Social Norms and Women in the Labor Force*

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Abstract

Social norms and gender roles shape the prevalent gap in the labor force participation of men and women. This study aims to understand whether female labor force participation is affected by social norms by using the election of female senators and governors as a possible cause of norms that support working women. Using a regression discontinuity design, I estimate the relative change in women's labor force participation after a woman wins the Senate seat or governor's office by a narrow margin of victory. My estimations do not provide evidence to reject the hypotheses of no demonstration effect of female politicians on labor force participation of women.

Keywords: social norms, regression discontinuity, female labor force participation, women in politics.
JEL Classification: J21

Sosyal Normlar ve Kadınların İşgücüne Katılımı

Özet

Sosyal normlar ve cinsiyet rolleri kadınlar ile erkekler arasında süregelen işgücü katılım oranı farkını şekillendiren etmenlerdendir. Bu çalışma, ABD Senatosu'na ve eyalet valiliğine kadınların seçilmesini sosyal normlarda bir değişiklik olarak kullanarak normların kadınların işgücü katılımına etkisini inceler. Kesikli regresyon dizaynı kullanarak yapılan analizlerde, küçük bir oy farkı ile belirlenen seçimleri takiben kadın işgücü katılım oranındaki değişim sorgulanır. Regresyon sonuçları özendirici etkinin var olmadığına dair kurulan hipotezi reddetmek için yeterli ispatu sunmamaktadır.

Anahtar Kelimeler: sosyal normlar, kesikli regresyon, kadınların işgücüne katılımı, kadın politilacılar.
Jel Sınıflaması: J21

There has been a longstanding labor force participation gap between men and women in the U.S. In 2015, the labor force participation rate of men was 56.7% whereas the labor force participation rate for women was 69%. The gap persists at all educational attainment levels and is observed for bachelor degree holders with 69% of the women and 79.7% of the men being in the labor force (U.S. Bureau of Labor Statistics, 2015 Census). Empirical studies explaining the part of the gap that cannot be attributed to human capital factors suggest that social norms and gender roles play a role in shaping women's preferences about time use and perceptions of social image. Hicks et al. (2014) argue also that the prevalent gender roles in the U.S. immigrants' countries of origin are associated with the division of labor within the household. Tijdens (2002) points to women's gender roles as secondary earners as being the best predictors of female part-time employment in the European Union.

As Elster put it in his 1989 paper, actions are typically influenced both by rationality and by norms. Hence, it will be useful to investigate women's decisions to work in light of society's perceptions about gender roles, and to expect changes in the women's labor force participation as social norms about a change in working women. Stam et al. (2013) use a Dutch dataset to identify the impact of gender role values regarding work ethic on women's labor supply, and Fortin (2005) uses the World Values Survey to relate gender norms to labor market outcomes for women in 24 OECD countries.

This study uses the women elected to the U.S. senate and to state government seats as potential causes of changed norms that would support working women, with the aim of understanding whether social norms affect female labor force participation. Just like any other legislature, the U.S. senate is a male-dominated arena. Since 1789, only 46 (2.34) of the total 1,963 current and former senators have been women. Throughout U.S. history, it has been rare for a woman to take a state executive position. Since the country's founding, only 32 women have been elected governor of a state. Hence, one can argue that when a woman enters the political arena as a senator or state governor and gains a job in a male-dominated environment, this might show an alteration in social norms.

In this paper, I examine whether social norms affect female labor force participation in the U.S. by using the election of female lawmakers as an indicator of a change in social norms. Previous studies examined the demonstration effects of female office holders on the political participation of women; they failed to reject the null hypotheses of no such effect in the context of developed (Broockman, 2014) and developing countries (Beaman et al., 2008 and Bhalotra et al.,2013). Beaman et al. (2012) analyze the demonstration effect on the adolescent educational attainment gap and confirm the existence of demonstration effects through changes in gender gap in the case of villages in India by showing a significant decline in the gender gap in adolescent educational attainment and career aspiration. In this study, I test whether female lawmakers are effective in changing the labor force participation of women in a developed country with a quite different culture than the setting of Beaman et al. My study differs from the previous studies by its outcome variable: I use the demonstration effect of female lawmakers to explain the longstanding labor force participation gap which is a differ-

ent aspect of female empowerment from the political participation as in Broockman's study which also uses U.S. data.

The goal of the paper is to causally examine whether female lawmakers have a positive impact on the probability of participating in the labor force. One issue with identifying the relation between elections with a female winner and women's participation in the market work force is the role of observed and unobserved state characteristics in determining how the social and economic setting in a state would affect elections as well as the labor market. Reverse causality is another potential problem if a higher female labor force participation affects the candidate and the results of the elections. In order to isolate the causal impact of female senators and governors, I use a regression discontinuity design (RD), and compare changes in labor force participation among women in the states after a female senator or governor is elected by a small margin of victory with the states where women lost elections by a small margin. Borrowed from Lee (2001), this estimation strategy assumes that states where a woman wins an election by a small margin are comparable to ones where a woman loses an election by a small margin.

My results do not suggest evidence to reject the null hypotheses of no demonstration effect of female senators and governors on the labor force participation of women either one year or three years after the elections. The estimated coefficients are too small to confirm the existence of a significant causal relation even with the use of different bandwidths for estimation.

This paper is organized as follows. Section 2 provides a review of the literature on elected women and their impact on their female electorates. Section 3 presents the data used for the analysis, Section 4 presents the identification strategy used to estimate the causal effects of female senators and governors on female labor force participation. Section 5 presents the main results, and Section 6 concludes the paper.

Literature Review

Motivated by the underrepresentation of women in politics in many developing as well as developed countries, economists have generated a literature that analyzes the impact of elected women on their female electorates through lawmaking and demonstration lenses.

The first group of papers concentrates on the policy choices of female legislators. Chattopadhyay and Duo (2004) observe that in Indian villages where Council Head positions have been randomly reserved for women, investments for the public good are implemented to address women's concerns. Brollo and Troiano (2012) find that in Brazilian municipalities where female mayors are elected by a small margin, they attract more infrastructure investment, increase the number of prenatal visits, and decrease the percentage of premature births in their municipalities. Interestingly, despite the magnitude of the infrastructure that they attract, female mayors are less likely to be reelected than their male counterparts. The authors believe that this results from male surveyors investing in greater political patronage during the terms of the females who are in of-

fice. Bhalotra and Clots-Figueras (2013) study the effect of female legislators on health outcomes by using close election data for Indian state assemblies; they find a significant decrease in neonatal mortality as a result of increased female political representation.

The second strand of the literature investigates whether female legislators have any demonstration effects on women in their consistencies. Beaman et al. (2008) find that the attitudes of female villagers towards local political participation remain unchanged following exposure to a female leader. In a different study, Beaman et al. (2012) find a significant decline in the gender gap in adolescent educational attainment and in the self and parental career aspirations in villages with a female Council Head. Bhalotra et al. (2013) analyze the impact of female winners on women's political participation in Indian state elections. They do not find any significant impact on voter turnout or entry of new female candidates. Although they find an increased probability that incumbent women will seek reelection, the effect fades over time and fails to demonstrate any spillover effects in neighboring areas.

The evidence from the U.S. also fails to support the existence of any demonstration effects. Broockman (2014) uses data from elections for state legislative offices. He uses a similar identification strategy to this study and compares the state legislative elections with small margins of victory for the races where a woman runs against a man. Although his district-level data has the advantage of having more than 2,500 observations in the regression analysis, he does not find that the election of additional women to U.S. state legislative offices has any causal effect on other women's political participation. Ferreira and Gyourko (2014) use a U.S. mayoral elections data set and also apply RD to the election results with a small-margin where a man and woman are opponent candidates. They look at a rich set of outcome variables such as the size of local government, the composition of municipal spending, or employment and crime rates, and find no evidence supporting an effect of female mayors on any of these outcome variables. Interestingly, they note that although female mayors have higher incumbency effects than men, these effects do not create any change in the long run on the political success of other female mayoral candidates in the same city or of female candidates in local congressional elections. This study uses a similar estimation strategy to answer a different question by testing whether the social norms are part of the reason for the labor force participation gap between men and women in the U.S.

The majority of the previous papers written on the demonstration effects of female lawmakers focus on the effect through political participation such as Broockman (2014) who tests the existence of this relationship with a U.S. dataset. In addition to political participation, women elected to an office might impress other women in their states in a more direct way such as educational attainment and career aspirations as Beaman et al. (2012) showed for the Indian case. This study is the first to examine the existence of such an effect in the U.S. labor market by using the female labor force participation as the outcome variable.

Data

Election results data come from the Statistics of the Presidential and Congressional Election documents published every other year by the clerk of the House of Representatives. I have information on the name, gender, party affiliation, and votes obtained by every candidate. I only include elections where a female candidate runs against a male candidate and the election result is determined by a small margin for the sake of identification strategy as explained in the following section.

I use data for the period between 1990 and 2012. Before the 1990's very few female senators were elected to the U.S. Senate. During this period of time, there were 57 different state-year pairs with a woman winning a senate seat (15% of the 373 total state-year pairs for the senate elections) and 30 state-year pairs with a woman winning a gubernatorial seat (11% of the 272 total state-year pairs for the governor elections). Over this period, 30 states never had a female senator while 33 states never had a female governor. Appendix Table lists the states and the total number of female senators and governors that served in each state.

I use the labor force participation data of the Current Population Survey-March Supplements for the years between 1990 and 2012. Since the 1950s, the national female labor force participation increased until it reached its highest level of 60% in 1999. Throughout the sample period, the female labor force participation rate has been between 57% and 60%. While showing a small overall change during my sample period, women's participation varied dramatically between states. For instance, between 1990 and 2012, the female participation rate varied from 64% to 73.7% in Minnesota while it ranged between 42% and 55% in West Virginia.

On the other hand, the male labor force participation rate has been showing a declining trend. Figure 1 shows the trends in the female and male labor force participation rates for my sample period.

Figure 1
Male and Female Labor Force Participation Rates 1990-2012
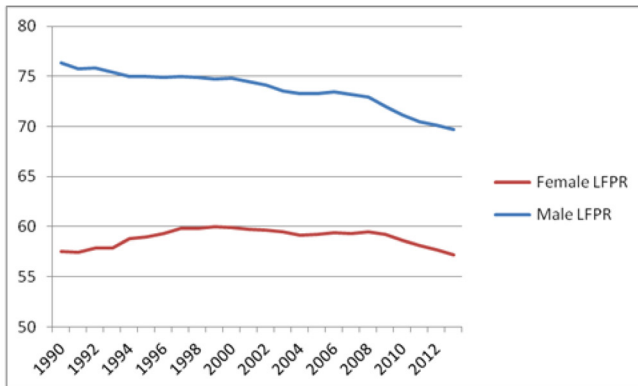
Source: BLS

Methodology

I would like to identify how state-level female labor force participation responds to a woman having won a Senate seat or the gubernatorial position. However, it is very likely that women's election results are correlated with observed and unobserved characteristics of the state, such as preference for female independence, which might directly determine women's labor force participation. This would impose a positive bias for my regression coefficients if I used a naïve ordinary least squares estimation. Another potential identification problem is in determining the direction of relation. States with higher female labor force participation are likely to have more female candidates.

In order to overcome these problems with identification, I follow Lee's seminal 2001 paper. Using an RD design and focusing on elections won and lost by a small margin, Lee (2001) investigates the electoral advantage of political incumbency by arguing that candidates who barely won an election are ex ante comparable to candidates who barely lost. Similarly, focusing on the elections with a small margin of victory in the case of female candidates running against male candidates, I assume that the assignment of treatment with a small margin is uncorrelated with any observed or unobserved characteristics of a state.

The identifying assumption is that when a woman barely wins or loses an election, the state does not exhibit any specific attitude towards or against women as office holders. As long as this assumption holds, this approach represents a treatment assignment that is as good as random. In the RD design, I assign treatment according to margin of victory where I define the vote margin as the difference in the number of votes that female and male candidates received as a percentage of the total votes. The observations with a positive margin belong to the treatment group since those belong to elections with a female victory, and similarly, observations with a negative margin define the comparison group.

If the female senators or governors causally affect the social norms in their constituencies, we would observe a discontinuity of the labor force participation of women in the states where they were elected at the zero margin, so the analysis focuses on the observations around the zero margin. Since the number of elections where a female candidate runs and wins against a male candidate are limited, I define a narrow margin as 6% (and below) of total votes for the gubernatorial elections and 5% (and below) of total votes for the senate elections as the bandwidth in RD regressions. The bandwidths are selected in order to run the analysis with the elections where a female candidate barely wins against a male candidate. Although the selection of a small margin leaves me with a small number of observations for the regression analysis, it is still possible to identify an impact by the jump at the cutoff in the RD graphs. In any case, I repeat the analysis with a 10 percent margin and present the RD graphs and regression result

tables in the Appendix. Larger number of observations do not change the results. I also include a third-order polynomial function of the running variable in the broader margin regressions.[1]

The equation below is used for the regression discontinuity design:

$$\Delta y_{st} = \alpha + \beta D_{st} + f(Z_{st}) + \mu(\Delta X_t) + \varepsilon_i, \tag{1}$$

where Δy is the change in labor force participation of women in state s from year t-1 to t.

D is the dummy variable for treatment, which is equal to 1 if a woman won the senate or gubernatorial election and 0 if not. Z is the forcing variable, which is the vote margin for this case. f() is a linear function of the forcing variable and ΔX is the change in the national LFPR from year t-1 to t. I include ΔX in the model in order to control for economic conditions affecting the labor force. The β coefficient measures the causal impact. I present parametric estimates that estimate the above equation using different first-order and second-order polynomial functions of Z calculated for the elections close to the zero margin cutoff. I run the regression for races decided with less than a 5% margin for the senate and less than a 6% margin for the gubernatorial seats. I conduct optimal bandwidth selection using the CV (Ludwig and Miller,2007) procedure. [2]

Results

Figure 2 and Figure 3 show the change in the female labor force participation rate (FLFPR) one year and three years after an election with a narrow margin involving a female candidate. Each graph represents local averages of the outcome in 0.05-margin bins plotted against the forcing variable, with overlaid smoothed linear regression lines on each side of the cutoff. Senate elections are held every two years and I aim to identify if the impact is observed with a lag by including the change in labor force participation within a three-year period following the election in order to disentangle the results of subsequent elections. Although the fitted lines of Figure 2 have a change in slope at the 0 margin threshold, the regression discontinuity results demonstrate that this change is not statistically significant.

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[1] The House of Representatives, on the other hand, is also a male-dominated environment, with women numbering 2.5% of current and former representatives. I leave the representative elections out of my sample due to the unavailability of labor market data at the congressional district level. Also, women representatives may be less salient because there are more than two representatives for most states, whereas every state has two senators and one governor.

[2] Additional regressions using optimal bandwidths which are determined using the methods proposed by Imbens and Kalyanaraman (2012) and Calonico, Cattaneo and Titiunik (2014) were also conducted; however the number of observations are few for the bandwidth chosen by these two methods.

Figure 2

The Change in Female Labor Force Participation Rate One Year after Senate or Gubernatorial Elections with a Small Margin that Include a Woman Candidate.
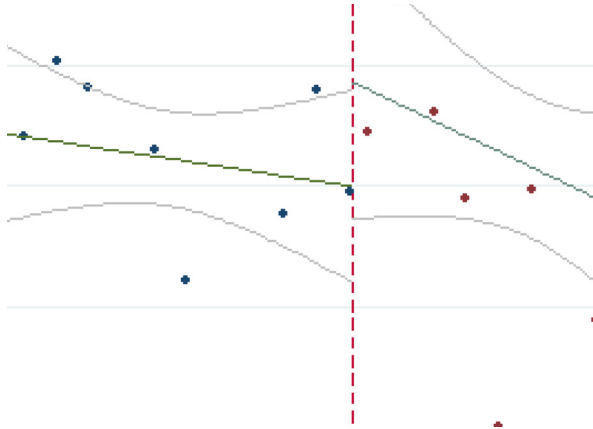
The y axis is the one-year change in FLFPR (in percentage points) after an election with a narrow margin of victory with a female candidate running against a male counterpart. The x axis is the margin of victory (in percentage points). The margin of victory is negative for elections with a female loser. The gray lines represent 95% confidence intervals.

Figure 3

The Change in Female Labor Force Participation Rate Three Years after Senate or Gubernatorial Elections with a Small Margin that Include a Woman Candidate.
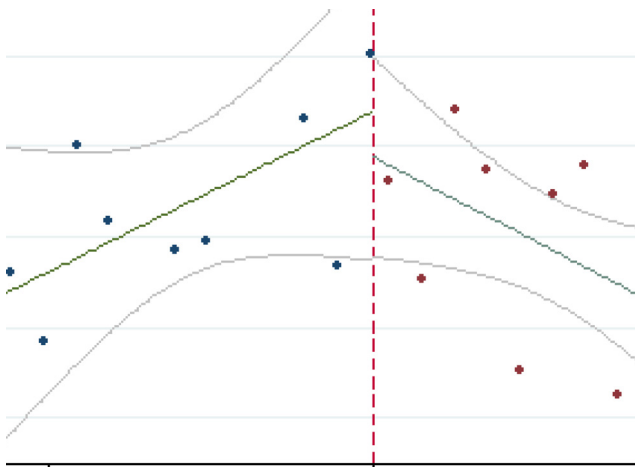
The y axis is the three-year change in FLFPR (in percentage points) after an election with a narrow margin of victory with a female candidate running against a male counterpart. The x axis is the margin of victory (in percentage points). The margin of victory is negative for elections with a female loser. The gray lines represent 95% confidence intervals.

Table 1 shows the RD regression results using the change in labor force participation of women one year after a woman wins a senate or gubernatorial election by a small margin. In Column 1 of Table 3, I present the results for the regression with a linear function of the running variable. I find an insignificant 1.5% increase in the LFPR of women in response to a woman winning the senate or gubernatorial seat by a small margin. In Column 2, I present the results with a second-order polynomial of the margin included. The magnitude of the coefficient for the female winner decreases to 0.53 and it is still insignificant. The optimal bandwidth selected with the CV method estimation results in a sample with a similar number of observations as the regression in Column 1 and an insignificant coefficient of 1.58 for the female winner variable.

Table 1
The Regression Discontinuity Results (1-year)

VARIABLES	(1) Change LFPR Linear Model	(2) Change LFPR Quadratic Model	(3) Change in LFRR CV Optimal Bandwidth
Female Winner	1.518	0.531	1.587
	(1.190)	(1.809)	(1.239)
Margin	-0.091	0.350	-0.174
	(0.273)	(1.135)	(0.305)
Margin_i	-0.453	-0.083	-0.306
	(0.386)	(1.553)	(0.422)
National LFPR	-1.061	-1.915	-1.008
	(0.801)	(1.286)	(0.815)
Margin_Sq.		0.070	
		(0.190)	
Margin_Sq_i		-0.235	
		(0.279)	
Observations	44	44	42

The dependent variable is the percentage change in female labor force participation 1 year after the election. The margin of victory is the percentage of the difference of the votes between the winner and runner-up candidate in the total votes. The observations in the table belong to the states following an election with a 5-percent margin of victory whenever a male and a female candidate run for the senate and state governor seats. Margin_i is the interaction of the treatment and running variable.
National LFPR is the 1-year change in LFPR for both sexes Margin_Sq and Margin_Sq_i are the margin square and margin square's interaction with the treatment variable.
Columns 1 and 2 show the results with a linear and quadratic function of the running variable, respectively.
Column 3 shows the results of RD regression for optimal bandwidth determined using the CV method.
Standard errors are in parentheses.

I also use the three-year change in the LFPR of women as the dependent variable in order to identify if there are any lagged effects, and I display the results in Table 2. The coefficient of the female winner is negative for the linear (Table 2, Column 1), quadratic (Table 2, Column 2) models and the model with the CV optimal bandwidth (Table 2, Column 3); it is still insignificant in all three estimations.

Table 2
The Regression Discontinuity Results (3-year)

	(1)	(2)	(3)
VARIABLES	3 yr change LFPR Linear Model	3 yr change LFPR Quadratic Model	3 yr change in LFRR CV OB
Female Winner	-0.764	-1.492	-0.834
	(1.408)	(2.143)	(1.473)
Margin	0.534	1.227	0.526
	(0.320)	(1.345)	(0.362)
Margin_i	-1.080**	-1.731	-1.018**
	(0.440)	(1.842)	(0.501)
National LFPR_3	0.122	0.119	0.699
	(0.451)	(0.470)	(0.969)
Margin_Sq		0.120	
		(0.225)	
Margin_Sq_i		-0.128	
		(0.331)	
Observations	44	44	42

The dependent variable is the percentage change in female labor force participation 1 year after the election. The margin of victory is the percentage of the difference of the votes between the winner and runner-up candidate in the total votes. The observations in the table belong to the states following an election with a 5-percent margin of victory whenever a male and a female candidate run for the Senate and state governor seats. Margin_i is the interaction of treatment and running variable.
Margin_Sq and Margin_Sq_i are the margin square and margin square's interaction with the treatment variable.
National LFPR 3 is the 3-year change in LFPR for both sexes
Column 3 shows the results of RD regression for the optimal bandwidth determined using the CV method.
Standard errors are in parentheses.

Conclusion

In this paper I test whether elected female officials in the U.S. create any demonstration effects by altering social norms and causing a change in the labor force participation of women in their constituencies. I fail to find evidence to reject the null hypotheses of no effect of female senators and governors on the labor force participation of women. There might be possible reasons for this. First, participation in the labor force corresponds to a late stage of life that is affected by female officeholders. Career aspirations of female high school and college students as well as major choices at college might have a higher possibility to be affected by role models as shown by Beaman et al. (2012) for India. Therefore in a future study, the demonstration effect of female law makers could be tested using a broader set of outcome variables focusing on young women. Second, the election of a woman to an office might not be sufficient to change the social norms, but also the efficiency of women in the elected offices might be a significant factor. Frederick (2010 and 2011) has analyzed the female senator's roll call voting behavior and concluded that female senators are more supportive than male senators on issues concerning women. Although these studies provide support for female senators' support

on policies concerning women, the extent that these efforts are visible to the women in their constituencies might be the determining factor for the lack of demonstration effects.

While some of the evidence in the literature on the policy impacts of female legislators validates changes in policy in favor of women electorates, in most of the cases scholars fail to find that female legislators have any significant demonstration effects. Other studies show similar results even when the focus is on local governments like the mayoral (Ferreira and Gyourko, 2014) or state legislative office elections (Broockman, 2014).

References

Beaman, L. A., Chattopadhyay, R., Duo, E., Pande, R., and Topalova, P. (2008). *Powerful Women: Does Exposure Reduce Bias?* (No. w14198). National Bureau of Economic Research.

Beaman, L., Duo, E., Pande, R., and Topalova, P. (2012). "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India," *Science*, 335(6068): 582-586.

Bhalotra, S. and Clots-Figueras, I. (2014). "Health and the Political Agency of Women," *American Economic Journal: Economic Policy*, 6(2): 164-197.

Bhalotra, S., Clots-Figueras, I., and Iyer, L. (2013). "Path-Breakers: How Does Women's Political Participation Respond to Electoral Success?" Harvard Business School BGIE Unit Working Paper, (14-035).

Brollo, F. and Troiano, U. (2012). "What Happens when a Woman Wins a Close Election? Evidence from Brazil," University of Alicante. *Mimeo*: 448-474.

Broockman, D.E. (2014). "Do Female Politicians Empower Women to Vote or Run for Office? A Regression Discontinuity Approach," *Electoral Studies*, 3(4): 190-204.

Chattopadhyay, R. and Duo, E. (2004). "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India," *Econometrica*, 72(5): 1409-1443.

Elster, J. (1989). "Social Norms and Economic Theory," *The Journal of Economic Perspectives*, 3(4): 99-117.

Ferreira, F. and Gyourko, J. (2014). "Does Gender Matter for Political Leadership? The Case of US Mayors," *Journal of Public Economics*, 112: 24-39.

Frederick, B. (2010). "Gender and Patterns of Roll Call Voting in the US Senate, in Congress and the Presidency," Taylor and Francis Group, 37(2): 103-124)

------, (2011). "Gender Turnover and Roll Call Voting in the US Senate," *Journal of Women, Politics and Policy,* 32(3): 193-210.

Fortin, N.M. (2005). "Gender Role Attitudes and the Labour-Market Outcomes of Women across OECD Countries," *Oxford Review of Economic Policy*, 21(3): 416-438.

Hicks, D.L., Santacreu-Vasut, E., and Shoham, A. (2015). "Does Mother Tongue Make for Women's Work? Linguistics, Household Labor, and Gender Identity." *Journal of Economic Behavior and Organization*, 110: 9-44.

Lee, D.S. (2001). The Electoral Advantage to Incumbency and Voters' Valuation of Politicians' Experience: A Regression Discontinuity Analysis of Elections to the US. (No. w8441). National Bureau of Economic Research.

Manning, J.E., Shogan, C.J., and Brudnick, I.A. CRS Report R43244, Women in the United States Congress: Historical Overview, Tables, and Discussion.

Stam, K., Verbakel, E., and de Graaf, P.M. (2014). "Do Values Matter? The Impact of Work Ethic and Traditional Gender Role Values on Female Labour Market Supply," *Social Indicators Research*, 116(2). 593-610.

Tijdens, K.G. (2002). "Gender Roles and Labor Use Strategies: Women's Part-time Work in the European Union," *Feminist Economics*, 8(1): 71-99.

Appendix

Table 3

Number of Times a Woman Served as Senator or Governor by State (1990-2012)

| State	Number of Female Senators	Number of Female Governors
Alaska	2	1
Arizona		4
Arkansas	2	
California	8	
Connecticut		1
Delaware		1
Hawaii	1	2
Illinois	1	
Kansas	1	3
Louisiana	3	1
Maine	6	
Maryland	4	
Massachusetts	1	
Michigan	3	2
Minnesota	2	
Missouri	2	
Montana		1
Nebraska	1	
New Hampshire	2	4
New Jersey		2
New Mexico		1
New York	4	
North Carolina	2	1
North Dakota	1	
Oklahoma		1
Oregon		1
South Carolina		1
Texas	3	1
Washington	7	2
Wisconsin	1	

States which did not have an elected female senator or governor during this time are left out.

Figure 4

The Change in Female Labor Force Participation Rate One Year after Senate or Gubernatorial Elections with a Broader Margin that Include a Woman Candidate.
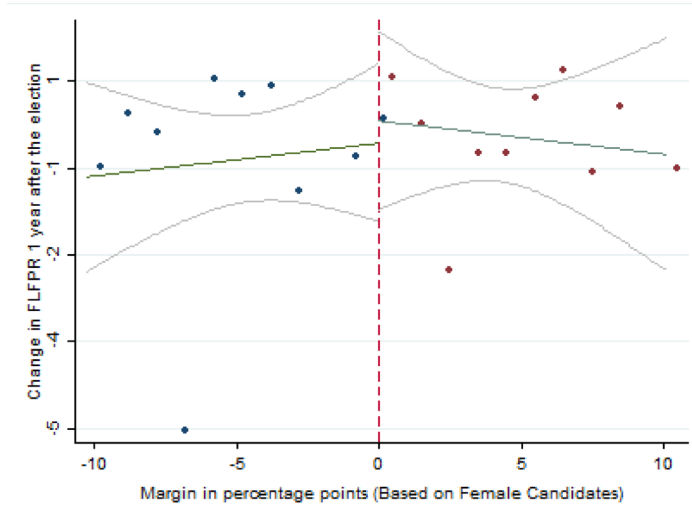
The y axis is the one-year change in FLFPR (in percentage points) after an election with a narrow margin of victory with a female candidate running against a male counterpart. The x axis is the margin of victory (in percentage points). The margin of victory is negative for elections with a female loser. The gray lines represent 95% confidence intervals.

Figure 5

The Change in Female Labor Force Participation Rate One Year after Senate or Gubernatorial Elections with a Broader Margin that Include a Woman Candidate.
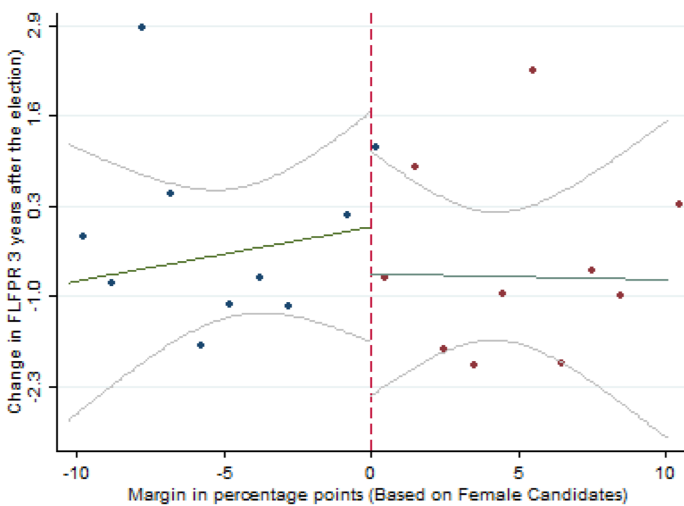
The y axis is the three-year change in FLFPR (in percentage points) after an election with a narrow margin of victory with a female candidate running against a male counterpart. The x axis is the margin of victory (in percentage points). The margin of victory is negative for elections with a female loser. The gray lines represent 95% confidence intervals.

Table 4

The Regression Discontinuity Results with Broader Margin (1-year)

	(1)	(2)	(3)
	Linear Model	Quadratic Model	Cubic Model
Female Winner	0.379	0.659	1.691
	(1.020)	(1.513)	(2.040)
Margin	0.0619	0.101	-0.728
	(0.135)	(0.534)	(1.436)
Margin_i	0.127	-0.405	-0.0304
	(0.199)	(0.720)	(1.816)
National LFPR	-0.353	-0.390	-0.397
	(0.721)	(0.739)	(0.749)
Margin_sq		0.00370	-0.201
		(0.0489)	(0.332)
Margin_sq_i		0.0230	0.351
		(0.0701)	(0.432)
Observations	65	65	65

The dependent variable is the percentage change in female labor force participation one year after the election. The margin of victory is the percentage of the difference of the votes between the winner and runner-up candidate in the total votes. The observations in the table belong to the states following an election with a 10-percent margin of victory whenever a male and female candidate run for the senate and state governor seats. Margin_i is the interaction of treatment and running variable. National LFPR is the one-year change in LFPR for both sexes. Margin_Sq and Margin_Sq_i are the margin square and margin square's interaction with the treatment variable. Columns 1, 2 and 3 show the results with a linear, quadratic and cubic function of the running variable, respectively.
Standard errors are in parentheses.

Table 5

The Regression Discontinuity Results with Broader Margin (3-year)

	(1) Linear Model	(2) Quadratic Model	(3) Cubic Model
Female Winner	0.379	0.659	1.691
	(1.020)	(1.513)	(2.040)
Margin	0.0619	0.101	-0.728
	(0.135)	(0.534)	(1.436)
Margin_i	-0.127	-0.405	-0.0304
	(0.199)	(0.720)	(1.816)
National LFPR	-0.353	-0.390	-0.397
	(0.721)	(0.739)	(0.749)
Margin_sq		0.00370	-0.201
		(0.0489)	(0.332)
Margin_sq_i		0.0230	0.351
		(0.0701)	(0.432)
Observations	65	65	65

The dependent variable is the percentage change in female labor force participation one year after the election. The margin of victory is the percentage of the difference of the votes between the winner and the runner-up candidate in the total votes. The observations in the table belong to the states following an election with a 10-percent margin of victory whenever a male and female candidate run for the senate and state governor seats. Margin_i is the interaction of the treatment and running variable. National LFPR is the one-year change in LFPR for both sexes. Margin_Sq and Margin_Sq_i are the margin square and margin square's interaction with the treatment variable. National LFPR 3 is the three-year change in LFPR for both sexes. Columns 1, 2 and 3 show the results with a linear, quadratic and cubic function of the running variable, respectively.
Standard errors are in parentheses.