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

Yu-Hsin Ho

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Department of Economics, National Taiwan University

Background

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Background

> 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
    - Established long before new left feminism movement in 1960s Western world
    - Mainly Influenced by May Fourth Movement（新文化運動）and KMT-CCP Alliance（聯俄容共）(黃長玲，2012）

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.

- Local council elections in Taiwan reserved 1 woman seat per 4 elected member
  - Guaranteeing 14% ~ 25% female representatives for electoral districts having ≥ 4 members
- If the number of female elected doesn't meet the requirement, then the lowest voted male winner will be replaced by highest voted female candidate.
- This provides neater identification of policy effect than India

- Effects of women reserved seats on **female political representation**
- And its corresponding effects on **female social status**

Data and Identification Strategy

Elected Female % $E_{tde} = \frac{\text{Female Member Size 女性當選人數}}{\text{Member Size 應選人數}}$ in year t, period e, and electoral district d.
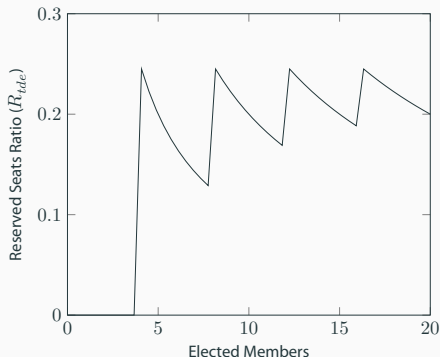
Data gathered from the City Council Elections:

- from 1998 to 2018 (6 periods in total)
- electoral district level

We use IV to deal with endogeneity of E_{tde}, instrumented by the % of reserved seats for women R_{tde}.

Reserved Seats % $R_{tde} = \frac{\text{Reserved Seats 保留名額數}}{\text{Member Size 應選人數}}$ in year t, period e, and electoral district d.

We capture this discontinuous "ticks" as instrument of treatment.

1st Stage

Effects of women reserved seats on **female political representativeness**

2nd Stage

Treatment effects on couple's **son preference**

- Variables:
  1. **Third Child**: Dummy of having 3rd child or not
  2. **Third Child is Son**: Dummy of 3rd child being male
- Data: Newborns Birth Data 出生人口檔 between 1998 to 2006
- Observation: couple level

2SLS Specification

2nd Stage:

$$Y_{itde} = \alpha + \beta_1 \hat{E_{tde}} + \gamma_1 \ln \text{population}_{\text{county}} + \delta_t + \delta_d + \epsilon_i$$

1st Stage:

$$\hat{E_{itde}} = \alpha + \beta_1 R_{tde} + \gamma_1 \ln \text{population}_{\text{county}} + \delta_t + \delta_d$$

Controlling ln population to resolve omitted variable bias.

Estimations

Elasticity of reserved seats on female elected and female candidates are high.

Table 1: 2SLS 1st Stage

	(1) Female Elected %	(2) Female Candidates %
Reserved Seats %	0.917***	0.781***
	(0.0785)	(0.0634)
Population Control	Yes	Yes
Election Year FE	Yes	Yes
County FE	Yes	Yes
Observations	966	966

Standard errors in parentheses

$^*\ p < 0.05,\ ^{**}\ p < 0.01,\ ^{***}\ p < 0.001$

Table 2: Summary Statistics of Samples

	count	mean	sd	min	max
year	302972	2000.762	2.015725	1998	2006
byear_n1	302972	2000.762	2.015725	1998	2006
byear_n2	302972	2002.895	2.112062	1998	2006
byear_n3	26532	2003.661	1.824804	1998	2006
sex1	302972	.4973529	.4999938	0	1
sex2	302972	.5256327	.4993434	0	1
sex3	26532	.5505427	.4974482	0	1
thirdChild	302972	.0875724	.2826726	0	1
bachelor_f	302972	.1854264	.3886437	0	1
bachelor_m	302972	.1484197	.3555161	0	1
age_f	302972	29.77056	4.543678	14	76
age_m	302972	26.90372	4.307737	13	55
population	302972	1577592	1034718	6560	3767095
N	302972				

Table 3: 2SLS Birth Outcomes of City Council Elections

	(1) Having 3rd Child	(2) Having 3rd Child	(3) 3rd Child is Son	(4) 3rd Child is Son
% Elected Female	-0.277***	-0.0460***	0.00108	0.0866
	(0.0237)	(0.0122)	(0.0576)	(0.0594)
1 sex	-0.0275***	-0.0273***	-0.0632***	-0.0627***
	(0.00111)	(0.00110)	(0.00595)	(0.00594)
2 sex	-0.0309***	-0.0309***	-0.0147*	-0.0147*
	(0.00117)	(0.00115)	(0.00622)	(0.00623)
Parent Age, Edu Control	Yes	Yes	Yes	Yes
Log-Population Control	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	Yes
County FE	No	Yes	No	Yes
Mean	0.0876	0.0876	0.551	0.551
Observations	302972	302972	26532	26532
Adj. R-square	0.00377	0.0305	0.00427	0.00422

Standard errors in parentheses

$^*\ p < 0.05, ^{**}\ p < 0.01, ^{***}\ p < 0.001$

Table 4: 2SLS Subgroup Birth Outcomes of City Council Elections

	Full Sample		Bachelor	Non-Bachelor
	(1)	(2)	(3)	(4)
	Having 3rd Child	Having 3rd Child	Having 3rd Child	Having 3rd Child
% Elected Female	-0.432***	-0.195***	-0.261***	-0.176***
	(0.0419)	(0.0285)	(0.0630)	(0.0299)
Both Daughter × % Elected Female	0	0	0	0
	(.)	(.)	(.)	(.)
Daughter Son × % Elected Female	0.224***	0.215***	0.365***	0.184***
	(0.0338)	(0.0332)	(0.0871)	(0.0341)
Son Daughter × % Elected Female	0.219***	0.211***	0.339***	0.183***
	(0.0342)	(0.0334)	(0.0818)	(0.0351)
Both Son × % Elected Female	0.147***	0.149***	0.284***	0.119***
	(0.0321)	(0.0315)	(0.0731)	(0.0334)
Parent Age, Edu Control	Yes	Yes	Yes	Yes
Log-Population Control	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes
County FE	No	Yes	Yes	Yes
Mean	0.0876	0.0876	0.0582	0.0927
Observations	302972	302972	44967	258005
Adj. R-square	0.00530	0.0325	0.0149	0.0331

Standard errors in parentheses

$^{*} p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$

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Outcome: 3rd Child

1. Increase Female **Bargaining Power**
   - Only couples with extreme sex composition consider to have 3rd child
   - Decreased willingness to pay additional son/daughter
   - No effects on college graduates (high bargaining power already)
2. Weaken **Son Preference**
   - Larger effect on couples without son

Outcome: Sex ratio of 3rd parity

- Indicating behaviors of those who had conservative gender attitudes
   - Higher willingness to pay for a son
- Sex selection existed, and higher female representation didn't abolish it.

Potential Issues

Outcomes on Gender Attitudes
- Taiwan Social Change Survey

Other Influencing Channels
- Elected or Candidacy?

Mechanisms
- Role-model effect
- Policy effect
    - Labor market outcomes
    - Pro-female policies