

Jobs for the Boys? Exploring gender bias in director's selection through corporate control activity*

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Statement of the problem:

Women are still underrepresented on boards of directors around the world: in UK (Vinnicombe et al., 2016), US (Kogut et al., 2014), Spain (Mateos de Cabo et al., 2011), Italy (Bianco et al., 2011) or France (Nekhili and Gatfaoui, 2013). In the US, women were in 2016 a 19.9% of board seats in Fortune 500 companies (Catalyst, 2016).

Two potential explanations (Gabaldón, et al., 2016):

- ***Demand-side factors:*** discriminatory barriers that prevent the promotion and progression of certain director groups (glass-ceiling).
- ***Supply-side factors:*** limited number of suitably qualified female directors for boardroom appointments (Gregory-Smith, 2014).

Statement of the problem:

The **crucial challenge for empirical studies** is that both supply and demand side arguments may explain the low representation of female and minority directors.

→ Studies only observe successfully **appointed** candidates. They do not observe the qualified candidates who were evaluated but not appointed.

→ In this study, the empirical strategy we employ is to **identify potential biases in the recruitment of directors** is based on board appointments after completed M&As.

Strategy:

In an M&A, we know who are the directors of the target firm, and we can observe those directors that are not able to make their way to the merged firms, as long as those that are successfully appointed.



We isolate potential **demand side** factors (glass-ceiling/recruitment bias)...

...and exclude **supply side** factors (i.e., reduce pool of suitable female candidates, self-selection, differences in values and attitudes, identification with gender roles, work-family conflict)

Demand side factors:

There are several kinds of discrimination that can bias the selection process:

- *Taste-based discrimination* (Becker, 1957).
- *Implicit discrimination* (Bertrand et al., 2005)
- *Statistical discrimination* (Phelps, 1972)
- *Mistake-based discrimination* (Wolfers, 2006)
- *Oportunistic discrimination* (Harbaugh and To, 2014)

Supply side factors:

The possible remanence of supply side factors in our empirical stratetgy should play a minor role:

- *Reduced pool of women candidates:* we observe the actual supply of female candidates considered
- *Gender differences in values and attitudes:* at the board level women should have similar needs and values as their male counterparts (Adams and Funk 2012; Powell, 1990)
- *Identification to gender expected roles:* in M&As women candidates have already played a role as board member.
- *Work-family conflict:* a switch of boards should not aggravate this conflict.

Previous studies:

There is a scarcity of papers that are able to identify (indirect) evidence of the presence of gender discrimination on boards:

- **Farrell and Hersch (2005, for US) and Gregory-Smith et al. (2014, for UK):** the appointment decisions are biased towards replicating the gender of the departing director.
- **Mateos et al. (2011):** find evidence of several kinds of discrimination (taste-based, statistical and mistake-based) against women behind the scarce presence of women on Spanish boards of directors.
- **Smith et al. (2010):** panel of executives of 3000 Danish firms, and look for patterns of promotion.
- **Fernandez-Mateo and Fernandez (2016):** Follow the selection process of a UK headhunter.

Sample selection

Thomson Reuters Mergers & Acquisition database

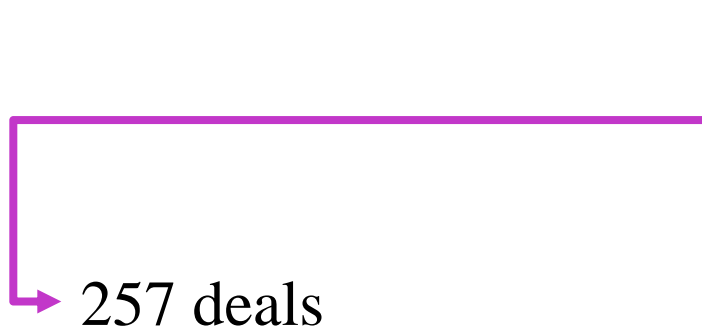
261,879 M&A deals between US firms

- **Of which 39,436 are between firms that are both listed**
- **Of which 25,335 were announced between 1996 and 2015**
- **Of which 5,050 lead to the acquirer owning more than 50% of the target**
- **Of which 4,984 are not privatizations, self-tenders, spin-offs, leveraged buyouts or recapitalizations.**
- **Of which 4,958 were completed by the end of 2015**

Sample selection

ISS directors database

For each of the 4958 M&As, we look for those deals where we have information on the composition of the target board the year before the announcement of the M&A, and the composition of the acquirer board the year after the completion of the deal.



Sample selection

12,2% of the target board are appointed to the merged board.

	Obs	Mean	Std. Dev.	Min	Max
Appointment	2309	0.122	0.328	0	1
Female	2309	0.097	0.296	0	1
Eth_hispanic	2309	0.011	0.106	0	1
Eth_african_american	2309	0.044	0.205	0	1
Eth_others	2309	0.013	0.111	0	1
Age>65	2308	0.288	0.453	0	1
Voting_power	2309	1.012	5.891	0	86.2
Number_other boards	2309	0.860	1.211	0	9
Tenure	1968	8.137	7.061	0	56
Independent	2309	0.715	0.451	0	1
Non_attendance	2309	0.014	0.117	0	1
Member_audit	1966	0.406	0.491	0	1
Member_compensation	1966	0.401	0.490	0	1
Member_governance	1966	0.280	0.449	0	1
Member_nomination	1966	0.355	0.478	0	1

Model:

$$Pr[Appointment_{jf}] = F(\alpha_j + \beta \cdot Female_{jf} + \Gamma \cdot X_{jf})$$

→ **Dependent variable:** *'Appointment'*

→ **Independent variable:** *Female*

Control variables:

- Ethnic minority variables: African-American, Hispanic and Asian.
- Age>65
- Voting Power.
- Number of other boards
- Tenure
- Independent director
- Meeting attendance
- Member of committee: Audit; Compensation; Governance; Nomination

Deal fixed effects:

- A dummy for each deal/firm. This allow for any feature of both target and acquirer firm as well as deal or economic conditions that might also affect the probability of appointment.

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Model Estimations

VARIABLES	Logit			Probit		
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.571** (0.291)	-0.539* (0.300)	-0.495* (0.296)	-0.345** (0.168)	-0.323* (0.172)	-0.307* (0.170)
Eth_hispanic	-0.918 (1.030)	-0.797 (1.110)	-1.012 (1.284)	-0.588 (0.624)	-0.499 (0.662)	-0.572 (0.734)
Eth_africanamerican	0.025 (0.451)	0.050 (0.450)	-0.106 (0.466)	0.024 (0.259)	0.039 (0.259)	-0.042 (0.268)
Eth_others	-0.539 (1.255)	-0.578 (1.241)	-0.659 (1.279)	-0.236 (0.687)	-0.258 (0.685)	-0.330 (0.695)
Age65	-1.201*** (0.224)	-1.013*** (0.236)	-1.055*** (0.240)	-0.715*** (0.126)	-0.604*** (0.135)	-0.631*** (0.136)
Voting_power		0.054 (0.038)	0.050 (0.035)		0.027* (0.015)	0.026* (0.014)
Number_other_boards		0.139 (0.086)	0.146* (0.086)		0.079 (0.052)	0.082 (0.051)
Tenure		-0.010 (0.019)	-0.010 (0.020)		-0.006 (0.011)	-0.006 (0.011)
Independent		-0.261 (0.226)	-0.092 (0.271)		-0.179 (0.133)	-0.078 (0.161)
Non_attendance		-16.566 (0.000)	-17.977 (0.000)		-4.472*** (0.120)	-4.421*** (0.124)
Member_audit			-0.406** (0.202)			-0.242** (0.116)
Member_compensation			-0.226 (0.228)			-0.130 (0.132)
Member_governance			0.231 (0.474)			0.152 (0.270)
Member_nomination			0.174 (0.411)			0.101 (0.233)
Constant	-18.409 (168.578)	-19.018 (.)	-18.691*** (2.145)	-5.663*** (0.177)	-5.643*** (0.239)	-5.622*** (0.246)
Observations	2,308	1,967	1,965	2,308	1,967	1,965
Deal/Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	43.29%	43.75%	44.00%	43.37%	43.84%	44.13%
Hosmer-Lemeshow	1.28	3.38	4.59	2.74	3.81	5.26
Pearson chi2	219.27	788.10	806.93	215.63	765.22	789.22
Sensitivity	35.46%	36.80%	37.50%	34.04%	36.80%	37.10%
Specificity	97.63%	97.32%	97.03%	97.73%	97.20%	96.97%
Correctly classified	90.03%	89.63%	89.52%	89.95%	89.53%	89.41%

The effect of personal characteristics on the probability of director appointment

Logit Model (model 3)

	mean	median	min	max	p5	p95
Female	0.354	0.383	0.001	0.603	0.056	0.564
Eth_hispanic	0.228	0.249	0.001	0.360	0.049	0.342
Eth_africanamerican	0.500	0.534	0.001	0.888	0.070	0.828
Eth_others	0.312	0.339	0.001	0.512	0.058	0.484
Age65	0.200	0.214	0.001	0.345	0.038	0.317

Probit Model (model 6)

	mean	median	min	max	p5	p95
Female	0.661	0.651	0.394	0.977	0.495	0.854
Eth_hispanic	0.441	0.418	0.164	0.945	0.243	0.705
Eth_africanamerican	0.947	0.947	0.886	0.998	0.911	0.980
Eth_others	0.634	0.624	0.366	0.975	0.462	0.830
Age65	0.434	0.410	0.135	0.936	0.240	0.702

Conclusions:

- ✓ We use M&As as a natural experiment to empirically identify potential biases (**demand-side**) in the appointment of directors.
- ✓ Female candidates are between $1/3$ and $2/3$ less likely of being **appointed** than their male colleagues.
- ✓ This effect is **independent of supply-side** factors such as lack of female candidates, self-selection, differences in values and attitudes, identification with gender roles, work-family conflict.
- ✓ The isolated recruitment bias **can only be compensated** through direct measures such as **soft or hard quotas**.



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