Online Appendix for Decomposing the Source of the Gender Gap in Legislative Committee Service: Evidence from U.S. States

Intended for online publication only.

Contents

A.1 Information on Dataset Coverage

Table A.1 – # Legislator-Term Observations by State.

State	Women	Men	Years	State	Women	Men	Years
AK	174	573	1986–2014	AL	100	953	1986–2014
AR	297	1416	1986–2014	AZ	409	816	1988–2014
CA	353	1096	1986–2014	CO	408	764	1986–2014
CT	679	1896	1988–2014	DE	168	598	1986–2014
FL	464	1581	1986–2014	GA	581	2534	1988–2014
HI	237	678	1986–2014	IA	373	1446	1986–2014
ID	384	1071	1988–2014	IL	559	1677	1986–2014
IN	308	1493	1986–2014	KS	574	1380	1988–2014
KY	230	1495	1986–2014	LA	89	661	1987–2011
MA	634	2126	1988–2014	MD	346	749	1994–2014
ME	744	1804	1988–2014	MI	420	1467	1986–2014
MN	698	1858	1986–2014	MO	562	2039	1986–2014
MS	148	978	1987–2011	MT	447	1349	1986–2014
NC	487	1782	1988–2014	ND	252	1168	1986–2014
NE	78	276	1986–2014	NH	1819	3996	1988–2014
NJ	243	1083	1987–2013	NM	335	896	1988–2014
NV	218	496	1988–2014	NY	572	2303	1988–2014
OH	356	1337	1986–2014	OK	192	1612	1986–2014
OR	280	796	1986–2014	PA	463	2882	1986–2014
RI	409	1415	1988–2014	SC	280	1685	1988–2014
SD	276	1143	1988–2014	TN	274	1407	1986–2014
TX	443	1975	1986–2014	UT	224	1030	1986–2014
VA	251	1325	1987–2013	VT	831	1617	1988–2014
WA	594	1184	1986–2014	WI	412	1275	1986–2014
WV	303	1366	1986–2014	WY	234	883	1986–2014

Table A.2 shows the 14 states for which we have information on bill sponsorship. We count a legislator as sponsoring a bill if they are the primary sponsor of the bill. This definition changes somewhat from state to state (e.g. some states allow for more than one primary sponsor); however, our state-by-year FEs can account for such differences. See Fouirnaies and Hall (forthcoming) for additional details about the representativeness of these 14 states compared to other states. Notably, these states are similar in terms of professionalism, legislator salaries, the presence of term limits, and partisan control of the legislature.

Table A.2 – # Legislator-Term Observations with Sponsorship Information by State.

State	Women	Men	Years	State	Women	Men	Years
AR	250	1158	1986–2014	AZ	382	753	1990–2014
CA	252	677	1992–2014	CO	218	394	1996–2014
FL	348	1129	1990–2014	LA	71	474	1995–2011
ME	743	1804	1988–2014	MI	312	958	1992–2014
MO	401	1318	1994–2014	MT	222	538	2000–2014
NV	127	237	1998–2014	OH	229	743	1996–2014
OK	127	1035	1992–2014	SD	136	538	1996–2014

A.2 Classifying Committees and Bills

We use the following search terms to classify committees. For the classification of bills we use the replication data from Fouirnaies and Hall (forthcoming) that use the same approach and similar word stems.[5]

```
qui foreach v in cmt chair vice {
     gen `v'_health = regexm(`v',"health|hosp|medic")
     gen `v'_educ = regexm(`v',"educ|school|univer|teach")
     gen `v'_social = regexm(`v',"social|human|age|elder|retir")
     gen `v'_welfare = regexm(`v', "welfare")
     gen `v'_fin = regexm(`v',"financi|bank|insuran")
     gen `v'_commerce = regexm(`v',"busi|commerce|trade|indus")
}
```

A.3 Further Tests for Difference-in-Differences Design

Table A.3 tests the parallel trends for the difference-in-differences design for Table 1 in two ways. First, we add district-specific linear time trends to relax the parallel trends assumption, finding a similar estimate to the main table (this estimate is presented in the first column for comparison). As column 2 shows, district linear trends do not meaningfully change any of the estimates across the three panels. Second, we add a lead of the treatment variable (electing a woman legislator), to look for evidence of pre-trending. As column 3 shows, we find none.

Table A.3 – Robustness: No Evidence of Pre-treatment Trends. There is no evidence of pretreatment trends which supports the parallel trends assumption.

	(1)	(2)	(3)	(4)	(5)	(6)
	Member of Committees on Health or Education			Log # of Bills on Health or Education		
Woman Legislator	0.13	0.14	0.14	0.12	0.17	0.16
	(0.01)	(0.02)	(0.01)	(0.03)	(0.05)	(0.04)
Woman Legislator, t+1			-0.01			-0.01
			(0.01)			(0.03)
# Observations	74,753	74,753	43,670	13,211	13,211	7,934
Baseline Mean	0.34	0.34	0.33	1.71	1.71	1.73
Chamber-by-Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
District FEs	Yes	Yes	Yes	Yes	Yes	Yes
District-specific Trends	No	Yes	No	No	Yes	No

The sample is restricted to single-member districts. Robust standard errors clustered by district in parentheses.

[5]The only relevant difference is that Fouirnaies and Hall (forthcoming) also include the word stem child when they classify education bills.

Table A.4 – Democratic Subsample: Women Are More Likely to Work on Women's Issues.

	(1)	(2)	(3)	(4)	(5)	(6)
	Member of Committees on Health or Education			Log # of Bills on Health or Education		
Woman Legislator	0.15	0.12	0.12	0.20	0.10	0.04
	(0.01)	(0.01)	(0.02)	(0.02)	(0.04)	(0.05)
# Observations	46,284	43,181	15,032	7,380	6,811	3,931
Baseline Mean	0.33	0.33	0.37	1.81	1.84	1.90
Chamber-by-Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
District FEs	No	Yes	Yes	No	Yes	Yes
Log First-Election Donations from Health and Education	No	No	Yes	No	No	Yes

Columns 1 and 4 reflect the overall difference between men and women. Columns 2 and 5 include district fixed effects to account for district preferences. Columns 3 and 6 adjust for money raised in first election as a proxy for background. Robust standard errors clustered by district in parentheses.

Table A.5 – Republican Subsample: Women Are More Likely to Work on Women's Issues.

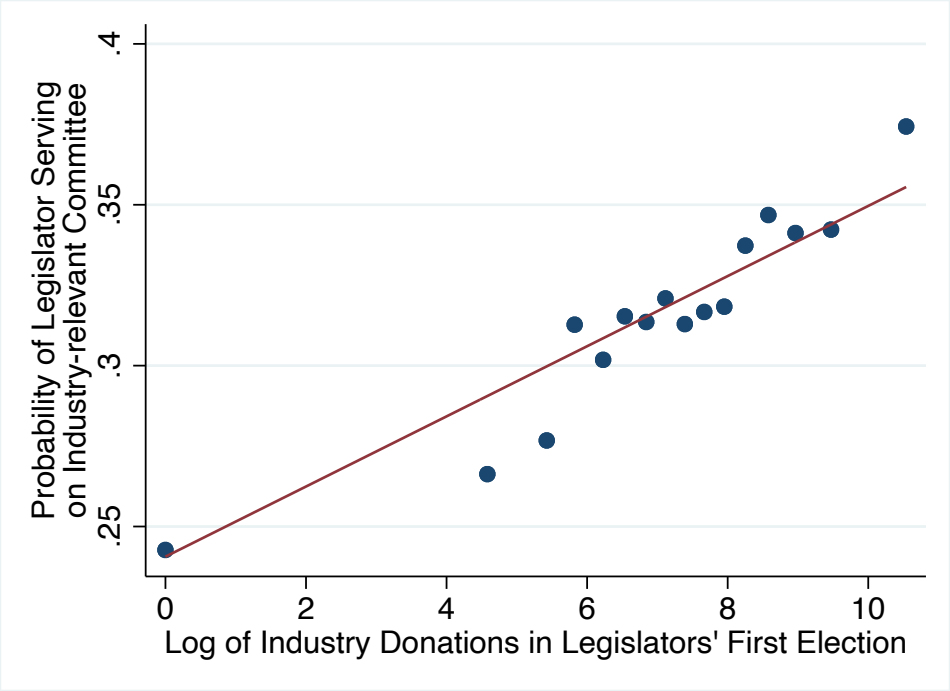
	(1)	(2)	(3)	(4)	(5)	(6)
	Member of Committees on Health or Education			Log # of Bills on Health or Education		
Woman Legislator	0.12	0.11	0.10	0.14	0.10	0.06
	(0.01)	(0.01)	(0.02)	(0.02)	(0.04)	(0.05)
# Observations	42,128	38,821	16,969	7,465	6,913	4,742
Baseline Mean	0.32	0.31	0.36	1.90	1.96	1.97
Chamber-by-Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
District FEs	No	Yes	Yes	No	Yes	Yes
Log First-Election Donations from Health and Education	No	No	Yes	No	No	Yes

Columns 1 and 4 reflect the overall difference between men and women. Columns 2 and 5 include district fixed effects to account for district preferences. Columns 3 and 6 adjust for money raised in first election as a proxy for background. Robust standard errors clustered by district in parentheses.

A.4 Fundraising Predicts Committee Service

In the paper, we control for fundraising from women's issues sectors in a legislator's first election as a proxy for their background. In this section, we show that first-election fundraising from particular industries strongly predicts future service on committees relevant to that industry—e.g., if a legislator raises a lot of money from the agriculture industry the first time she runs for election, she is more likely to serve on the agriculture committee in the future than a legislator who raises less money from the agriculture committee. This result suggests that first-election fundraising is a useful proxy for pre-existing attributes of different candidates that make them more or less relevant to a given industry, including their professional backgrounds before becoming politicians.

Figure A.1 – Predicting Committee Service Using First-Election Fundraising. The graph presents on the x-axis binned averages of total log money raised from industry j to legislator i and on the y-axis the probability that legislator i serves on a committee relevant to industry j at any time in his or her career.



Next, we can examine the correlation between legislator background and fundraising directly for legislators in California, using data on schoolboard elections.[6] Table A.6 shows the results. For all three outcome variables, we see that former schoolboard members raise more money from the education sector than do other candidates. This suggests that first-election fundraising from sectors is a useful indicator of legislator background, at least for education.

[6] https://www.sos.ca.gov/elections/county-city-school-district-ballot-measure-election-results/

Table A.6 – Education Fundraising Relates to Candidate Background. Legislators who are former schoolboard members in California raise more money from the education sector the first time they run for the state legislature.

	$ from Educ	Log $ from Educ + 1	Raise Any Money from Educ
	(1)	(2)	(3)
Schoolboard Member	6109.94	2.69	0.27
	(3074.98)	(0.70)	(0.07)
# Observations	512	512	512

Robust standard errors in parentheses.

A.5 Additional Statistical Results

Table A.7 shows the main effects broken down by whether a district is switching from a man to a woman representative or from a woman to a man. In all specifications, the coefficients show the difference in probability of committee sponsorship or total bill sponsorship for the woman legislator relative to the man. For the committee assignment specification, the effect is slightly larger when a woman replaces a man than vice versa, but in the bill sponsorship analysis the effect is larger when a woman is replaced by a man. Future work in this area might further explore how the gender gap evolves over time after districts have been represented by a woman for several electoral cycles.

To address the fact that committees vary in their importance across state, we also allow the effect of a woman being elected to office to vary flexibly by a measure of state legislative professionalism. Table A.8 examines heterogeneous effects by state legislative professionalism. In more professionalized states, committees tend to have more power and resources relative to less professionalized states. The theoretical expectations are a bit unclear. On one hand, many of the more professionalized legislatures tend to lean Democratic (e.g. New York and California). On the other hand, the gender gap may be particularly pronounced when competition for committee assignments increases. We interact the legislative professionalism index introduced by Squire (2007) with our treatment of electing a woman. Interestingly, we find some modest (although noisy) evidence that the gender gap in committee assignment is exacerbated as professionalization increases. However, after accounting for district preferences and legislator backgrounds, we find no similar effect for bill sponsorship (column 6). This finding lends credence to the idea that something about the committee assignment process within the legislature is largely responsible for the over-representation of women on women's issue committees and suggests a promising avenue for future research.

Table A.7 – Heterogeneity in committee effects depending on whether the representative switches from being a man to a woman or a woman to a man.

	Full Sample	Female to Male	Male to Female	Full Sample	Female to Male	Male to Female
	(1)	(2)	(3)	(4)	(5)	(6)
	Member of Committees on Health or Education			Log # of Bills on Health or Education		
Woman Legislator	0.12	0.07	0.14	0.11	0.16	0.10
	(0.01)	(0.01)	(0.01)	(0.02)	(0.04)	(0.03)
# Observations	87,099	18,980	67,994	14,612	3,528	11,063
Baseline Mean	0.32	0.38	0.30	1.86	1.89	1.85
Chamber-by-Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
District FEs	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by district in parentheses.

Table A.8 – Effect Heterogeneity: Variation in Effects across Levels of Legislative Professionalization. There is no evidence of pretreatment trends which supports the parallel trends assumption.

	(1)	(2)	(3)	(4)	(5)	(6)
	Member of Committees on Health or Education			Log # of Bills on Health or Education		
Woman Legislator	0.12	0.09	0.08	0.14	0.05	0.05
	(0.01)	(0.01)	(0.02)	(0.03)	(0.04)	(0.05)
Woman Legislator ×	0.08	0.17	0.23	0.23	0.29	0.06
Professionalization	(0.04)	(0.06)	(0.12)	(0.11)	(0.17)	(0.21)
# Observations	89,641	87,099	34,061	14,881	14,612	9,311
Baseline Mean	0.32	0.32	0.36	1.85	1.86	1.89
Chamber-by-Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
District FEs	No	Yes	Yes	No	Yes	Yes
Log First-Election Donations from Health and Education	No	No	Yes	No	No	Yes

The sample is restricted to single-member districts. Robust standard errors clustered by district in parentheses.

Finally, we also examine if women candidates are less likely to be assigned to committees and sponsor legislation in areas that are typically considered to be "male dominated." Two committees that tend to be strongly associated with men are commerce and finance (Dolan 2004; Provins 2017). When we replicate the main analysis using these two issue areas, we find that women are 4 percentage points less likely to be assigned to these committees (Table A.9). These results suggest that perhaps stereotypes about women's issues are stronger than those about men's issues, although more research is needed on this topic. For transparency, in Table A.10 we show the probability of assignment broken down by committee type when a woman is elected to office. Estimates are from the two-ways fixed effects models described in the main text with district and state-by-year FEs.

Table A.9 – Women Are Less Likely to Work on traditional Men's Issues.

	(1)	(2)	(3)
	Member of Committees on Commerce or Finance		
Woman Legislator	-0.04	-0.04	-0.04
	(0.00)	(0.01)	(0.01)
# Observations	89,641	87,099	34,061
Baseline Mean	0.29	0.28	0.30
Chamber-by-Year FEs	Yes	Yes	Yes
District FEs	No	Yes	Yes
Log First-Election Donations from Health and Education	No	No	Yes

Robust standard errors clustered by district in parentheses.

Table A.10 – Women Representatives and Committee Service in State Legislatures: Difference-in-Differences design. A woman representative is substantially more likely to serve on committees whose jurisdictions relate to issues the literature identifies as womens' issues (highlighted in grey), relative to a hypothetical man elected from the same district at the same time.

Committee	Change in Probability of Committee Assignment After Electing a Woman
Women's Issues	**0.116 (0.007)**
Agriculture	-0.005 (0.005)
Appropriations	0.015 (0.005)
Commerce	-0.027 (0.006)
Education	0.057 (0.006)
Energy	0.002 (0.007)
Ethics	0.002 (0.002)
Finance	-0.024 (0.005)
Health	0.093 (0.006)
Judiciary	-0.004 (0.006)
Labor	-0.017 (0.004)
Rules	-0.011 (0.004)
Social	0.078 (0.006)
Transportation	-0.034 (0.006)
Ways and Means	-0.013 (0.004)
Welfare	0.014 (0.003)

Numbers in second column are twoway fixed-effects estimates. Robust standard errors clustered by district in parentheses. The first row presents an estimate pooling over the women's issues committees, which are defined to be education and health.