Online Appendix for

Underrepresented Outperformers: Female Legislators in the Chinese Congress

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A.1 Women's status and the Women's Federation in China

The essay *What Has Socialism Ever Done for Women* argues that while socialism might have curtailed freedoms and rights in other areas, women generally fare better under socialism than capitalist democracy in education, property ownership, reproduction rights, and so forth (Ghodsee and Mead 2018). Especially in new socialist countries with underdeveloped economies, women's labor is in dire need in the workforce (Molyneux 1985).

The CCP has endorsed "equality between men and women" (男女平等) since its founding in 1921, and many women joined the Party and fought in the Communist Revolution. Women were granted full legal rights and mobilized to participate in production upon the CCP's political victory (Tsai 1996). The first constitution of China in 1954 granted women's equal rights to men in "all spheres of life, in political, economic, cultural, social and family life."[1] In the CCP Central Party School, the main party indoctrination institution that specifically trains party cadres, courses have been taught on gender equality and "gender and public policy" (Wang and Zhang 2010).

The CCP also endorses and leads the All-China Women's Federation (Women's Federation thereafter), a "mass organization" (instead of a branch of government) with the goal of "further liberating and developing women from all ethnicities and all domains in China." The Women's Federation was founded in 1949 and led by senior female CCP members. They were among the first cohort of revolutionaries who fought and won the Communist Revolution (Wang 2017). In the Mao years, the Women's Federation focused on drafting and implementing of the new Marriage Law and promoting women's participation in collective agricultural and industrial production. In the reform era, the Women's Federation has redirected its orientation towards providing services such as vocational training and healthcare aid to women, and most relevantly, proposing legislative and policy changes related to women's issues (Zhou 2019). Interviews with Women's Federation officials show that legislation is one of the few areas in which the federation "prides itself on its work to represent women's interests" (Zhou 2019, p.22), most recently the Anti-Domestic Violence Law passed in 2015. Zheng Wang calls those who work within the Women's Federation "state

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[1] See Constitution of the People's Republic of China, http://www.npc.gov.cn/zgrdw/englishnpc/Constitution/2007-11/15/content_1372964.htm, accessed Jul.7, 2020.

feminists" and finds that they engage in the "politics of concealment, working behind the scenes without publicly claiming their authorship of feminist laws and policies" (Wang 2017, 259). Because the CCP considers the concept of "feminism" to be "Western, narrow, and bourgeois," state-feminists need to "camouflage their feminist agenda with legitimate, seemingly un-gendered Party slogan" (Wang 2017, p.18). Our analysis pays special attentions to legislative bills that are related to Women's Federation's efforts and legislators affiliated with the organization.

After decades of the CCP governance, gender gaps in political and socioeconomic indicators remain salient but have narrowed. Female representation in the CCP Party Congress has risen to 20 to 25% from fewer than 10% in the Mao era. For the first time, two female politicians ascended to the 25-member Politburo (in 2012, but one retired in 2017) (Li 2017).[2] In other fields such as medicine, science, and technology, China has seen as high percentages of women as other socialist and former state-socialist countries.[3] It could be the case that the socialist legacy of promoting women in math, science, and engineering has created a conducive social environment for Chinese women studying and working in these fields. The Chinese business world is dominated by men and has few female top executives, but two of the top ten richest business women in the world are Chinese.[4]

Nevertheless, no women politicians have made it to the Politburo Standing Committee, the highest echelon of CCP leadership and power. Kellee Tsai argues that the Chinese patriarchy is resilient to changes in economic structure because "the process of gender norm construction and actualization at the state and the household levels are ultimately mutually reinforcing" (Tsai 1996, p.520).

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[2]Also see https://www.bbc.com/zhongwen/simp/chinese-news-41572323, accessed Jul. 7, 2020.

[3]See https://www.thepaper.cn/newsDetail_forward_5238043 for a Chinese language report on medical field and http://uis.unesco.org/sites/default/files/documents/fs55-women-in-science-2019-en.pdf for UNESCO's 2019 report on Women in Science, both accessed Jul. 7, 2020.

[4]See *Forbes China*, Apr.9, 2020, http://www.forbeschina.com/billionaires/48218, accessed Jan.20, 2021.

A.2 Data description

We collected extensive biographical information for all legislators that served the 12th NPC, including the original batch of legislators selected in late 2012 (N=2,987) and 114 new legislators who are added later to replace outgoing legislators that were removed, retired, or died before their terms ended. The name list comes from the official NPC webasite: http://www.npc.gov.cn/zgrdw/npc/xinwen/2013-02/27/content_1759167.htm (last accessed Apr. 12, 2021). We then obtained the detailed CVs of each legislator using the following online sources:

- Baidu Encyclopedia (*Baidu baike*): www.baike.com

- Wikipedia page on the 12th NPC delegates: https://bit.ly/3a6Fx7E

- China search: https://www.chinaso.com

Detailed summary statistics of these legislators are shown in Tables A.1 and A.2. Descriptions of variables are included in the main text.

Bill titles and sponsorship information were extracted from the official website of the NPC in 2017. The official page of bill sponsorship is: http://www.npc.gov.cn/wxzlhgb/ccc/new.shtml. Again, the NPC only keeps bill sponsorship information of the current NPC online, so the website only includes information of the 13th NPC (2018–2023). China National Knowledge Infrastructure (CNKI) keeps copies of historical Gazette of the NPC standing committee, and they also include bill sponsorship information. For instance, see https://bit.ly/3uNZYOK. We compared our bill data with the CNKI gazette data of the 12th NPC, and identified one bill not included in our dataset: a 2013 bill sponsored by legislator Chen Ailian (female) regarding corporate social responsibility law.

Table A.1: Descriptive statistics of legislators selected in 2012

Characteristics	mean	standard deviation	min	max
Female	0.234	0.423	0	1
CCP member	0.134	0.341	0	1
Satellite party member	0.126	0.331	0	1
Education below college	0.151	0.358	0	1
Education post-grad	0.568	0.495	0	1
Ethnic minority	0.134	0.341	0	1
Occupation				
Government	0.369	0.483	0	1
Business	0.298	0.457	0	1
Public organization	0.253	0.435	0	1
PLA	0.089	0.285	0	1
Political experience				
First-time legislator	0.621	0.485	0	1
Years in office	2.97	4.703	0	59
Political behavior outcomes				
Sponsored a bill	0.209	0.407	0	1
No. of bills	0.773	3.298	0	81
Total	2,987			

Table A.2: Descriptive statistics of new legislators added after 2013

Characteristics	mean	standard deviation	min	max
Female	0.219	0.416	0	1
CCP member	0.798	0.403	0	1
Satellite party member	0.126	0.331	0	1
Education below college	0.079	0.271	0	1
Education post-grad	0.632	0.485	0	1
Ethnic minority	0.254	0.437	0	1
Occupation				
Government	0.596	0.493	0	1
Business	0.167	0.374	0	1
Public organization	0.228	0.421	0	1
PLA	0.009	0.094	0	1
Political behavior outcomes				
Sponsored a bill	0.070	0.257	0	1
No. of bills	0.149	0.812	0	8
Total	114			

Table A.3: Bills and Committees

Committee	Total bills	Bills sponsored by female	Female Chair
Internal affairs	329	44.07%	Yes
Education, culture and health	347	49.86%	No
Finance and economics	472	37.90%	No
Law	702	43.45%	No
Environment and resources	298	48.99%	No
Rural affairs	147	41.05%	No
Ethnic affairs	6	33.33%	No
Foreign affairs	10	35.71%	No
Overseas Chinese affairs	4	25.00%	Yes
Total	2,315	44.02%	2
Women's issue	141	58.87%	

Notes: 51 bills sponsored by delegations (i.e., provincial delegations or the PLA) are not included in this analysis. In this analysis, each bill only has one sponsor, and co-sponsored bills are broken down to separate bills.

Figure A.1: Bills broadly related to women's interests and rights
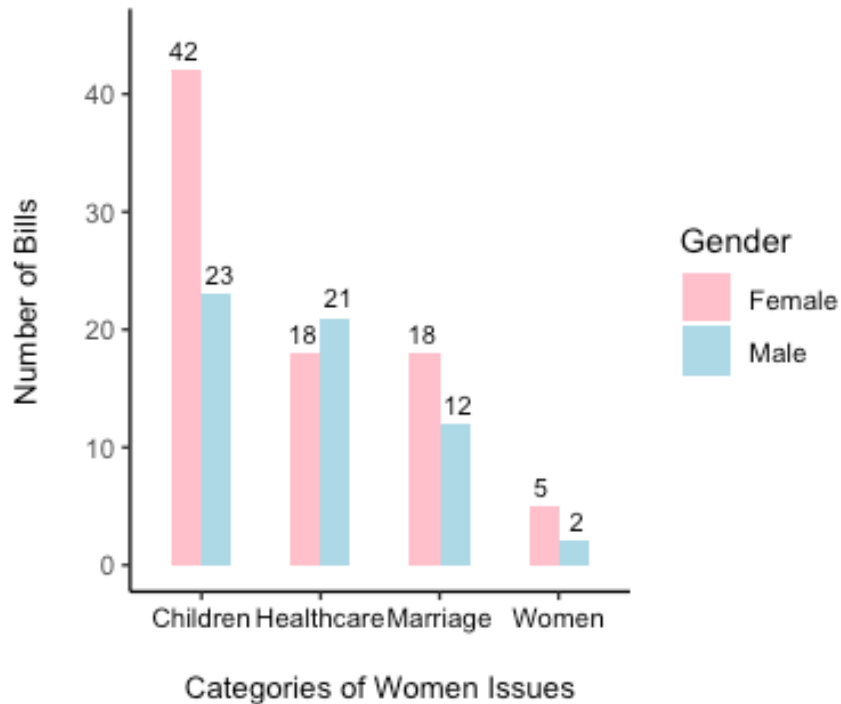
Notes: This graph shows the number of bills sponsored by male and female legislators in four categories broadly related to gender and "women's work" in the 12th NPC.

Figure A.2: Bills that are co-sponsored
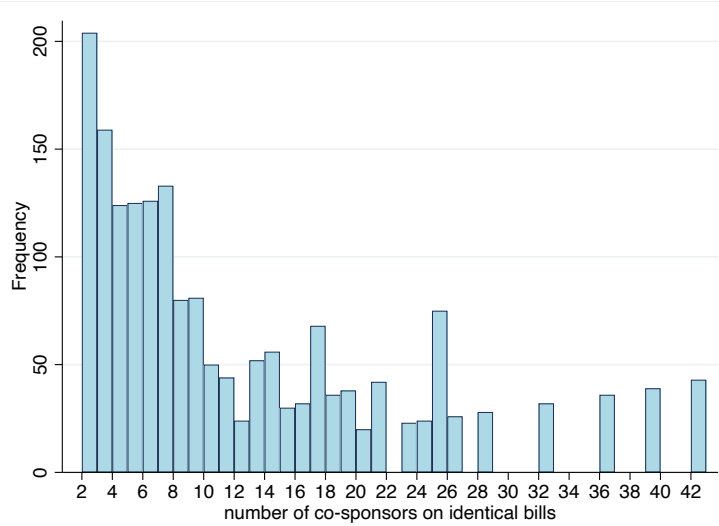
Notes: This histogram shows the frequency of identical bills submitted to the 12th NPC congressional committees. If the number of identical bills is 12, it means that 12 co-sponsors across delegations submitted bills that are the same bill. Bills with only one sponsor are not included here.

Table A.4: Co-sponsored bills and gender composition

	Total bills	Percentage	Average total co-sponsors
All female co-sponsors	43	13.7%	2.5
All male co-sponsors	61	19.4%	2.6
Mixed-gender team	211	66.9%	7.3
Total	315		5.9
At least one woman	254	80.6%	6.7
At least one man	272	86.3%	6.4

Notes: This table only includes bills that have more than one co-sponsors. It does not include bills sponsored by delegations (instead of individuals).

Table A.5: Comparing female legislators in the CCP vs. satellite parties

	All legislators	Female legislators	Female sponsor	No. of bills by women	No. of bills by men
CCP	2,184	15.38%	25.89%	1.3	0.5
Satellite party and no affiliation	803	45.21%	34.16%	1.5	1.0
Satellite party	375	43.47%	42.94%	2.3	1.2

Notes: In comparison, among all male legislators, about 18.05% are sponsors, and male legislators, on average, write 0.6 bill.

A.2 Additional analyses and robustness checks

Table A.6: Percentages of bills passed within 12th NPC and by 2021

	Total	Male sponsor	Female sponsor	p value
Within 12th NPC	22.12%	20.32%	24.41%	0.0197
By 2021	50.71%	48.65%	53.35%	0.0250

Notes: The last column reports p value from two-sided difference-in-means t tests.

Table A.7: Legislator gender and bill sponsorship: including new legislators

Dependent variable:	Sponsorship	No. of bills
	(1)	(2)
Female	0.0828***	0.6960***
	(0.0198)	(0.2195)
Ethnic minority	-0.0086	-0.1100
	(0.0226)	(0.1968)
CCP	-0.0914***	-0.3275*
	(0.0203)	(0.1936)
Government	0.0276	-0.0871
	(0.0539)	(0.0855)
Business	0.0664	-0.0153
	(0.0566)	(0.1760)
Public organization	0.0644	0.0895
	(0.0557)	(0.1304)
PLA	-0.0276	-0.2991***
	(0.0557)	(0.1005)
Education: post-graduate	0.0388***	-0.0468
	(0.0149)	(0.1285)
New legislator indicator	-0.1331***	-0.4321***
	(0.0283)	(0.1170)
Observations	3,101	3,101
R-squared	0.1100	0.0441
Province FE	Yes	Yes

Notes: These models are identical to models in Table 2 but include new legislators added to the NPC after 2013. Instead of "political experience," we include a binary variable indicating whether a legislator is a new legislator. The results are consistent with our main findings. Robust standard errors are in parentheses.*** p<0.01, ** p<0.05, * p<0.1

Table A.8: Legislator gender and bill sponsorship: excluding government and PLA officials

Dependent variable	Sponsorship (1)	Sponsorship (2)	No. of bills (3)	No. of bills (4)
Female	0.0855***	0.0848***	0.8317***	0.8605***
	(0.0252)	(0.0253)	(0.2799)	(0.2988)
Ethnic minority	-0.0459	-0.0469	-0.2789	-0.3216
	(0.0365)	(0.0366)	(0.3739)	(0.3847)
CCP	-0.0610***	-0.0625***	-0.1946	-0.2107
	(0.0232)	(0.0232)	(0.2276)	(0.2301)
Business	-0.0139	-0.0143	-0.1600	-0.1482
	(0.0225)	(0.0225)	(0.2387)	(0.2288)
Education: post-graduate	0.0773***	0.0786***	0.0729	0.0890
	(0.0214)	(0.0214)	(0.1867)	(0.1880)
First time legislator	-0.0351		-0.7090***	
	(0.0224)		(0.2147)	
Years in office		0.0024		0.1019*
		(0.0024)		(0.0523)
Constant	0.2575***	0.2300***	1.3758***	0.6289**
	(0.0308)	(0.0294)	(0.2845)	(0.2822)
Observations	1,636	1,636	1,636	1,636
R-squared	0.1158	0.1149	0.0553	0.0614
Province FE	Yes	Yes	Yes	Yes

Notes: These models are identical to models in Table 2 but excluding government and PLA delegates. The results are consistent with our main findings. Robust standard errors are in parentheses.*** p<0.01, ** p<0.05, * p<0.1

Table A.9: Effect of female committee chairs on sponsorship

Dependent variable:	Sponsorship	Sponsorship
	(1)	(2)
Female chair	-0.4882	-0.7288
	(0.4830)	(1.0482)
Female	0.6949**	
	(0.3481)	
Ethnic minority	0.5489	2.1239*
	(0.4509)	(1.1567)
CCP	0.5074	0.9102
	(0.4448)	(0.9033)
Government	-1.4163**	1.7459
	(0.6960)	(1.5702)
Business	-1.2040	1.7512
	(0.7759)	(1.6873)
Public organization	-0.4086	2.5643*
	(0.5928)	(1.3823)
PLA	-0.5089	1.3263
	(0.6946)	(1.7708)
Education: post-graduate	-0.1612	-0.2098
	(0.3092)	(0.6491)
First-time legislator	-2.9750***	-3.8772***
	(0.3247)	(0.7485)
Constant	5.6423***	3.0749*
	(0.7500)	(1.7945)
Observations	1,128	413
Sample	All legislators	Female legislators
R-squared	0.1788	0.2470
Province FE	Yes	Yes
Committee FE	Yes	Yes

Notes: Female chair takes the value of 1 if an NPC committee is chaired by a woman. Robust standard errors are in parentheses.*** p<0.01, ** p<0.05, * p<0.1

Table A.10: Does female leadership encourage female collaboration

Dependent variable:	collaboration	collaboration frequency
	(1)	(2)
Female	0.1000*	2.1220*
	(0.0519)	(1.0912)
Provincial female leader	0.0702	-0.5823*
	(0.0438)	(0.3452)
Female × Prov female leader	-0.0603	-1.6329
	(0.0677)	(1.1626)
Ethnic minority	-0.0569	-0.2201
	(0.0534)	(0.5999)
CCP	0.0089	0.5847
	(0.0380)	(0.6322)
Government	0.1418	0.7695*
	(0.1154)	(0.4654)
Business	0.1857	1.1358**
	(0.1158)	(0.4793)
Public organization	0.2182*	1.7108***
	(0.1157)	(0.5535)
PLA	-0.2814*	-1.2718**
	(0.1517)	(0.5906)
Education: post-graduate	-0.0681**	-0.9183**
	(0.0345)	(0.4533)
First-time legislator	-0.0410	-1.5467***
	(0.0336)	(0.4689)
Constant	0.6062***	2.4015***
	(0.1215)	(0.6210)
Observations	624	624
R-squared	0.0726	0.0756
Province FE	No	No

Notes: This table shows regression results using (1) collaboration or co-sponsorship dummy, and (2) collaboration frequency as the dependent variable. The sample includes all legislators who have sponsored at least one bill. The interaction effect is insignificant. We do not have data on collaborations within province.

Table A.11: Predicting sponsorship of bills related to women's interests

Dependent variable:	Women's issue bill sponsorship (1)	No. of bills related to women (2)
Female	0.0695**	0.2163**
	(0.0310)	(0.0849)
Ethnic minority	0.0849	0.0277
	(0.0581)	(0.0811)
CCP	-0.0168	0.0610
	(0.0316)	(0.0661)
Government	-0.0698**	-0.1293
	(0.0346)	(0.0788)
Business	-0.0595	-0.1723**
	(0.0400)	(0.0871)
Public organization	-0.0326	-0.1070
	(0.0367)	(0.0911)
PLA	-0.0319	-0.0571
	(0.0492)	(0.1029)
Education: post-graduate	-0.0036	-0.0313
	(0.0268)	(0.0516)
First-time legislator	-0.0006	-0.0478
	(0.0262)	(0.0606)
Constant	0.1414***	0.2306***
	(0.0416)	(0.0823)
Observations	624	624
R-squared	0.0775	0.0670
Province FE	Yes	Yes

Notes: This table shows regression results using (1) a binary variable indicating whether one has sponsored any women's bill, and (2) number of bills related to women's interests as dependent variable. The sample includes all legislators who has sponsored at least one bill. Women are 6.95% more likely to sponsor a bill related to women's interests, and write 0.2 more bills related to women's interests compare to male legislators who have sponsored at least one bill. Robust standard errors are in parentheses.*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A.12: Women's Federation experience and bills related to women's interests

Dependent variable:	Women's issue bill sponsorship	No. of bills related to women
	(1)	(2)
WF experience	-0.0075	-0.0179
	(0.0243)	(0.0588)
WF award	0.0266	0.0318
	(0.0202)	(0.0431)
Ethnic minority	0.0300	-0.0030
	(0.0275)	(0.0456)
CCP	0.0039	0.0629
	(0.0207)	(0.0493)
Government	-0.0130	-0.0324
	(0.0144)	(0.0317)
Business	-0.0301	-0.1151
	(0.0238)	(0.0729)
Public organization	0.0034	-0.0380
	(0.0169)	(0.0634)
PLA	0.0246	0.0183
	(0.0201)	(0.0580)
First-time legislator	-0.0126	-0.0762
	(0.0207)	(0.0682)
Education: post-graduate	-0.0034	-0.0599
	(0.0206)	(0.0645)
Constant	0.0532	0.1871
	(0.0326)	(0.1296)
Observations	699	699
R-squared	0.0724	0.0489
Province FE	Yes	Yes

Notes: This table shows regression results using (1) a binary variable indicating whether one has sponsored any women's bill, and (2) number of bills related to women's interests as dependent variable. The sample includes all female legislators who have sponsored at least one bill. WF experience is a binary variable taking the value of 1 if a legislator has worked for the Women's Federation, including being a member of the WF's executive committee. WF award is a binary variable taking the value of 1 if a legislator has received an award by the WF. Such awards include: "March 8 Red Flag Bearer" 三八红旗手 or "Heroine" 巾帼英雄. We limit this analysis to female legislators only because these WF experiences and awards mostly applied to women. Out of 699 female legislators, 134 have had work experiences with the WF and 239 have received an WF award. Robust standard errors are in parentheses.*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A.13: Ethnic minority female legislators and political behavior

	N	Female %	Female sponsor	No. of bills sponsored by female
All legislators	2,987	23.40%	30.18%	1.45
Ethnic minority legislators	401	41.40%	21.08%	1.05
Han legislators	2,586	20.61%	33.02%	1.58

Notes: This table compares ethnic minority legislators with other legislators with a focus on women's political behavior. Ethnic minority female legislators are less likely to be a bill sponsor compared with Han (the ethnic majority group) legislators, and they on average sponsor a smaller number of bills compared to Han women in the 12th NPC. Even though ethnic minority groups enjoy a quota, the interaction of the gender quota and the ethnic minority quota does not produce a particularly active group, unlike the effect of the non-CCP quota interacting with the gender quota.

Table A.14: Women and cross-committee bills

	Female legislator	Male legislator	difference
Whether one has sponsored cross-committee bill	46.22%	35.73%	10.50%***

Notes: Among all male legislators who have sponsored bills, 35.75% have proposed bills that are cross-committee. The percentage for female legislators is 46.22%. The two-sided difference-in-means t test yields a p value of 0.0108.