

Reserving Female Status — Women Reserved Seats and Gender Empowerment in Taiwan

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Background

Data and Identification Strategy

Results

Remarks

1. We utilized women reserved seats in council elections to estimate casual effects of gender quotas on female status.
2. Increased gender quotas leads to lower son preference, which is supported by newborns data and survey.
3. No significant effect on gender role attitudes.

Background

A Progressive Gender Perspective of *ROC Constitution*

中華民國憲法第 134 條

各種選舉，應規定婦女當選名額，其辦法以法律定之。

- Mandatory women reserved seats in *any* election codified in *ROC Constitution* since 1946
- Local council elections in Taiwan reserved 1 woman seat per 4 elected member (or per 5 before 1999)
 - Guaranteeing 14% ~ 25% female representatives for electoral districts having ≥ 4 members
- The lowest voted male winner will be replaced by highest voted female candidate if the requirement doesn't meet.

Past researches on effects of women political representation utilized a natural experiment in India

1993 Constitution Amendment in India

- 1/3 seats reserved for women in local council elections
- Higher female political representation due to this policy
- **Identification:** States adopting this policy was designated randomly, causing random treatment and time variation

Outcomes: son preference, crime against women, educational attainment/investment, gender attitudes, etc.

Data and Identification Strategy

Outcomes: Son Preference

1. Having 3rd child
2. Sex ratio of 3rd parity

From MOI Newborns Data between 1998 and 2006

- Samples: Couples who already have 2 children, deciding whether to have 3rd one.
- Transformed into balanced panel data by couple and year

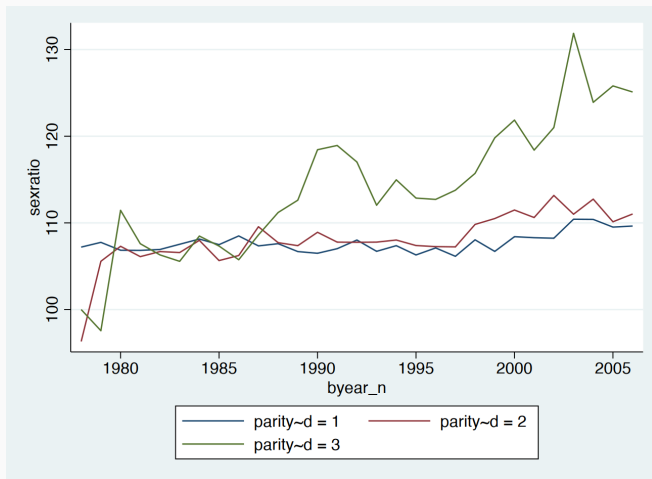


Figure 1: Newborns Sex Ratio by Parity

Survey Outcomes: Son Preference & Gender Role

Taiwan Social Change Survey

- Sample: Period 2001, 2006
 1. 「為傳宗接代，至少要生一兒子」
 2. 「一個家庭幾個小孩最理想」
- Sample: Period 2011, 2016
 - Gender role variables

Vote data from 1998, 2002, 2005 council elections.

Instrument: % of reserved seats

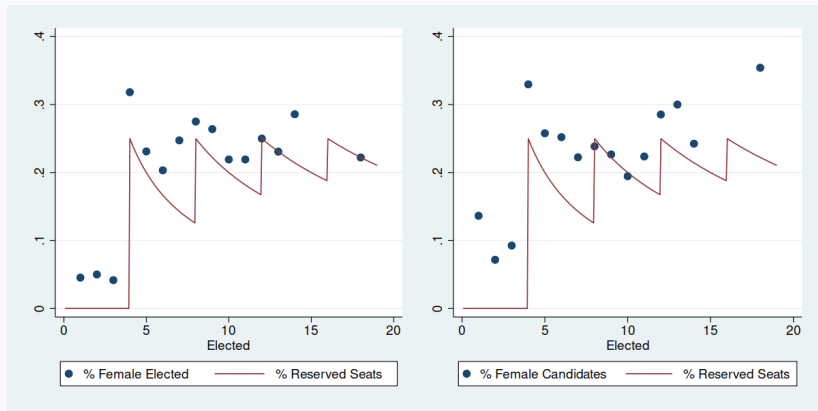
- $Z_{ed} = \frac{\text{Reserved Seats 保留名額數}}{\text{Member Size 應選人數}}$, in election year e , electoral district d
- Determined by population size of electoral district.

Potential Treatments

- % female elected
- % female candidates

Both could affect outcomes. Exclusion restriction not satisfied. Thus I'll present 1st stage and reduced form.

1st Stage Estimations



Control for population size to prevent OVB.

1st Stage Estimations

$$X_{td} = \alpha + \beta_1 \% \text{ Reserved Seats}_{td} + \gamma_1 \ln \text{pop}_{tc} + \delta_t + \delta_c$$

in election year t , district d , county c

Table 1: 1st Stage

	(1)	(2)
	% Elected Female	% Female Candidates
% Reserved Seats	1.029*** (0.0620)	0.758*** (0.0578)
Population Control	Yes	Yes
Election Year FE	Yes	Yes
County FE	Yes	Yes
Observations	2210	2210

Standard errors in parentheses

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

Results

Reduced form specification:

$$Y_{itcd} = \alpha + \rho_1 \% \text{ Reserved Seats}_{td} + \gamma_1 \ln \text{pop}_{tc} + X'_i \eta + \delta_t + \delta_c$$

for couple i , year t , county c , electoral district d

Birth Outcome: Having 3rd Child

	(1)	(2)	(3)	(4)	(5)
	Full Sample	High School	Non-HS	Urban	Non-Urban
% Reserved Seats	-0.00864*** (0.00289)	-0.00568 (0.00417)	-0.0157*** (0.00301)	-0.00898 (0.00719)	-0.00690** (0.00309)
Daughter Son \times % Reserved Seats	0.00645** (0.00263)	0.00182 (0.00403)	0.0160*** (0.00284)	0.0129* (0.00713)	0.00420 (0.00285)
Son Daughter \times % Reserved Seats	0.00651** (0.00261)	0.00671 (0.00417)	0.0125*** (0.00268)	0.0178** (0.00681)	0.00375 (0.00280)
Both Son \times % Reserved Seats	0.00655** (0.00281)	0.00570 (0.00424)	0.0135*** (0.00299)	0.0178*** (0.00649)	0.00357 (0.00304)
Age, Edu Control	Yes	Yes	Yes	Yes	Yes
Log-Population Control	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Mean	0.00969	0.0126	0.00715	0.00699	0.0105
Observations	6654418	3088955	3565463	1525767	5128651
Adj. R-square	0.0145	0.0153	0.0130	0.00928	0.0155

Standard errors in parentheses

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

Birth Outcome: 3rd Parity Sex Ratio

	(1)	(2)	(3)	(4)	(5)
	Full Sample	High School	Non-HS	Urban	Non-Urban
% Reserved Seats	0.0357 (0.0463)	0.00469 (0.0631)	0.0305 (0.0719)	0.261 (0.196)	0.0207 (0.0478)
Daughter Son \times % Reserved Seats	-0.0549 (0.0735)	-0.0667 (0.0977)	0.0253 (0.112)	-0.213 (0.315)	-0.0446 (0.0755)
Son Daughter \times % Reserved Seats	0.0300 (0.0690)	0.143 (0.0969)	-0.0308 (0.108)	0.104 (0.241)	0.0363 (0.0723)
Both Son \times % Reserved Seats	0.00702 (0.0694)	-0.0831 (0.0918)	0.175 (0.108)	-0.276 (0.258)	0.0197 (0.0716)
Age, Edu Control	Yes	Yes	Yes	Yes	Yes
Log-Population Control	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Mean	0.551	0.560	0.537	0.556	0.550
Observations	64470	38971	25499	10659	53811
Adj. R-square	0.0106	0.0127	0.00638	0.00906	0.0109

Standard errors in parentheses

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

Survey Outcome: Son Preference

From TSCS 2001, 2006.

	(1) 至少生一兒子	(2) 理想小孩數
Reserved Seats %	-0.159 (0.262)	-0.623 (0.642)
女 × Reserved Seats %	-0.493** (0.200)	0.524 (0.765)
Age, Edu Control	Yes	Yes
Log-Population Control	Yes	Yes
Year FE	Yes	Yes
County FE	Yes	Yes
Mean	0.460	2.395
Observations	3697	1980
Adj. R-square	0.130	0.0780

Standard errors in parentheses

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

Survey Outcome: Gender Role

From TSCS 2011, 2016; 1 = Pro-female

	(1) 丈夫的責任就是賺錢, 妻子的責任就是照顧家庭	(2) 如果母親外出工作, 對還沒上小學的小孩比較不好	(3) 當妻子有份全天(職)的工作時, 家庭生活總是會受到妨害	(4) 在經濟不景氣時, 女性員工應比男性員工先被解僱
Reserved Seats %	0.140 (0.130)	-0.0324 (0.139)	0.106 (0.154)	-0.180* (0.101)
女 × Reserved Seats %	0.231 (0.214)	0.0812 (0.200)	0.219 (0.201)	0.186 (0.120)
Age, Edu Control	Yes	Yes	Yes	Yes
Log-Population Control	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Mean	0.565	0.448	0.532	0.866
Observations	4057	4024	4031	3970
Adj. R-square	0.226	0.0187	0.00833	0.0472

Standard errors in parentheses

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

Remarks

- Weaken son preference: Higher satisfaction of current status for couples without son.
- Women with lower educational attainment was more susceptible to exposure
- Survey confirmed decreasing son preference.
- No significant effect on gender role attitudes.

Possible Mechanisms

1. Role model effects:

Interaction between female council member and female voters.

2. Policy effects:

Public good provision, pro-female & childcare policies.