Gender Quotas and the Crisis of the Mediocre Man
Web Appendix Material, Tables and Figures

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Section W1. Validating competence by policy outcomes

This section gives details on the data sources and variable construction for each of our five measures of the quality of municipal governance.

The first measure is a Citizen Satisfaction Index produced by Statistics Sweden and measured on a scale from 0 to 100. It is based on the answers to three questions: (1) How happy are you with how your municipality handles its various responsibilities (*Hur nöjd är du med hur din kommun sköter sina olika verksamheter?*), (2) How well does your municipal government live up to your expectations (*Hur väl uppfyller din kommuns verksamheter dina förväntningar?*), and (3) Imagine a municipality that perfectly handles its' operations. How close to that ideal would you rank your own municipality? (*Föreställ dig en kommun som sköter sina olika verksamheter på ett perfekt sätt. Hur nära ett sådant ideal anser du att din kommun kommer?*). The source is Statistics Sweden's Citizen surveys (*Medborgarundersökningar*). Municipalities sign up for the survey, and as of 2015, 263 municipalities had participated at least once since the start of the program in 2005. A total of 938 surveys have been carried out in these ten years. In municipalities with less than 10,000 persons between 16-84, 600 respondents are selected at random, and 1,200 respondents are selected in larger municipalities. Our outcome variable is election period average of this index, for all surveys taken during that election period in each municipality.

The two next measures come from a complete register of complaints filed by citizens with The Parliamentary Ombudsmen (JO), a Swedish government agency with the task of reviewing the implementation of laws and other regulations in the public sector on behalf of the Parliament and independent of the executive power. After an investigation, complaints can end with a formal criticism issued by the agency. Each year, the agency receives about 7,000 complaints about municipal governments, and about 10% of them lead to criticism. We count the number of complaints that target a specific municipality during each election period. We also count the number of these complaints that lead to criticism. In each case, we normalize these variables with the municipal population in 1000s of inhabitants.

The last three measures are based on data from municipal financial statements. These records are kept by Statistics Sweden and are subject to mandatory reporting from all municipalities in every budget year. From these statements, we extract two indicators that have the advantage of measuring the management of local public finances without conflating quality of management with political ideology. The measurement is based on the key normative requirement for local government finances in Sweden's municipality law (KL 1991:900 1§8 and §5, 1997:614 LKR 5§4). It states that the finances need to be "sustainable" (*god ekonomisk hushållning*), a concept commonly defined as "no one generation of the population consuming the wealth created by previous generations". This definition of the municipal financial ideal was developed over more than a century of public and academic discussions in Sweden (Brorström et al. 2014, see also SOU 2011:59). A standard operationalization of sustainable finances is based on two indicators:

1) a balanced budget, and 2) a stable and positive net capital, meaning that the municipality has not achieve budget balance by borrowing money. These two indicators can also be said to comprise the core aspects of a multi-dimensional assessment of the quality of the municipality's economic governance (authors' interviews).

In performance evaluations of local public finances, the two indicators (budget balance and net capital) are usually measured by the annual Net Result over Total Costs, and the Solvency Rate. The solvency rate is a measure of long-term financial capacity of the municipality. It shows the proportion of total assets that have been financed from budgetary surpluses through history. A negative solvency rate implies that the total debts is larger than total assets, as can be easily seen in the definition:

$$solvency\ rate = \frac{total\ assets - debt}{total\ assets} * 100$$

A straightforward way to analyze the two indicators it to use them as separate linear outcomes. We do this by computing electoral period averages of our yearly data. Consensus is, however, that the best performers should be identified by combining the two variables and truncating the extremes of the distributions. For example, a 10 percentage point budget surplus should not be considered better than a 3 percentage point surplus. We construct an index of sustainable finances scoring each municipality on each dimension and in each election period by the schedule shown in table W1. A higher score (1-6) indicates better performance. Cut-offs are based on conventional wisdom and academic practice among Swedish public economists.

Section W2. Shocks to the share of competent followers

We now suggest direct evidence for the idea that competent followers pose a threat to mediocre leaders as implied by the survival function Q in the model, thereby validating the model's interpretation of the data. For this exercise, however, we require a plausibly exogenous shock to r_K. To construct this, we exploit changes in party popularity during the time interval from the list design to the election: (i) this time interval is over six months, and (ii) at list design, parties often count on the same number of seats as in the last election. Based on (i) and (ii), we can create a plausibly exogenous "shock" to the share of competent followers by calculating the difference between the realized share of competent politicians (after the election) and the expected share based on the fraction of competent politicians.

A key assumption for this approach to work is that the party's electoral success must not be directly correlated with the survival of leaders. This might be an issue, for example, if when a party is successful, candidates further down the ballot are less competent (see e.g. Dal Bó et al. 2016). This would imply that party success would be correlated with both leader survival and the share of competent candidates. To limit concern about this, our regressions control for the difference in the party's seat share in the municipal council compared to the last election, and also include fixed effects for the extra number of seats.

The outcome that we use is a binary indicator for leader survival at the individual level, defined as being equal to one if the leader reappears on the ballot in the next election. The sample includes the top-3 ranked individuals on each party's ballot (i.e. the leadership), and the sample selected is precisely as the one

analyzed in Section 3. We exclude the Social Democrats after the 1991 election, and local parties with less than 8 elected representatives.

In addition to our proposed shock to r_K , and the aforementioned controls, we also include municipality-party and election-period fixed effects with standard errors being clustered at the municipality-party level.

Table W4 reports the results. Column (1) suggests that a higher share of competent followers does indeed affect the survival chances of the average leader. In columns (2) and (3) we find striking differences between mediocre and competent leaders with a positive shock to the competence of followers reducing the survival probability of a mediocre leader, while not affecting that of a competent leader. The interaction term in Column (4) shows that the difference between mediocre and competent leaders is statistically significant with the estimated effect amounting to around a 20 percentage point lower survival probability for incompetent compared to competent leaders.

Section W3. The competence of male and female politicians

In principle, the effect of the quota on competence in the estimates that pools men and women can come from two sources: (1) a better selection among men, which is the one that we emphasize, and (2) a larger number of women. Explanation (2) hinges on women being better selected than men, so that increasing the share of women drives up competence. We can think about this as a "composition effect".

One way to look at this is to calculate a counterfactual for the impact of the quota on competence among men and women combined, while supposing that the selection within each gender would have been constant. In this counterfactual, the improvement in competence would only come from electing more women. Let us assume that the selection within genders are constant at their 1991 level. Then consider the impact for the median quota bite, which is an 11 percentage-point increase in the share of elected women. In 1991, before the quota, elected women were indeed better selected than men. Among women, who made up 39% of the politicians, 54.7% were competent. Among men, who made up 61% of the politicians, 50.4% were competent. This gives 52.08% competent among men and women combined. Now change the shares of both men and women politicians to 0.5 at unchanged competences. At these proportions, 52.55% percent of politicians are competent (see the Table below).

Increasing the proportion of women by 11 percentage points thus raises the proportion of competent by 0.45 percentage points. Comparing this to the baseline estimation result in the paper (using the coefficient of 0.27 for the change between 1991 and 1994, displayed in the left graph of Figure 4), an 11 percentage-point increase in the quota raised the 2.97 percentage points. It follows that the composition effect only explains about 15% of the total effect.

Calculation of counterfactual improvement in selection from gender-composition effect only

Actual selection in 1991, at median quota bite				Counterfactual selection in 1994 with same gender competence as 1991, at equal shares men and women			
Share men	0.61	Share women	0.39	Share men	0.50	Share women	0.50
Share comp men	0.504	Competence women	0.547	Share comp men	0.504	Competence women	0.547
Selection = men*comp men + women*comp women				Selection = men*comp men + women*comp women			
Share comp = 0.61*0.504+0.39*0.547 = 0.52077				Share comp = 0.50*0.504+0.50*0.547 = 0.5255			

Next, we consider the question if the pre-quota competence gap (to the advantage of women) was larger in municipalities with mediocre male leaders. A good starting point is the insight above that women were better selected than men in 1991. For each municipality, we measure the size of this difference by subtracting the share of competent men from the share of competent women. We then measure the competence of male leaders as the average competence of the top-three men.

We run a binary regression of the gender competence gap on the competence of male leaders for the pre-quota year, 1991 (see regression output below). Then, we obtain a constant of 0.15, indicating a 15 percentage-point gender gap to the advantage of women, when all male leaders are mediocre. The beta-coefficient is -0.168, meaning that having only competent male leaders rather than only mediocre leaders, is associated with a 16.8 percentage point lower gender gap.

```
      Source |       SS           df       MS      Number of obs   =        191
-------------+----------------------------------   F(1, 189)       =      11.01
       Model |  .829124105         1  .829124105   Prob > F        =     0.0011
    Residual |  14.2378098       189  .075332327   R-squared       =     0.0550
-------------+----------------------------------   Adj R-squared   =     0.0500
       Total |  15.0669339       190  .079299652   Root MSE        =     .27447


-----------------------------------------------------------------------------------
    comp_gap_elec |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------+----------------------------------------------------------------
   inc_res_d_top3_m | -.1686333   .0508305    -3.32   0.001    -.2689013   -.0683653
            _cons |   .1493118   .0361754     4.13   0.000     .0779523    .2206713
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```

Comparing the beta estimate to the constant, suggests a substantial competence gap in places with mediocre male leaders prior to the quota, but no gender gap in places where all male leaders were competent. Women are thus likely to have exercised a larger threat to the survival of mediocre leaders.

Table W1. Replication of Table 4 (see Panel A) and Figure 4 (see Panel B) with competence measured as the average of the income residual among elected politicians.

Sample:	Panel A: Pre-Post D-i-D					
	All Politicians		Male Politicians		Female Politicians	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*$\Delta w_{94\text{-}91}$	0.139	0.241	0.361*	0.517*	-0.328	-0.092
	(0.188)	(0.264)	(0.210)	(0.287)	(0.354)	(0.553)
Mun- time trend		x		x		x
Observations	1,996	1,996	1,996	1,996	1,983	1,983

	Panel B: Period-by-Period D-i-D		
D1982*$\Delta w_{94\text{-}91}$	-0.126	-0.248	-0.033
	(0.266)	(0.313)	(0.587)
D1985*$\Delta w_{94\text{-}91}$	-0.240	-0.208	-0.289
	(0.s263)	(0.311)	(0.477)
D1988*$\Delta w_{94\text{-}91}$	-0.092	-0.029	-0.477
	(0.208)	(0.250)	(0.425)
	1991 = Reference year		
D1994*$\Delta w_{94\text{-}91}$	-0.030	0.340*	-0.766
	(0.227)	(0.195)	(0.468)
D1998*$\Delta w_{94\text{-}91}$	0.041	0.224	-0.437
	(0.279)	(0.274)	(0.497)
D2002*$\Delta w_{94\text{-}91}$	0.366	0.431	0.002
	(0.276)	(0.323)	(0.453)
D2006*$\Delta w_{94\text{-}91}$	0.044	0.365	-0.493
	(0.295)	(0.347)	(0.547)
D2010*$\Delta w_{94\text{-}91}$	-0.064	0.138	-0.792
	(0.300)	(0.377)	(0.504)
D2014*$\Delta w_{94\text{-}91}$	-0.181	-0.021	-0.711
	(0.329)	(0.424)	(0.584)

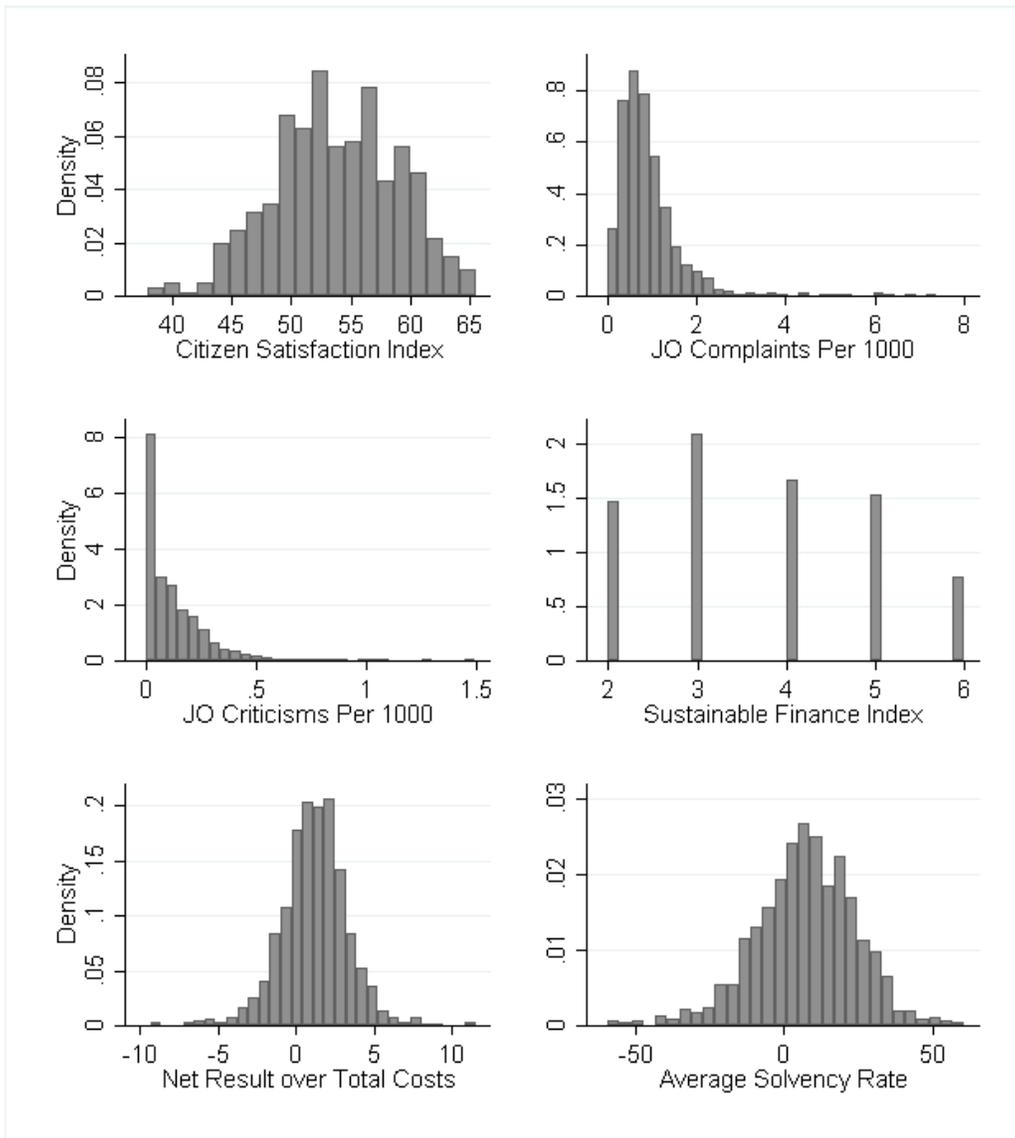| Observations	1,996	1,996	1,996	1,996	1,983	1,983

Notes: For specifications, see the notes to Table 4 and Figure 4. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W2. Replication of Table 1 for men and women separately.

	Preference vote share		Re-election		List rank	Top ranked	Cognitive score	Leadership score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Men								
Competent	1.81***	0.29	8.53***	7.92***	-0.97***	4.93***	0.13***	0.24***
	(0.29)	(0.18)	(0.40)	(0.41)	(0.08)	(0.50)	(0.03)	(0.03)
Observations	54,445	53,627	106,180	101,659	101,659	106,180	19,734	16,015
Women								
Competent	2.23***	0.28**	10.69***	9.99***	-1.15***	4.73***		
	(0.25)	(0.14)	(0.54)	(0.55)	(0.09)	(0.47)		
Observations	22,565	22,281	40,196	38,793	38,793	40,196		
List rank FE		yes		yes				

Notes: The table replicates Table 1, except that the relations are estimated separately on the subsamples of male and female politicians, rather than jointly for all politicians – for details, see the notes to that table. The table shows that the relation between the income residuals and political success is at least as strong for women as for men.

Figure W1. Distribution of Policy Outcomes

Notes: The figure shows the distributions of variables used as outcomes in the estimations of correlations between competent politicians and the quality of local government in Table 2 of the main paper. The Citizen Satisfaction Index is based on population surveys carried out by Statistics Sweden and capturing how local citizen's satisfaction with the services of local government. It is based on the survey questions (1) How happy are you with how your municipality handles its various responsibilities? (ii) How well does your municipal government live up to your expectations? and (iii) Imagine a municipality that perfectly handles its operations. How close to that ideal would you rank your own municipality? Municipalities volunteer for the survey, and 263 municipalities (>90 percent) participated at least once between 2005 and 2015. JO complaints measures the number of complaints (per 1000 inhabitants) from citizens about administrative decisions made by the municipality, as recorded by the government agency of *Justitieombudsmannen* (JO). JO criticisms is the number of such complaints, also per 1000 inhabitants, that resulted in the issuance of formal criticism by the agency. The average net accounting surplus is the average budget surplus of the local government as a share of total costs, and averaged over the years in the election period. Negative values indicate budget deficits. The average solvency rate is assets minus debt over assets. These two variables are combined to an index of Sustainable Finances, as further detailed in Table W1 below.

Table W3. Index of sustainable public finances

		Dimension 1: Solvency Rate		
		Solvency >20%	Solvency 0-20%	Solvency < 0%
Dimension 2: Net Result over Total costs	Surplus > 2%	5	4	3
	Surplus 1-2%	4	3	2
	Surplus < 1%	3	2	1

Notes: The table summarizes the cut-off values used to create the index of Sustainable Public Finances used to estimate the correlation between politician competence and government quality in Table 2 of the main paper. The index is based on two variables, the net results over total costs (in rows) and the solvency rate (in columns). Details about these variables are laid out in Section W1. The authors are grateful for the kind advice on methodology from Hans Petersson at the Municipal Research in West Sweden Institute (Kommunforskning i Västsverige, www.kfi.se).

Table W4. Relationship between leader and follower competence, controlling for competence among nominated but not elected party members

	Binary Income Residual						Cognitive Enlistment Score	Leadership Enlistment Score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged top-3 competence	0.112***		0.111***	0.093***	0.074***	0.015	0.178***	0.183***
	(0.014)		(0.015)	(0.011)	(0.016)	(0.021)	(0.044)	(0.052)
Nominated competence	0.228***	0.247***	0.228***	0.095***	0.111***	-0.163***	0.048	0.154**
	(0.039)	(0.037)	(0.039)	(0.030)	(0.040)	(0.052)	(0.056)	(0.074)
Top-3 competence		0.072***	0.003					
		(0.014)	(0.015)					
Lagged C Followers				0.359***				
				(0.020)				
Municipality F.E					yes		yes	yes
Mun*Party F.E						yes		
Control for supply of competent candidates	yes	yes	yes	yes	yes	yes	yes	yes
Observations	3,025	3,705	3,012	2,918	3,025	3,025	963	800

Notes: The table shows estimated relationships between competence of the political leadership and the selection of followers in those parties in future elections. Specifications follow the format of Table 3, and are explained in the notes to that table. The only exception is the added control variable for the proportion of competent politicians among nominated politicians on the list – i.e., non-elected people who may move up to higher list ranks in future periods. This control approximates the supply of competent politicians in the local party's candidate pool. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W5. Relation between leader and follower competence, with outcome defined as difference in the share of competent amongst elected and nominated followers.

| | Binary Income Residual | | | | | | Cognitive Enlistment Score | Leadership Enlistment Score |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged top-3 competence	0.075*** (0.015)		0.080*** (0.016)	0.056*** (0.013)	0.047*** (0.017)	0.009 (0.023)	0.114** (0.049)	0.176*** (0.056)
Top-3 competence		0.046*** (0.014)	-0.007 (0.017)					
Lagged follower competence				0.269*** (0.020)				
Municipality F.E					yes		yes	yes
Mun*Party F.E						yes		
Observations	3,025	3,705	3,012	2,918	3,025	3,025	963	800

Notes: The table shows estimated relationships between competence of the political leaders and followers in future elections. Specifications follow the format in Table 3, and are explained in the notes to that table. The difference is that each outcome variable is re-calculated as the difference between the proportions of competent politicians among those elected and among those in the candidate pool. The candidate pool includes persons nominated on the electoral ballot who do not obtain a seat. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W6. Leader survival and shocks to follower competence

	Leader survival			
	(1)	(2)	(3)	(4)
Share of competent followers	-0.046	-0.324**	0.076	-0.324**
	(0.065)	(0.149)	(0.087)	(0.145)
Share of competent followers*competent leader				0.400**
				(0.170)
Competent leader				0.210*
				(0.122)
Controls	yes	yes	yes	yes
Election-period FE	yes	yes	yes	yes
Municipality*party FE	yes	yes	yes	yes
Subsample of leaders		mediocre	competent	
Observations	5,768	2,256	3,512	5,768

Notes: The table shows estimated changes in the survival probability of leaders as a function of shocks to the share of competent followers. The outcome variable captures the survival of the individual politician with a binary indicator that takes the value 1 if he or she re-appears on the ballot in an election (t). The unit of observation is the individual politician in each election, and the sample includes all top-three politicians – i.e., the party leadership in the previous election (t-1) in all parties with at least 8 municipal councilors. The data period is 1985-2014. Column (1) shows the results for all leaders, columns (2) and (3) show results for mediocre and competent leaders, respectively, and column (4) shows the results from an interaction effect between a binary indicator for a competent leader, and the shock measure. This measure, which approximates an exogenous variation in the share of competent followers, is defined as the difference between the realized share of competent politicians (after the election) and the expected share of competent followers. The latter is the share that would have resulted if the party would have won the exact same number of seats as in the current election as in the previous election. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W7. Baseline results in un-restricted full sample.

Sample:	*All Politicians*		*Male Politicians*		*Female Politicians*	
	Panel A: Pre-Post D-i-D					
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*Δw$_{94-91}$	0.053	0.200*	0.149	0.293*	-0.225	-0.025
	(0.091)	(0.111)	(0.113)	(0.163)	(0.174)	(0.191)
Muni. time trends		yes		yes		yes
Observations	2,837	2,837	2,837	2,837	2,822	2,822

			Panel B: Period-by-Period D-i-D			
D1982*Δw$_{94-91}$	0.042		-0.124		0.294	
	(0.122)		(0.145)		(0.236)	
D1985*Δw$_{94-91}$	0.045		0.014		0.066	
	(0.128)		(0.147)		(0.238)	
D1988*Δw$_{94-91}$	-0.042		-0.068		-0.141	
	(0.104)		(0.108)		(0.214)	
			1991 = Reference year			
D1994*Δw$_{94-91}$	0.211**		0.201**		-0.033	
	(0.083)		(0.094)		(0.172)	
D1998*Δw$_{94-91}$	0.096		0.181		-0.139	
	(0.104)		(0.125)		(0.188)	
D2002*Δw$_{94-91}$	0.152		0.201		-0.061	
	(0.109)		(0.150)		(0.207)	
D2006*Δw$_{94-91}$	-0.065		0.076		-0.384*	
	(0.127)		(0.162)		(0.229)	
D2010*Δw$_{94-91}$	-0.088		-0.053		-0.359	
	(0.144)		(0.197)		(0.244)	
D2014*Δw$_{94-91}$	0.082		0.020		-0.040	
	(0.154)		(0.204)		(0.259)	
Observations	2,837		2,837		2,822	

Notes: The table shows estimated effects of the Social Democrats' zipper quota on the competence of the party's elected local politicians. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel estimates equation (5) -- see notes to Table 4 -- but in the full sample of Social Democratic local parties – i.e., including those that did not comply with the quota and those that had a female leader in 1991. The lower panel repeats the estimation of equation (6) in this full sample -- see notes to Figure 4. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W8. Baseline results with the bite of the gender quota defined as 0.5 minus the proportion of elected women in 1991.

	Panel A: Pre-Post D-i-D					
Sample:	All Politicians		Male Politicians		Female Politicians	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*$\Delta w_{94\text{-}91}$	0.090	0.267**	0.167	0.372**	-0.126	0.142
	(0.104)	(0.111)	(0.120)	(0.167)	(0.198)	(0.193)
Muni. time trends		yes		yes		yes
Observations	1,996	1,996	1,996	1,996	1,983	1,983

	Panel B: Period-by-Period D-i-D		
D1982*$\Delta w_{94\text{-}91}$	0.036	-0.096	0.318
	(0.137)	(0.156)	(0.295)
D1985*$\Delta w_{94\text{-}91}$	0.015	0.004	-0.047
	(0.133)	(0.150)	(0.259)
D1988*$\Delta w_{94\text{-}91}$	0.061	0.055	-0.026
	(0.114)	(0.115)	(0.233)
	1991 = Reference year		
D1994*$\Delta w_{94\text{-}91}$	0.216**	0.202**	0.073
	(0.084)	(0.095)	(0.183)
D1998*$\Delta w_{94\text{-}91}$	0.210*	0.291**	0.041
	(0.111)	(0.128)	(0.209)
D2002*$\Delta w_{94\text{-}91}$	0.226*	0.303*	0.071
	(0.131)	(0.165)	(0.224)
D2006*$\Delta w_{94\text{-}91}$	0.020	0.176	-0.268
	(0.148)	(0.166)	(0.255)
D2010*$\Delta w_{94\text{-}91}$	-0.040	0.010	-0.328
	(0.160)	(0.213)	(0.256)
D2014*$\Delta w_{94\text{-}91}$	0.083	-0.029	0.017
	(0.168)	(0.221)	(0.270)
Observations	1,996	1,996	1,983

Notes: The table shows estimated effects of the Social Democrats' zipper quota on the competence of the party's elected local politicians. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. The difference is the definition of the quota bite, which is now computed as 0.5 minus the local party's share of women among its elected politicians in 1991. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W9. Baseline results with controls for municipality characteristics in 1991 interacted with election period dummies.

	Panel A: Pre-Post D-i-D					
Sample:	All Politicians		Male Politicians		Female Politicians	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*$\Delta w_{94\text{-}91}$	0.092	0.266**	0.259**	0.444**	-0.291	0.013
	(0.108)	(0.130)	(0.123)	(0.189)	(0.221)	(0.237)
Muni. time trends		yes		yes		yes
Observations	1,996	1,996	1,996	1,996	1,983	1,983

	Panel B: Period-by-Period D-i-D		
D1982*$\Delta w_{94\text{-}91}$	0.070	-0.160	0.524*
	(0.152)	(0.175)	(0.313)
D1985*$\Delta w_{94\text{-}91}$	0.043	-0.053	0.236
	(0.170)	(0.185)	(0.320)
D1988*$\Delta w_{94\text{-}91}$	-0.002	-0.071	-0.005
	(0.135)	(0.143)	(0.269)
	1991 = Reference year		
D1994*$\Delta w_{94\text{-}91}$	0.256**	0.285**	0.082
	(0.107)	(0.111)	(0.243)
D1998*$\Delta w_{94\text{-}91}$	0.161	0.272*	-0.044
	(0.125)	(0.143)	(0.234)
D2002*$\Delta w_{94\text{-}91}$	0.212	0.279	0.034
	(0.137)	(0.196)	(0.246)
D2006*$\Delta w_{94\text{-}91}$	-0.019	0.190	-0.414
	(0.163)	(0.195)	(0.287)
D2010*$\Delta w_{94\text{-}91}$	-0.004	0.115	-0.359
	(0.154)	(0.219)	(0.265)
D2014*$\Delta w_{94\text{-}91}$	0.111	-0.010	0.105
	(0.167)	(0.230)	(0.288)
Observations	1,996	1,996	1,983

Notes: The table shows estimated effects of the Social Democrats' zipper quota on the competence of the party's elected local politicians. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. In both cases, we add control variables for municipal characteristics, held constant at their 1991 and interacted with the election period dummies. The control variables are the number of municipal councilors in the council as a whole, and six dummies for Statistics Sweden's categories for municipality types: large cities, suburban cities, middle size cities, commuting cities, rural, and other. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W10. Impact of the Social Democratic quota on average competence in the Conservative Party and the Center Party.

Sample:	Panel A: Pre-Post D-i-D					
	All Politicians		*Male Politicians*		*Female Politicians*	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-QuotaΔw_{94-91}	0.200*	0.052	0.227*	-0.017	0.378**	0.143
	(0.110)	(0.131)	(0.132)	(0.167)	(0.191)	(0.215)
Muni. time trends		yes		yes		yes
Observations	1,997	1,997	1,992	1,992	1,957	1,957

	Panel B: Period-by-Period D-i-D		
D1982*Δw_{94-91}	-0.161	0.024	-0.670**
	(0.163)	(0.171)	(0.296)
D1985*Δw_{94-91}	-0.051	0.110	-0.259
	(0.140)	(0.152)	(0.289)
D1988*Δw_{94-91}	0.098	0.143	0.150
	(0.102)	(0.124)	(0.208)
	1991 = Reference year		
D1994*Δw_{94-91}	0.116	0.129	0.181
	(0.114)	(0.138)	(0.205)
D1998*Δw_{94-91}	0.047	0.011	0.363
	(0.125)	(0.157)	(0.229)
D2002*Δw_{94-91}	0.317**	0.475***	0.147
	(0.141)	(0.181)	(0.235)
D2006*Δw_{94-91}	0.108	0.384**	-0.164
	(0.161)	(0.175)	(0.285)
D2014*Δw_{94-91}	0.108	0.303	0.100
	(0.159)	(0.217)	(0.258)
Observations	1,997	1,992	1,957

Notes: The table shows estimated effects of the Social Democrats' zipper quota on the competence of elected local politicians in the Center Party and the Conservative Party. In each municipality, the elected politicians from these parties are pooled, and the total sum must be eight or more politicians to be included in the estimation. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W11. Baseline results using enlistment data for continuous measures of cognitive ability and leadership score as outcome variables.

| | Panel A: Pre-Post D-i-D | | | |
| | Leadership Score | | IQ Score | |
	(1)	(2)	(3)	(4)
Post-Quota*Δw_{94-91}	2.440**	2.272*	1.488	1.196
	(1.165)	(1.284)	(1.013)	(1.393)
Muni. time trends		yes		yes
Observations	1,372	1,372	1,472	1,472

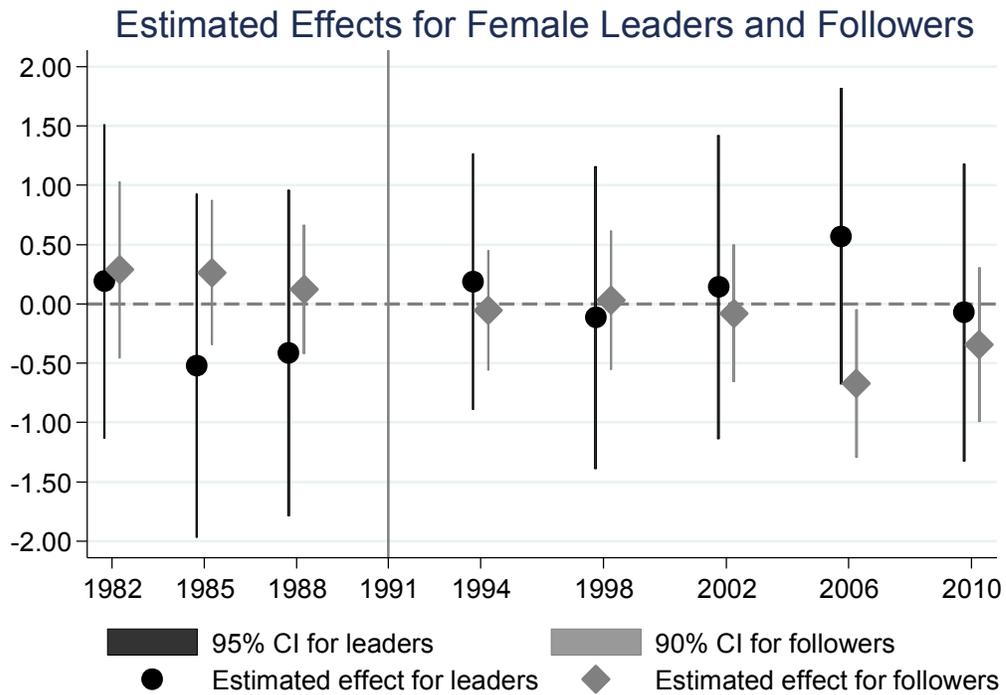|	Panel B: Period-by-Period D-i-D	
D1988*Δw_{94-91}	0.257	0.941
	(1.260)	(1.201)
	1991 = Reference year	
D1994*Δw_{94-91}	3.482***	1.982
	(1.298)	(1.370)
D1998*Δw_{94-91}	3.283**	1.669
	(1.314)	(1.402)
D2002*Δw_{94-91}	0.628	2.206*
	(1.414)	(1.304)
D2006*Δw_{94-91}	1.945	1.665
	(1.403)	(1.167)
D2010*Δw_{94-91}	3.627**	1.702
	(1.512)	(1.276)
D2014*Δw_{94-91}	2.416	2.238*
	(1.670)	(1.239)
Observations	1,372	1,472

Notes: The table shows estimates of the Social Democrats' zipper quota on the competence of the party's elected local politicians. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. Competence is measured by two variables from the Swedish military enlistment. These two variables, cognitive and leadership skills, are both measured on a scale from 1 to 9. The competence among the elected politicians is measured as the average of these scores. Data is available for men born between 1951 and 1979. For this reason, the variables have low coverage in the first two elections in the sample and we therefore truncate the data at the 1988 election. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W12. Baseline results using enlistment data for binary measures of cognitive ability and leadership score as outcome variables.

| | Panel A: Pre-Post D-i-D | | | |
| | Leadership Score | | IQ Score | |
	(1)	(2)	(3)	(4)
Post-Quota*Δw_{94-91}	0.352	0.448	0.457	0.464
	(0.308)	(0.360)	(0.303)	(0.376)
Muni. time trends		Yes		yes
Observations	1,372	1,372	1,472	1,472

	Panel B: Period-by-Period D-i-D	
D1988*Δw_{94-91}	0.096	-0.005
	(0.326)	(0.340)
	1991 = Reference year	
D1994*Δw_{94-91}	0.696**	0.412
	(0.344)	(0.405)
D1998*Δw_{94-91}	0.449	0.587
	(0.339)	(0.439)
D2002*Δw_{94-91}	0.268	0.478
	(0.404)	(0.371)
D2006*Δw_{94-91}	0.122	0.360
	(0.406)	(0.355)
D2010*Δw_{94-91}	0.518	0.379
	(0.408)	(0.372)
D2014*Δw_{94-91}	0.351	0.508
	(0.473)	(0.373)
Observations	1,372	1,472

Notes: The table shows estimates of the Social Democrats' zipper quota on the competence of the party's elected local politicians. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. Competence is measures by two variables from the Swedish military enlistment. These two variables, cognitive and leadership skills, are both measured on a scale from 1 to 9. We pool the all available data across municipalities and time for all elected politicians and compute the median score for each variable within each party. A politician is defined as competent it he has a score above this average, and mediocre otherwise. The measurement of competence in the local party is the average of this binary variable among the elected politicians in that municipality. Data is available for men born between 1951 and 1979. For this reason, the variables have low coverage in the first two elections in the sample and we therefore truncate the data at the 1988 election. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Figure W2. Competence effect of the quota on female leaders and followers

Estimated Effects for Female Leaders and Followers

Legend:
- 95% CI for leaders
- 90% CI for followers
- Estimated effect for leaders (●)
- Estimated effect for followers (◆)

Notes: The figure shows the estimated changes in the fraction of competent female followers and female leaders relative to the reference year (1991) and depending on the change in the share of elected women in 1991-1994. Notes are otherwise identical to those for the right-hand graph of Figure 4. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W13. Effects of gender quota on change in competence of elected politicians (followers) between 1991 and 1994, as mediated by the survival of male mediocre leaders from 1991 to 1994.

	All (1)	Men (2)	Women (3)
$\Delta w_{94\text{-}91}$	0.938***	0.516	1.200
	(0.314)	(0.565)	(0.881)
Share Surviving Mediocre Male Leaders* $\Delta w_{94\text{-}91}$	-0.752**	-0.490	-0.984
	(0.373)	(0.597)	(0.964)
Share Surviving Mediocre Male Leaders	0.073	0.045	0.067
	(0.064)	(0.092)	(0.138)
Observations	119	119	116

Notes: The table shows the estimated effects of the gender quota on the change in the competence among followers between 1991 and 1994 regressed, in a fully saturated regression model, on the quota bite interacted with the share of surviving male mediocre leaders between 1991 to 1994. The share of surviving leaders is the proportion of the male mediocre leaders, i.e. the top-three candidates on the ballot, who were re-elected -- from any ballot rank -- in 1994. The outcome variable is the fraction of competent followers, i.e. elected politicians below rank 3 on the ballot, (column 1) and among elected men and women, respectively (columns 2 and 3). The unit of observation is the local party-election period. The sample includes all local Social Democratic parties that complied with the quota in 1994 (having more than 40% elected women in 1994) and a male leader in 1991. We also require the presence of at least one mediocre male leader in the top-three ballot ranks. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W14. Quota impact on competence, holding constant the number of elected men or women.

Sample:	Panel A: Pre-Post D-i-D					
	Male Politicians		*Male Top 3 Politicians*		*Female Politicians*	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*Δw$_{94-91}$	0.223*	0.347**	0.361	0.702**	-0.139	0.146
	(0.127)	(0.157)	(0.239)	(0.324)	(0.174)	(0.249)
Muni. time trends		yes		yes		yes
Observations	1,984	1,984	1,963	1,963	1,959	1,959
	Panel B: Period-by-Period D-i-D					
D1982*Δw$_{94-91}$	-0.149		0.007		0.500*	
	(0.183)		(0.397)		(0.254)	
D1985*Δw$_{94-91}$	-0.132		-0.076		-0.026	
	(0.166)		(0.310)		(0.238)	
D1988*Δw$_{94-91}$	-0.160		-0.245		0.110	
	(0.138)		(0.275)		(0.247)	
	1991 = Reference year					
D1994*Δw$_{94-91}$	0.099		0.717***		0.070	
	(0.103)		(0.219)		(0.216)	
D1998*Δw$_{94-91}$	0.256**		0.248		0.103	
	(0.121)		(0.253)		(0.225)	
D2002*Δw$_{94-91}$	0.275*		0.360		0.201	
	(0.155)		(0.329)		(0.276)	
D2006*Δw$_{94-91}$	0.095		0.195		-0.242	
	(0.161)		(0.321)		(0.249)	
D2010*Δw$_{94-91}$	-0.049		-0.061		-0.170	
	(0.202)		(0.321)		(0.254)	
D2014*Δw$_{94-91}$	0.015		0.287		0.064	
	(0.213)		(0.388)		(0.268)	
Observations	1,984		1,963		1,959	

Notes: The table shows estimated effects of the Social Democrats' zipper quota on the competence of the party's elected local politicians. The first two columns show results for men, the next two columns (3 and 4) show the results for the top-three men on the ballot, regardless of their ballot ranks, and the last two columns (5 and 6) show the results for women. For the specifications with men and women, the number of elected politicians in each local party is kept constant at its 1991 level, counting from the top of the ballot in every election thereafter and computing the competence measure in this group. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W15. Quota impact on competence, full candidate list.

Sample:	*All Politicians*		*Male Politicians*		*Female Politicians*	
	Panel A: Pre-Post D-i-D					
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*Δw₉₄₋₉₁	0.104	0.136*	0.152*	0.244***	-0.076	-0.049
	(0.065)	(0.073)	(0.079)	(0.093)	(0.119)	(0.118)
Muni. time trends		yes		yes		yes
Observations	2,008	2,008	2,008	2,008	2,008	2,008

$Post\text{-}Quota*\Delta w_{94\text{-}91}$

Panel B: Period-by-Period D-i-D

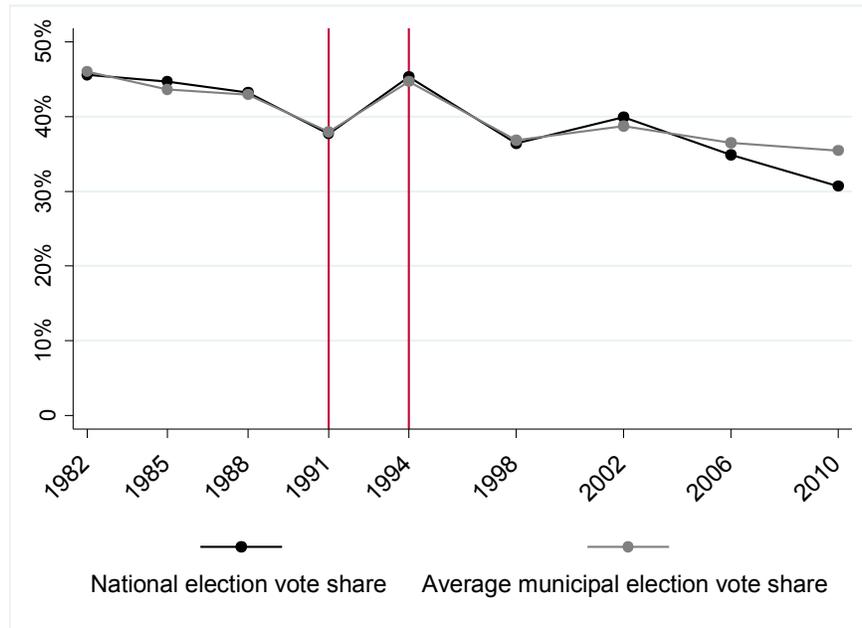|	All	Male	Female
$D1982*\Delta w_{94\text{-}91}$	0.005	-0.157	0.203
	(0.085)	(0.100)	(0.143)
$D1985*\Delta w_{94\text{-}91}$	0.031	-0.037	0.057
	(0.073)	(0.076)	(0.165)
$D1988*\Delta w_{94\text{-}91}$	-0.024	-0.086	-0.001
	(0.073)	(0.078)	(0.154)
	1991 = Reference year		
$D1994*\Delta w_{94\text{-}91}$	0.117*	0.099	0.035
	(0.061)	(0.074)	(0.105)
$D1998*\Delta w_{94\text{-}91}$	0.133	0.134	0.029
	(0.082)	(0.096)	(0.131)
$D2002*\Delta w_{94\text{-}91}$	0.135	0.178	-0.057
	(0.088)	(0.113)	(0.139)
$D2006*\Delta w_{94\text{-}91}$	0.046	0.082	-0.189
	(0.093)	(0.120)	(0.161)
$D2010*\Delta w_{94\text{-}91}$	0.122	0.092	-0.017
	(0.090)	(0.119)	(0.156)
$D2014*\Delta w_{94\text{-}91}$	0.088	-0.095	0.135
	(0.100)	(0.135)	(0.191)
Observations	2,008	2,008	2,008

Notes: The table shows estimates of the Social Democrats' zipper quota on the competence of the party's nominated local politicians, that is, every person on the electoral ballot. The first two columns show results for both women and men, and the remaining four columns divide the sample by sex. The upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table W16. Quota impact on the electoral success of local Social Democratic Parties.

	Panel A: Pre-Post D-i-D					
Outcome Variable:	Number of Seats		Seat Share		Vote Share	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Quota*$\Delta w_{94\text{-}91}$	0.487	-0.083	0.055	0.013	0.060	0.027
	(2.178)	(2.193)	(0.036)	(0.048)	(0.037)	(0.050)
Muni. time trends		yes		yes		yes
Observations	1,996	1,996	1,996	1,996	1,985	1,985

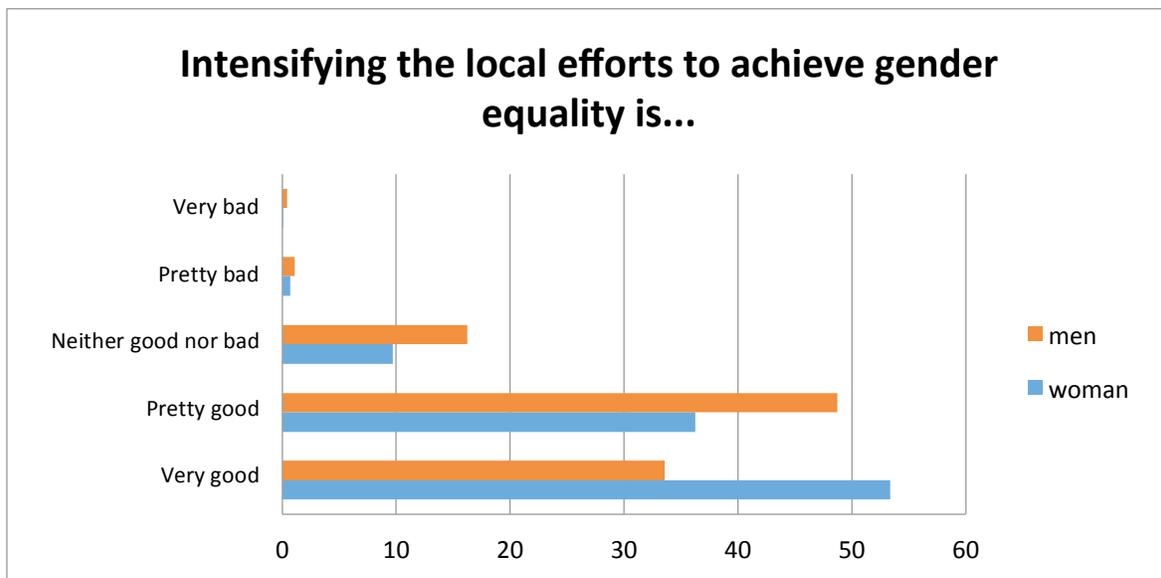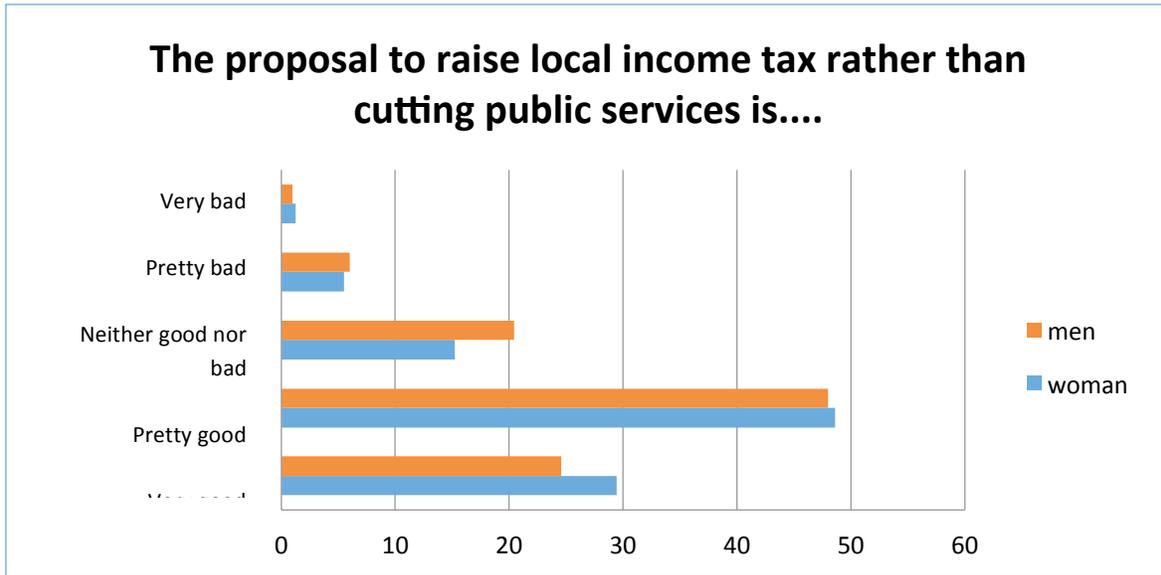|	Panel B: Period-by-Period D-i-D		
D1982*$\Delta w_{94\text{-}91}$	-4.053*	-0.068	-0.067*
	(2.270)	(0.042)	(0.040)
D1985*$\Delta w_{94\text{-}91}$	1.049	0.011	-0.028
	(3.192)	(0.067)	(0.034)
D1988*$\Delta w_{94\text{-}91}$	-0.487	0.020	0.018
	(2.193)	(0.030)	(0.030)
	1991 = Reference year		
D1994*$\Delta w_{94\text{-}91}$	-0.009	0.033	0.044
	(1.830)	(0.037)	(0.037)
D1998*$\Delta w_{94\text{-}91}$	0.050	0.037	0.030
	(2.220)	(0.047)	(0.043)
D2002*$\Delta w_{94\text{-}91}$	-0.870	0.036	0.029
	(2.494)	(0.048)	(0.046)
D2006*$\Delta w_{94\text{-}91}$	-1.512	0.037	0.045
	(2.593)	(0.048)	(0.048)
D2010*$\Delta w_{94\text{-}91}$	-0.231	0.059	0.047
	(2.856)	(0.058)	(0.058)
D2014*$\Delta w_{94\text{-}91}$	-0.388	0.063	0.055
	(2.743)	(0.055)	(0.052)
Observations	1,996	1,996	1,985

Notes: The table shows estimates of impact of the Social Democrats' zipper quota on the electoral performance of the party. Three outcome variables are used to measure electoral performance. In column (1), the outcome is the party's number of seats; in column (2) it is the proportion of seats; and in column (3) it is the proportion of the vote in the local election. Other than the replaced outcome variable, the upper panel repeats the estimation of equation (5) -- see notes to Table 4 -- and the lower panel repeats the estimation of equation (6) -- see notes to Figure 4. All relations are estimated by OLS. Robust standard errors clustered at the municipality level in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%.

Figure W3. National election vote share of the Social Democratic party, 1982-2010

Notes: The figure shows the development over time of the vote share of the Social Democratic party in the election to the national parliament (black line) and as an average across municipal elections (gray line). The vertical red lines indicate the last election year before the gender quota, 1991, and the first election year after the quota, 1994.

Figure W4. Policy preferences of elected men and women in the Social Democrats in 2012

Notes: For a given level of competence, a mediocre leader would prefer a man to a woman, if women have different policy preferences than men. In other words, all else equal, a mediocre leader would rather pick mediocre men than mediocre women in the pre-quota equilibrium. Preference differences between men and women in local Social Democratic parties can be micro-founded in Swedish surveys. The figure shows two distributions for 3,552 Social Democrat councilors surveyed in the Survey of Local Swedish Politicians in 2012 (response rate approx. 80%, see Gilljam and Karlsson, 2014, for more details). The questions gauge preferences over the basic issue of redistribution (raising local income taxes before reducing the quality of services) and policy efforts to achieve gender equality in the municipality. The horizontal axes show the percentages of male and female respondents who thought these ideas were "very bad", "pretty bad", "neither good nor bad", "pretty good", or "very good".