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Gender differences in executive compensation in Spain¹

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Abstract

Purpose: In the context of the Sustainable Development Goal 5 of the United Nations 2030 Agenda: 'Achieve gender equality and women's empowerment', where gender equality is not only a matter of justice but also essential to achieve sustainable development, this paper aims to examine the gender pay gap in executive director compensation and the influence of female board representation and participation in Nomination and Remuneration Committee (NRC) on this gap in Spanish listed firms over the period 2012-2022.

Design/methodology/approach The analysis is conducted using a dataset created by the authors, which includes executive director compensation data for 164 unique firms. This dataset comprises 128 distinct observations for a given firm and year for women, and 2,333 observations for men. We estimate OLS models, clustering standard errors by executive. We use Oaxaca-Blinder decomposition to decompose gender differences in compensation into differences in the characteristics of men and women and differences in the return on the same characteristics.

Findings: We find evidence of pay penalty for female executive directors compared to male counterparts. After controlling for firm, board, and executive characteristics, we find that women earn 27% less than comparable men. The penalty is lower in companies with a higher share of women on the compensation committee, suggesting that

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women's participation plays a role in setting a more equal remuneration policy. The gender gap in executive compensation narrows over time due to a substantial reduction of the differences between men and women in both characteristics and the return on these characteristics.

Originality: This study is one of the few analyzing the gender gap in executive director compensation and its evolution in Spain. It specifically explores how gender diversity on both the board and the NRC impacts this gap. Our analysis is focused on the most recent period characterized by important efforts to promote gender diversity.

Keywords: top management, pay equity, corporate governance, sustainable finance, glass ceiling

JEL: G32;G35;G38;J16;J31

1. Introduction

Despite pressure on firms from regulations, the quest for management diversity and the public debate, women remain underrepresented in executive positions and tend to be lower paid than men (Molinero-Díez et al.,2022). Today, executive remuneration, inequality and inclusiveness are priorities in the United Nations 2030 Agenda for Sustainable Development. This paper partially addresses its Goal 5: "Achieve gender equality and women's empowerment" where gender equality is not only a matter of justice but also essential to achieving sustainable development. We explore the existence of gender differences in executive compensation in Spanish listed firms and test whether pay varies as women's participation in managerial positions increases.

We provide relevant insights for policymakers to attain the goals of the UN 2030 Agenda. We do so in three ways. First, by studying the evolution of gender diversity on the board of directors (BD), we show how far Spanish listed companies are from the gender quota goal (at least 40% of the board to be women) established in Spanish and European regulations. Second, controlling for a set of firm, governance, and executive characteristics, we test whether there is a gender gap in executive compensation and applying Oaxaca-Blinder decomposition we disentangle which part of this gap is due to observed or unobserved characteristics. Third, we explore whether the inclusion of women on the board signals to external stakeholders a firm's commitment to minority

groups and socially responsible behaviour or whether women play a meaningful role in the company. If women's presence on the board and the Nomination and/or Remuneration committee (NRC) affects the size of the gender pay gap in top positions, it is plausible to conclude that women play a meaningful role in the company.

According to Elkinawy and Stater (2011), the unequal compensation of women on the board has implications for the productivity of the executive labour market and the economy as a whole. Gender disparities and discrimination at the top may discourage women from pursuing top executive careers, even though doing so would increase a company's value as well as performance, productivity and the income of other workers.

The first hypothesis (H1) tests the existence of gender differences in pay in executive directors in Spanish listed companies. There is evidence of a gender pay gap in executive directors across countries, with exceptions in CEO compensation (Geiler and Renneboog 2015, Gupta et al., 2018) and that of Danish executives (Lausten, 2001) and US executives (Bowlin et al., 2003).

There are few studies of the gender pay gap in top positions in Spain. Pucheta-Martínez and Bel-Oms (2015) studied the factors influencing the gender pay gap on the BD of listed companies for the period 2004-2011. However, they do not differentiate between executive and non-executive directors. The present study helps to fill this gap by focusing on executive directors of all listed companies in the more recent period of 2012-2022 and by controlling for individual characteristics.

Spain offers an interesting case. Within Europe, it was traditionally among the least gender-equal countries. Its anti-egalitarian cultural and social consensus may dissuade women from participating and progressing in the labour market. However, in the last decade, public and private institutions have promoted equality, and gender equality has improved. Spain's international ranking in the Global Gender Gap Index (GGGI, provided by the World Economic Forum) has risen from 26th in 2012 (GGGI of 73%) to 17th in 2022 (GGGI of 78%).

Economic theory suggests a range of drivers explaining differences in pay for comparable men and women on the board. These drivers include: board gender diversity, gender discrimination, female segregation in smaller firms or lower paid industries, gender differences in risk aversion and bargaining power, and social norms. We focus mainly on board gender diversity. Thus, the second hypothesis (H2) tests

whether a higher presence of women on the board and/or NRC decreases the gender gap in executive pay.

For this study we construct a rich data set on executive director compensation in Spain for the period 2012-2022 including executive, governance, and firm characteristics. We use linear static models, clustering standard errors by executive directors to estimate the gender gap in executive director compensation and we decompose this gender gap into variation in sample composition and residual changes induced by different returns to the characteristics.

The remainder of this paper is organised as follows. Section 2 presents the institutional framework. Section 3 summarises the literature and the theoretical framework. Section 4 describes the data and method. Section 5 discusses the results. Conclusions are drawn in Section 6.

2. Institutional framework for board gender diversity and equal pay

Despite the numerous laws and plans aimed at mitigating unequal treatment between men and women in the Spanish labour market, it is characterized by persistent wage discrimination.

The lack of transparency in company directors' income prevented analysis of the gender pay gap before 2003. In 2003, the Spanish Listed Companies Transparency Act (Law 26/2003) obliged listed firms (excluding the financial sector) to disclose details of directors' pay in their annual reports. In 2011, the Sustainable Economy Act 2/2011, applied under EU Directive CRD3, extended these regulations to the financial sector.

One advance in equal pay policy was the 2019 reform through Royal Decree Act 6/2019 of March 1 on urgent measures to guarantee equal treatment and opportunities for men and women in employment and occupation. This act follows the 2014/124/EU Commission Recommendation of 7 March 2014 on reinforcing the principle of gender pay equity through transparency. It became mandatory for companies with more than 50 employees to analyse their wage structures (including managerial positions) and prove the existence of equal pay for equal work and work of equal value.

As in many other countries, women in Spain are underrepresented in managerial positions. In the last two decades, the publication of recommendations and legal reforms to raise gender diversity on boards has taken place, accompanied by social changes. In 2007, Spain introduced a gender quota through Organic Law 3/2007 on Gender Equality. It recommended all large public and private firms to set a target of 40% of each gender on company boards by 2015. It was a soft law board gender quota that did not impose penalties for companies that failed to meet the target. In 2015, Recommendation 14 of the CNMV's Unified Good Governance Code of Listed Companies set a target of 30% female board members by 2020 and recommended the BD to approve a policy for the selection of board members to encourage gender diversity. Mateos de Cabo et al. (2019) found that less than 9% of targeted firms fully complied with the quota.

In short, despite policy reforms aiming at gender parity in managerial positions in Spain and other European countries, gender balance in managerial positions is still a distant goal. In response, the European Commission approved Directive 2022/2381 in 2022 imposing gender parity on BD of listed companies. It set a target of 40% of the underrepresented sex among non-executive directors and 33% among all directors. This has been transposed in Spain through the Organic Law on Gender-Balanced Representation and Equal Presence of Women and Men, which has been approved in December 2023.

3. Literature review and theoretical background

Despite the implementation of gender equality policies and calls for gender diversity in management in the most developed countries, women continue to be underrepresented in executive roles and typically receive lower compensation than their male counterparts (Molinero-Díez et al., 2022). There is evidence of a gender pay gap in executive directors after controlling for individual and firm characteristics (Devers et al. 2007, Yanadori et al. 2018), though there are some exceptions in CEO compensation (Geiler and Renneboog 2015, Gupta et al. 2018) and the remuneration of Danish executives (Lausten, 2001) and US executives (Bowlin et al., 2003).

Most studies have focused on one country, most notably the USA (Bertrand and Hallock 2001, Shin 2012, Carter et al. 2017, Cook et al. 2019), the United Kingdom (Geiler

and Renneboog,2015), Australia (Yanadori et al.,2018) and Denmark (Smith et al.,2011). Schneider et al. (2021) also analysed six European countries (including Spain), finding 'strong evidence for women on European executive boards being paid less than men'.

Regarding Spain, there are only a few studies of the gender pay gap in top positions, likely due to data limitations, as female executive directors still represent a small percentage (around 5% in Gender statistics database, European Institute for Gender Equality 2022) of all top management positions. For instance, Pucheta-Martínez and Bel-Oms (2015) analyze whether a gender wage gap exists in the boards of directors of Spanish listed companies from 2004 to 2011.

In general, the size of the gender gap has been observed to vary by country, control variables, and period of analysis, as summarized in Table S1 in the supplementary material.

Economic theory suggests a range of drivers explaining differences in pay for comparable men and women on the board. These drivers include: board gender diversity, gender discrimination (with two main sources of discrimination: taste-based discrimination (Becker,1971), associated with the prejudice of employers regarding women (minority group), and statistical discrimination, which refers to the underestimation of women's skills in the presence of imperfect information), female segregation in smaller firms or lower paid industries, gender differences in risk aversion and bargaining power, and social norms. We focus mainly on board gender diversity, particularly, on the female representation on board and NRC.

Many studies based on organisational demography have examined the impact of women's integration into male-dominated work environments. According to Campuzano (2019) 'Male-dominated organizational cultures can be equated with inertia, as they have maintained a consistent, traditional set of underlying assumptions, behaviours, and norms and direction over time'. This demographic inertia may act as a barrier preventing improvements in women's representation. Theory and research suggest that women often face resistance, performance pressures and negative stereotypes. Consequently, women tend to adopt male perspectives (Eagly et al.,2012), failing to support other women and to advance measures such as gender equity policies (Ellemers et al.,2004).

These limitations are relevant for female board members as they might serve a symbolic function, signalling firm support for women, rather than having substantial impact (Main and Gregory-Smith,2018). In this sense, we test whether these limitations might be overcome with respect to pay equity in two ways: by women's integration and participation on BD and the NRC.

Regarding women's integration on boards of directors and NRC, research in organizational demography (Kanter,1977) suggests that increasing the proportion of women and eliminating token or solo status improve their positions in male-dominated organizations, enabling them to overcome the mentioned leadership limitations. This is supported by three key factors. First, having several women on a male-dominated board can help diminish gender stereotypes and alleviate the scrutiny that women often face (Ely and Thomas,2001). Second, increasing female representation also provides a more supportive context for other women to exhibit leadership behaviours that differ from traditional male behaviours (Eagly et al.,2003). Third, women's inclusion in the NRC may indicate that the company is committed to promoting gender diversity, thereby enhancing the authority and influence of women in leadership roles (Karpowitz et al.,2012).

Research on women's inclusion on the BD has shown that a higher percentage of women on the board reduces gender segregation and helps women's integration in managerial positions (Huffman et al.,2010). However, the impact on the gender pay gap is less clear. On the one hand, several US studies (Bell 2005, Carter et al. 2015, Elkinawy and Stater 2011) have shown that female representation in the boardroom reduces the gender pay gap among executives. On the other hand, Cook et al. (2019) find that women's presence on the board is insufficient for advancing compensation equity, and Pucheta-Martínez and Bel-Olmos (2015) find no influence of the percentage of female board members on the gender pay gap among directors.

The second way in which women might influence gender gap in compensation is by actively participating in the NRC, where they play a role in direct decision-making regarding compensation structures and gender diversity policies on the board. Female directors are associated with greater transparency (Cook and Glass,2018), therefore, their inclusion in the NRC might reduce inequities in compensation.

However, there is ambiguity on the effect of increasing the number of women on the NRC over the gender pay gap. Empirical evidence for US firms supports the idea that the gender gap in executive pay decreases when the number of women on the NRC increases (Shin,2012). In contrast, Pucheta-Martínez and Bel-Olmos (2015) find that the presence of women on the NRC increases the gender pay gap in Spain. Interestingly, Cook et al. (2019) find that only when a woman chairs the NRC does the pay gap shrink for USA, concluding that it is not just a matter of adding more women to the board to drive change through gender diversity, instead, the role of women in leadership positions on compensation decisions.

4. Data and Method

4.1 Sample selection

To study the gender pay gap among executive directors, we construct a unique and rich data set consisting of data on the executive directors of listed Spanish companies for the period 2012-2022. The first observed year is 2012, as executive directors' compensation in listed firms became publicly available through the CNMV in response to Law 2/2011 on Sustainable Economy, aimed at increasing transparency and improving corporate governance.

We focus our analysis on executive directors (top leaders responsible for the daily management of the firm) because they are the only group exposed to a gender pay gap. Compensation for non-executive directors (do not participate in the daily management of the firm, they can be independent directors, proprietary directors or other external directors) remains uniform by director type, irrespective of gender or seniority.

Our data set contains information on executive compensation, executive characteristics, board features and firm characteristics. The data set is built using three data sources. Executive and board characteristics, such as compensation or board composition, were gathered from annual corporate governance reports. Remuneration reports were taken from the CNMV. Firm-level characteristics, such as firm size, return on assets (ROA) and leverage, were gathered from the Refinitiv Eikon-Thomson Reuters database. Sector information was taken from the Madrid Stock Exchange. As age is not available from CNMV due to data protection, we hand-collected it by gathering information from company websites, CVs, or online news articles, resulting in some

missing values. Table S2 in the supplementary material gives a description of the variables included in our panel, along with the data source. After excluding uncompensated executives (46 distinct men, corresponding to 112 firm-year observations and 3 women corresponding to 6 firm-year observations) or those lacking relevant information, we achieve a data set consisting of information on 164 unique listed firms. Out of 2461 executive-year observations, only 128 (about 5%) are female-firm-year observations (corresponding to 30 unique female executives). The remaining 2,333 are male-firm-year observations (corresponding to 445 unique male executives). This disparity reflects men's dominance in top positions on the board. Crucially, we must be cautious when interpreting the statistics for the group of female executive directors due to the small sample size.

4.2 Descriptive statistics

This section provides descriptive statistics for gender differences in total executive director compensation and other characteristics that might help explain the gender pay gap. Total executive director compensation is the dependent variable. It comprises fixed and variable pay, as well as allowances.

Figure 1 shows the evolution of average total executive director compensation (in real terms) by gender over the period 2012-2022. Real total compensation is computed using the Spanish consumer price index (CPI) and 2012 as the base year. Male executive director compensation tends to increase over time, except for the period 2015-2016. It starts at 1.01 million euros in 2012 and exhibits the highest compensation in 2022 (1.81 million euros). The trend in female executive director compensation is less clear as it exhibits fluctuations with ups and downs. The small female sample size makes its average compensation very sensitive to new entrants or exits. The highest value is in 2021 (2.18 million euros), and the lowest value is in 2015 (0.79 million euros). Without controlling for other variables, a gender pay gap is observed in favour of men for the whole period, except in 2014, where both compensations are virtually similar, and 2021, where female's compensation is 1.25 times male's compensation. The largest compensation difference is in 2015, with women's compensation being 55% of that of men.

[Figure 1]

Table 1 compares compensation and individual characteristics of female and male executive directors for the period 2012-2022. On average, female executive directors earn significantly less than their male counterparts, with male compensation being 14% higher than female compensation. Note that for the main analysis compensation is measured as the natural logarithm of real total compensation. Female executive directors are younger (44 years old) than their male counterparts (51 years old) and are less likely to be CEOs (34% *versus* 47%) or chairs of the board (13% *versus* 32%) than men. However, both groups have similar tenures on the board (around 11 years) and belong to the same number of committees.

[Table 1]

Table 2 provides summary statistics for the governance and firm-level characteristics for all firms in the sample as well as firms with or without (at least) one female executive director on the board over the period 2012-2022. This distinction is relevant because, according to Shin (2012), ‘Companies that have at least one female top executive can be considered different—in terms of organizational culture, policies, or other unobservable characteristics—from a majority of other firms that do not have any female top executives’.

The total sample comprises 1,299 firm-year observations (corresponding to 164 unique firms). Only 10% of them correspond to firms with at least one female executive director. Focusing first on all firms, the average size of the board is 10.4 directors. This figure complies with the CNMV’s Unified Good Governance Code of Listed Companies (should be between 5 and 15 members). However, the percentage of independent directors (42%) is lower than the recommended level (at least 50%). Regarding gender diversity on boards, the average share of women on the board (both executive and non-executive directors) is 20%. Hence, women are clearly a minority group in a male-dominated board. This rate (not shown) increases from 11% in 2012 to 30% in 2022, marking a notable improvement but still remaining below the 40% target recommended by the Gender Equalitarian Act.

Most firms (97%) have a NRC, which decides on the promotion and compensation of directors and proposes a gender diversity plan for the board and the top management to the board. In Spain, the NRC may comprise both executive directors and non-executive directors although it is recommended that most of its members be independent directors. In 2014, it became mandatory for listed companies to have an NRC, signalling the increased influence of the NRC over pay structure and gender diversity policies. The average representation of women on the NRC is 21%. It's important to note its evolution (not shown), which increased from 12% in 2012 to 35% in 2022. Firm size is an important predictor of executive compensation (Conyon, 2014). The average firm size (log of total assets) is 21.21. According to Bowlin et al. (2003), 'Economic theories of compensation and moral hazard suggest that firm performance should affect an executive's compensation'. Thus, to measure performance, we use the ROA. The average ROA is 2%. Lastly, the measure for debt is the leverage. The average value is 0.32.

[Table 2]

The last column of Table 2 shows differences in the characteristics of firms with and without (at least) one female executive director. Firms with (at least) one female executive director have a slightly smaller board size (9.7 *versus* 10.4), a higher proportion of women on the board (28% *versus* 19%), a lower likelihood of having a NRC (94% *versus* 97%) and, surprisingly, a lower proportion of women on the NRC (16% *versus* 22%). In addition, firms with (at least) one female executive director have lower leverage and returns over assets. This might be related to women being more risk averse than men (Geiler and Renneboog, 2015).

4.3 Methodology

To test for the existence of gender differences in executive director remuneration (H1) in Spanish listed companies and to examine the associated determinants, we estimate the logarithm of real total compensation for all executive directors using ordinary least squares (OLS). Note that we cannot estimate the fixed effects model because the key variable (female dummy) does not vary within each person.

The most complete model (without interactions) to estimate annual executive director compensation is:

$$\log Y_{it} = \delta F_i + X_{it}\beta + G_{it}\gamma + Z_{it}\vartheta + D_t\varphi + \varepsilon_{it} \quad (1)$$

Here, Y_{it} denotes the real total compensation of executive director i in year $t \in \{2012, 2013 \dots 2022\}$. The main variable of interest is the female dummy (F_i), which takes the value 1 for women and 0 for men. The coefficient δ measures the total pay gap between women and similar men working in similar firms. The variable X_{it} is a vector of characteristics describing executive director i (age, age squared, tenure on the board, tenure squared, CEO and chair). G_{it} is a vector of governance characteristics (board size, board independence, share of women on the board, existence of a NRC and share of women on the NRC). Z_{it} is a vector of characteristics of the executive's firm (firm size, leverage, ROA and sector). Note that firm characteristics (except sector) enter into the model with a one-year lag to avoid possible endogeneity with respect to the compensation of top executives. We use yearly dummies D_t to control for time effects. ε_{it} is a zero-mean error term that is assumed to be uncorrelated with the independent covariates (strong strict exogeneity assumption). However, we cannot assume that the error term is independent across observations because executive directors might appear several times in the data set. We correct for this by clustering standard errors by executive. This adjustment makes the standard errors robust to heteroscedasticity across executives and make estimates of the coefficients consistent.

To test the second hypothesis, we estimate specifications that add interactions between a female dummy and the percentage of women on the board and the NRC. If the interaction term is positive and significant, it would indicate that the gender pay gap is smaller when there are more women on the board/NRC.

5. Results and discussion

First, we estimate the log of real compensation using five specifications. The results are shown in Table 3. Model 1 comprises only the female dummy. Model 2 also includes the year dummies and sector variable. Model 3 adds firm characteristics. Model 4 also includes governance characteristics. Lastly, Model 5 also adds executive director characteristics.

5.1 Effect of gender (female dummy) in the model without gender interactions

The key variable in our analysis is the female dummy. Although the size and significance of the coefficient vary among the specifications, the negative values of the coefficient for the female dummy and its significance in all models support the existence of a gender pay gap in executive director compensation in favour of men.

The uncontrolled gender difference is captured in Model 1. Women earn 48% less than men (following Halvorsen and Palmquist, 1980, $(e^{\delta} - 1) \cdot 100$). After controlling for sector and time (Model 2), this figure only falls to 46% and the significance increases from 10% to 5%, suggesting that a small part of the unadjusted executive director pay gap can be explained by female concentration in less well-paid sectors (Table S4 in the supplementary material), as previous evidence suggests (Smith et al., 2011). The size of the gender gap diminishes significantly after incorporating firm characteristics in Model 3, with female executives earning 37% less than their male counterparts. Firm size is the main driver of this reduction, suggesting that part of the gender pay gap in Model 2 is due to disparities in the distribution of firm size. Most women are concentrated in smaller firms, which tend to pay less to executive directors while only a small proportion of women are found in the largest firms within the sample. The female coefficient increases slightly when board characteristics are included in Model 4.

After adding executive director characteristics (Model 5), both the coefficient of the female dummy and its significance decrease. Women's compensation becomes 27% lower than men's. The drop in the size of the female dummy coefficient in Model 5 indicates that disparities in executive director characteristics, particularly in CEO and chair positions as well as age, contribute to the gender compensation gap observed in previous models. As demonstrated in Table 1, women occupy fewer top positions, such as CEO and chair, which are typically associated with higher compensation. Additionally, female executive directors are, on average, younger than their male counterparts, and executive director pay tends to increase with age.

[Table 3]

5.2 Coefficients on the covariates

Focusing on Table 3, we briefly discuss the association of our explanatory variables with executive director compensation. First, regarding firm characteristics, as in previous studies (Elkinawy and Stater, 2011), executive directors in larger firms earn more than those in smaller firms. Larger firms require more talented individuals to manage complex organizations (Murphy, 1999), and accordingly, they are compensated at higher rates. Consistent with earlier findings (Conyon, 2014), executive director compensation shows a positive correlation with ROA, indicating that companies tend to reward executives based on their past performance. Firm's leverage is negatively associated with compensation, although it is statistically insignificant.

Second, according to previous evidence, board and governance structure might influence the remuneration policy for top managers on the board. Unlike in the study by Elkinawy and Stater (2011), larger boards offer higher total compensation. In general, larger boards are associated with less governance quality and CEOs at these firms receive greater compensation (Core et al., 1999). The higher the proportion of independent directors on the board, the higher the total compensation. More independent outside directors mean greater pressure of active monitoring of executives (Shivdasani and Yermack, 1999), and compensation tends to be closely tied to performance. The percentage of women on the board and on the NRC are statistically non-significant.

As expected, given the previous evidence (Shin, 2012), executive directors occupying higher positions on the executive board, such as CEO or chair, are better paid. According to Conyon (2014), the CEO pay premium might reflect a combination of different skills, job functions as well as premium-associated tournaments in organizations. Moreover, belonging to a larger number of committees is associated with higher total compensation.

Under human capital theory, age and tenure are determinants of compensation. The effect on total compensation is positive but diminishing as found in Elkinawy and Stater (2011) for salary. The positive returns to experience in the firm suggests that firm-specific human capital plays an important role in top management positions and this influence on the compensation policy of the firm (Kostiuk, 1990).

5.3 Results of interaction effects

In Table 4, we present the estimation of Model 5 (Table 3), adding interaction effects between the gender dummy and a given board characteristic: in Model 1, share of women on the board; in Model 2, share of women on the NRC; in Model 3, board independence; in Model 4, board size; in Model 5, all of these interactions.

[Table 4]

Certain governance structures may favour women. We are mainly interested in whether gender inequality in total executive director compensation decreases when the share of women on the board or NRC increases. In line with Pucheta-Martínez and Bel-Oms (2015), the interaction effect of the share of women on the board is statistically non-significant and with opposite signs in Model 1 and Model 5. Increasing the representation of women on the board has no clear impact on the gender pay gap in executive compensation.

In contrast, the significance and positive sign of the coefficient of the share of women on the NRC interacting with the female dummy (Models 2 and 5) reveal that increasing the percentage of women on the NRC narrows gender inequalities in executive compensation. To quantify the influence of increasing the representation of women on the NRC over the gender pay gap, we compare the difference between male and female executive compensation (using Model 2) under two scenarios: assuming no women on the NRC and assuming the mean value of 20% representation of women on the NRC. The remaining continuous variables are valued using the sample mean and for the categorical variables, we assume that a NRC exists, the executive is not acting as either CEO or chair and is working in consumer services in the year 2022. This benchmark woman earns 4.34% less than the male counterpart assuming no women on the NRC. This value decreases to 1.44% when the share of women on the NRC is 20%. This result is in line with Shin (2012), who found a positive relationship between women's presence on the NRC and a reduction in pay gaps among top executives in the USA. According to Cook and Glass (2018), female directors are associated with greater transparency, so their presence on the NRC seems to reduce distortions in executive pay. Increasing the proportion of women and eliminating the solo status appears to help women overcome leadership limitations in male-dominated boards.

The coefficients of the other two interactions with the female dummy (board independence and board size) are statistically insignificant. The non-significant coefficient of the interaction between the female dummy and either board independence (Model 3 and 5) or board size (Model 4 and 5) suggests that a higher proportion of independent directors or a larger board size is not associated with a smaller or a greater gender pay gap.

5.4 The role of compositional variation by gender in total compensation

Table 5 shows the results of the decomposition of mean differences in the log of total compensation between men and women using traditional Oaxaca-Blinder decomposition (Oaxaca 1973, Blinder 1973). The results are given for the whole study period and separately for two consecutive subperiods (2012-2016 and 2017-2022). The aim is to show how the executive director pay gap and its decomposition vary over time. Unfortunately, due to the small number of female executive directors in the sample, we cannot estimate the model separately for each year.

To perform Oaxaca-Blinder decomposition, we estimate our benchmark model (Model 5 in Table 3) separately for men and women, excluding the female dummy (estimation results in Table S5 in the supplementary material). If $y = \log(Y)$, the Oaxaca-Blinder decomposition of the gender difference in average compensation is as follows:

$$\bar{y}_M - \bar{y}_F = (\bar{X}_M - \bar{X}_F) \cdot \hat{\beta}_M + (\hat{\beta}_M - \hat{\beta}_F) \cdot \bar{X}_F \quad (2)$$

Here, $\bar{y}_M$ and $\bar{y}_F$ are the average predicted log total compensations for men and women, respectively. $\bar{X}_M$ and $\bar{X}_F$ are the sample averages of the explanatory variables for men and women, and $\hat{\beta}_M$ and $\hat{\beta}_F$ are the estimated coefficients from the male and female regressions, respectively.

This method decomposes total gender differences in two parts: composition effects (first term on right side of Eq. 2) and behavioural effects (second term on right side of Eq. 2). Thus, gender differences are due to differences in the characteristics of men and women (composition effects), such as tenure or job position, and differences in

compensation returns associated with such characteristics (behavioural effects) paid by the labour market. The latter differences (also named residual effects) are related to unobserved characteristics such as differences in productivity, education and discriminatory factors. Note that, unlike the previous analysis (Table 3 and 4), here, total gender differences in compensation includes differences in slope coefficients.

The first rows of Table 5 give the average log of total compensation for men and women according to the estimated models (in Table S5). The table also shows the differences between them, which is the size of the gender gap. For instance, for the whole period, the mean of log of the compensation is 13.44 for men and 12.83 for women. Therefore, the gender gap was 0.61 in favour of men.

The last two rows show that the two components (composition effects and behavioural effects) contribute to explaining the gender gap. In absolute terms and for the whole period, if women had the same characteristics as men, female compensation would increase by 0.28. Similarly, if female characteristics were rewarded using the male's coefficients, female compensation would increase by 0.33. Thus, 54% of the gender gap in total compensation is explained by behavioural effects and the remaining part (46%) is explained by the differences in characteristics (discussed in Section 4).

According to the evolution of the gender gap, it decreased from 0.92 in the first sub-period (2012-2017) to 0.28 in the second sub-period (2018-2022). This reduction can be attributed to a substantial decrease in the differences between men and women in both characteristics (composition effects falling from 0.36 to 0.14) and the return on these characteristics (behavioural effects decreasing from 0.56 to 0.14).

Assuming similar levels of education for men and women in executive director positions, what is credible because 'women might often need to obtain better credentials than men in order to be hired and promoted in a market with a historical glass ceiling' (Elkinawy and Stater,2011), plausible reasons for the unexplained part of the gender compensation gap (behavioural effects) are: discrimination, the importance of male-dominated networks and gender differences in bargaining power, as reported by Schneider et al. (2021), as well as differences between men and women in labour supply behaviour, risk preferences or unobserved productivity (Elkinawy and Stater,2011). Unfortunately, due to the lack of relevant information to explain the gender gap (i.e. demand and supply factors are not disentangled, differences in

productivity or motivation, discrimination...) we cannot distinguish the specific reasons behind the behavioural effects.

[Table 5]

6. Conclusions

In this paper, we analyse the gender pay gap in executive directors in Spanish listed firms for the period 2012-2022 and we assess how the share of women on the board and on the NRC influences the aforementioned gender pay gap. Using a data set of executive director compensation built by the authors we estimate OLS models, clustering standard errors by executive directors.

Despite the notable rise in the share of women on boards (rising from 11% in 2012 to 30% in 2022), achieving gender equality representation in executive positions requires further efforts. Our data indicates an increase in the proportion of women in executive roles from 4% in 2012 to 7% in 2022.

Our results provide evidence of a pay penalty for female executive directors which confirms our first hypothesis. After controlling for board governance, firm and executive characteristics, women earn 27% less than men. These gender differences are explained rather equally by two components: differences in characteristics between men and women and differences in the return to the characteristics (behavioural effects).

Composition characteristics that disadvantage women include underrepresentation in CEO or chair positions, their younger age compared to men, and the tendency to cluster in smaller firms and lower-paying industries more than men. These differences might be associated with existing demographic inertia that preserves traditional structures favouring men, despite advancements made by women. The lower proportion of women in executive board positions may also be attributed to their insufficient management of key tools for advancement within companies, including networking, professional image, and career management (Jarabo,2023).

Concerning the evolution of compensation inequalities, gender-based executive pay differences narrow over time due to a significant reduction in disparities between men and women in both characteristics and the return on these characteristics.

Regarding our second hypothesis, we find that, although the presence of women on the board has no influence on the gender pay gap, women become better paid relative to men as the proportion of women on the NRC rises. This finding suggests that increasing the number of women in the NRC is a means to overcome leadership limitations, enabling women to influence remuneration and gender diversity policies.

The observed increase in women's representation on corporate boards of directors and the reduction in compensation inequalities suggest that social and policy pressure on gender equality is producing positive results in one of the traditionally least gender-equal countries within Europe. Policies promoting management pay transparency and mandatory analyses are crucial for raising awareness about the importance of gender diversity. They play a key role in diagnosing the current situation and establishing an action plan aligned with outlined goals for increased women's representation in management set by law.

In spite of the notable advances, there is still much work to be done in this line. In the context of sustainable development, policy measures should focus on achieving gender equality and women's empowerment (UN-SDG-5). They should aim to reduce gender inequalities in female representation on board and on executive positions as well as in pay.

One obvious limitation of the study is the small size of the sample of female executive directors. Consequently, the results must be interpreted with caution. Second, our results show association but not causality. Third, the lack of relevant information to explain the gender pay gap prevent us from identifying the specific factors behind the behavioural effects. Lastly, our data prevented the decomposition of total compensation into base salary and performance-based compensation, which could shed light on what is driving the gender gap.

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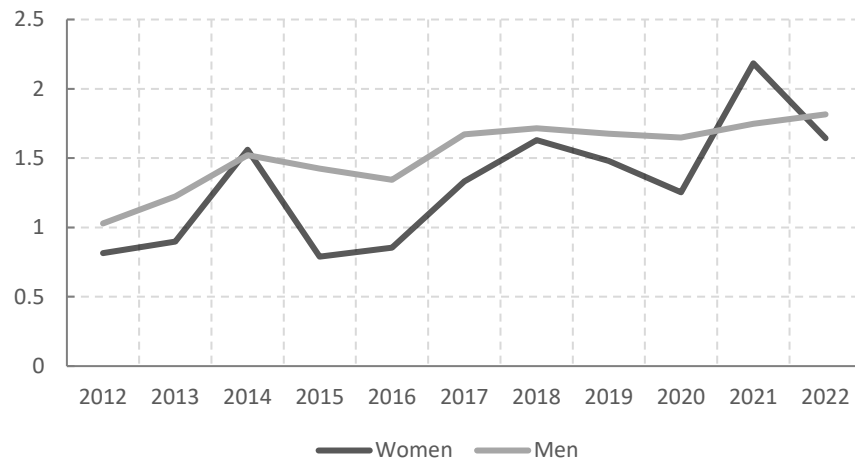
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Figure 1: Evolution of real total executive compensation by gender over the period 2012–2022 (millions of euros)



Source: own elaboration. Number of female (male) executives varies between 10(173) and 13(238).

Table 1: Descriptive statistics for executive characteristics (2012–2022)

	All			Women			Men			Mean Difference (men-women) (<i>p</i> -value) ^(a)
	Median	Mean	SD	Median	Mean	SD	Median	Mean	SD	
Real compensation (in mill.)	0.68	1.44	2.27	0.27	1.25	2.49	0.71	1.45	2.26	0.20 (0.000)
ln(real compensation)	13.43	13.39	1.33	12.5	12.77	1.52	13.47	13.42	1.31	0.65 (0.000)
Age (2011)	50	50.88	12.31	42	44.38	15.86	50	51.21	11.87	6.83 (0.000)
Tenure	8	11.37	9.75	7	11.32	10.17	8	11.37	9.72	0.05 (0.485)
CEO	0	0.46	0.5	0	0.34	0.47	0	0.47	0.5	0.13 (0.004)
Chair	0	0.31	0.46	0	0.13	0.34	0	0.32	0.47	0.18 (0.000)
No. committees	0	0.49	0.68	0	0.53	0.95	0	0.49	0.66	-0.04 (0.160)

Note: The number of female (male) observations is 128 (2333), however for Age_11, the number of observations is 116 (2290).^(a)Null hypothesis in Wilcoxon test of equal means for men and women.

Source: own elaboration

Table 2: Descriptive statistics for governance and firm characteristics for all firms and those with and without female executives (2012–2022)

	All firms			Firm-year (with female executives)			Firm-year (without female executives)			Mean difference (<i>p</i> -value) ^(b)
	Median	Mean	SD	Median	Mean	SD	Median	Mean	SD	
Governance characteristics										
Board_size	10,00	10.36	3.41	9,00	9.70	3.59	10,00	10.43	3.38	0.73 (0.006)
Share women on board	0.19	0.2	0.13	0.29	0.28	0.13	0.18	0.19	0.13	-0.10 (0.000)
Board_independence	0.40	0.42	0.17	0.43	0.43	0.13	0.40	0.42	0.17	-0.01 (0.207)
Female executive	0,00	0.10	0.30	1,00	1.01	0.09				
Nomination & Rem. Comm.	1,00	0.97	0.18	1,00	0.94	0.24	1,00	0.97	0.17	0.03 (0.066)
Share_women_N&R Comm.	0.20	0.21	0.22	0.17	0.16	0.18	0.20	0.22	0.23	0.06 (0.008)
Firm characteristics										
Firm_Size ^(a)	21,00	21.18	2.41	21.07	21.28	3.39	20.99	21.17	2.80	-0.11 (0.394)
Leverage ^(a)	0.30	0.32	0.24	0.21	0.26	0.26	0.31	0.33	0.23	0.06 (0.000)
ROA ^(a)	0.02	0.02	0.10	0.01	0.01	0.13	0.02	0.02	0.09	0.01 (0.014)

Note: Descriptive statistics correspond to 1,299 firm-year observations: 127 firm-year observations for firms with female executives and 1,172 firm-year observations for firms without female executives.

^(a)Variables entered with a lag. ^(b)Null hypothesis in Wilcoxon test of equal means for men and women.

Source: own elaboration.

Table 3: OLS estimates explaining ln of real total compensation

	Model 1	Model 2	Model 3	Model 4	Model 5
Female	-0.65*	-0.61**	-0.46**	-0.49**	-0.32*
	(0.35)	(0.29)	(0.19)	(0.20)	(0.18)
Firm_Size ^(a)			0.40***	0.34***	0.34***
			(0.027)	(0.031)	(0.026)
Leverage ^(a)			-0.19	-0.21	-0.24
			(0.17)	(0.16)	(0.16)
ROA ^(a)			1.64***	1.52***	1.47***
			(0.37)	(0.37)	(0.38)
Board_size				0.054***	0.054***
				(0.015)	(0.015)
Share_women_board				0.64	0.23
				(0.42)	(0.38)
Board_independence				0.54**	0.46**
				(0.26)	(0.22)
NRC				-0.036	0.045
				(0.15)	(0.13)
Share_women_NRC				-0.12	-0.039
				(0.22)	(0.19)
CEO					0.38***
					(0.073)
Chair					0.31***
					(0.092)
Number Committees					0.098**
					(0.049)
Age					0.095***
					(0.034)
Age ²					-0.00092***
					(0.00032)
Tenure					0.029***
					(0.0086)
Tenure ²					-0.00040**
					(0.00019)
Constant	13.4***	13.1***	5.02***	5.51***	2.45***
	(0.065)	(0.16)	(0.56)	(0.60)	(0.91)
Observations	2461	2461	2450	2450	2397
R2	0.01175	0.09345	0.47876	0.49027	0.55551
Yearly dummies	No	Yes	Yes	Yes	Yes
Sector	No	Yes	Yes	Yes	Yes

^(a)Variables entered with a lag. Standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$.

Source: own elaboration.

Table 4: OLS estimates explaining ln of real total compensation including interaction effects

	Model 1	Model 2	Model 3	Model 4	Model 5
Female	-0.66** (0.30)	-0.58*** (0.22)	-0.95* (0.49)	0.021 (0.59)	-0.24 (0.51)
Firm_Size ^(a)	0.35*** (0.026)	0.35*** (0.026)	0.35*** (0.026)	0.35*** (0.026)	0.35*** (0.026)
Leverage ^(a)	-0.22 (0.16)	-0.23 (0.16)	-0.24 (0.16)	-0.24 (0.16)	-0.22 (0.16)
ROA ^(a)	1.50*** (0.39)	1.51*** (0.39)	1.44*** (0.38)	1.48*** (0.38)	1.47*** (0.38)
NRC	0.030 (0.14)	0.024 (0.14)	0.034 (0.14)	0.034 (0.13)	0.030 (0.14)
Share_women_board	0.15 (0.39)				0.23 (0.39)
Board_size	0.054*** (0.015)	0.053*** (0.014)	0.054*** (0.014)	0.054*** (0.014)	0.054*** (0.015)
Board_independence	0.46** (0.22)	0.45** (0.22)	0.43* (0.22)	0.47** (0.22)	0.40* (0.22)
Share_women_NRC	-0.025 (0.19)	-0.0070 (0.16)	0.037 (0.16)	0.038 (0.16)	-0.080 (0.19)
Female#Share_women_board	1.28 (0.98)				-1.40 (1.34)
Female#Share_women_NRC		1.94*** (0.70)			2.35** (0.96)
Female#Board_independence			1.56 (0.97)		1.52 (1.17)
Female#Board_size				-0.032 (0.054)	-0.068 (0.045)
CEO	0.38*** (0.073)	0.38*** (0.073)	0.39*** (0.073)	0.38*** (0.074)	0.38*** (0.073)
Chair	0.31*** (0.092)	0.31*** (0.092)	0.31*** (0.092)	0.32*** (0.092)	0.31*** (0.092)
Number Committees	0.098** (0.049)	0.094* (0.049)	0.090* (0.049)	0.10** (0.050)	0.096* (0.050)
Age	0.094*** (0.034)	0.095*** (0.033)	0.092*** (0.034)	0.098*** (0.034)	0.098*** (0.035)
Age ²	-0.0009*** (0.00032)	-0.00091*** (0.00031)	-0.00089*** (0.00032)	-0.00094*** (0.00032)	-0.00094*** (0.00032)
Tenure	0.029*** (0.0086)	0.029*** (0.0086)	0.029*** (0.0086)	0.029*** (0.0086)	0.029*** (0.0086)
Tenure ²	-0.00040** (0.00019)	-0.00041** (0.00019)	-0.00041** (0.00019)	-0.00039** (0.00019)	-0.00040** (0.00019)
Constant	2.47*** (0.90)	2.44*** (0.89)	2.55*** (0.91)	2.35** (0.94)	2.32** (0.93)
Observations	2397	2397	2397	2397	2397
R2	0.55620	0.55773	0.55642	0.55561	0.55938

^(a)Variables entered with a lag. Standard errors in parentheses.

Estimations include controls for sector and year dummies. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$.

Source: own elaboration.

Table 5: Oaxaca-Blinder decomposition analysis of the gender gap in total compensation

	All Years		2012-2017		2018-2022	
Total differences	0.61	100%	0.92	100%	0.28	100%
Males	13.44		13.37		13.55	
Females	12.83		12.45		13.27	
Composition effects	0.28	46.2%	0.36	39.0%	0.14	51.6%
Behavioural effects	0.33	53.8%	0.56	61.0%	0.14	48.4%

Note: evaluated at male coefficients.

Supplementary material

Table S1: Literature review

Article	Country	Database	Period	Dependent variable	Sample	Is there a g
Bowlin, Renner and Rives (2003)	USA	S&P 500	1997	Annual compensation; long-term cash equivalent compensation	Executives	No, after inc
Cook, Ingresoll and Glass (2019)	USA	S&P 500 companies and Compustat database, Execucomp database	2009–2013	Base salary; base salary plus bonuses and total compensation and natural logs (LN)	Top five executives	Yes, the more women have o decisions, t compen
Quintana-García and Elvira (2017)	USA	Longitudinal data from a sample of public high technology firms on top executives from Thomson Reuters Datastream’s ASSET4 ESG	2007–2011	Total compensation; base pay; variable pay	Top executives	Women who a market hires are both base compensation internal placem reduced as re women in top p
Shin (2012)	USA	S&P; ExecuComp; RiskMetrics Directors Database	1998–2005	Log of total compensation	Executives	Yes, the gender smaller when a women are on committee

Table S1 (continuation)

Article	Country	Database	Period	Dependent variable	Sample	Is there a geno
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Carter, Franco and Gine (2017)	USA	S&P 1500; EXECUCOMP; RiskMetrics	1996–2010	Natural log of salary or total compensation	Sample of executives	Yes, 7% salary gap; compensation gap; diversity on board; gender gap. Women's aversion may act as a pay convergence
Bell (2005)	USA	S&P 1500; EXECUCOMP	1992–2003	Total gross compensation; cash compensation; salary	Executives	Women earn 8–10% less than comparable men; female-headed firms have female executives; firm characteristics
Bertrand and Hallock (2001)	USA	US Public Corporations; EXECUCOMP	1992–1997	Composition of compensation packages	Executives	Unexplained gap of 10–15% holding constant age, tenure, etc. of executive, age
Gupta et al. (2018)	USA	EXECUCOMP; RISKMETRICS; COMPUSTAT; CRSP	1996–2014	Natural log of total CEO compensation	CEO	No evidence of a gap between male and female CEOs' compensation
Elkinawy and Stater (2011)	USA	EXECUCOMP; COMPUSTAT; Investor's Responsibility Resource Center data	1996–2004	Real base salary and total compensation	Top five executives	Yes, salaries of female executives are about 5% lower than male executives after controlling for executive, firm, and personal characteristics. It is true at the time, but not the case now

Table S1 (continuation)

Article	Country	Database	Period	Dependent variable	Sample	Is there a gender gap?
Geiler and Renneboog (2015)	UK	Manifest Database; BoardEx database; Datastream	1996–2007	Total compensation and its components (salary, bonuses, etc.)	All top managers in all listed UK companies	CEOs do not face a gender gap; other female executives earn less than their male counterparts
Lausten (2001)	Denmark	Confidential files from Danish consulting firm (Dansk Management Forum)	1992–1995	Executive compensation	Executives	No (after controls for age, tenure, etc. disappears when you control for who you are, where you work, and what you do)
Smith, Smith and Verne (2011)	Denmark	Employer-employee database with Danish companies in private sector with more than 50 employees	1996–2005	Executive compensation	CEOs; VPs; potential top executives	There is a large compensation gap between male and female executives
Yanadori, Gould, and Kulik (2018)	Australia	Sirca Corporate Governance database	2011–2014	Total pay; base salary; financial incentives	Executives serving full-time on the board	Yes, female executives receive 10% less of total pay earnings than male executives. A large gender pay gap exists; differences in pay are not explained by differences in

Schneider, Iseke and Pull (2021)	Europe (6 European countries)	Wharton Research Data; Bloomberg, provided by firm hkp; hand-collected	2011– 2014	Log of total annual pay	Executive board members in large companies	Estimated adjuste around 11%, es recruited e
Pucheta-Martínez and Bel-Oms (2014)	Spain	Spanish National Securities Market Commission (CNMV); SABI database; Corporate websites	2004– 2011	Logarithm of difference between compensation of male and female directors of firms listed on Madrid Stock Exchange	Board of directors	Yes, pay receive average 6.914 tir women

Table S2: Definition of explanatory variables

	Variable	Description	Data source
Executive	Female	1 if woman; 0 otherwise	CNMV
	Age	Age in December 2011	Hand-collected
	Tenure	Tenure (in years) on board, including tenure as non-executive director	CNMV
	CEO	1 if executive is CEO	CNMV
	Chair	1 if executive is chair	CNMV
	Number Committees	Number of committees to which executive belongs	CNMV
Board	Board size	Number of directors on board	CNMV
	Share_women board	Proportion of women on board	CNMV
	Board_independence	Proportion of independent directors on board	CNMV
	NRC	1 if firm has a NRC; 0 otherwise	CNMV
	Share women NRC	Proportion of women on remuneration committee	CNMV
Firm	Firm_size	Natural logarithm of total assets	Refinitiv Eikon
	Leverage	Ratio of total debt to total assets (winsorised at 1 st percentile)	Refinitiv Eikon
	ROA	Ratio of operating income before depreciation to total assets (winsorised at 1 st percentile)	Refinitiv Eikon
	Sector	Categorical variable: consumer goods; basic materials, industry and construction; oil and energy; consumer services; financial services; real estate services; technology and communication	Madrid Stock Exchange

Source: Own elaboration

Table S3: Number of listed firms in sample by sector and year (2012–2022)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Consumer goods	27 (2)	27 (3)	24 (3)	25 (4)	27 (4)	27 (4)	25 (3)	22 (3)	22 (2)	20 (2)	19 (1)	265 (31)
Industry & constr.	32 (0)	31 (0)	31 (0)	31 (1)	31 (2)	30 (2)	32 (2)	31 (2)	31 (2)	33 (2)	32 (2)	345 (15)
Oil & energy	8 (0)	8 (0)	7 (0)	7 (0)	7 (0)	8 (0)	8 (0)	10 (0)	11 (0)	12 (0)	13 (0)	99 (0)
Consumer services	16 (2)	16 (2)	18 (2)	18 (2)	18 (1)	18 (0)	16 (0)	14 (1)	14 (2)	15 (2)	15 (3)	178 (17)
Real estate services	16 (2)	15 (2)	16 (2)	16 (2)	15 (2)	12 (1)	15 (1)	14 (1)	15 (2)	14 (2)	14 (3)	162 (20)
Financial services	16 (3)	16 (4)	16 (3)	17 (3)	17 (3)	15 (3)	15 (4)	15 (3)	14 (3)	13 (3)	12 (3)	166 (35)
Technology & comm.	6 (1)	6 (1)	7 (1)	8 (1)	9 (0)	9 (0)	9 (1)	9 (1)	8 (1)	7 (1)	6 (1)	84 (9)
Total	121 (10)	119 (12)	119 (11)	122 (13)	124 (12)	119 (10)	120 (11)	115 (11)	115 (12)	114 (12)	111 (13)	1299 (127)

Note: Number of listed firms with at least one female executive in parentheses.

Source: Own elaboration

Table S4: Distribution and average real total executive compensation (millions of euros) by sector and gender (2012–2022)

	All				Female executives				Male executives				Differences in compensation ^(a)
	Distribution		Compensation		Distribution		Compensation		Distribution		Compensation		(male-female)
	N	%	Mean	SD	N	%	Mean	SD	N	%	Mean	SD	(p-value)
Consumer goods	504	20.48%	0.95	1.95	31	24.22%	0.22	0.13	473	20.27%	1.00	2.00	0.78 (0.000)
Industry & constr.	595	24.18%	1.67	2.82	15	11.72%	0.33	0.19	580	24.86%	1.7	2.85	1.38 (0.000)
Oil & energy	163	6.62%	2.55	3.28	0	0.00%			163	6.99%	2.55	3.28	
Consumer services	336	13.65%	1.18	1.32	18	14.06%	0.44	0.48	318	13.63%	1.22	1.34	0.78 (0.000)
Real estate services	252	10.24%	0.97	1.67	20	15.63%	0.18	0.19	232	9.94%	1.03	1.73	0.85 (0.000)
Financial services	464	18.85%	1.79	2.44	35	27.34%	3.53	4.11	429	18.39%	1.65	2.19	-1.88 (0.138)
Technology & comm.	147	5.97%	2.25	2.53	9	7.03%	2.31	1.84	138	5.92%	2.25	2.58	-0.07 (0.378)
Total	2461	100	1.50	2.38	128	100%	1.31	2.63	1948	100.00%	1.51	2.36	0.20 (0.000)

Note: See Table S3 in the supplementary material for the distribution of listed Spanish firms by sector and year.

^(a) Null hypothesis in Wilcoxon test of equal means for men and women.

Table S5: OLS estimates explaining ln of real total compensation. Men and Women

	2012-2022		2012-2017		2018-2022	
	Men	Women	Men	Women	Men	Women
Firm_Size ^(a)	0.35*** (0.027)	0.30 (0.18)	0.36*** (0.028)	0.27 (0.31)	0.30*** (0.037)	-0.10 (0.20)
Leverage ^(a)	-0.25 (0.16)	1.23 (1.17)	-0.019 (0.19)	2.98*** (1.01)	-0.60*** (0.21)	-1.53 (1.96)
ROA ^(a)	1.36*** (0.40)	1.81 (1.09)	1.47*** (0.40)	3.00 (1.96)	1.12** (0.57)	-3.70 (2.17)
NRC	0.086 (0.14)	-0.61* (0.34)	0.11 (0.16)	-0.81 (0.57)	-0.91*** (0.33)	
Share_women_board	0.27 (0.40)	0.50 (1.62)	-0.40 (0.45)	1.61 (2.29)	1.14** (0.52)	-0.39 (2.89)
Board_size	0.054*** (0.015)	-0.090 (0.086)	0.041*** (0.015)	-0.046 (0.097)	0.092*** (0.022)	-0.41** (0.19)
Board_independence	0.40* (0.23)	1.89 (1.78)	0.30 (0.24)	1.87 (1.33)	0.71* (0.37)	-0.85 (3.80)
Share_women_NRC	-0.088 (0.19)	0.15 (0.87)	0.023 (0.23)	0.23 (1.66)	-0.25 (0.25)	0.21 (1.14)
CEO	0.39*** (0.075)	-0.046 (0.38)	0.41*** (0.079)	0.55 (0.69)	0.40*** (0.10)	-2.65 (1.55)
Chair	0.29*** (0.093)	0.53 (0.44)	0.25** (0.100)	0.24 (0.80)	0.37*** (0.12)	0.77 (0.90)
Committees	0.089* (0.050)	0.34 (0.25)	0.15*** (0.054)	0.35 (0.40)	-0.037 (0.079)	0.84* (0.46)
Age	0.098** (0.039)	0.22 (0.18)	0.085** (0.040)	0.044 (0.33)	0.10** (0.045)	-0.34 (0.61)
Age ²	-0.00094*** (0.00036)	-0.0021 (0.0020)	-0.00082** (0.00037)	-0.00032 (0.0037)	-0.0010** (0.00044)	0.0078 (0.0073)
Tenure	0.031*** (0.0088)	-0.031 (0.054)	0.032*** (0.0097)	-0.0048 (0.14)	0.030*** (0.011)	-0.35* (0.19)
Tenure ²	-0.00043** (0.00020)	0.0011 (0.0016)	-0.00050** (0.00021)	0.0023 (0.0059)	-0.00027 (0.00024)	0.0083* (0.0046)
Industry & constr.	-0.12 (0.12)	0.46 (0.32)	-0.17 (0.12)	0.36 (0.54)	-0.034 (0.16)	1.14** (0.46)
Oil & energy	-0.31* (0.17)		-0.32* (0.18)		-0.28 (0.20)	
Consumer services	0.032 (0.15)	-0.78 (0.85)	-0.086 (0.16)	-2.35* (1.12)	0.25 (0.20)	-1.71 (1.40)
Real estate services	-0.97*** (0.18)	-0.89 (1.29)	-0.96*** (0.17)	-1.19 (1.84)	-0.95*** (0.23)	-0.45 (1.63)
Financial services	0.086 (0.17)	-1.07 (0.73)	-0.067 (0.19)	-2.96** (1.34)	0.24 (0.20)	-2.43* (1.24)
Technology & comm.	0.066 (0.17)	0.18 (1.08)	0.030 (0.20)	-0.95 (2.03)	0.11 (0.21)	1.85* (1.01)
Constant	2.24** (1.01)	2.04 (6.69)	2.51** (1.10)	4.69 (12.4)	3.52*** (1.33)	23.9 (14.7)
Observations	2281	116	1331	62	950	54
R2	0.54901	0.74476	0.54213	0.83965	0.57872	0.84589

^(a)Variables entered with a lag. Standard errors in parentheses. Controlling for yearly dummies.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$.

Source: own elaboration.