Political Economics III, Spring 2017
Political Selection in Sweden: Facts, Causes, and Consequences

Torsten Persson, IIES Stockholm University
http://perseus.iies.su.se/~tpers/

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Last week

General selection patterns

- an inclusive meritocracy
- politicians are able people from diverse social backgrounds: no acute tradeoff between the two
- competence increases with political power

Political parties

- appear to play an important role in screening, on average promoting the competent
- use popularity among the voters, as expressed by preference vote, as key criterion when appointing local party leaders

This week

Consequences of local municipal leadership

- selection into leadership position, such as mayor, brings important rents in terms of salary as well as prestige
- do rents extend to the leaders' families?

Behavior of local party leaders

- how do they choose competence for followers on party ballot?
- how does this interact with representation of men and women?
- what are the effects of gender quotas in politics?
- does (gender) representation come at cost of competence

Dynastic Political Rents

Olle Folke, Torsten Persson and Johanna Rickne

Economic Journal (forthcoming)

Material incentives to seek political office

"*The obvious starting point for analyzing incentives faced by politicians is to quantify the relative costs and benefits of a career in politics*" (Keane and Merlo 2010)

"*Politicians are rational individuals who make career decisions by comparing the expected returns of alternative choices*" (Diermeier et al. 2005)

- growing body of work on personal rewards from office (Eggers and Hainmueller 2009, Querubin and Snyder 2009, Lundqvist 2013, Fisman et al. 2014, Kotakorpi, et al. 2014)
- only a few papers on rewards spread to relatives (Fafchamps and Labonne 2014, Gagliarducci and Manacorda 2015, Bennedsen et al. 2015)

Dynastic political rents

Such rents different from other types of rents

- not democratically legitimate, and may signal corruption

How could dynastic political rents occur?

- via nepotistic hires or favors, indirect favors inside or outside political hierarchy
- via changed behavior by relatives

Question of paper

Do incomes go up for relatives to politicians in power?

- if see such effects – along which channel do they occur
- understudied – unlike income of politicians themselves, or returns to politically connected firms
- interesting to do in Sweden – at low end of perceived corruption

Methodology and contribution

Exploit close elections in Swedish municipalities

- near-random shocks to which political block holds power

Use individual data

- close relatives to top politicians in largest party of each political bloc
- relatives of powerful majority and opposition politicians

Compare to few existing studies

Fafchamps and Labonne (2014) on Philippines, Gagliarducci and Manacorda (2015) on Italy

- observe family links directly, so do not have to rely on last-name approximations
- have considerably better outcome data

Amore-Bennedsen-Nielsen (2015) on Denmark

- use more plausible and interpretable shifts of political power: governing majority vs. opposition, rather than large vs. small municipalities

Roadmap

1. **Data and methodology**
2. Baseline results
3. Channels and mechanisms
4. Final remarks

Data

Start from same extensive politician data set

- all politicians, in all parties, in all municipalities, in all elections 1991-2011

Identify close relatives (Generation and Sibling Registers)

- from politician ID-number, get relatives' ID-numbers

Measure income of relatives and politicians (Income Register)

- (mostly) third-party reported earnings from tax-returns
- separately observe employment and business earnings
- can observe occupation and employer

Treatment and control groups

Study political coalitions

- party proliferation due to PR, so parties rarely rule alone
- left and center-right blocks well-defined in most municipalities

Treatment group

- children and siblings to top-three politicians on party list of largest party in *governing* block – don't study spouses for reasons of selection
- mayor (KSO) nearly always from top three, and chair of important committees very often (Table 3)

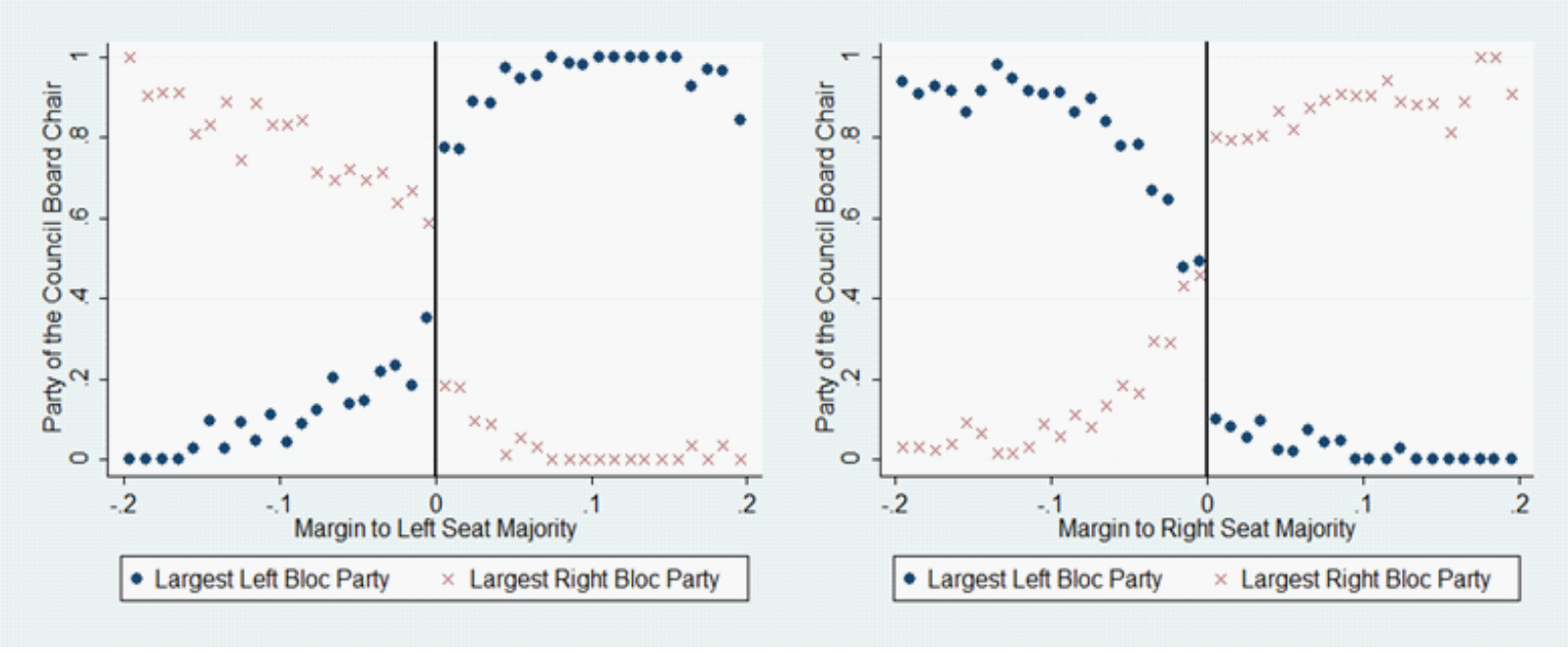
Control group

- children and siblings to top-three politicians on party list of largest party in *opposition* block
- opposition never appoints chairs, but vice chairs (Table 3)

Identifying variation

Largest party in block appoints the mayor

- probability of this event by (block vote share – 50%)



- tempting to use fuzzy RDD, but do not have enough power
- use strategy in spirit of RDD

Main estimating equation

$$Y^i_{n,t} = \beta P^i_{p,m,t} + \lambda_t + \rho_n + \varepsilon^i_{n,t}$$

- $Y^i_{n,t}$ average earnings for individual i, living in municipality n, in election period t
- $P^i_{p,m,t} = 1$ if i has top-politician relative, whose party p appoints mayor in municipality m, in election period t

Identification threat due to selection

- ruling-party and opposition-party politicians may differ, as may income of relatives – especially if one block sure to win
- consider "close" elections: shift of majority is within 5% points of vote share
- probability to appoint mayor similar for largest party in each block – like trimming sample by similar propensity scores
- use variety of controls, and test that sample is balanced

How define close elections?

Not as simple as under plurality rule

- because of many parties in PR, mapping from party vote shares to bloc majority in seats is quite complex

Resolve by simulation (Online Appendix)

- in 2/3 of elections 1991-2010, one or more bloc within 10 percentage points of votes from shift in seat majority
- 44% of elections within 5 percentage points from majority shift – this is main estimation sample

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Table 4 – effects on total earnings?

	Living in any municipality				Living in municipality of politician			
	Relatives to top-three politicians		Relatives to top-ranked politician		Relatives to top-three politicians		Relatives to top-ranked politician	
	All	5%	All	5%	All	5%	All	5%
Panel A. Total earnings								
DV: Log Earnings								
Treatment	0.08***	0.06*	0.08*	0.06	0.11***	0.12**	0.16**	0.17*
	(0.02)	(0.04)	(0.04)	(0.06)	(0.04)	(0.06)	(0.06)	(0.10)
DV: Earnings								
Treatment	6.16***	1.41	6.94	4.76	6.19**	6.69	8.92**	12.07
	(2.21)	(3.71)	(4.28)	(8.23)	(2.63)	(4.17)	(4.47)	(7.37)
Obs.	23,826	10,507	8,315	3,626	10,206	4,568	3,504	1,561
Mean dep var	190.07	193.77	196.23	199.85	162.34	165.13	166.08	164.49

- large estimates, only significant if look in same municipality

Robustness tests

Earnings from employment or business?

- all employment, none from business (Table 4)

What if replace current earnings with lagged earnings?

- no effect in 5% election sample (Table 5)

Predetermined characteristics as dependent variables?

- no significant effect on age, years of education (Table W1)

Robust to control variables?

- no significant effect in 5% sample of lagged incumbency, age and education of children and siblings (Table W2)

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Table 6 – Children vs. siblings?

	Children who live in the same municipality as the politician				Siblings who live in the same municipality as the politician			
	Relatives to top-three politicians		Relatives to top-ranked politician		Relatives to top-three politicians		Relatives to top-ranked politician	
	All	5%	All	5%	All	5%	All	5%
DV: Log Earnings								
Treatment	0.09*	0.06	0.22***	0.22*	0.09	0.18*	0.01	0.02
	(0.05)	(0.07)	(0.08)	(0.13)	(0.06)	(0.09)	(0.11)	(0.14)
DV: Earnings								
Treatment	3.34	1.05	16.25***	18.80**	6.99	10.43	-1.81	0.41
	(3.07)	(5.11)	(5.12)	(8.31)	(4.64)	(7.65)	(8.27)	(13.25)
Obs.	6,412	2,876	2,221	991	3,794	1,692	1,283	570
Mean dep var	135.94	137.15	135.13	133.06	206.97	212.69	219.64	219.13

- effect on children of mayors, but not on siblings
- large income hike, almost 20% of earnings

Table 7 – Children of new or incumbent mayors?

	Children of first-time chairs		Children of incumbent chairs	
	All	5%	All	5%
Log Earnings				
Treatment	0.26***	0.40**	0.14	0.09
	(0.10)	(0.17)	(0.19)	(0.20)
Earnings				
Treatment	15.74**	22.23**	6.78	7.70
	(6.13)	(10.07)	(16.30)	(22.19)
Obs.	1,617	698	604	293
Mean dep var	128.70	124.75	152.36	152.87

- result much stronger for new mayors (low power for incumbents)

Further on mechanisms

Earnings from *municipality* employment?

- no significant effects (Table 8)

Employment in *parent's* pre-election sector?

- no significant (positive) effects (Table 8)

Being a *university* student?

- do find negative effect – cf Table 8

Living in same municipality?

- do find a positive effect – cf Table 8

Table 8 – Behavioral changes?

	Children of top-three		Children of top-ranked	
	All	5%	All	5%
Panel C. Being a tertiary student				
Treatment	-0.00	0.01	-0.04*	-0.03
	(0.01)	(0.02)	(0.02)	(0.03)
Obs.	6,412	2,876	2,221	991
Mean	0.29	0.30	0.30	0.31
Panel D. Living in municipality of parent politician				
Treatment	0.03***	0.01	0.04***	0.02
	(0.01)	(0.01)	(0.01)	(0.02)
Obs.	10,207	4,443	3,546	1,561
Mean	0.52	0.52	0.52	0.52

- results consistent with children postponing university and working in mayor's municipality instead

Short-run vs. medium-run outcomes

Results concern only a four-year election period

- censoring makes it hard to look at very long run
- use power shifts in 1991-2002 elections to study effects 8-11 years out
- caveats: lower power, some opposition politicians in control group may return to power in the interim

Results mixed

- positive effects on earnings appear to remain, but no negative medium-run effects on years of education – cf Table 9

Table 9 – Medium-run outcomes?

	Children of the top-three politicians		Children of the top-ranked politicians	
	All	5%	All	5%
Panel A. Total earnings				
DV: Log Earnings				
Treatment	0.10**	0.06	0.13	0.18
	(0.05)	(0.07)	(0.08)	(0.15)
DV: Earnings				
Treatment	10.46**	6.20	12.03	27.07*
	(4.54)	(8.13)	(8.02)	(15.88)
Obs.	4,269	1,850	1,479	638
Mean dep var	226.34	236.09	230.92	237.71

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Final remarks

Dynastic political rents to relatives of Swedish mayors

- higher earnings for children, but not for siblings
- large in relative terms, but earnings of children not very high
- larger impact for new mayors than incumbents
- effects arise in private sector, and partly reflect staying at home to work, rather than moving elsewhere to study
- in medium run, positive effect on earnings remain and negative effects on years of education disappear

All in all, political dynastic rents look like marginal phenomenon

- quantitatively smaller effects than in earlier studies (Italy and Philippines)
- no sign that mayors staff bureaucracies with their own relatives

Gender Quotas and the Crisis of the Mediocre Man

Tim Besley, Olle Folke, Torsten Persson, and Johanna Rickne

American Economic Review (forthcoming)

General motivation

Back to conditions for well-functioning democracy

- able (competent) politicians
- even representation: not only of socioeconomic groups, but other aspects like gender

Both hinge on appointments by party leaders

- able followers threaten leader survival, as may followers of different gender
- mediocre leaders defending their position can create vicious circle of mediocrity, some shock needed to break such "old-boys network"

Gender quotas: A contested issue

Used in elections by more than 100 countries

- some mandated, others voluntary
- mandates also discussed for company boards
- proponents appeal to equal representation, opponents appeal to meritocracy

So, do quotas violate meritocratic appointments, or can they instead support them by straightening out vicious circle of mediocrity?

- but .... little theory and evidence speak on this issue
- 1993 “zipper” quota in Sweden’s Social Democrats

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- 1993 "zipper" quota in Sweden's Social Democrats

"Our party's quota policy of mandatory alternation of male and female names on all party lists was informally known as the 'crisis of the mediocre man' in the Woman's Association"
- Inger Segerström, Chairperson of Women's Association, 1995-2003.

Appointments and ability in Swedish municipal politics

Step 1: Theory

- show how party leaders with given competence choose follower ability, trading off own survival and electoral success

Step 2: Evidence

- show how local parties with mediocre leaders have mediocre followers

Step 3: Evidence

- study (causal) effects of 1993 quota on ability of men and women

Step 4: Back to theory

- extend model from Step 1 to help interpret the evidence

Related research: Theory

Citizen-candidate models

- otherwise ability and gender does not matter for policy and hence not to voters (Osborne and Slivinsky 1996, Besley and Coate 1997)

Models of political selection

- ability is valence for voters (Banks and Sundaram 1998)
- choices by mediocre leaders may compromise competence and diversity (Egorov and Sonin 2011)
- survival of leaders may depend on composition of followers (Gagliarducci and Paserman 2012)

Supply of politicians

- who selects into politics in the wake of discrimination (Julio and Tavares 2016)

Related research: Gender quotas in politics

Descriptive about quotas

- spread of reforms and numeric impact on representation (Dahlerup 2006, Krook 2009)
- case studies of substantive and symbolic representation (Franceschet, Krook and Piscopo 2012)

Effects of quotas

- candidate quotas often evaded (Norris 2004, Krook, 2010, Casas-Arce and Saiz 2011, Bagues and Esteve-Volart 2012)
- positive impact on votes in male-dominated parties (Cases-Arce and Saiz 2011)
- how do additional women compare to men: higher or similar education or occupation (Baltrunaite et al 2012, O'Brien, 2012), equal parliamentary activity (Murray 2010)

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3. The zipper quota
4. Making theoretical sense of results
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Context: Municipal party leaders

Predominantly male

- e.g., 80% of all first-ranked positions on party ballot in 1991 (83% in Social Democrats)

Control composition of the party list

- selection committee close to party leader proposes electoral list, after member nominations, or internal primaries
- few changes made in members' meeting
- surveys of municipal politicians confirm decisive influence of party leaders

Basic model structure

Election for municipal council

- two parties $K = D, B$

Politicians

- two types: competent and mediocre, share of competent r_K
- voter payoff increasing in r_K invariant to number of seats

Leaders

- have competence $l_K \in [0, 1]$, higher l_K more competent

Party competence

- weighted average of leader and follower competence

$$c_K = \alpha l_K + (1 - \alpha) r_K . \tag{1}$$

$0 < \alpha < 1$ is mechanic or substantive weight

Timing of events

1. Each party K has leader with competence l_K
2. Each leader chooses share of competent followers r_K
3. Council election is held: party's chance of winning increasing in c_K
4. Popularity shock ε for each leader realized, followed by contest in each party: leader's survival chance increasing in $l_K - r_K$
5. Payoffs realized

- study equilibrium by backward induction

Stage 4: Leadership contest

Leader survives if

$$r_K - l_K + \varepsilon < 0$$

- popularity shock ε has c.d.f. $Q(\cdot)$, symmetric around 0 with log-concave density $q(\cdot)$
- probability of leader survival $Q(l_K - r_K)$
- popularity shock not known at list-design stage 2

Stage 3: Council election

Voters

- get utility $v_K = c_K$ from party $K = D, B$ (competence is valence)
- do not care about survival of leaders beyond their competence

Competition for voters

- think about standard probabilistic-voting model
- probability party D wins is $P\left(v_D - v_B\right)$
- assume density $p(\cdot)$ has single maximum at $v_D = v_B$

Stage 2: List design

List choice by leader in party D

- pick competence equivalent to picking

$$v_D = \alpha l_D + (1 - \alpha)\, r_D$$

- ego rents e from surviving, and $E = 1$ from party winning
- expected payoff when choosing r_D

$$\widetilde{V}(l_D, r_D) = Q\,(l_D - r_D)\, e + P(\alpha l_D + (1 - \alpha)\, r_D - v_B)$$

First-order condition, for given l_D and v_B

$$-q\,(l_D - r_D)\, e + (1 - \alpha) p (v_D - v_B) = 0 \qquad (2)$$

- higher r_D, higher chances of external win and internal loss
- parallel condition for party B gives prediction:

Prediction *In any political equilibrium, more competent leaders pick more competent candidate lists*

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Linking data sets

Party ballots from Election Authority

- ten waves of elections 1982 to 2014
- list rank of each politician
- Social Democrats make up roughly 40% of elected

Linked to rich socioeconomic data

- various registers give highly reliable information on income, education, age, sex, occupation, location, for full sample period

Full population data

- same variables used to calculate Earnings score

Measuring competence

Estimate Mincer regression for population

- in each annual cross section, estimate:

$$y_{i,t} = f(age_{i,t}, educ_{i,t}, occ_{i,t}) + \alpha_m + \varepsilon_{i,t} \quad (3)$$

  $y_{i,t}$ year t income for i, α_m municipality fixed effect
- f has a separate fixed effect for each possible interaction among dummies for cohorts, education, and broad occupation
- estimate (3) separately for men, women, and retired
- derive Earnings score: "individual fixed effect" averages $\varepsilon_{i,t}$ across t

Binary competence measure – as in model

- politician competent (mediocre) if her score $E(\varepsilon_{i,t})$ above (below) median for party – within-party analysis
- l_K average competence of party's top three ranked candidates in past election, r_K average across all elected politicians except top three

Validate earnings score

By other competence measures

- correlated with leadership and cognitive scores for men

By political success

- correlated with preference-vote shares, re-election, list-rank, top rank (Table 1)

By service delivery

- policy performance measures correlated with average earnings score in majority party (Table 2)

Leader and follower competence – Table 3

	Binary Income Residual						Cognitive Enlistment Score	Leadership Enlistment Score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged top-3 competence	0.123*** (0.015)		0.121*** (0.015)	0.096*** (0.011)	0.077*** (0.016)	0.014 (0.021)	0.179*** (0.043)	0.180*** (0.051)
Top-3 competence		0.081*** (0.015)	0.006 (0.016)					
Lagged follower competence				0.369*** (0.020)				
Election-period FE	yes	yes	yes	yes	yes	yes	yes	yes
Municipality FE					yes		yes	yes
Municipality*party FE						yes		
Observations	3,028	3,708	3,015	2,920	3,028	3,028	976	826

- as in model, correlated across followers and leaders
- also study shocks to follower competence (Table W6)

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The Social Democrat zipper quota

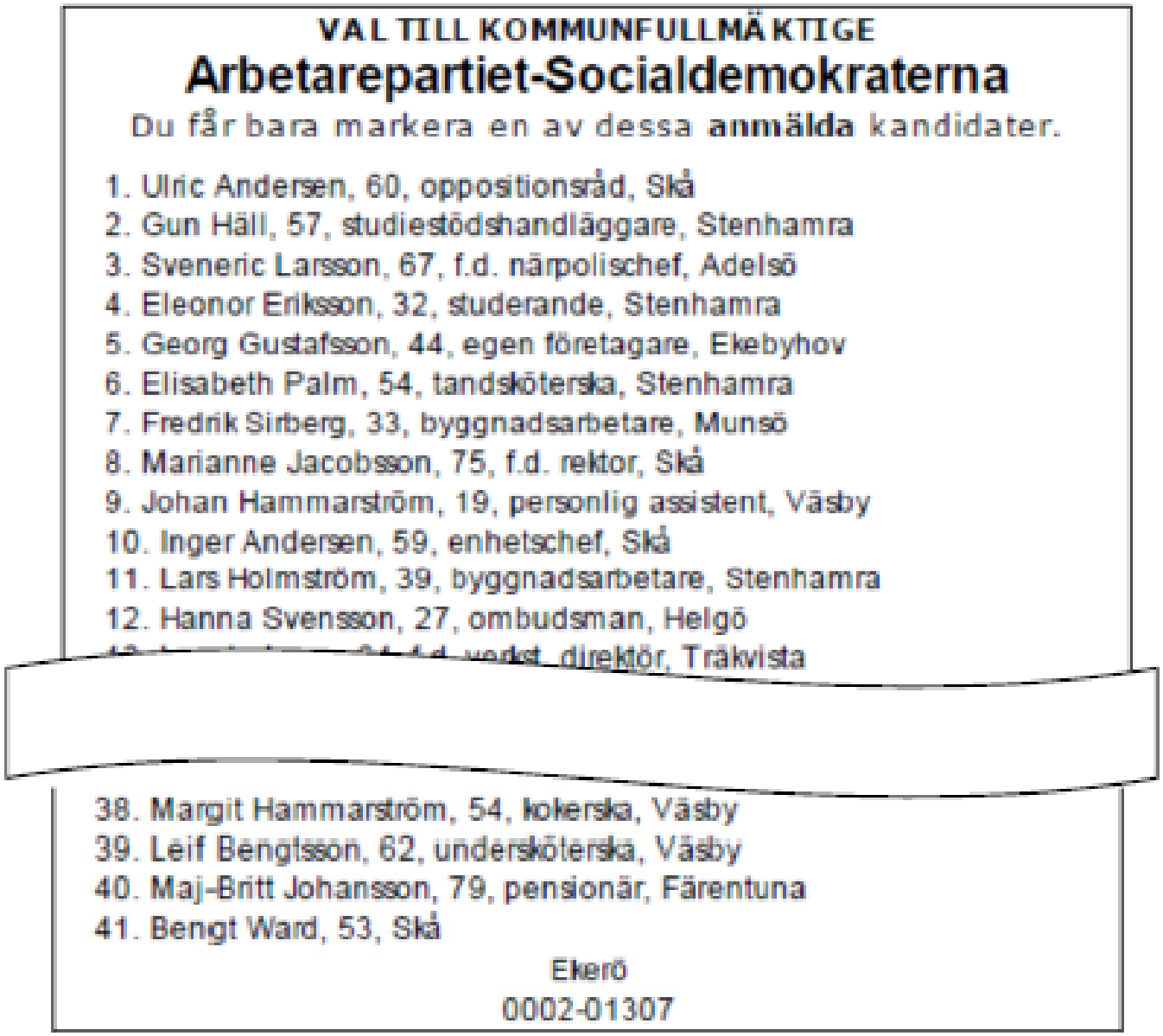
Pre-history

- female members had long fought for better representation
- recommendations before 1988 and 1991 elections of 40-50% female candidates were not too successful
- 82% of local party leaders were men

1993 reform

- credible threat of breakout feminist party
- centrally imposed reform on local groups – cf Figure 2
- zipper quota much more effective than recommendations (Conservatives 1993, and Center party 1996) – cf Figure 3

A "zipped" ballot – Figure 2



VAL TILL KOMMUNFULLMÄKTIGE

Arbetarepartiet-Socialdemokraterna

Du får bara markera en av dessa **anmälda** kandidater.

1. Ulric Andersen, 60, oppositionsråd, Skå
2. Gun Häll, 57, studiestödshandläggare, Stenhamra
3. Sveneric Larsson, 67, f.d. närpolischef, Adelsö
4. Eleonor Eriksson, 32, studerande, Stenhamra
5. Georg Gustafsson, 44, egen företagare, Ekebyhov
6. Elisabeth Palm, 54, tandsköterska, Stenhamra
7. Fredrik Sirberg, 33, byggnadsarbetare, Munsö
8. Marianne Jacobsson, 75, f.d. rektor, Skå
9. Johan Hammarström, 19, personlig assistent, Väsby
10. Inger Andersen, 59, enhetschef, Skå
11. Lars Holmström, 39, byggnadsarbetare, Stenhamra
12. Hanna Svensson, 27, ombudsman, Helgö

38. Margit Hammarström, 54, kokerska, Väsby
39. Leif Bengtsson, 62, undersköterska, Väsby
40. Maj-Britt Johansson, 79, pensionär, Färentuna
41. Bengt Ward, 53, Skå

Ekerö

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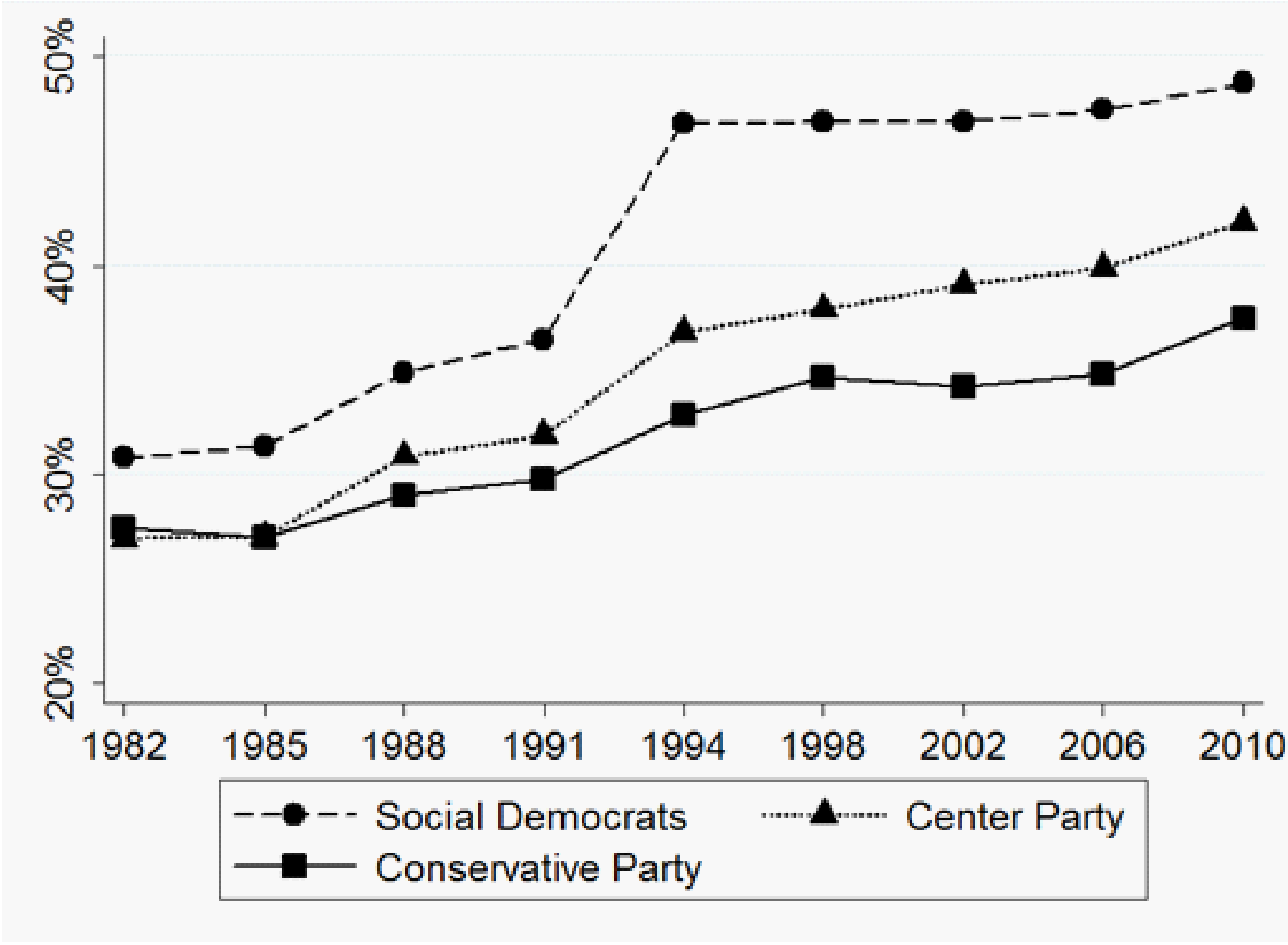
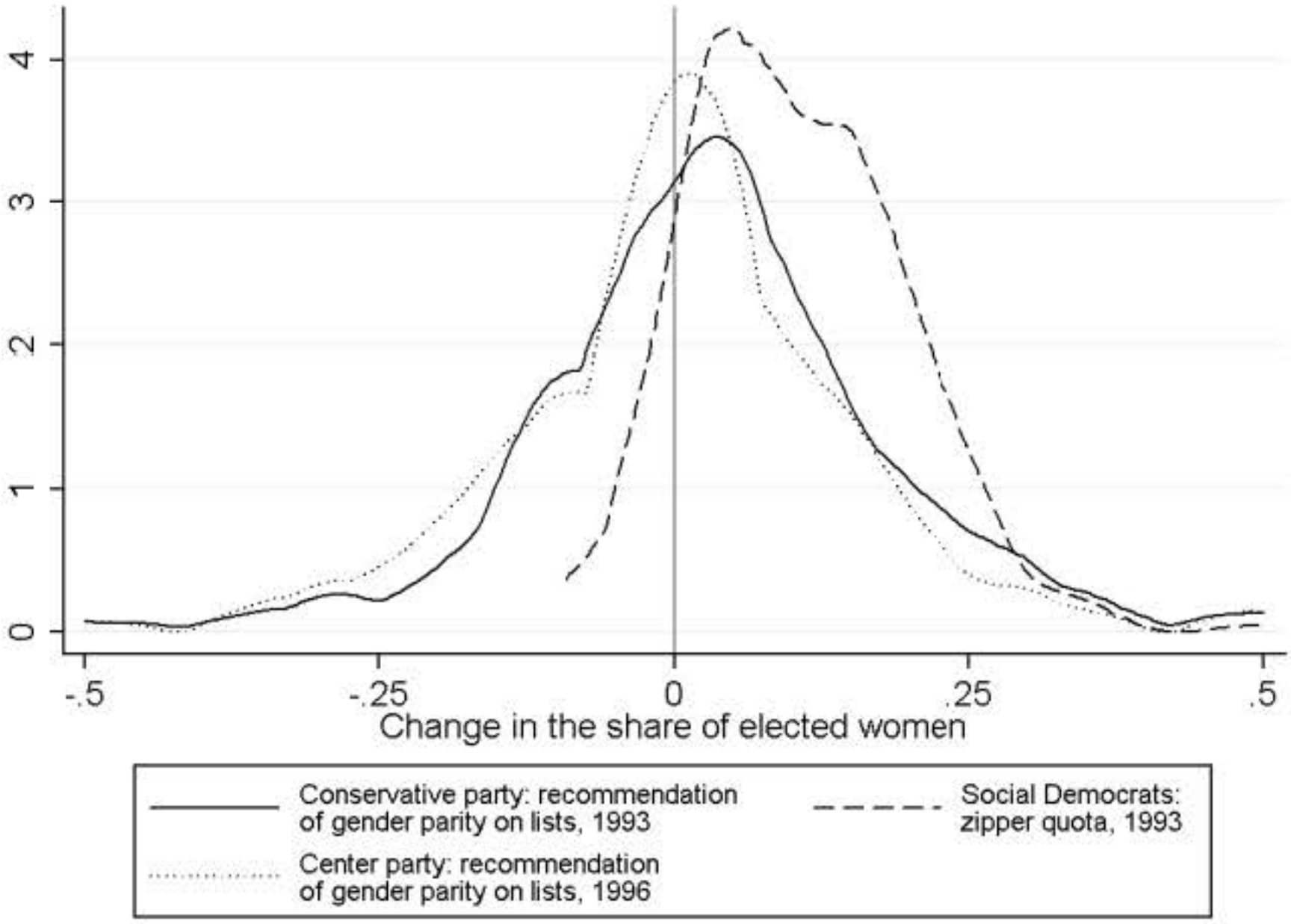
Female council shares – Figure 3a



Distribution of changed female shares – Figure 3b



What to expect from the quota?

Different window on leaders and followers

- quota may have disrupted cosy coexistence of mediocre male leaders and followers
- larger shock if larger "quota bite" in 1994 election – less room for mediocre leader to survive by picking mediocre followers
- strategy of female Social Democrats: "turn numbers to influence!"

Difference in differences (DID) formulations

$$r_{m,t} = \Delta w_{m,94-91} \times \rho_t + \alpha_m + \varepsilon_{m,t}$$

where $\rho_t = 1$ for all elections after 1991, or

$$r_{m,t} = \beta_t \Delta w_{m,94-91} \times elec_t + elec_t + \alpha_m + \varepsilon_{m,t}$$

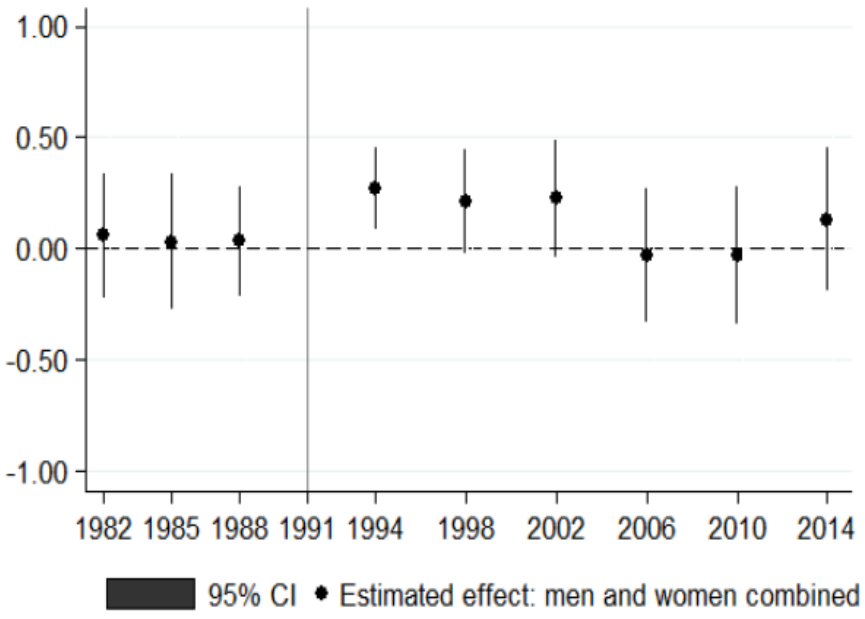
where $elec_t$ a dummy for election year t

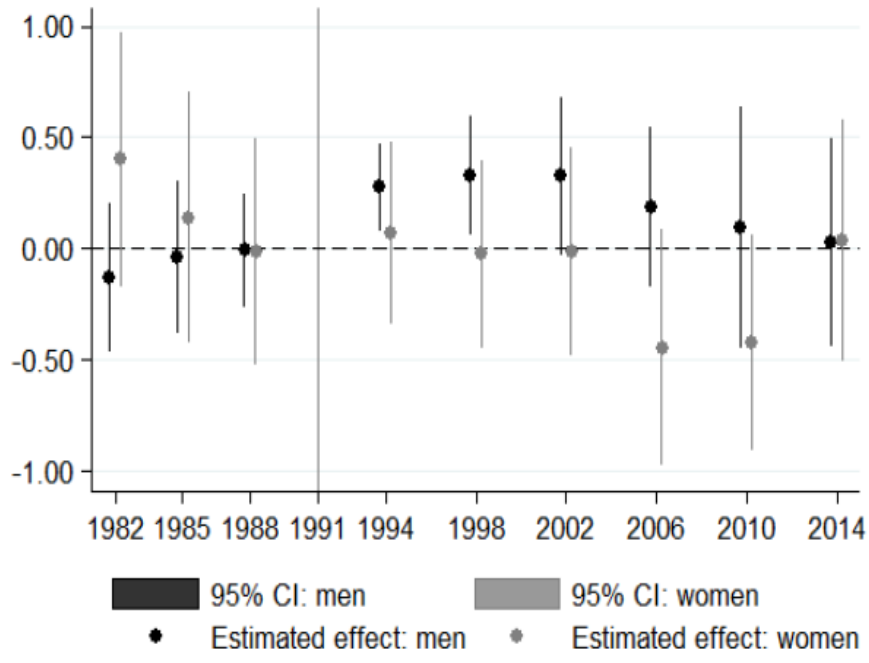
- estimate for sample of municipalities with *male* party leader, which fullfilled the quota requirement

Simple DID – Table 4

	All Politicians		Male Politicians		Female Politicians	
	(1)	(2)	(3)	(4)	(5)	(6)
*Post-Quota*Δw94-91*	0.097	0.288**	0.249**	0.441**	-0.267	0.072
	(0.101)	(0.117)	(0.120)	(0.178)	(0.200)	(0.209)
Municipality FE	yes	yes	yes	yes	yes	yes
Muncipality time trends		yes		yes		yes
Observations	1,996	1,996	1,996	1,996	1,983	1,983

Dynamic DID – Figure 4

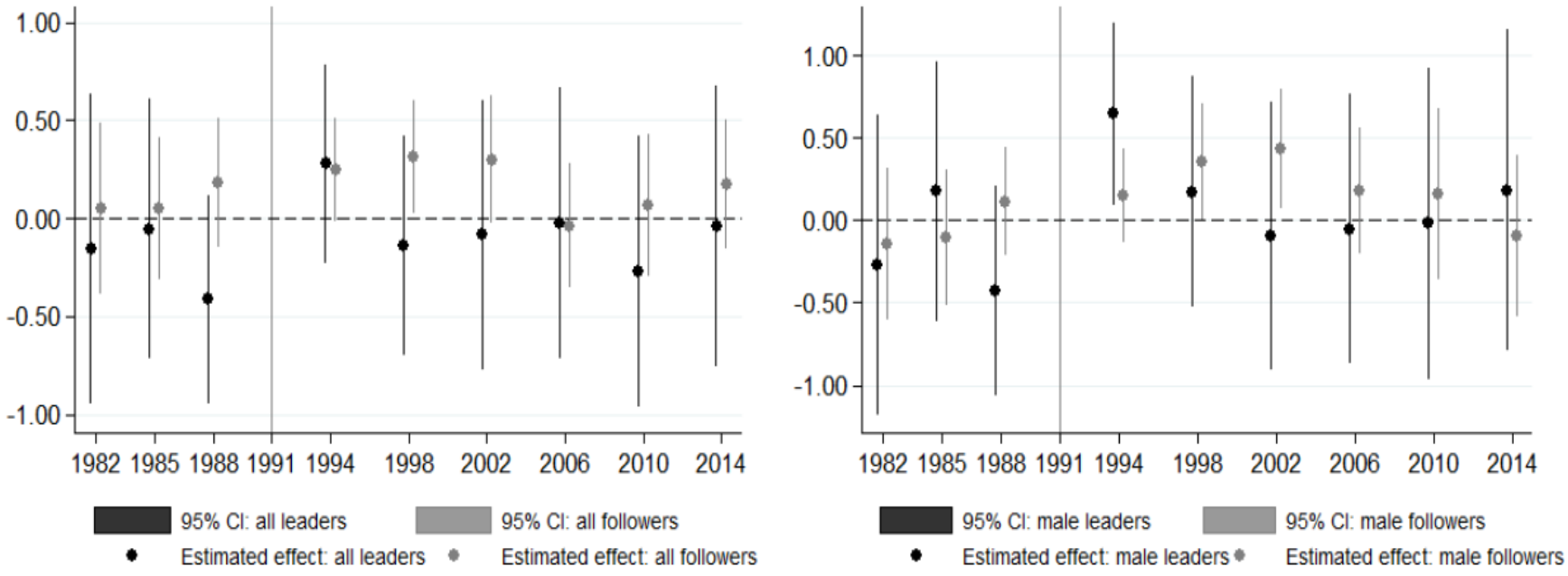




Results robust to

- dropping sample restrictions (Table W7)
- measuring quota bite in alternative ways (Table W8)
- controlling for municipal variables interacted with electoral-year dummies in the dynamic DID (Table W9)
- using shares of competent in other parties as placebo (Table W10)
- measuring follower competence by Leadership and Cognitive scores (Tables W11 and W12)

Leaders vs. followers DID – Figure 5



- higher competence not only mechanical effect of fewer men
- among men, effect on leaders immediate, on followers lagged

Do effects run via resignations?

Intriguing time pattern

- competence of male leaders improves already in 1994, of male followers only in next two elections

Could this reflect leader resignations?

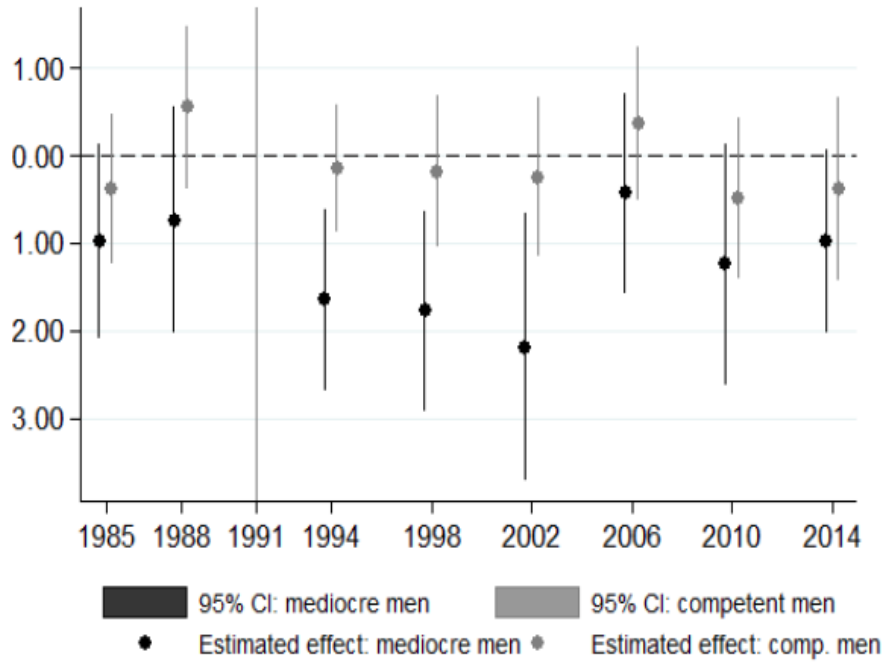
- yes, if mediocre leaders were more likely to resign
- to check, estimate *individual-level* triple difference

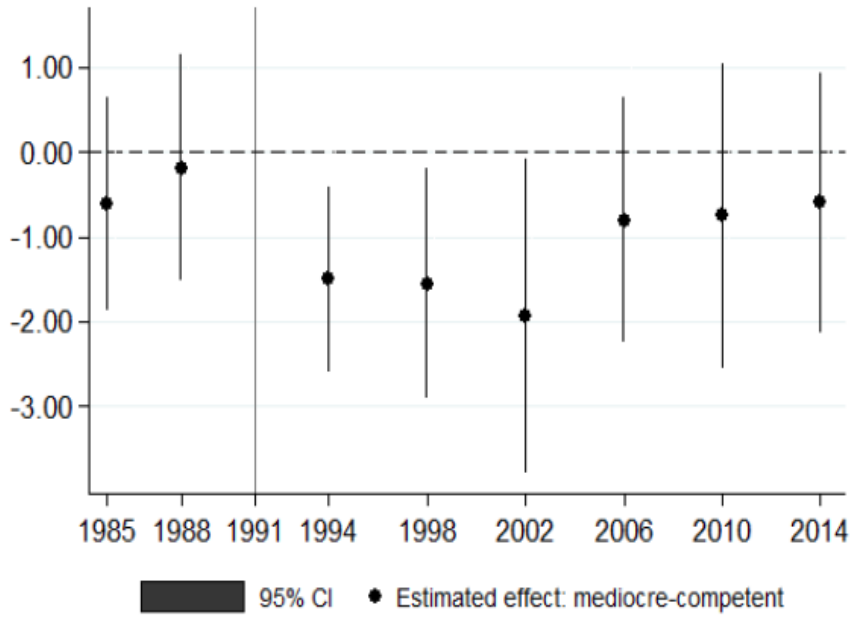
$$\begin{aligned} s_{i,t} &= \beta_t(\Delta w_{m,91-94} \times elec_t \times l_i) + elec_t \times l_i + \Delta w_{m,91-94} \times l_i \\ &\quad + \Delta w_{m,91-94} \times elec_t + a_m \times l_i + l_i + elec_t + \alpha_m + \varepsilon_{i,t} \end{aligned}$$

$s_{i,t}$ dummy for surviving – not resigning *before* election t – of leader i (from top 3), and l_i individual dummy for mediocracy

- or, run DID separately for competent and mediocre leaders

Leader resignations DID – Figure 6





Roadmap

1. A simple model
2. Data and results for ability
3. The zipper quota
4. **Making theoretical sense of results**
5. Final remarks

Extend simple model

Distinguish male and female candidates

- w_D, party D share of women, chosen along with r_D at stage 2

Preferences of representative voter

$$v_D = \alpha l_D + (1 - \alpha) r_D + \mu (w_D)$$

- $\mu (w_D)$ concave, max at $1/2$ – average voter wants equal representation

Leadership survival at stage 2

$$\sigma (w_D, r_D) - l_D + \varepsilon < 0$$

- "threat function" $\sigma (\cdot)$ increasing and convex in both arguments
- probability of survival now $Q(l_D - \sigma (w_D, r_D))$

Optimal choice of candidates

Focus on partial equilibrium

- party D choices, for given v_B offered by party B

Unconstrained optimum conditions

- for share of competent r_D

$$-\sigma_r q(l_D - \sigma(w_D^*, r_D^*))e + p(v_D - v_B)(1-\alpha) = 0$$

  leader faces similar tradeoff as in simple model

- for share of females w_D

$$-\sigma_w q(l_D - \sigma(w_D^*, r_D^*))e + p(v_D - v_B)\mu_w(w_D^*) = 0$$

  1st term negative, so sets $w_D^* < 0.5$ where μ slopes upward

Interpretation?

- think about this as the pre-quota equilibrium

Effects of quota

Suppose central party sets $w_D = w$

- define constrained share of competent $R_D(w, l_D)$ from

$$-\sigma_r(w, R_D(w, l_D))\, q(l_D - \sigma(w, R_D(w, l_D)))e$$

$$p(\alpha l_D + (1-\alpha) R_D(w, l_D) + \mu(w) - v_B)(1-\alpha) = 0$$

- effect on competence induced by $w = \frac{1}{2}$ quota

$$\Delta r_D = \int_{w_D^*}^{1/2} \frac{\partial R_D(w, l_D)}{\partial w} dw \cong \frac{\partial R_D(w_D^*, l_D)}{\partial w} \left[\frac{1}{2} - w_D^*\right]$$

  which has uncertain sign, as sign of $\frac{\partial R_D(w_D^*, l_D)}{\partial w}$ uncertain
- whichever sign, effect proportional to quota bite $\left[\frac{1}{2} - w_D^*\right]$
- effect on leadership survival

$$\Delta\sigma = \int_{w_D^*}^{1/2} \frac{d\sigma(w, R_D(w, l_D))}{dw} dw \cong \frac{d\sigma(w_D^*, R_D(w_D^*))}{dw} \left[\frac{1}{2} - w_D^*\right]$$

  which also has uncertain sign
- what is missing? – a role for resignations!

Allow for leader resignations

New stage 1.5, before choice of r_D and w_D

- incumbent leader l_D may resign – if so, new leader with competence z_D drawn at random
- let $W(w, z_D)$ be choice by new leader when female quota is w
- higher l_D has higher payoff if stays in office

Equilibrium resignations

- exists a cutoff such that $l_D < \hat{l}_D(w)$ resign, with $\hat{l}_D(w)$ increasing in w – more mediocre leaders resign as face greater threats from women
- a strict quota $w = \frac{1}{2}$ implies an approximate cutoff shift by

$$\hat{l}\left(\frac{1}{2}\right) - \hat{l}_D(0) \simeq \frac{\partial \hat{l}_D(0)}{\partial w}\left[\frac{1}{2} - W(0, l_D)\right]$$

Prediction *A quota raises resignation rates for mediocre leaders, with larger effect at greater quota bite*

- expected follower competence rises with increasing resignations by mediocre leaders

Roadmap

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Final remarks

Theory – new modeling

- selection of candidate ability in list system: mediocre followers picked by mediocre leaders who worry about their own survival
- if female quota shift such leaders' attention from surviving to winning elections, leader turnover and follower competence rise

Data – new measurement

- measure ability by Earnings score
- validated in three ways

Empirics – new substantive findings

- strong link between leader and follower competence
- a stricter quota raised competence, among men
- immediate wave of resignations by mediocre leaders, and more competent followers in subsequent elections
- like in Lecture 1, more equal representation does not compromise meritocracy