Managers' gender attitudes and the gender gap: How daughters affect their manager fathers HR practices

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PRELIMINARY: PLEASE DO NOT CIRCULATE

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Despite convergence in employment and earnings, women are still confronted with **unequal economic opportunities**

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$\Rightarrow$ Actions of individuals responsible for corporate practices (wages, promotion, retention) influence the gender gap in the LM

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- If these evaluations have a **gender component**, then they affect the career progression of female workers relative to men

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Managers' **gender attitudes** $\Rightarrow$ HR practices towards female employees $\Rightarrow$ overall gender gap in the firms

This paper

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Female socialisation hypothesis (FSH): parents with daughters are more likely to hold egalitarian views

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- Parents want the best for their children and care about policies that hinder/help their offspring
- Structural and cultural barrier still exist for girls in our society

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- Parents want the best for their children and care about policies that hinder/help their offspring
- Structural and cultural barrier still exist for girls in our society
- Particularly true for **fathers**: having a daughter makes men more aware of the existence of gender biases

"Men may see gender equity as a more "personal" issue when it has the potential to affect their children"

Related work - Female socialisation hypothesis

Few **economic** studies tested the FSH impact on:

- **Political outcomes**: parenting a daughter increases propensity of male members of US Congress to vote liberally on gender-related cases (Washington, 2008) and to vote for left-wing parties in the population (Oswald et al., 2010)

- **Corporate outcomes**: CSR spending (Cronqvist and Yu, 2017), diversity and VC performance (Gompers and Wang, 2017)

- Role of the FSH for **gender inequality in LM** outcomes of women has been overlooked!

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This paper contribution: focus on gender gap in the LM

- FSH influence in the context of male **managers** and the definition of HR practices

- **Methodological** improvements

Related work - Gender norms

Sociologists: fathers incorporate part of their daughter's identity in forming their gender role perceptions

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Growing lit in econ: gender norms - prescribe how the social category of men/women should behave - explain the gender-gap

- **Adherence** to gender roles explains:
  - ▸ **women** LF participation (Fortin, 2005; Bertrand et al., 2015)
  - ▸ division of domestic work and marriage formation in the **household** (Bertrand et al. 2015; Fernandez and Fogli, 2009)

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    - ▶ **women** LF participation (Fortin, 2005; Bertrand et al., 2015)
    - ▶ division of domestic work and marriage formation in the **household** (Bertrand et al. 2015; Fernandez and Fogli, 2009)
- Much less on the **origins**:
    - ▶ **parental** characteristics (Olivetti et al, 2016; Fernandez et al, 2004); culture (Fernandez and Fogli, 2009)

This paper contribution:

- More on **origins** and malleability of norms
- Different angle on **impact**: gender attitudes of male top-decision makers for labour market outcomes outside the household

Approach and preview of findings

1. Given the decision of having a child, gender is exogenous: natural-experiment setting

   - Exploit variation **across-establishments** in the number of manager's daughters

2. Concern: endogenous sorting of managers $\Rightarrow$ Danish social-security data on the population of managers

   - Exploit variation **within establishment** in the number of daughters given by births to managers

Fathering an additional daughter is associated with

1. Increase in **share of wage bill** paid to women by more than 1pp

2. Similar increase in **share of female** workers

3. Effects do not come from the first daughter only

Interpretation and mechanisms

The change in manager behaviour regarding HR practices can be explained by:

1a Change in **preferences**: can occur right after the birth
1b Change in **beliefs**: should occur as managers gain more information on women's ability/disadvantages

Use **age** of daughter to distinguish between the two: not done yet

Suggestive evidence in line with change in preferences (not mutually exclusive)

Data

Denmark's Integrated Database for Labor Market Research (IDA):

- employer-employee data set on all firms, establishments, and working individuals in the Danish economy from 1992-2011
- longitudinal information about the family composition of all individuals (gender, year of birth of offspring)

Sample selection

1. **Establishment**: 119,278
- Single-manager establishments:
  - 72% of estab-years obs
  - 33% of employees $\Rightarrow$ small: 12 employees
- Analysis at the establishment-year level

Data

2 **Managers**: 132,707

- Identified based on occupational codes
- Male only: 78% of all managers
- 89% of them have at least one child
  - ▶ N children: 2.27
  - ▶ N daughters: 1.16
  - ▶ N sons: 1.23
- Births: 9,422
  - ▶ 49.6% are female
  - ▶ 25% first-born

Summary statistics: gender gap

Earning gap approximately 20% (Kleven et al, 2017)

VARIABLES	(1) log_earning	(2) log_earning	(3) log_earning	(4) log_earning	(5) log_earning
Women	-0.262***	-0.269***	-0.171***	-0.181***	-0.181***
	(0.000784)	(0.000771)	(0.000624)	(0.000629)	(0.000627)
Educ length	0.0914***	0.0902***	0.0486***	0.0471***	0.0471***
	(0.000120)	(0.000118)	(9.80e-05)	(9.86e-05)	(9.84e-05)
Age	0.0123***	0.0113***	0.00943***	0.00924***	0.00924***
	(4.59e-05)	(4.52e-05)	(3.65e-05)	(3.64e-05)	(3.64e-05)
Experience	0.0405***	0.0340***	0.0116***	0.0119***	0.0117***
	(6.04e-05)	(6.12e-05)	(5.09e-05)	(5.09e-05)	(5.08e-05)
Tenure		0.0571***	0.0483***	0.0480***	0.0484***
		(0.000127)	(0.000103)	(0.000103)	(0.000102)
Full time			1.468***	1.487***	1.484***
			(0.000820)	(0.000832)	(0.000830)
ISCO - Occupat				-0.0125***	-0.0133***
				(9.87e-05)	(9.87e-05)
Size					0.000413***
					(2.67e-06)
Observations	5,970,881	5,970,881	5,970,881	5,970,881	5,970,881
R-squared	0.413	0.432	0.630	0.631	0.633
Year FE	YES	YES	YES	YES	YES

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

Summary statistics: employees characteristics

VARIABLES	Male	Female	Managers
Earnings	234,987	162,326	495,824
Age	36	34	47
Experience	14	10	21
Years of edu	12	11	13
%Married	0.49	0.49	0.85
%Full-time	0.80	0.66	0.94
Tenure	3	3	5
% White collar	0.29	0.56	
Hish-skilled	0.16	0.16	
Low-skilled	0.13	0.40	
% Blue collar	0.53	0.19	
Hish-skilled	0.29	0.04	
Low-skilled	0.24	0.15	
Observations	3,511,667	2,218,468	460,933

Empirical specification: equation

$$Y_{et} = \alpha + \beta_1 NDaught_{et} + \beta_2 NChildren_{et} + \gamma \mathbf{W}_{et} + \delta \mathbf{M}_{et} + \varphi Size_{et} + \eta_t + \varepsilon_{et}$$

Dependent variables at the establishment level

- Female share of total wage bill: $WB_{et}^f / (WB_{et}^f + WB_{et}^m)$
  Imperfect measure (hourly wage * hours * N employees)

- Female employment share: $N_{et}^f / (N_{et}^f + N_{et}^m)$

$\mathbf{W}_{et}$ controls for avg employees characteristics (age, years of education, experience, tenure, %FT, %married, %children)

$\mathbf{M}_{et}$ controls for manager characteristics (age, experience, years of education, tenure)

Empirical specification: across-establishment variation

$$Y_{et} = \alpha + \beta_1 NDaught_{et} + \beta_2 NChildren_{et} + \gamma \mathbf{W}_{et} + \delta \mathbf{M}_{et} + \varphi Size_{et} + \eta_t + \varepsilon_{et}$$

1. **Cross-section**: conditional on the number of children, the number of female children is a random variable

Compare 2 managers with same number of children in 2 different establishments in the same year to estimate the impact of fathering one additional daughter as opposed to one additional son

- The difference in outcome variables between the two managers yield an estimate of the *relative* daughter effect
- Separate the effect of fathering one additional daughter from the impact of fathering an additional child
- Fathering a daughter on any age

Empirical specification: fixed-effects identification

Concern: endogenous sorting of managers into different "types" of establishments depending on presence of daughters

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Concern: endogenous sorting of managers into different "types" of establishments depending on presence of daughters

2. **Manager-establishment FE**: coefficient is identified from births of daughters, as opposed to sons, to managers staying in the same establishment before/after the birth

Compare 2 managers with the same number of children both experiencing a birth (one daughter vs one son)

- The difference in the outcomes before and after the birth between the two managers yield an estimate of the *relative* daughter effect: fathering one additional daughter vs son

$$Y_{et} = \alpha + \beta_1 ND_{et} + \beta_2 NC_{et} + \gamma \mathbf{W}_{et} + \delta \mathbf{M}_{et} + \varphi Size_{et} + \eta_t + \chi_{me} + \varepsilon_{et}$$

- ND_{et}, NC_{et} are changes due to birth events
- $\mathbf{W}_{et}$, $\mathbf{M}_{et}$, and $Size_{et}$ are all changes, potentially endogenous

Empirical specification: comparison

Differences of FE specification with respect to cross-section:

1. Identification comes only from those matched manager-establishments pairs in which managers experience **birth** (5% of all distinct mgmt-estab pairs: 16% with multiple births)

2. Limited effect of **age** of daughters: on average I observe 3 years post-birth

Results: OLS and %F wage bill

Conditional on the number of children, each daughter parented increases the share of wage bill going to female by more than 3%

Average %F wage bill = 0.41

VARIABLES	(1) %F WageBill	(2) %F WageBill	(3) %F WageBill	(4) %F WageBill
N daughters	0.0139***	0.0136***	0.0137***	0.0137***
	(0.00155)	(0.00144)	(0.00141)	(0.00141)
N children	-0.0139***	-0.0127***	-0.0185***	-0.0185***
	(0.00118)	(0.00111)	(0.00112)	(0.00112)
Year FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	438,884	438,884	438,884	438,884
R-squared	0.002	0.079	0.097	0.098

Standard errors clustered at establishment level in parentheses

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

Results: OLS and %Female employees

Conditional on the number of children, each daughter parented increases the share of female employment by more than 5%

Average %Female employees = 0.37

VARIABLES	(1) %F workers	(2) %F workers	(3) %F workers	(4) %F workers
N daughters	0.0197***	0.0196***	0.0198***	0.0198***
	(0.00171)	(0.00153)	(0.00150)	(0.00150)
N children	-0.0202***	-0.0169***	-0.0232***	-0.0232***
	(0.00128)	(0.00117)	(0.00119)	(0.00119)
Year FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	438,884	438,884	438,884	438,884
R-squared	0.007	0.121	0.138	0.138

Standard errors clustered at establishment level in parentheses

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

Results: FE and %F wage bill

Concern: endogenous sorting into different establishment depending on the presence of a daughter $\Rightarrow$ exploit birth events Event study

Birth of a daughter is associated with almost 3% higher %F WB

VARIABLES	(1) %F WageBill	(2) %F WageBill	(3) %F WageBill	(4) %F WageBill
N daughters	0.0112***	0.0116***	0.0117***	0.0117***
	(0.00377)	(0.00376)	(0.00376)	(0.00375)
N children	-0.00293	-0.00426*	-0.00487*	-0.00551**
	(0.00260)	(0.00259)	(0.00259)	(0.00258)
Year FE	YES	YES	YES	YES
Mgr-Esatb FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	438,884	438,884	438,884	438,884
R-squared	0.843	0.845	0.845	0.845

Standard errors clustered at establishment level in parentheses

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

Results: FE and %Female employees

Birth of a daughter is associated with almost 2.5% higher %F workers

VARIABLES	(1) %F workers	(2) %F workers	(3) %F workers	(4) %F workers
N daughters	0.00829***	0.00887***	0.00887***	0.00886***
	(0.00314)	(0.00312)	(0.00311)	(0.00312)
N children	-0.00426*	-0.00551**	-0.00545**	-0.00506**
	(0.00218)	(0.00217)	(0.00217)	(0.00217)
Year FE	YES	YES	YES	YES
Mgr-Esatb FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	438,884	438,884	438,884	438,884
R-squared	0.895	0.897	0.897	0.897

Standard errors clustered at establishment level in parentheses

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

Results: 1st vs additional daughters

Until now linear effect in the N daughters $\Rightarrow$ reasonable assumption OLS

VARIABLES	(1) %F WageBill	(2) %F WageBill	(3) %F WageBill	(4) %F WageBill
First Daughter	0.0124***	0.0118***	0.0118***	0.0119***
	(0.00458)	(0.00456)	(0.00455)	(0.00455)
Second+ Daughter	0.00925*	0.0104**	0.0106**	0.0105**
	(0.00508)	(0.00504)	(0.00503)	(0.00503)
N children	-0.00211	-0.00330	-0.00391	-0.00454*
	(0.00246)	(0.00246)	(0.00246)	(0.00245)
Year FE	YES	YES	YES	YES
Mgr-Esatb FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	436,499	436,499	436,499	436,499
R-squared	0.843	0.845	0.845	0.845

Standard errors clustered at establishment level in parentheses

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

Results: 1st vs additional daughters

OLS

VARIABLES	(1) %F workers	(2) %F workers	(3) %F workers	(4) %F workers
First Daughter	0.00843**	0.00760**	0.00760**	0.00752**
	(0.00381)	(0.00380)	(0.00380)	(0.00380)
Second+ Daughter	0.00748*	0.00892**	0.00891**	0.00898**
	(0.00418)	(0.00410)	(0.00410)	(0.00410)
N children	-0.00359*	-0.00461**	-0.00455**	-0.00416**
	(0.00204)	(0.00203)	(0.00203)	(0.00203)
Year FE	YES	YES	YES	YES
Mgr-Esatb FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	438,884	438,884	438,884	438,884
R-squared	0.895	0.897	0.897	0.897

Standard errors clustered at establishment level in parentheses

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

Next

Focus on

- Heterogeneous effects (Table)
- Age of daughter
- Dynamics and persistence of the effect

Outcomes

- Hourly wage at individual level
- Promotions and hirings
- Firm performance

Extend to

- Multi-manager establishments $\Rightarrow$ Bigger establishments, heterogeneous effects sector, size, workforce
- Female managers
- Variation given by managers changing establishments

Conclusions

For behaviour to change, people experiences need to change first!

- Implications for definition and implementation of gender diversity programs
- To the realm of factors influencing manager "style" (Bertrand and Schoar, 2003) we should add family composition/personal experiences
- New evidence on origins and malleability of gender attitudes and on their relevance for the gender-gap in the firm
- Extend the relevance of the FSH to the LM/corporate setting

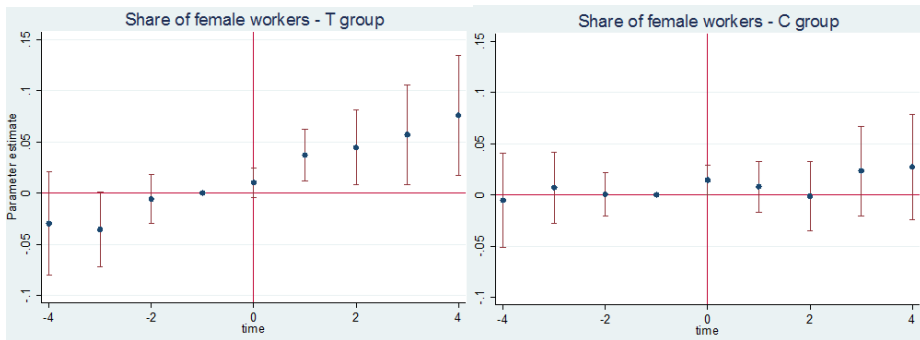Thank you!

Results: FE

Sample: managers experiencing a first-birth and having only one
child. At least 100 observation per year
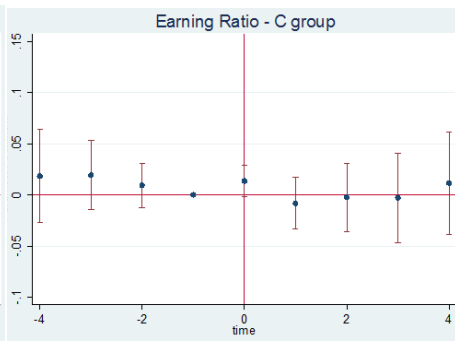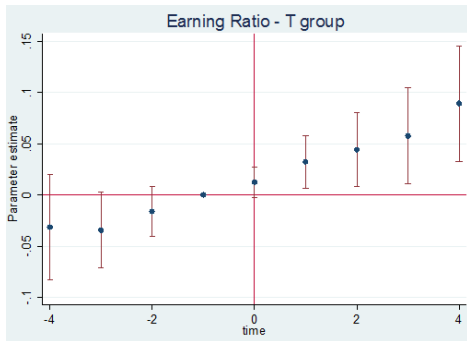
Results: FE

Sample: managers experiencing a first-birth and having only one child. At least 100 observation per year

Results: FE

Sample restriction: individuals experiencing a first birth and having tot N children equal to one

Average characteristics 1 year before birth

	FB_Son mean	Obs FB_Son	FB_Daugh mean	Obs FB_Daugh	Difference	(p-value)
Age	31.13	902	31.71	844	-0.58	0.23
Married	0.38	902	0.37	844	0.01	0.73
Educ length	10.95	902	11.10	844	-0.14	0.19
Tenure	2.25	902	2.31	844	-0.06	0.43
Size	10.71	902	11.24	844	-0.53	0.48
Age Estab	7.58	902	7.49	844	0.09	0.70
Industry	6.40	902	6.20	844	0.20	0.11
Earning Ratio	0.41	895	0.41	837	0.01	0.65
%Female	0.39	902	0.38	844	0.01	0.44

Results: workforce composition

OUTCOMES	Den=tot employees		Den=F employees	
	OLS	FE	OLS	FE
%F Top3	0.0141***	0.0103***	0.00336*	0.0112**
	(0.00125)	(0.00310)	(0.00180)	(0.00535)
%F Full-Time	0.00843***	0.00470*	-0.0105***	-0.00109
	(0.00125)	(0.00257)	(0.000941)	(0.00383)
%F Part-Time	0.0114***	0.00416*	0.0105***	0.00109
	(0.000618)	(0.00218)	(0.000941)	(0.00383)
%F H-Edu	0.00455***	0.00260	-0.00991***	-0.000324
	(0.000988)	(0.00237)	(0.00159)	(0.00507)
%F Child5y	0.00227***	-5.68e-05	-0.000286	-0.00268
	(0.000446)	(0.00193)	(0.000958)	(0.00468)
Observations	438,884	438,884	325,048	325,048

Results: 1st vs additional daughters

VARIABLES	(1) %F WageBill	(2) %F WageBill	(3) %F WageBill	(4) %F WageBill
First Daughter	0.0227***	0.0250***	0.0189***	0.0190***
	(0.00264)	(0.00246)	(0.00242)	(0.00242)
Second+ Daughter	0.0118***	0.0101***	0.0139***	0.0138***
	(0.00290)	(0.00268)	(0.00265)	(0.00264)
N children	-0.0143***	-0.0135***	-0.0185***	-0.0185***
	(0.00115)	(0.00108)	(0.00109)	(0.00109)
Year FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	436,499	436,499	436,499	436,499
R-squared	0.003	0.080	0.097	0.098

Standard errors clustered at establishment level in parentheses

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

Back

Results: 1st vs additional daughters

VARIABLES	(1) %F workers	(2) %F workers	(3) %F workers	(4) %F workers
First Daughter	0.0237***	0.0288***	0.0232***	0.0232***
	(0.00288)	(0.00260)	(0.00256)	(0.00256)
Second+ Daughter	0.0219***	0.0188***	0.0226***	0.0227***
	(0.00323)	(0.00288)	(0.00284)	(0.00284)
N children	-0.0198***	-0.0172***	-0.0227***	-0.0227***
	(0.00124)	(0.00114)	(0.00115)	(0.00115)
Year FE	YES	YES	YES	YES
Avg Controls Employees		YES	YES	YES
Controls Manager			YES	YES
Establishment Size				YES
Observations	438,884	438,884	438,884	438,884
R-squared	0.007	0.122	0.138	0.138

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

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