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

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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.
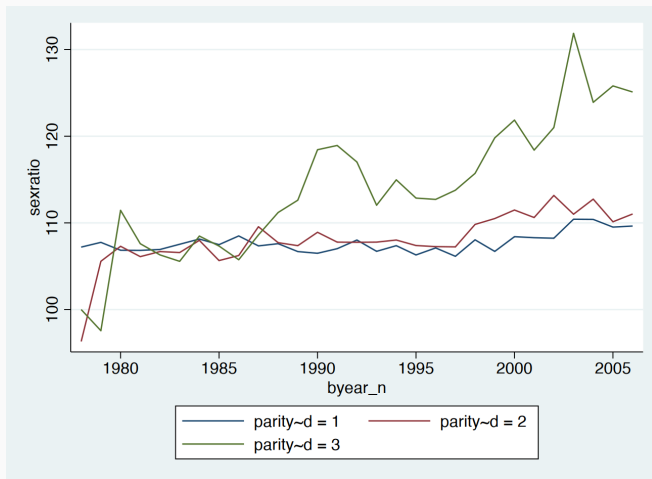- Transformed into balanced panel data by couple and year

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 satistied. Thus I'll present 1st stage and reduced form.
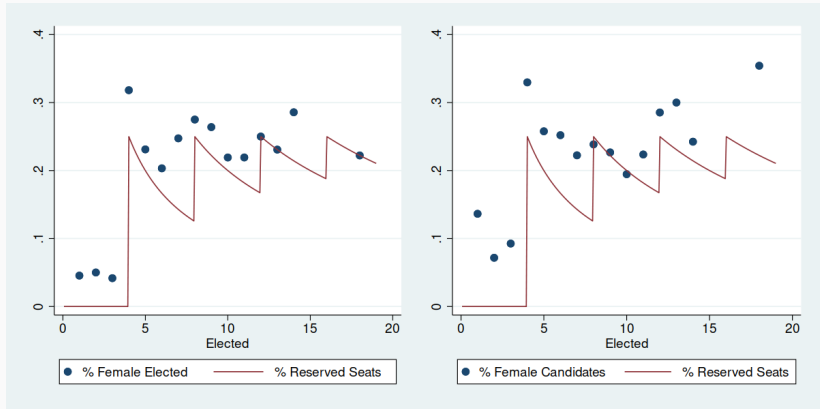
Figure 2: Reservation, Actual Female Elected & Candidates

1st Stage specification

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

in election year t, district d, county c
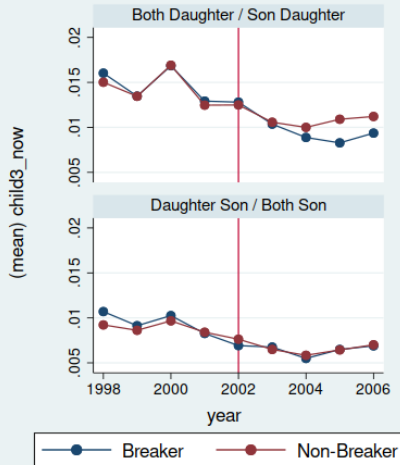
Table 1: 1st Stage

	(1) % Elected Female	(2) % Female Candidates
% Reserved Seats	1.029***	0.758***
	(0.0620)	(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

Birth Outcome: Having 3rd Child

Figure 3: Breaker v.s. Non-breaker Group Outcomes

Table 2: Outcome: 3rd Child Now

	(1) Full Sample	(2) High School	(3) Non-HS	(4) Urban	(5) Non-Urban
% Reserved Seats	−0.008 64***	−0.005 68	−0.0157***	−0.008 98	−0.006 90**
	(0.002 89)	(0.004 17)	(0.003 01)	(0.007 19)	(0.003 09)
Daughter Son × % Reserved Seats	0.006 45**	0.001 82	0.0160***	0.0129*	0.004 20
	(0.002 63)	(0.004 03)	(0.002 84)	(0.007 13)	(0.002 85)
Son Daughter × % Reserved Seats	0.006 51**	0.006 71	0.0125***	0.0178**	0.003 75
	(0.002 61)	(0.004 17)	(0.002 68)	(0.006 81)	(0.002 80)
Both Son × % Reserved Seats	0.006 55**	0.005 70	0.0135***	0.0178***	0.003 57
	(0.002 81)	(0.004 24)	(0.002 99)	(0.006 49)	(0.003 04)
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	0.009 69	0.0126	0.007 15	0.006 99	0.0105
Observations	6 654 418	3 088 955	3 565 463	1 525 767	5 128 651
Adj. R-square	0.0145	0.0153	0.0130	0.009 28	0.0155

Standard errors in parentheses, clustered on year-township

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

Table 3: Outcome: 3rd Parity Sex Ratio

	(1) Full Sample	(2) High School	(3) Non–HS	(4) Urban	(5) Non–Urban
% Reserved Seats	0.0357	0.004 69	0.0305	0.261	0.0207
	(0.0463)	(0.0631)	(0.0719)	(0.196)	(0.0478)
Daughter Son × % Reserved Seats	−0.0549	−0.0667	0.0253	−0.213	−0.0446
	(0.0735)	(0.0977)	(0.112)	(0.315)	(0.0755)
Son Daughter × % Reserved Seats	0.0300	0.143	−0.0308	0.104	0.0363
	(0.0690)	(0.0969)	(0.108)	(0.241)	(0.0723)
Both Son × % Reserved Seats	0.007 02	−0.0831	0.175	−0.276	0.0197
	(0.0694)	(0.0918)	(0.108)	(0.258)	(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	64 470	38 971	25 499	10 659	53 811
Adj. R-square	0.0106	0.0127	0.006 38	0.009 06	0.0109

Standard errors in parentheses, clustered on year-township

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

Survey Outcome

Sample: TSCS 2001 & 2006

	(1) 至少生一兒子	(2) 理想小孩數
Reserved Seats %	−0.159	−0.623
	(0.262)	(0.642)
女 × Reserved Seats %	−0.493**	0.524
	(0.200)	(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, clustered on year-township

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

TSCS 2011 & 2016; 1 = Pro-female; 0 = Pro-male

	(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	−0.0324	0.106	−0.180*
	(0.130)	(0.139)	(0.154)	(0.101)
女 × Reserved Seats %	0.231	0.0812	0.219	0.186
	(0.214)	(0.200)	(0.201)	(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	0.008 33	0.0472

Standard errors in parentheses, clustered on year-township

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

Remarks

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- Weaken son preference: Higher satisfaction 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 (after 2011)

Possible Mechanisms

1. Role model effects:

   Interaction between female council member and female voters.

2. Policy effects:

   Public good provision, pro-female & childcare policies.