GENDER DIVERSITY IN MANAGEMENT POSITIONS AND THE GENDER WAGE GAP. EVIDENCE FROM SPANISH LABOR MARKET

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OUTLINE

1. Motivation
2. Goal and Hipothesis
3. Literature Review
4. Database and variables
5. Methodological approach
6. Primary Results
7. Discussion and conclussion

1. MOTIVATION

One of the key targets in gender equity policies is to foster the presence of women in management positions and Boards at firms. In the EU, the share of women in listed firm Boards increased from 11.9% in 2010 to 22.7% in 2015 (European Commission, 2015), but in Spain, 17% of the Board members are women.

Gender diversity at work have been widely studied by literature from several approaches (sociological, psychological, economic…)
Literature has look for empirical support for this statement in a global context of the expected impact over human resources management and women labor conditions

Increasing literature that analyze the link between the allocation of women in management positions and the gender differences in labor conditions, and in particular we will focus on gender wage gap

2. GOAL AND HIPOTHESIS

Goal: To shed some light on the role of gender diversity in management positions at firm as a key factor in explaining the gender wage gap.

Hipothesis 1: a higher diversity (Blau index) in management positions would lead to a decrease in the gender wage gap.

Hipothesis 2: firms with higher share of women in management positions show more equal retributions between men and women, reducing gender wage gap.

Hipothesis 3: a higher diversity and women share in management positions reduce gender wage gap along the wage distribution and thus reduce the glass ceiling phenomenon.

3. LITERATURE REVIEW

Regarding **gender retribution disparities**, authors point out that increasing participation of women in management reduces gender wage gap:

- **Hultin and Szulkin** (2003), for Sweden, reinforce the link between higher presence of women in management and lower gender wage gap in non-managerial workers, although results depends on the distinction between "managers" (high-level decision makers) and "supervisors" (low-level decision makers).
- **Bell** (2005): focus on US firms listed in the S&P 1500 Index and concludes that there is a link between higher presence of women in top positions and better labor conditions for female workers, both for executive female workers and for all female workers in a company.
- **Cohen and Huffman** (2007) uses data for US 2000 census, focusing on firms with more than 10 managers. They show that for certain industries a higher percentage of women in management was linked to lower salaries for both women and men in non-management positions and that the presence of female managers is related to a smaller wage gap but this link is significant only if they are in a high status position.
- **Cardoso y Winter-Ebmer** (2010, 2007): using data for Portugal, they find that the gender wage gap is smaller in female-led firms, but also find that the higher the share of females in the firm, the lower the promotion chances for any individual, either female or male.

3. LITERATURE REVIEW

- **Hirsch** (2013): Using linked employer–employee data for Germany and controlling for employment segregation by including job-cell fixed effects, he found that the unexplained gender pay gap is significantly lower in plants with a higher share of females in management and that the gap-reducing effect is more pronounced for second-level compared to first-level managers.
- **Hensvik** (2014): Using a rich matched employer-employee data set from Sweden, she shows a substantial negative association between the representation of female managers and the establishment's gender wage gap.
- **Vega et al.** (2016): using the Spanish wage structure survey and applying a concept of a 30% threshold to influence the corporate governance policies, authors find that a higher participation of women in management positions reduce gender wage gap on average, but do not reduce discrimination.

There is a **lack of consensus about the key factors that might act as channels in the influence process and the size of that influence**.

4. DATABASE AND VARIABLES

Database: Spanish Earnings Structure Survey for 2014 -SESS14- (INE, 2016)

Sample: this work focus on a wider group of **top positions at a firm that includes group A (directors and managers)** (CNO-11). The final working sample collects information for **49,183 workers working in 3,946 firms.**

Endogenous Variable: **Hourly wage** is calculated as the ratio of monthly wage by number of hours worked in a month. Monthly wage includes base wage, complements, overtime payment and non-ordinary payments.

Target explaining variable is the diversity measure:
1) Blau index for management positions $Blau\ Index = 1 - \sum p^2$
2) Share of women participation in management positions

Control variables:

Individual characteristics: age and educational attainment

Job position characteristics: type of working journey and contract, responsibility at the position and qualification of the job.

Firm characteristics: size and economic activity.

5. METHODOLOGICAL APPROACH

Mincer's wage regressions

$$Y_{gi}=\beta_g X_{gi}+u_{gi}$$

Quantile regressions that allows analyzing wage gaps along the earning distribution instead of average values (Koenker and Bassett's, 1978, Melly, 2006)

$$q_{\theta(y_i|x_i)} = x_i'\hat{\beta}_\theta$$

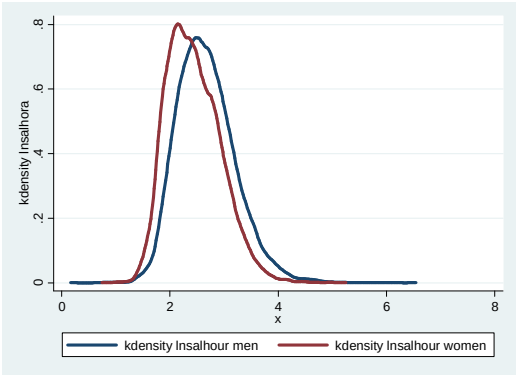
6.1. RESULTS: Gender pay gap

Table 1. Wage per hour and gender wage gap distribution

	Men	Women	Wage gap (%)
Mean	17.07	13.11	**23.22**
Std. deviation	14.32	8.35	
10	7.63	6.34	16.99
20	9.13	7.39	19.00
30	10.56	8.40	20.44
40	12.08	9.52	21.15
50	13.77	10.87	21.01
60	15.81	12.45	21.23
70	18.39	14.59	20.66
80	22.04	17.31	21.47
90	29.02	22.11	23.81
Ratio p90/p10			1.40
Ratio p90/p50			1.13
Ratio p50/p10			1.24

Source: processed by authors from SSES (2014)

Figure 1. Kernel density distribution of wage by gender



Source: processed by authors from SSES (2014)

6.2. RESULTS: Wage estimations with Blau Index

Table 2. Summary of results for wage regressions.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Women	-0.1621*	-0.1647*		-0.1730*	-0.1602*	-0.1684*		-0.1601*
Blau Index	0.0904*	0.0806*						
Women*Blau Index		0.0216	-0.1446*	0.0943*				
Share women directors					-0.0003	-0.0285*		
Women* Share women directors						0.0282*	-0.0012*	-0.0003*
R^2	0.4930	0.4930	0.4742	0.4925	0.4921	0.4923	0.4732	0.4921

Women coef. are negative, showing women are underpaid in all specifications

Blau coef. result positive, pointing out that firms with higher gender diversity improve retribution conditions for all workers

Interaction diversity and women coef.: Gender diversity in terms of higher share of women in firms reduces the gender wage gap (model 4)

Share women directors coef. Shows that firms with higher share of women directors pays lower salaries to both men and women (industry segregation explanations)

Interaction share women directors and women coef. Shows that firms with higher share of women directors pays more equal wages (positive coef. partly compensates lower average wages)

6.3. RESULTS: Wage estimations by quantiles

Table 3. Summary of results for wage quantile regressions.

	model 1			Model 4			model 6			
	mujer	blau_ dirtotal	Diff.	mujer	Mujer _ blau	Diff.	mujer	%mujer dir	Mujer_ %mujerdir	Diff.
q10	-0,131	0,071	-0,060	-0,137	0,065	-0,072	-0,131	-0,005	0,004	-0,131
q25	-0,136	0,072	-0,064	-0,145	0,071	-0,074	-0,143	-0,020	0,019	-0,143
q50	-0,152	0,083	-0,069	-0,159	0,081	-0,078	-0,156	-0,027	0,026	-0,157
q75	-0,167	0,099	-0,068	-0,179	0,101	-0,078	-0,172	-0,027	0,027	-0,172
q90	-0,188	0,139	-0,049	-0,206	0,158	-0,047	-0,196	-0,032	0,032	-0,196
average reg.	-0,162	0,090	-0,072	-0,173	0,094	-0,079	-0,168	-0,029	0,028	-0,169

Proportionally higher decrease in wage gap in models 1 and 4 (diversity models 1 and 4)

Proportionally lower decrease in wage gap in models with percentage of women directors

7. DISCUSSION AND CONCLUSSIONS

Hipothesis 1: a higher diversity (Blau index) in management positions would lead to a decrease in the gender wage gap. **NO CLEAR SUPPORT** (not significant reduction in wage gap)

Hipothesis 2: firms with higher share of women in management positions show more equal retributions between men and women, reducing gender wage gap. **ACCEPTED** (but these firms pay lower global wages)

Hipothesis 3: a higher diversity and women share in management positions reduce gender wage gap along the wage distribution and thus reduce the glass ceiling phenomenon. **NO CLEAR SUPPORT** (no robust results for different specifications)

THANK YOU FOR YOUR ATTENTION

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