legislatures” (43). Rule finds that women's recruitment to state legislatures is not “related to urbanized or rural state contexts” (68). Nechemias’ (1985) research indicates that while there is no relationship between the success of female legislators and urbanization, women win the most legislative seats in metropolitan areas close to the state capitals. Norrander and Wilcox (1998) find that urbanization is an important factor in the election of women state legislators in only one region of the country.

1.2. U.S. House of representatives

Welch and Studlar (1996) studied the results of the 1992 House election and find that women are more likely to be candidates from the Democratic Party, from outside of the South and East, and from constituencies with more women in the workforce. On the factors facilitating election, they conclude that political variables, such as running in a safe seat, are more important than demographic variables. They find that region and the districts’ levels of owner occupied housing, income, urbanization, and women in the workforce did not affect the chances of women or men being elected.

Palmer and Simon (2006) examine women candidates in House races from 1956 to 2004. Both African-American women and men are more likely to win in districts that are strongly urban, Democratic, and working class. However, there are differences between black and white women and white Democratic and Republican women. “Female Democratic House members tend to win elections in districts that are more liberal, more urban, more diverse, more educated and much wealthier than those won by male Democratic members of the House” (152). In comparison, female Republican Representatives usually win in districts that are less conservative, less Republican, more urban, and more diverse than those electing male Republican Representatives.

1.3. Summary

Some of the findings indicate that several factors (e.g., culture, region, education, and workforce in state legislative elections) have a significant impact on the success or failure of female candidates. However, studies on other factors (e.g., length of sessions, professionalism in legislatures, and level of party activity) show mixed results of their influence on the election of women.

In our study, we focus on the metropolitan–rural variable. This is one of the key variables with mixed results.

2. Research plan

In this study, we focus on the impact of the metropolitan–rural population on women's success in elections for state legislatures and the U.S. House of Representatives. More research is needed on this relationship for several reasons. First, the metropolitan–rural factor has not been studied as much as a number of other variables. Second, as mentioned above, the findings from previous studies are mixed. The results range from women being more likely to be elected from rural areas to women being more likely to be elected from metropolitan areas. Also, some studies find that there is no relationship between the amount of either rural or metropolitan population and the success of the women candidates. Third, more analysis is needed that divides the districts into city, suburban, and rural. This type of study is useful because most previous research only uses the amount of urbanization to measure the metropolitan–rural variable. A city–suburban–rural analysis provides a better explanation of which population areas tend to support women candidates than just a broad measure of urbanization.

Unlike many studies of women's representation, our study takes Congressional or state legislative district as our unit of analysis. Using district rather than state for our unit of analysis allows for more cases and more precise estimation of the effect of district type (urban, suburban or rural) on women running for and being elected to Congress and to state legislatures.

The first hypothesis is that women are more likely to be elected from metropolitan areas (cities and suburbs) than from rural areas. This is based on the assumption that metropolitan communities have a larger pool of potential female candidates than rural areas, and that metropolitan voters support women's equality more than rural voters. For example, questions from the General Social Surveys (National Opinion Research Center, 2000) indicate that a much higher percentage of suburban (36%) and urban (34%) women have college degrees than rural (i.e., farm and country home residents) women (6%). And a much lower proportion of suburban (17%) and urban (26%) residents as compared to rural residents (40%) believe that men are better suited for politics.
The second hypothesis is that the shift in legislative seats from rural areas to suburban areas increased the chances that women will be elected to legislatures. For this analysis, the metropolitan areas are divided into suburbs and cities, and then suburban voters are compared to rural voters. The focus is on the suburbs because overall all the gains in metropolitan districts came from the suburbs. If women are more likely to be elected from the suburbs rather than the countryside and many legislative seats shift from rural to suburban areas, then more women should be elected to legislatures.

To test the hypotheses, we examine the results of races involving Republican and Democratic women candidates in the 2000 elections for the lower house of the 50 state legislatures and the U.S. House of Representatives. An election year close to 2000 was substituted for the 2000 election in the few states that did not hold elections for state legislature in 2000. The districts are divided into urban (central city), suburban (suburbs), urban–suburban (about half city, half suburbs), rural (rural and small town areas), and mixed (about half metropolitan, half rural). For the causal models, first a continuous variable (metro) is used that is the percentage of the district that is located in a Metropolitan Statistical Area (MSA). In another model, the metro variable is removed and replaced with the percentage of the district that is rural (outmsa) and urban (cc).

3. Findings

3.1. House of representatives

The results of the analysis support both hypotheses: Table 2 shows the metropolitan–rural composition of the districts held by women in the 2001 House. The data indicate that women are much more successful in metropolitan and suburban areas than in rural areas. Of the 59 women in the House, 49 represented metropolitan districts, 33 represented suburban or urban–suburban districts, and just four represented rural districts. Whereas rural districts made up 19% of the total House districts in 2001, only 7% of all the female House members were from rural districts. In comparison, metropolitan districts made up 58% of the House districts but elected 83% of the female representatives. And suburban districts were 35% of the total districts and elected 46% of the female representatives. The mean percentage of the vote for women candidates is higher in metropolitan (19) and suburban (18) districts than in rural (8) districts. In addition, while there is a negative correlation (−.178) between the percent of the rural (non-metropolitan) population in the districts and the percent of the vote for women candidates, there is a positive correlation with the metropolitan (.178) and suburban (.016) population.

Table 2. Female representatives in Metropolitan–Rural Districts, 2001 U.S. House.

	% of Total Seats	Number of Women	% of Total Women	Women as % of Total in Each Category	Mean Vote % for Women Candidates
Urban	16	17	29	24	22
Urban–Suburban	7	5	8	17	15
Suburban	35	27	46	18	18
Mixed	23	6	10	6	7
Rural	19	4	7	5	8
Total	100	59	100		

In our model of the U.S. Congress (Table 3), we estimate whether women will represent a House district, first by using the metropolitan variable as our explanatory variable and then by replacing the metropolitan variable with the rural (outmsa) and central city (cc) variables.

Table 3. Determinants of whether a woman will represent a Congressional District.

	Coeff (s.e.)	−1 to +1 s.d.	Coeff (s.e.)	−1 to +1 s.d.
Metropolitan District	.016(.008)*	.09		
Central City District			.006(.005)	
Rural District			−.013(.008)@	−.07
% African-American	.003(.009)		.001(.009)	
SES	.029(.021)@	.05	.036(.022)*	.06
% in poverty	.016(.021)		.014(.021)	
Republican Affiliation	−.782(.318)*	−.08	−.719(.325)*	−.07
N	425		425	
% Correct Predictions	86.21		86.21	
Chi^2	25.95 ($p < .000$)		24.66 ($p < .000$)	
Log Likelihood	−161.545		−162.189	

**$p \leq .01$, *$p \leq .05$, @$p \leq .1$.

We also include several other district-level control variables, including percent of African-Americans, percent of district residents in poverty and whether the officeholder is Republican. Two variables, percent of residents with a college degree and average household income, are highly collinear (.7608). Thus, these two variables were combined into a socio-economic status (SES) measure. The model, a logit (see Note), correctly predicts the independent variable 86.2% of the time. Further, the data show that the metro variable is significant and in the expected direction. As the percentage of the district that is metropolitan (urban or suburban) increases, the likelihood of a woman representing the Congressional district also increases. The social economic status variable is also significant but at the .10 level. The higher the average SES of the district, the more likely it is to elect a woman representative. Finally, the party affiliation of the officeholder is important. Voters are more likely to send a Democratic woman to represent them than a Republican.

How much of a difference does it make for a district to be more metropolitan in terms of women's representation? Holding all other independent variables at their means, varying MSA from one standard deviation below the mean (46.954%) to one standard deviation above (100%) increases the probability by .09 (or 9%) that a Congressional seat will be held by a woman. Thus, we see a clear difference for the chances of women's representation between districts that are more metropolitan and those that are more rural. By comparison, varying SES from one deviation below to one above the mean increases the probability of a woman representing the district by .05. Finally, by changing the representative from Democrat to Republican in the model, the probability that a woman will represent a district decreases by .08.

In the next model, we drop the metropolitan variable in order to test the relationship between central city, suburban and rural districts. Because the huge demographic shift in the last century has been from rural areas to suburban ones, we especially want to examine the relationship between rural and urban areas in terms of the chances of a given legislative district being represented by a woman. We also want to make sure that the differences that we noted in the model using the metropolitan variable are not simply due to a disproportionate urban influence. The results show a significant difference at the .1 level between the chances for a woman to represent a rural district vs. a suburban district (because suburban is the suppressed category in this model, both central city and rural variables should be compared to the suburban variable). The probability of a woman representing a rural district decreases by .07 compared to suburban. There is no statistically significance between central city Congressional districts and suburban ones. The SES variable and party variable are significant again in the same directions as before and with very similar effects.

It is important to note the limitations of the data in these models. With only four Congressional rural districts being represented by women, we should be cautious about making too much of these findings. In order to be more confident in our results, we turn to an analysis of the state legislatures, where there are many more cases and greater variation among our variables.

3.2. State legislatures

The data reporting the findings for the state legislatures (see Table 4, Table 5 and Table 6) show that women have much greater success in metropolitan and suburban districts than in rural districts. Table 4 compares the 2000 mean vote percentage in the metropolitan–rural districts for women candidates in the lower house of the state legislatures. The data in the table indicate that in most states suburban and urban women won a higher percent of the vote than rural women. In only seven states is the mean vote for rural women legislators higher than the mean vote for both the urban and suburban legislators. Suburban women candidates and urban women candidates won a higher percentage of the vote than rural women candidates in 21 of the top 25 states in population. The top 25 states contain most of the mid-sized or large metropolitan areas.

Table 4. Mean vote percentage of women candidates in the 2000 election for the Lower House of State Legislatures by the Metropolitan–Rural composition of the districts.

	U	US	S	M	R		U	US	S	M	R
CA	30	68	29	13	19	KY	26	0	13	50	5
TX	19	0	16	43	13	OR	38	0	28	24	34
NY	29	31	16	0	20	OK	38	0	28	24	34
FL	25	18	30	23	25	CT	23	54	32	100	21
IL	35	7	40	20	12	IA	18	0	42	0	18
PA	17	0	17	18	12	MS	27	0	18	0	10
OH	42	20	25	23	14	AR	18	0	38	0	11
MI	32	25	29	18	16	KS	39	61	45	25	19
GA	47	35	23	13	12	UT	37	0	17	0	9
NJ	15	13	17	12	8	NV	36	0	30	26	31
NC	44	0	19	7	16	NM	23	0	20	25	35
VA	15	0	15	14	3	WV	9	0	12	0	11
MA	16	0	19	20	17	NE	20	0	11	0	11
IN	19	27	22	19	13	ID	45	0	20	0	27
WA	38	0	37	47	19	ME	13	0	28	0	27
TN	34	49	10	0	0	NH	16	0	11	0	16
MO	32	0	27	21	14	HI	25	0	24	0	19
AZ	31	0	8	7	29	RI	27	0	25	0	28
MD	10	13	11	6	9	MT	23	0	0	0	28
WI	18	0	21	7	27	DE	20	0	13	0	36
MN	22	0	35	22	26	SD	10	0	0	9	6
CO	30	81	30	43	29	AK	22	0	0	0	28
AL	15	8	10	17	6	ND	16	0	25	15	7
LA	26	20	15	0	14	VT	12	0	15	0	20
SC	21	0	12	0	14	WY	19	0	17	0	18

Note: The states are listed by population rank.

Table 5. Correlation coefficients between the 2000 vote of women State Legislative Candidates and the Districts' Percent Metropolitan population.

California	.139	Kentucky	.244**
Texas	.066	Oregon	–.040
New York	.074	Oklahoma	.193
Florida	.009	Connecticut	.024
Illinois	.282**	Iowa	.061
Pennsylvania	.097	Mississippi	.160
Ohio	.217*	Arkansas	.171
Michigan	.177	Kansas	.253**
Georgia	.259**	Utah	.203
New Jersey	.172	Nevada	.075
North Carolina	.186*	New Mexico	–.158
Virginia	.222*	West Virginia	.032
Massachusetts	–.009	Nebraska	.149
Indiana	.114	Idaho	.085
Washington	.230*	Maine	–.218
Tennessee	.389**	New Hampshire	–.063
Missouri	.235**	Hawaii	.047
Arizona	.001	Rhode Island	.027
Maryland	.056	Montana	–.087
Wisconsin	–.122	Delaware	–.270
Minnesota	.135	South Dakota	.156
Colorado	.013	Alaska	–.097
Alabama	.112	North Dakota	.276**
Louisiana	.081	Vermont	–.090
South Carolina	–.025	Wyoming	–.031

*$p < .05$; **$p < .01$.

Table 6. Determinants of Whether a Woman Will Represent a State House District.

	Coeff (s.e.)	–1 to +1 s.d.	Coeff (s.e.)	–1 to +1 s.d.
Metropolitan District	.003(.001)**	.06		
Central City District			.091(.084)	
Rural District			–.290(.087)**	–.05
% African-American	.002(.002)		.001(.002)	
SES	.005(.002)**	.04	.006(.002)**	.06
% Social Services	–.021(.004)**	–.07	–.019(.004)**	–.06
Republican Affiliation	–.292(.071)**	–.05	–.286(.072)**	–.05
N	5265		5265	
% Correct Predictions	76.2		76.2	
Chi^2	112.64 ($p < .000$)		116.27 ($p < .000$)	
Log Likelihood	–2834.004		–2832.189	

**$p \leq .01$; *$p \leq .05$; @$p \leq .1$.

Table 5 presents correlation coefficients for the vote for women state legislative candidates and the districts' metropolitan population. As with the previous data, the results show that women candidates are more successful in metropolitan areas than in rural areas. The correlations between the women's vote and the metropolitan population were positive in 38 states. The 12 states with negative correlations were mostly small states with large rural populations (e.g., Montana, Alaska, Vermont, and Wyoming). Whereas 32 of the 35 states with the largest populations had a positive correlation, eight of the 15 smallest states had negative correlations. So within almost all the states with middle-sized or large metropolitan areas, women candidates were more successful in metropolitan areas as compared to rural areas. Rural women candidates do better primarily in the few states with small metropolitan areas and large rural populations.

Our causal model using state level data (Table 6) is similar to the one used above for the House. For this model, we were not able to collect data on the percent of district residents in poverty so instead used a proxy measure which is the percentage of the district that uses social services. We also tested for state effects with a fixed effects model indexed on states. Doing so ensures that the results are not due to simple differences between states in politics, culture or any other factor.1

The first causal model of state legislative districts is also significant and predicts 76.2% of all cases correctly. As in the Congressional model (Table 3), the metropolitan variable is a significant and positive predictor of women's representation and a change from one standard deviation below the mean metro score to one deviation above results in a .06 increase in the chance that a woman will represent a given legislative district. Also similar to the Congress model, the SES variables (proportion increase .04) and party affiliation (switch to Republican decreases proportion by .05) variables are significant and in the expected direction. The social services variable in this model is also significant, as an increase in the percentage of residents who use social services significantly decreases the chance that a woman will represent a district by .07).

In the second causal model, we drop the metropolitan variable in order to test the relationship between central city, suburban and rural districts. Similar to the Congressional model, we find that there is a significant statistical difference between rural districts and the suppressed suburban districts. Women are significantly less likely to represent rural districts than suburban districts while there is no statistical difference between the likelihood that a woman will represent an urban district rather than a suburban one.

4. Conclusion

A substantial shift of legislative districts occurred from rural to metropolitan areas during the past 50 years. Since the suburbs grew faster than the central cities, the major result of this shift in the U.S. House and in many state legislatures was a huge increase in suburban seats and a large decline in rural seats.

To examine the impact of this shift in seats on the success of female legislative candidates, it is useful to analyze the voting results of women in metropolitan, rural and mixed (part metropolitan areas, part rural areas) districts. The findings from past research are mixed on the impact of the metropolitan–rural factor on the chances of women winning legislative seats. The results of this study support the conclusion that women are more likely to be elected from metropolitan areas than from rural areas. And, in addition, the results indicate that the rural-to-suburban shift in seats improved the chances that women will win seats in Congress and the state legislatures.

Further, these findings suggest that the rise in suburban seats and the decline in rural seats was a factor in the increase of women legislators during the past 30 years. Many seats were added to areas that are more likely to elect women, and many seats were eliminated in areas that are less likely to elect women. And if this shift of districts continues, the possibility of women winning more legislative seats should also continue to improve.

Note

1. A likelihood ratio test indicated that a fixed effects model is appropriate (rho = 0, chibar2 = 48.01. prob> = chibar2 = 0.000). However, when comparing the logit to the fixed effects logit, there was no difference to the variables of interest. In fact, the only difference was that when using the percentage of Afirican-Americans in the district, became significant. Thus, we present the logit table because more readers will be familiar with logit.

Appendix A.

The definitions for the metropolitan–rural districts for the House of Representatives are as follows:

> Urban—55% or more of the population is in the central city of a Consolidated Metropolitan Statistical Area (CMSA) or a Metropolitan Statistical Area (MSA).
>
> Urban–suburban—80% of the population is in a CMSA or MSA, 30–54% of the population is in the central city, and 30–54% of the population is outside the central city of a CMSA or MSA.
>
> Suburban—55% or more of the population is outside the central city of a CMSA or MSA, and the CMSA or MSA has a central city population of 250,000 or more.

Rural—55% or more of the population is outside a CMSA or MSA.

Mixed—districts not meeting any of the above criteria.

The classification of the House districts was based on data from the Bureau of the Census, 1963 and Bureau of the Census, 2005 and Congressional Quarterly, 1964, Congressional Quarterly, 1993 and Congressional Quarterly, 2003.
The classification of state legislative districts is based on data from Barone, Lilley, and DeFranco (1998). The definitions for urban, suburban, and rural are districts with 55% or more of the population in either central city, suburban, or rural areas. Urban–suburban districts have 80% of the population in central cities and suburbs with 30–54% in central cities and 30–54% in suburbs. The mixed districts are the remaining districts.

References

Arceneaux, Kevin. (2001). The 'Gender Gap' in state legislative representation: New data to tackle an old question. Political Research Quarterly, 54, 143–160.

Barone, Michael, Lilley, William, III, & De Franco, Laurence J. (1998). State legislative elections: Voting patterns and demographics. Washington, DC: Congressional Quarterly.

Bureau of the Census. (1963). Congressional district data book: Districts of the 88th Congress. Washington, DC: U.S. Government Printing Office.

Bureau of the Census (2005). http://www.census.gov.

Carroll, Susan J. (1994). Women as candidates in American politics(2nd ed.). Bloomington: University of Indiana Press.

Congressional Quarterly (1964). CQ census analysis: Congressional districts of the United States. Congressional Quarterly Weekly Report 22, 1783–1894.

Congressional Quarterly (1993). Congressional Districts in the 1990s. Washington, DC: Congressional Quarterly.

Congressional Quarterly (2003). Politics in America 2004: The 108th Congress. Washington, DC: CQ Press.

Darcy, Robert, & Schramm, Sara Slavin. (1977). When women run against men. Public Opinion Quarterly, 41, 1–12.

Darcy, Robert, Welch, Susan, & Clark, Janet. (1994). Women, elections and representation (Revised 2nd ed.). Lincoln: University of Nebraska Press.

Diamond, Irene. (1977). Sex roles in the state house. New Haven: Yale University Press.

Flammang, Janet. (1985). Female officials in the feminist capital: The case of Santa Clara County.Western Political Quarterly, 38, 94–118.

Hill, David B. (1981). Political culture and female political representation. Journal of Politics, 43, 159–168.

Hogan, Robert E. (2001). The influence of state and district conditions on the representation of women in U.S. State Legislatures. American Politics Research, 29, 4–24.

Matland, Richard E., & Brown, Deborah Dwight. (1992). District magnitude's effect on female representation in U.S. State Legislatures. Legislative Studies Quarterly, 17, 469–492.

National Opinion Research Center (2000). General Social Surveys for 2000.

Nechemias, Carol. (1985). Geographic mobility and women's access to state legislatures. Western Political Quarterly, 28, 119–131.

Nechemias, Carol. (1987). Changes in the election of women to US State. Legislative Seats Legislative Studies Quarterly, 12, 125–142.

Norrander, Barbara, & Wilcox, Clyde. (1998). The geography of gender power: Women in state legislatures. In Sue Thomas, & Clyde Wilcox (Eds.), Women and elective office: Past, present, and future. New York: Oxford University Press.

Norrander, Barbara, & Wilcox, Clyde. (2005). Change and continuity in the geography of women state legislators. In Sue Thomas, & Clyde Wilcox (Eds.),Women and elective office: Past, present, and future. New York: Oxford University Press.

Palmer, Barbara, & Simon, Dennis. (2006). Breaking the political glass ceiling. New York: Routledge.

Reed, Robert W., & Schansberg, Eric D. (1995). The house under term limits: What would it look like? Social Science Quarterly, 76, 698–719.

Rule, Wilma. (1981). Why Women Don't Run: The critical contextual factors in women's legislative recruitment. Western Political Quarterly, 34, 60–77.

Sanbonmatsu, Kira. (2002). Political parties and the recruitment of women to state legislatures. Journal of Politics, 64, 791–809.

Squire, Peverill. (1992). Legislative professionalization and membership diversity in state legislatures. Legislative Studies Quarterly, 17, 69–82.

Thompson, Joel A., & Moncrief, Gary F. (1993). The implications of term limits for women and minorities: Some evidence from the States. Social Science Quarterly, 74, 300–309.

Volgy, Thomas J., Schwarz, John E., & Gottleib, Hildy. (1986). Female representation and the quest for resources: Feminist activism and electoral success. Social Science Quarterly, 67, 156–168.

Welch, Susan, & Studlar, Donley. (1996). The opportunity structure for women candidates in Britain and the United States. Political Research Quarterly, 49, 861–874.

Werner, Emmy E. (1968). Women in state legislatures. Western Political Quarterly, 21, 40–50.

Further reading

King, Gary, Tomz, Michael, & Wittenberg, Jason. (2000). Making the most of statistical analyses: Improving interpretation and presentation. American Journal Political Science, 44, 347–361.