

# Appendix

## 1. Descriptives

Table 1: Descriptives 1982-2014

	1982	1985	1988	1991	1994	1998	2002	2006	2010	2014	Total
Elected	0.287 (0.0714)	0.299 (0.0724)	0.333 (0.0737)	0.334 (0.0697)	0.408 (0.0530)	0.414 (0.0557)	0.421 (0.0544)	0.422 (0.0550)	0.430 (0.0504)	0.435 (0.0524)	0.379 (0.0821)
Nominated	0.330 (0.0468)	0.340 (0.0433)	0.362 (0.0547)	0.367 (0.0422)	0.397 (0.0409)	0.402 (0.0442)	0.404 (0.0413)	0.408 (0.0393)	0.414 (0.0383)	0.420 (0.0396)	0.385 (0.0528)
Marriage rate	. (.)	. (.)	0.538 (0.0490)	0.522 (0.0425)	0.503 (0.0434)	0.482 (0.0448)	0.466 (0.0454)	0.453 (0.0452)	0.444 (0.0441)	0.432 (0.0451)	0.480 (0.0573)
Divorce rate	. (.)	. (.)	0.0793 (0.0210)	0.0774 (0.0203)	0.0874 (0.0206)	0.103 (0.0199)	0.114 (0.0191)	0.120 (0.0179)	0.123 (0.0170)	0.127 (0.0176)	0.104 (0.0268)
Age gap	. (.)	. (.)	-2.878 (0.339)	-2.999 (0.310)	-2.969 (0.288)	-2.920 (0.269)	-2.869 (0.257)	-2.825 (0.248)	-2.798 (0.244)	-2.751 (0.245)	-2.876 (0.287)
Population	. (.)	. (.)	18899.9 (33325.9)	23345.6 (42700.1)	23539.4 (43547.2)	23897.2 (46044.2)	24006.1 (46811.7)	24600.4 (48285.5)	25636.7 (51605.2)	24774.7 (50366.8)	23608.2 (45674.7)
Left parties	. (.)	. (.)	0.478 (0.114)	0.427 (0.115)	0.508 (0.119)	0.470 (0.118)	0.469 (0.112)	0.434 (0.119)	0.415 (0.126)	0.406 (0.107)	0.451 (0.121)
Average Income	. (.)	. (.)	824.7 (56.55)	920.3 (78.42)	998.8 (78.29)	1066.7 (92.15)	1317.7 (117.8)	1489.6 (157.4)	1724.1 (222.9)	1847.5 (241.7)	1276.6 (386.5)

*Notes:* Mean values by election year. Elected is the proportion of women elected to municipality councils. Nominated is the proportion of women nominated on lists to municipal elections. Marriage rate is the proportion of married women, Divorce rate is the proportion of divorced women, and Age gap is the average age difference between married women and their spouse. Population is the municipal population, Left parties is the proportion of seats held by Social Democrats and the Left party, and Average income is the average income in SEK of the municipal population. In 1988, the values for Marriage rate, Divorce rate, Age gap, Population, Left parties and Average income are calculated using data from 1990 (the closest year available).

*Sources:* Statistics Sweden

Table 2: Descriptives: Balance

	Unmarried women		Women	
	Lowest share	Highest share	Lowest share	Highest share
<b>Dependent variables 1988-2014</b>				
Elected	0.368 (0.0861)	0.387 (0.0778)	0.366 (0.0857)	0.390 (0.0775)
Nominated	0.377 (0.0554)	0.391 (0.0492)	0.376 (0.0543)	0.392 (0.0504)
<b>Independent variables 1988-2014</b>				
Marriage rate	0.493 (0.0534)	0.467 (0.0578)	0.487 (0.0585)	0.473 (0.0548)
Divorce rate	0.100 (0.0267)	0.107 (0.0258)	0.102 (0.0271)	0.105 (0.0257)
Age gap	2.905 (0.273)	2.848 (0.292)	2.920 (0.309)	2.832 (0.248)
Population	16222.3 (15844.8)	31879.5 (63060.9)	17405.8 (21679.6)	30682.0 (61561.4)
Left parties	0.435 (0.114)	0.468 (0.123)	0.440 (0.125)	0.463 (0.113)
Average Income	1262.3 (373.5)	1277.2 (390.4)	1260.8 (369.9)	1278.7 (393.8)
<b>Historic variables 1749-1859</b>				
Industry	0.0327 (0.0396)	0.0310 (0.0381)	0.0277 (0.0340)	0.0357 (0.0427)
Unmarried women			0.237 (0.0258)	0.246 (0.0243)
Women	0.518 (0.0118)	0.523 (0.0314)		
<b>Geographic variables</b>				
Area (log)	20.89 (1.139)	21.24 (1.383)	20.93 (1.374)	21.20 (1.158)
Latitude	58.77 (2.247)	59.85 (3.014)	58.94 (3.021)	59.67 (2.296)
Longitude	15.17 (2.044)	15.32 (2.793)	14.62 (2.540)	15.87 (2.174)

*Notes:* Mean values by levels of gender balance in history, Std.Dv in parenthesis. Lowest share is the 50 percent of the municipalities with the least unmarried women/women (17 to 24 percent and 45 to 52 percent, respectively, on average 1749-1859) and Highest share is the 50 percent of the municipalities with the largest proportion of unmarried women/women (24 to 36 percent and 52 to 86 percent, respectively, on average 1749-1859).

*Sources:* Statistics Sweden and Tabellverket

## 2. Robustness

Table 3: Family formation and gender balance of politicians elected to municipal office (1988–2014)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Marriage rate	-0.379*** (0.050)	-0.158*** (0.060)	-0.074 (0.064)							-0.406*** (0.058)	-0.073 (0.066)	-0.022 (0.064)
Divorce rate				0.910*** (0.122)	0.783*** (0.134)	0.621*** (0.139)				0.271** (0.137)	0.605*** (0.163)	0.502*** (0.160)
Age gap							-0.026*** (0.010)	-0.030*** (0.007)	-0.029*** (0.008)	-0.043*** (0.009)	-0.028*** (0.007)	-0.023*** (0.008)
Sex ratio	0.562*** (0.214)	0.970*** (0.208)	0.844*** (0.225)	0.048 (0.244)	0.697*** (0.208)	0.544** (0.215)	0.635** (0.246)	1.021*** (0.203)	0.788*** (0.203)	-0.341 (0.259)	0.433* (0.243)	0.424* (0.239)
Constant	0.263** (0.117)	0.372 (0.293)	0.192 (0.283)	0.238** (0.114)	0.158 (0.260)	0.137 (0.250)	0.099 (0.134)	-0.016 (0.259)	0.030 (0.253)	0.819*** (0.153)	0.298 (0.294)	0.173 (0.284)
Year fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region fe's	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Geographic cov.	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Socioecon cov.	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Observations	2303	2303	2303	2303	2303	2303	2303	2303	2303	2303	2303	2303
Clusters	290	290	290	290	290	290	290	290	290	290	290	290
R2	0.379	0.480	0.492	0.368	0.493	0.501	0.332	0.483	0.498	0.409	0.498	0.505

*Notes:* Results from OLS regression. The dependent variable is the proportion of women elected to municipal councils. Married is the proportion of married women, Divorced is the proportion of divorced women, Age gap is the average age difference between married women and their spouse, and Sex ratio is the sex ratio in the municipality. Year fixed effects are included for all election years from 1988 to 2014. Geographic covariates are coordinates for latitude and longitude (of the center of each municipality), and the natural log of the area of the municipality. Socioeconomic covariates are; municipal population, the proportion of seats held by Social Democrats and the Left party, and the average income in SEK of the municipal population. Standard errors in parentheses clustered at level of municipality. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . *Sources:* Statistics Sweden and Tabellverket.

Table 4: Family formation and gender balance of politicians nominated to municipal office (1988–2014)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Marriage rate	-0.221*** (0.035)	-0.051 (0.043)	-0.023 (0.050)							-0.190*** (0.040)	0.032 (0.055)	0.041 (0.058)
Divorce rate				0.730*** (0.087)	0.431*** (0.105)	0.397*** (0.116)				0.423*** (0.105)	0.454*** (0.138)	0.414*** (0.141)
Age gap							-0.020*** (0.008)	-0.014** (0.007)	-0.012* (0.007)	-0.021*** (0.008)	-0.009 (0.007)	-0.006 (0.007)
Sex ratio	0.555*** (0.200)	0.726*** (0.190)	0.643*** (0.217)	0.047 (0.206)	0.503*** (0.185)	0.404** (0.204)	0.538*** (0.199)	0.700*** (0.175)	0.603*** (0.190)	-0.149 (0.218)	0.467** (0.205)	0.428* (0.223)
Constant	0.210* (0.108)	0.345 (0.251)	0.280 (0.255)	0.281*** (0.098)	0.315 (0.223)	0.302 (0.219)	0.156 (0.107)	0.219 (0.220)	0.231 (0.215)	0.566*** (0.127)	0.242 (0.260)	0.212 (0.261)
Year fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region fe's	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Geographic cov.	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Socioecon cov.	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Observations	2303	2303	2303	2303	2303	2303	2303	2303	2303	2303	2303	2303
Clusters	290	290	290	290	290	290	290	290	290	290	290	290
R2	0.246	0.396	0.404	0.267	0.407	0.412	0.214	0.399	0.406	0.287	0.410	0.413

*Notes:* Results from OLS regression. The dependent variable is the proportion of women nominated to municipal councils. Married is the proportion of married women, Divorced is the proportion of divorced women, Age gap is the average age difference between married women and their spouse, and Sex ratio is the sex ratio in the municipality. Year fixed effects are included for all election years from 1988 to 2014. Geographic covariates are coordinates for latitude and longitude (of the center of each municipality), and the natural log of the area of the municipality. Socioeconomic covariates are; municipal population, the proportion of seats held by Social Democrats and the Left party, and the average income in SEK of the municipal population. Standard errors in parentheses clustered at level of municipality. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . *Sources:* Statistics Sweden and Tabellverket.

Table 5: Historical gender norms and gender balance in the labor market

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Unmarried women	0.025 (0.040)	0.050 (0.038)			0.015 (0.040)	0.034 (0.037)	0.031 (0.041)
Women			0.091*** (0.024)	0.104*** (0.020)	0.089*** (0.024)	0.098*** (0.020)	0.117*** (0.024)
Industry							0.022 (0.024)
Constant	0.424*** (0.010)	0.849*** (0.133)	0.382*** (0.012)	0.791*** (0.132)	0.380*** (0.014)	0.788*** (0.132)	0.786*** (0.143)
Year fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region fe's	No	Yes	No	Yes	No	Yes	Yes
Geographic cov.	No	Yes	No	Yes	No	Yes	Yes
Observations	2205	2205	2205	2205	2205	2205	1998
Clusters	276	276	276	276	276	276	250
R2	0.251	0.458	0.260	0.466	0.261	0.467	0.468

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Mediation models

Table 6: Historical gender norms and gender balance of politicians elected to municipal office

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Unmarried women	0.523*** (0.100)	0.352*** (0.087)			0.480*** (0.098)	0.322*** (0.086)	0.335*** (0.092)	0.154 (0.096)	0.091 (0.090)	0.239** (0.094)	0.158* (0.092)	0.027 (0.088)
Women			0.447*** (0.158)	0.242*** (0.054)	0.386*** (0.141)	0.186*** (0.044)	0.180*** (0.041)	0.093* (0.047)	0.111*** (0.039)	0.082** (0.039)	0.089** (0.042)	0.049 (0.043)
Industry							0.149** (0.059)	0.139** (0.059)	0.109* (0.056)	0.137** (0.057)	0.123** (0.053)	0.096* (0.055)
Marriage rate								-0.241*** (0.061)				-0.076 (0.075)
Divorce rate									0.982*** (0.128)			0.636*** (0.174)
Age gap										-0.044*** (0.008)		-0.031*** (0.008)
Sexratio											1.132*** (0.191)	0.346 (0.260)
Constant	0.159*** (0.025)	0.795*** (0.270)	0.053 (0.082)	0.714*** (0.269)	-0.031 (0.075)	0.680** (0.270)	0.778*** (0.280)	1.094*** (0.290)	0.578** (0.247)	0.554** (0.269)	0.129 (0.277)	0.427 (0.322)
Year fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region fe's	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic cov.	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2746	2746	2746	2746	2746	2746	2490	1998	1998	1998	1998	1998
Clusters	276	276	276	276	276	276	250	250	250	250	250	250
R2	0.473	0.587	0.463	0.581	0.485	0.589	0.590	0.479	0.498	0.486	0.484	0.509

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 7: Historical norms and gender balance of politicians nominated to municipal office

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Unmarried women	0.406*** (0.070)	0.273*** (0.058)			0.386*** (0.069)	0.261*** (0.057)	0.250*** (0.060)	0.164** (0.073)	0.118* (0.061)	0.188*** (0.063)	0.146** (0.066)	0.097 (0.070)
Women			0.229** (0.100)	0.117*** (0.044)	0.180** (0.086)	0.071 (0.044)	0.059 (0.048)	0.035 (0.058)	0.039 (0.054)	0.024 (0.052)	0.026 (0.059)	0.016 (0.053)
Industry							0.038 (0.043)	0.023 (0.047)	0.006 (0.046)	0.020 (0.046)	0.012 (0.044)	-0.001 (0.045)
Marriage rate								-0.090** (0.045)				0.017 (0.065)
Divorce rate									0.472*** (0.101)			0.375*** (0.144)
Age gap										-0.022*** (0.007)		-0.012 (0.008)
Sexratio											0.573*** (0.177)	0.264 (0.217)
Constant	0.231*** (0.017)	0.715*** (0.184)	0.210*** (0.052)	0.697*** (0.190)	0.142*** (0.047)	0.671*** (0.184)	0.629*** (0.197)	0.767*** (0.227)	0.557*** (0.204)	0.544** (0.219)	0.326 (0.233)	0.352 (0.294)
Year fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region fe's	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic cov.	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2753	2753	2753	2753	2753	2753	2496	1998	1998	1998	1998	1998
Clusters	276	276	276	276	276	276	250	250	250	250	250	250
R2	0.374	0.521	0.347	0.510	0.381	0.522	0.526	0.393	0.406	0.400	0.399	0.412

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Survey measurement of norms

Table 1: Correlations

Survey measurement of gender norms	
Elected	0.281***
Nominated	0.263***
Unmarried women	0.195**
Women	0.114
Marriage rate	-0.196***
Divorce rate	0.174**
Age gap in couples	-0.160**

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The survey question "What is your opinion about the following statement? Strive for a society with increased equality between women and men." <sup>1</sup> is asked in the SOM-survey, a large national public opinion survey in Sweden (Göteborgs universitet 2020). The survey is based on a sample of randomly selected individuals from the Swedish tax register. The question about whether one supports increased gender equality has been asked since 1993. The survey is based on a large sample and distributed yearly, however, as there are as many as 290 municipalities the number of answers from each municipality is low (especially so

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<sup>1</sup>Vilken är din åsikt om följande förslag? Satsa på ett samhälle med ökad jämställdhet mellan kvinnor och män

for the smaller ones). In order to include as many respondents as possible I have pooled data from all years available (1993-2019). The municipalities with the lowest number of responses (all years combined) reach approximately 20-30 people. The largest municipality, Stockholm, has a total of 6320 answers. The respondents answer on a scale from 1 to 5 ranging from very good suggestion to very bad suggestion. I measure the proportion of respondents who answered "very good" or "good" about increasing gender equality. Most respondents are positive to the suggestion, and variation across municipalities is small (mean 0.8, sd 0.04).

Correlations between the survey measurement and the mean (all years) of the main variables in the analysis in the paper supports the idea that the proxy variables do catch gender norms. The measurement is positively related to the proportion of women elected and nominated, to the historical family formation measurements and to the divorce rate. It is negatively correlated with the marriage rate and the age gap in couples.

## References

Göteborgs universitet, S.-i. (2020). Den nationella SOM-undersökningens kumulativa dataset 1986-2018.