TO BE BETTER TO BE EQUAL: IN SEARCH OF GENDER-BASED PERFORMANCE EFFECTS IN FINANCIAL STATEMENTS OF ITALIAN UNLISTED COMPANY BOARDS

Massimo Cecchi [*]

* Department of Business and Economics, University of Florence, Florence, Italy
Contact details: Department of Business and Economics, University of Florence, Via delle Pandette, 9 (50127), Florence, Italy

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Abstract

Although Italy is characterized by a Rhine model of capitalism, with an underdeveloped stock exchange, previous studies on gender inequality have focused only on the analysis of the country's few listed companies. Our study examines, instead, a larger sample of approximately 15,000 Italian limited companies, which include, in particular, unlisted companies. In the absence of estimates of these firms' value on a stock market, the study measures performance based on financial statement data and ratios. No statistically significant correlations between performance and gender emerge. Therefore, if women have to "be better" to be treated "equally", we can conclude that women do not seem to perform better than their male counterparts. However, women are not found to perform worse, either. Hence, we can also conclude that their underrepresentation can only be the result of sociocultural discrimination. We believe that this reversal of perspective should also be considered in future studies in search of overperformance to justify leading roles for women.

Keywords: Gender Inequality, Accounting Performance, Corporate Governance, Rhenan Capitalism

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1. INTRODUCTION

Italy is one of the European countries with the highest levels of gender inequality.

According to the World Economic Forum's 2020 global index of gender inequality, Italy falls among the last Western European and North American countries (19th out of 22) in its level of gender equality (World Economic Forum, 2020). Eurostat also places Italy at the bottom of the ranking in terms of women's participation in the labor market (29th out of 30 EU countries[1]), with a female

employment rate in 2019 of 50.1% compared to the EU average of 64.3% (see Table A.1 in Appendix). On average, the gap between the male and female employment rates is 18.2 percentage points in comparison with the EU average of 10.4 percentage points, giving Italy a ranking of 27th out of 30 EU countries.

Conversely, its standing as regards the pay gap rate is better, ranking third out of 30 EU countries with a score of 5.0 in comparison with an EU average of 15.6.

Even considering Europe as a whole, data show that although in recent decades most countries have experienced significant increases in women's level of

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[1] EU 28 plus Iceland and Norway.

education and labor market participation, these improvements have not translated into greater female representation in economic leadership positions.

In particular, regarding the composition of company boards, the Eurostat time series highlights that for the largest publicly listed companies, the average share of women from 2003 to 2007 grew by only 1.5 percentage points (from 8.5 to 10%; see Table A.2 in Appendix). This pointed to a real emergency.

Since 2006, the European Commission has therefore paid special to gender diversity, adopting multiple initiatives.

Among other efforts, in 2006, the Commission issues the "Roadmap for equality between women and men 2006–2010" (COM (2006) 0092), revised in 2008 (COM (2008) 0760); the "Strategy for equality between women and men 2010–2015" (COM (2010) 491); the reference framework "Strategic engagement for gender equality 2016–2019" and the "Gender equality strategy 2020–2024", which is still under consultation.

To improve the gender balance among non-executive directors in companies listed on stock exchanges, in 2012, the European Commission adopted a proposal for a directive (COM (2012) 614). The aim of the proposal, which has been passed by a strong majority in the European Parliament but is still under discussion in the European Council, is to increase to at least 40% the presence of the underrepresented gender among non-executive board members.

Following the European Commission's actions, a lively debate on gender quotas arose within many EU member states.

In 2003, Norway became the first country in the world to have introduced a quota law for boards of directors, amended in 2008 to introduce severe sanctions for firms that fail to comply. Statistics show that the share of women on boards of public limited companies in Norway crossed the target of 40% at the end of 2009 (see Table A.2 in Appendix).

This was followed between 2007 and 2011 by similar policies in Spain, Belgium, France, Italy, the Netherlands, Germany, Portugal, and Austria. In the various countries, the size of the gender quota varies between 30 and 40%, and in almost all cases, companies were given a period of time to meet the required quota so that they could adjust gradually to the new requirements in terms of the gender composition of their boards. In some countries, a phase-in process with sequentially higher quotas was established. Finally, national legislation also differs in the presence and type of sanctions for non-compliers (Comi, Grasseni, Origo, & Pagani, 2020). Some European countries, such as the UK and Finland, seek to boost growth in boardroom positions held by women through self-regulatory initiatives (see Davies, 2015, for the UK and FinnCham, 2016, for the Finnish case).

In particular, in Italy in 2011, the parliament mandated quotas for listed companies with law no. 120 (also known as *"Legge Golfo-Mosca"*), requiring at least one-third (one-fifth for the first term) of board seats to be held by directors of the less-represented gender for the three board appointments after August 2012. In 2019 (DL 124/19 and L. 159/19), the Golfo–Mosca law was then extended by providing for a gender balance constraint for six renewal meetings instead of three.

As a consequence of these laws, within the regulated contexts, the Italian situation has also changed rapidly (see Table A.2 in Appendix).

There is no doubt that mandatory quotas are the most effective means of rapidly increasing the number of women on boards of directors.

However, their usefulness has been studied mainly in relation to the effect produced on company performance, and in this regard, opinions differ (Walby, 2013; Smith, 2014).

There is, however, a second problem that needs to be highlighted. Currently, it does not seem that the legislation has been able to trickle into areas not specifically regulated, and male figures continue to dominate the most important positions (see Table A.3 in Appendix).

To return our focus to Italy, data from the Italian Commission for Companies and the Stock Exchange (Consob) certify that the position of women within management bodies seems to have improved only within the confines of the application of mandatory legislation. Table A.4 in the Appendix shows the position of women at the end of 2019. The rise in the share of women on boards to 36.5% was not at all followed by an equivalent growth in the shares of women at the top (in unregulated positions), i.e., as chairs (3.1%), deputy chairs (4.1%), or CEOs (1.9%).

However, there is a third problem that motivates our research: in Italy, there are very few listed companies, and previous research risks being unrepresentative.

According to the well-known theory of Gerschenkron (1962), the reason for the initial narrowness of the stock market can be traced back to the fact that Italy belongs to the category of so-called late joiners — that is, second-generation industrialized countries, which, to recover quickly, financed their development through state intervention and banks rather than through the stock market.

If we take as a reference the contrast between the two forms of capitalism, the German-Rhenish, and the Anglo-Saxon versions, as theorized by Albert (1993), Italy undoubtedly belongs to the former category.

Therefore, even if research on the stock exchange is of certain importance, in limiting ourselves to this literature, we risk not fully grasping the economic reality of the country.

In February 2021, the Italian stock exchange had 380 listed companies, 225 with medium-large capitalizations (MTA market) and 155 with small and medium capitalizations (AIM market), compared to 1,791,853 limited companies (Unioncamere, 2020).

Market cap to GDP is approximately 36 in Italy, compared to 105 in the UK and 195 in the US. The number of listed companies per million inhabitants is approximately 6 in Italy, compared to approximately 30 in the UK and 13.5 in the US. Among neighboring countries, France also has a more developed stock market (with its figures for market cap to GDP and listed companies per million at approximately 106 and 13.5, respectively).

Confirming that the Italian economic reality must be interpreted in light of Rhine capitalism, Germany instead presents a stock market representation very similar to that of the Italian market, with a market cap to GDP of approximately 55 and listed companies per million inhabitants of approximately 5.7.

A different investigation strategy is therefore considered necessary. So, research questions are as follows:

1. What is the percentage of women at the helm of Italian companies in a much larger sample than that of listed companies alone analyzed in previous research?

2. Do women-led companies perform differently from men-led ones?

Hence, to answer these questions, starting from a sample of 1,089,152 limited companies in the Aida database (Bureau van Dijk) for which governance data are available in addition to financial statements, we select those with a minimum of 50 employees, 4.4 million in total assets and 8.8 million in sales. We obtain a sample of 14,622 companies, and we analyze their financial statements.

The rest of the paper is organized as follows. Section 2 completes the literature review partly anticipated in this section regarding EU gender quotas and highlights the contribution of our paper. Section 3 outlines the sample, the variables, and the methodology used. Subsequently, in Section 4, we present and discuss the results. Finally, Section 5, incorporates the study's conclusions, implications, and suggestions for future research.

2. RELATED LITERATURE

As previously pointed out, most research on women's participation on boards of directors concerns listed or very large companies, even though it is impossible to offer an exhaustive representation of an enormous and ever-growing literature.

As noted for European quotas, despite a large body of theoretical and empirical studies examining the relationship between gender diversity and firm performance, the findings are decidedly mixed and conflicting.

On methodological grounds, legislative initiatives on quotas are an interesting quasi-natural experiment on exogenous corporate board change that has fueled ever-growing economic literature on the relationship between gender quotas and company performance.

In general, supporters of gender quotas believe that they will help to crack the glass ceiling that prevents productive high-skilled women from reaching leadership positions, with beneficial effects on firm performance. Opponents of gender quotas claim that if boards are already set to maximize firm performance, the introduction of a binding constraint in terms of the number of women among board members should necessarily lead to suboptimal output (Comi et al., 2020).

However, all the major studies focus on listed companies. For example, Randøy, Thomsen, and Oxelheim (2006) focus on the largest 500 listed companies from Denmark, Norway, and Sweden in 2005, finding that board diversity is not significantly related to company performance (stock market valuation and profitability).

On the other hand, Ahern and Dittmar (2012), for a panel of 248 Norwegian listed companies in the period 2001–2009, note that the announcement of the gender quotas law had a significant negative impact both in terms of share price reaction and impact on profitability and in the probability of delisting. Bertrand, Black, Jensen, and Lleras-Muney (2014) show that a large number of public limited companies changed their status to private after 2003. Bøhren and Staubo (2016) confirm the negative impact of the Norwegian legislation on profitability.

Conversely, Nygaard (2011) finds that in the absence of information asymmetries between pre-existing male internal and incoming external female directors, overall business performance appears to improve.

Matsa and Miller (2013), analyzing a panel of Norwegian companies in the period 2003–2009, also qualify the conclusions of Ahern and Dittmar (2012). They find that the introduction of the quota was neutral in terms of both short-run market reaction and long-run performance, while the reduction in short-run operating profits was due to changes in employment policies with the related increase in the cost of labor.

Eckbo, Nygaard, and Thorburn (2016) question the results of previous studies on the Norwegian case, such as that of Ahern and Dittmar (2012), criticizing the methodology used and the short observation period. It is also very likely that the diverse empirical evidence found in the Norwegian context may also be inextricably linked to the socio-economic characteristics of that country.

Indeed, recent studies emphasize the need for comparative empirical research to extend the results of studies generally focused on single countries.

For example, Adams and Kirchmaier (2015), analyzing a sample of 22 countries, show that the relationship between female board representation and corporate performance is positive when full-time female labor force participation is above the median of the sampled countries.

Terjesen, Couto, and Francisco (2016) analyze the role of more gender-balanced boards in 47 countries in 2010 and find that the effect of independent directors on reducing agency costs is magnified by board gender diversity.

Boubaker, Dang, and Nguyen (2014), analyzing French listed firms over the 2009–2011 period, find evidence of a negative and significant effect of the percentage of female directors on firm financial performance.

Focusing on Italy, Ferrari, Ferraro, Profeta, and Pronzato (2016) analyze the effect of the Golfo–Mosca law on gender quotas in listed companies. Studying the period 2007–2014, they document how the application of gender quotas led to more qualified and rejuvenated boards of directors, given that on average, women on boards are younger and have a better education level. Furthermore, the authors find a negative correlation between the share of women on boards of directors and stock market price volatility and a positive effect on returns, although, as acknowledged by the authors, these findings may not be conclusive given that they

are based on an excessively short period of time (two years after the introduction of gender quotas).

On the other hand, Gordini and Rancati (2017) analyze the relationship between gender diversity and the financial performance of a panel of Italian listed companies in the years 2011–2014 and note that the presence of one or more women on the board does not in itself produce any significant effect. Greater gender diversity can also generate economic gains and does not destroy value if investors do not penalize companies that increase female representation on their boards of directors. Italian companies should rather focus their efforts on the right mix of men and women and not on the formal presence of women on boards of directors.

Bruno, Ciavarella, and Linciano (2018), examining the profitability of listed Italian firms over the period 2008–2016, estimate a positive effect on different measures of performance when the share of women exceeds a certain threshold ranging between approximately 17% and 20% of board members.

Finally, Comi et al. (2020) analyze the Italian situation from a comparative perspective based on four EU countries (Belgium, France, Italy, and Spain) over 2004–2014. The authors find that mandatory quotas have heterogeneous impacts, being positive and larger in countries such as Italy that are characterized by lower levels of firm performance and greater gender imbalances. While on average, the results show that gender quotas have no significant effect on firm profitability and productivity, the major exception is Italy, where gender quotas are found to positively affect firm productivity. Overall, it appears not only that Italian companies have respected the law by hiring new women but that these women have a high level of education in specific sectors such as law, management, and economics and work experience in managerial positions similar to that of incumbents. In addition, it appears that board renovations have also resulted in male directors having more experience, with a potentially positive impact on business productivity.

In summary, a primary problem in research on gender quotas is that the results are at minimum conflicting (Rhode & Packel, 2014).

But even if we extend the analysis outside the European context, even where gender quotas do not operate, the results of the various studies are contradictory.

Many of these highlight a positive relationship. Within this stream, we have already referred to the research of Terjesen et al. (2016), Adams and Ragunathan (2014), Adams and Kirchmaier (2015), Ferrari et al. (2016), and Bruno et al. (2018), for the European context.

Shrader, Blackburn, and Iles (1997), examining data from the *Wall Street Journal* for 200 large firms, also find positive relationships between the firm's total percentage of women managers and profitability.

Erhardt, Werbel, and Shrader (2003), through a data study of leading US companies, find that a higher degree of board diversity is associated with superior performance. Carter, D'Souza, Simkins, and Simpson (2003), again examining how the proportion of women and individuals from different ethnic groups influences the financial performance of Fortune 1000 companies, find that companies with at least two female directors perform better.

Farrel and Hersch (2005) find, however, that a higher ratio of women leads to a slight improvement in the performance of Fortune 500 companies for the period 1990–1999.

Nguyen and Faff (2006) find a positive relationship between the market value of a sample of publicly-traded Australian companies and the gender diversity of the board of directors.

Tarr-Whelan (2009), analyzing the performance of Fortune 500 companies, finds that companies with a higher percentage of women in senior positions have higher profits and a greater ability to survive financial crises. They also posit a 30% threshold effect, whereby if women represent at least one-third of a group, they are able to influence decisions. Schwartz-Ziv (2013) also hypothesizes that the existence of a critical mass of female directors influences the work of the board of directors and financial performance, analyzing the board and board meetings of eleven Israeli government companies between 2007 and 2009. The authors document that boards are most active when they include at least three male and three female directors (for references to a selected bibliography on tokenism and critical mass, see Kanter, 1977; Konrad, Kramer, and Erkut, 2008; Arena et al., 2015).

A positive relationship between diversity and performance is also found by Adams and Ragunathan (2014) for a sample of US bank holding companies listed in the 2006–2009 period. The positive effect appears to be related to the high quality of female directors, who are on average slightly more educated than male directors and subject to a more difficult selection process in the financial sector than elsewhere.

Evidence of a positive impact of gender diversity on firm performance is also found in Schmid and Urban (2015), who analyze both short- and long-term market reactions to exogenous retirements of female board members (i.e., due to death or illness) for 35,000 listed firms across 53 countries over 1998–2010.

Owen and Temesvary (2017) present further evidence of critical mass, that is, the nonlinearity between board diversity and corporate performance, for 90 US bank holding companies over the period 1999–2016.

Conversely, other studies find a negative relation between the percentage of women on boards and corporate performance.

We have previously seen for the European context the results of the research by Ahern and Dittmar (2012) and Bøhren and Staubo (2016). Moreover, Adams and Ferreira (2009), analyzing 1,939 listed companies in the US for the period 1996–2003, also find a negative relationship between gender diversity and both value and profitability. Dobbin and Jung (2010) study Fortune 500 US companies and confirm a negative correlation between board diversity of gender and firm value, while no significant relationship is found between gender diversity and profitability.

Finally, many other studies, such as Shrader et al. (1997) on 200 large US firms or Daily, Certo, and Dalton (1999) on Fortune 500 firms from 1987 to 1996, find no correlation or statistically significant impact of female representation on firm profitability and/or market value.

Even Farrell and Hersch (2005), examining a group of Fortune 500 and Fortune Service 500 companies from 1990 to 2000, find that although women tend to serve in better-performing companies, the firms experience nonsignificant abnormal returns.

For Europe, in addition to the aforementioned works of Gordini and Rancati (2017) and Comi et al. (2020), we can cite, for example, Singh, Vinnicombe, and Johnson (2001). After conducting an extensive survey of female directors on major UK boards of directors, they conclude that there is a need for a better understanding of how female directors contribute to board performance, pointing out that the theory is not well developed. Rose (2007), using a sample of listed Danish firms during the period 1998–2001, find no significant relationship between female board representation and firm financial performance.

Campbell and Mínguez-Vera (2008), analyzing a sample of Spanish listed companies for the period from January 1995 to December 2000, find that the presence of one or more women on the board of directors does not have a significant effect on financial performance.

Even later, Marinova, Plantenga, and Remery (2010), using 2007 data on 186 Dutch and Danish listed firms, and Gregory-Smith, Main, and O'Reilly (2014), using data on the board composition and the company performance of UK listed companies between 1996 and 2011, also find no relation between board diversity and firm performance.

More recently, Rose, Munch-Madsen, and Funch (2013), extending the analysis to Nordic countries as well as Germany, find no support for any performance impact relating to female board representation.

An attempt to reconcile these apparently conflicting results has been made by Post and Byron (2015), who conduct a meta-analysis of 140 studies verifying whether the different conclusions may be correlated, for example, with the different regulations and/or sociocultural contexts.

Their findings suggest that board diversity is neither wholly detrimental nor wholly beneficial to firm financial performance. They note that female representation is positively correlated with accounting returns and that this relationship is more positive in countries with stronger shareholder protection, possibly because this motivates boards to use the different knowledge, experience, and values that each member brings to the board. Furthermore, although they find a relationship between female representation and market performance that is close to zero, it is positive in countries with higher gender equality (and negative in countries with low gender equality), perhaps because societal gender differences in human capital may influence investors' evaluations of the future earning potential of firms that have more female directors.

On the other hand, studies on small and medium-sized European companies are in the minority and usually show a negative correlation, as in the case of Mínguez-Vera and Martin (2011) for Spanish SMEs, Gottschalk and Niefert (2013) for German start-up firms, and Shehata, Salhin, and El-Helaly (2017) for UK SMEs.

Instead, Manita, Elommal, Dang, and Houanti (2020), focusing on a selection of small and medium-sized enterprises in France between 2009 and 2014, find no notable correlation between performance and gender diversity.

As we can see from the review carried out, the literature on gender performance is very rich, but for the most part, it concerns listed and very large companies. This also applies to the research conducted previously on Italy (Ferrari et al., 2016; Gordini and Rancati, 2017; Bruno et al., 2018; Comi et al., 2020), where unlisted companies prevail.

Therefore, our study seeks to offer an important contribution highlighting a phenomenon that has hitherto remained in the shadows: the existence (or not) of gender-based performance effects in unlisted Italian companies.

3. DATA AND METHODOLOGY

The initial sample consisted of 1,089,152 Italian limited companies for which information on the board of directors (role and gender) was available in the Aida database (Bureau van Dijk). Financial statement data were collected for 2019.

Subsequently, we extracted from the sample the companies obliged to prepare European financial statements in a complete form — that is, those with at least 8.8 million in revenues, 4.4 million in total assets, and 50 employees. The sample was thereby restricted to 16,299 companies.

Finally, by removing the companies with incomplete data, we arrived at a sample of 14,622 companies (Table 1).

Table 1. Sample description

Role and gender	1,131,978
Legal form: limited companies	1,089,152
Employees: minimum = 50 units	23,456
Total asset minimum = 4.4 mil	18,963
Sales minimum = 8.8 mil	16,299
Missing data	14,622

Given the size of the sample, we did not examine the entire board but selected the gender of the top position as a proxy for gender representation (president of the board or sole administrator). Women hold 10.5% of these roles, in line with Eurostat data on similar positions for a sample of listed companies (i.e., 11.8%; see Table A.3 in Appendix).

Table 2. Variable description

Qualitative variables	
Region	*Abruzzo, Basilicata, Calabria, Campania, Emilia-Romagna, Friuli-Venezia Giulia, Lazio, Liguria, Lombardia, Marche, Molise, Piemonte, Puglia, Sardegna, Sicilia, Toscana, Trentino-Alto Adige, Umbria, Valle d'Aosta, Veneto.*
Ind	*Industry NACE codes: A: agriculture, forestry, and fishing; B: mining and quarrying; C: manufacturing; D: electricity, gas, steam and air conditioning supply; E: water supply, sewerage, waste management and remediation activities; F: construction; G: wholesale and retail trade, repair of motor vehicles and motorcycles; H: transporting and storage; I: accommodation and food service activities; J: information and communication; K: financial and insurance activities; L: real estate activities; M: professional, scientific and technical activities; N: administrative and support service activities; O: public administration and defense, compulsory social security; P: education; Q: human health and social work activities; R: arts, entertainment, and recreation; S: other services activities.*
LegF	Legal form: *S.A.p.A.: società in accomandita per azioni; S.p.A.: società per azioni; S.R.L.: società a responsabilità limitata*
List	Whether the company is listed on the Italian MTA market.
Quantitative variables	
Emp	*employees*
FirmAge	*company's age*
DirAge	*director's age*
S	*sales*
TA	*total asset*
E	*equity*
NI	*net income*
D	*debt*
LnS	*natural logarithm of sales*
LnTA	*natural logarithm of total asset*
LnE	*natural logarithm of equity*
Ratios	*D/EBITDA; ROA; ROS; ROE*

First, for qualitative variables, we present descriptive statistics calculating the frequency of males and females for each variable.

For quantitative variables, we calculate means and medians and, moreover, compare and test the significance of the differences in means for males and females by t-statistics. In particular, performance is quantified with the *ROE, ROA,* and *ROS* ratios (Zahra & Stanton, 1988; Shrader et al., 1997; Erhardt et al., 2003; Adams & Ferreira, 2009; Wang & Clift, 2009; Carter et al., 2010; Lückerath-Rovers, 2013; Schwartz-Ziv, 2013; Gregory-Smith et al., 2014).

Finally, to further test the possible correlations between the variables described in Table 6 and the gender of directors, we set up a logistic regression where the dependent variable is gender "*GEN*", a dummy variable that equals one for female directors and zero for male directors.

$$
\begin{aligned}
GEN(0,1) = \beta_0 + \beta_1 + Emp + \beta_2 FirmAge + \beta_3 DirAge + \beta_4 LnS + \beta_5 LnTA + \beta_6 LnE + \beta_7 D/EBITDA + \beta_8 ROA \\
+ \beta_9 ROS + \beta_{10} ROE + \beta_{11} Region + \beta_{12} Ind + \beta_{13} LegF + \beta_{14} List + \varepsilon
\end{aligned}
\tag{1}
$$

Region, Ind, and *LegF* are sets of variables. In detail, *Region:* $\beta_{11.1}$ *Abruzzo,* $\beta_{11.2}$ *Basilicata,* $\beta_{11.3}$ *Calabria,* $\beta_{11.4}$ *Campania,* $\beta_{11.5}$ *Emilia-Romagna,* $\beta_{11.6}$ *Friuli-Venezia Giulia,* $\beta_{11.7}$ *Lazio,* $\beta_{11.8}$ *Liguria,* $\beta_{11.9}$ *Lombardia,* $\beta_{11.10}$ *Marche,* $\beta_{11.11}$ *Molise,* $\beta_{11.12}$ *Piemonte,* $\beta_{11.13}$ *Puglia,* $\beta_{11.14}$ *Sardegna,* $\beta_{11.15}$ *Sicilia,* $\beta_{11.16}$ *Toscana,* $\beta_{11.17}$ *Trentino-Alto Adige,* $\beta_{11.18}$ *Umbria,* $\beta_{11.19}$ *Valle d'Aosta,* $\beta_{11.20}$ *Veneto.*

Ind: $\beta_{12.1}$ *A,* $\beta_{12.2}$ *B,* $\beta_{12.3}$ *C,* $\beta_{12.4}$ *D,* $\beta_{12.5}$ *E,* $\beta_{12.6}$ *F,* $\beta_{12.7}$ *G,* $\beta_{12.8}$ *H,* $\beta_{12.9}$ *I,* $\beta_{12.10}$ *J,* $\beta_{12.11}$ *K,* $\beta_{12.12}$ *L,* $\beta_{12.13}$ *M,* $\beta_{12.14}$ *N,* $\beta_{12.15}$ *P,* $\beta_{12.16}$ *Q,* $\beta_{12.17}$ *R,* $\beta_{12.18}$ *S.*

LegF: $\beta_{13.1}$ *S.A.p.A.,* $\beta_{13.2}$ *S.p.A.,* $\beta_{13.3}$ *S.R.L.*

4. RESULTS AND DISCUSSION

Table 4 shows the distribution of the sample among the Italian regions and industries (NACE codes).

We can observe how the distribution between males and females is not uniform among the regions. However, if we take the north and the south as a reference, we can observe how the distribution is patchy.

As far as industry is concerned, the sector with the greatest female presence is that of human health and social assistance activities (20%, code *Q*). Conversely, the sector with the lowest presence of women seems to be agriculture, forestry, and fishing (5.7%, code *A*). Sector *P* has even lower values, but the narrowness of the sample makes it poorly representative.

It does not appear that the legal form and the listing have a significant impact on the female presence (Table 5). Even most of the quantitative variables examined, particularly those that express accounting performance (*ROA, ROS,* and *ROE*), do not show substantial differences between companies with a woman and a man at the top.

In fact, most variables (Table 6a) display similar median values, and even if there are differences between means, they are not statistically significant (p > 0.05).

Only for variables related to age (Table 6b) do we find statistically significant differences (p < 0.001). In particular, women in charge appear to be younger on average by 22 years (median 33.45 for females and 55.45 for males). On the other hand, we find a smaller difference regarding the age of the company. In this case, companies led by women turn out to be slightly older (median 32.03 for females and 29.77 for males).

Table 4. F/M differences for region and industry

	Region				Industry (NACE)		
	F	*M*	*Number*		*F*	*M*	*Number*
Abruzzo	10.3	89.7	185	*A*	5.7	94.3	70
Basilicata	13.2	86.8	38	*B*	13.3	86.7	30
Calabria	22.0	78.0	41	*C*	9.6	90.4	6,763
Campania	11.9	88.1	481	*D*	9.7	90.3	124
Emilia-Romagna	11.1	88.9	1,590	*E*	6.5	93.5	294
Friuli-Venezia Giulia	9.9	90.1	372	*F*	12.7	87.3	597
Lazio	12.3	87.7	1,102	*G*	10.9	89.1	2,068
Liguria	7.3	92.7	258	*H*	9.9	90.1	794
Lombardia	10.3	89.7	4,961	*I*	13.7	86,3	278
Marche	11.8	88.2	330	*J*	9,5	90.5	654
Molise	11.1	88.9	18	*K*	11.7	88.3	749
Piemonte	10.8	89.2	1,414	*L*	13.9	86.1	288
Puglia	9.8	90.2	235	*M*	11.8	88.2	1,047
Sardegna	12.0	88.0	108	*N*	11.8	88.2	448
Sicilia	12.8	87.2	218	*P*	4.2	95.8	24
Toscana	10.1	89.9	714	*Q*	20.0	80.0	275
Trentino-Alto Adige	7.6	92.4	420	*R*	10.5	89.5	76
Umbria	15.8	84.2	165	*S*	12.4	87.6	43
Valle d'Aosta	6.9	93.1	29	Total	10.5	89.5	14,622
Veneto	9.1	90.9	1,943				
Total	10.5	89.5	14,622				

Table 5. F/M differences for legal form and listing

	Legal form				List		
	F	*M*	*Number*		*F*	*M*	*Number*
S.A.p.A.	0	100	11	Unlisted	10.5	89.5	14,359
S.p.A.	10	90	8,113	Listed	8.7	91.3	263
S.R.L.	11.2	88.8	6,498	Total	10.5	89.5	14,622
Total	10.5	89.5	14,622				

Table 6a. F/M differences between quantitative variables (differences are not significant) (Part 1)

Gender	Employees (Emp)		Sales (S)		Total asset (TA)		Equity (E)		Net income (NI)		EBITDA	
	F	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*
N	1,533	13,089	1,533	13,089	1,533	13,089	1,529	13,007	1,519	12,875	1,519	12,875
Mean	699	524	237,208	163,423	683,106	462,323	141,421	93,569	6,707	4,384	30,183	18,785
2°quartile	75	77	15,803	18,135	14,985	17,449	4,347	4,675	104	145	1,040	1,194
Median	121	132	31,375	36,943	32,055	36,853	11,352	12,173	766	879	2,417	2,981
3°quartile	282	289	81,287	89,757	90,812	94,381	34,530	33,878	2,764	3,018	7,415	8,226
SD/1.000	5.76	3.11	211.75	996.93	8254.10	8466.73	1610.65	1015.62	67.337	46.321	52.445	241.49
SE mean	147	27	54,082	87,13	210,816	73,994	41,191	8,904	1,728	408	13,456	2,127
p > 0.05	t (1638) = 1.17		t (1612) = 1.35		t (1929) = 0.99		t (1673) = 1.13		t (1691) = 1.31		t (1594) = 0.84	

Table 6a. F/M differences between quantitative variables (differences are not significant) (Part 2)

Gender	D/E		D/EBITDA		ROA		ROS		ROE	
	F	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*
N	1,529	13,006	1,519	12,875	1,533	13,089	1,491	12,617	1,486	12,514
Mean	6.36	5.27	6.08	9.20	5.37	5.34	4.76	4.46	9.58	9.97
2°quartile	0.89	0.99	3.37	3.55	1.69	1.82	1.53	1.57	2.11	2.37
Median	1.76	1.99	6.62	6.75	4.41	4.46	4.01	4.02	8.50	8.86
3°quartile	3.95	4.07	12.34	12.28	8.23	8.67	8.44	8.21	16.43	18.32
SD/1.000	61.03	84.00	107.55	279.75	10.49	11.73	7.75	8.19	22.31	23.35
SE mean	1.56	0.74	2.76	2.47	0.27	0.10	0.20	0.07	0.58	0.21
p > 0.05	t (14537) = 0.45		t (14396) = -0.43		t (2008) = 0.11		t (14110) = 1.38		t (1892) = -0.62	

Note: The last row shows the results t-test for equality of means; p > 0.05 for each variable.

Table 6b. F/M differences between quantitative variables (differences are significant)

Gender	FirmAge		DirAge	
	F	*M*	*F*	*M*
N	1,531	13,064	1,531	13,048
Mean	33.54	31.70	34.89	56.97
2°quartile	19.14	18.11	20.48	41.35
Median	32.03	29.77	33.45	55.45
3°quartile	43.70	41.59	45.34	70.75
SD/1.000	18.22	18.88	19	22
SE mean	0.159	0.483	0.485	0.193
p < 0.001	t (1879) = 3.63		t (2044) = 4.84	

Note: The last row shows the results t-test for equality of means; p < 0.001 for each variable.

Evaluation of the predictive capacity of the parameters, as previously explained, is carried out with a logistic regression model.

We use a stepwise backward method to estimate the best model. Table 7 shows the results. However, the fit of the model to the data is limited (*Nagelkerke R²*: 0.026). This confirms the overall limited influence of gender on the economic-financial characteristics of companies found in many previous studies (Randøy et al., 2006, Gordini & Rancati, 2017; Rose, 2007; Campbell & Mínguez-Vera, 2008; Marinova et al., 2010; Gregory-Smith et al., 2014; Rose et al., 2013; Manita et al., 2020). Within this narrow scope, no variable connected to company performance (*ROA, ROS,* and *ROE*) has

statistical significance, but companies headed by women appear to have lower sales (*LnS*) and higher capitalizations (*LnE*).

As was already apparent from the comparison between the averages, female-headed companies appear to be slightly older, while women heads are younger than their male colleagues.

Sectors *B, C, F, G, H, K, I, J, L, M, N,* and *Q* show an increased likelihood of having women in charge, as do the regions of *Calabria, Lazio,* and *Umbria.* Conversely, the *Trentino-Alto Adige* region shows a reduced likelihood. Finally, the legal form *S.p.A.* shows an increased probability of having a man in charge.

Table 7. Logistic regressions

Variables	β	S.E.	Wald	Odds Ratio
LnS	-0.154***	0.036	18.16	0.857
LnE	0.060**	0.028	4.595	1.062
FirmAge	0.009***	0.002	32.304	1.009
DirAge	-0.014***	0.002	34.165	0.986
B	1.105*	0.579	3.636	3.018
C	0.674***	0.191	12.452	1.962
F	0.948***	0.226	17.625	2.581
G	0.897***	0.202	19.759	2.451
H	0.727***	0.223	10.642	2.069
K	1.315***	0.228	33.385	3.726
I	1.009***	0.263	14.717	2.742
J	0.654**	0.234	7.824	1.923
L	1.166***	0.256	20.810	3.209
M	0.978***	0.212	21.370	2.660
N	0.960***	0.242	15.797	2.612
Q	1.452***	0.243	35.722	4.273
Calabria	0.727*	0.387	3.519	2.068
Lazio	0.201**	0.103	3.827	1.223
Trentino-Alto Adige	-0.420***	0.194	4.696	0.657
Umbria	0.478***	0.231	4.292	1.612
S.p.A.	-0.104*	0.062	2.850	0.901
Intercept	-1.273***	0.345	13.646	0.280
N. obs.	14,622			
Log-likelihood	9,077,589			
R² Cox & Snell	0.012			
R² Nagelkerke	0.025			

*Note: *** p < 0.01; ** p < 0.05; *p < 0.10.*

5. CONCLUSION

This paper aimed to fill a noticeable research gap and offer new insights into the relationship between corporate performance and women at the helm of Italian boards of directors.

Indeed, although Italy is characterized by a Rhine model of capitalism, with an underdeveloped stock exchange and very few listed companies, previous studies have focused on the analysis of the latter.

Therefore, our study examines, instead, a larger sample of approximately 15,000 Italian limited companies that include, in particular, unlisted companies. In the absence of an estimate for these companies' value on a stock market, the study measured performance based on financial statement data and ratios.

As with many other studies, no statistically significant correlations between performance and gender emerged. On the other hand, it was also confirmed that women at the helm of companies are

generally younger than their male colleagues, while the companies that they head are slightly older. Other significant correlations emerged in regard to the distribution between regions and sectors of activity.

There is therefore no evidence that women-led companies perform better.

Thus, if women have to "be better" to be treated "equally", we can conclude that women do not seem to perform better than their male counterparts.

However, women are not found to perform worse, either.

Therefore, the point is that if the presence of such a limited number of women at the helm of companies does not seem justified by underperformance, their underrepresentation can only be the result of sociocultural discrimination.

We believe that this reversal of perspective should also be considered in future studies in search of overperformance to justify leading roles for women.

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APPENDIX

Table A.1. The gender gap in Europe

	Employment rate	*Employment gap by education*[1]				*Pay gap*[2]
	Female	*0–2*	*3–4*	*5–8*	*Total*	*Total*
EU 28	64.3	17.1	11.9	6.3	10.4	15.6
Austria	69.3	10.4	8.9	5.7	9.1	20.7
Belgium	61.8	14.3	11.0	4.1	6.9	5.8
Bulgaria	65.2	19.3	10.8	5.5	9.5	14.3
Croatia	58.1	8.0	11.7	1.9	8.3	11.6
Cyprus	65.8	19.0	13.2	8.9	10.6	11.2
Czechia	68.2	5.0	13.7	16.2	13.9	21.1
Denmark	72.3	12.3	6.1	6.1	6.1	14.8
Estonia	73.3	14.6	10.4	7.9	5.7	24.9
Finland	71.7	10.7	5.0	2.7	1.9	17.2
France	62.9	11.9	7.8	4.1	6.1	15.6
Germany	73.1	12.9	5.4	6.5	7.8	20.4
Greece	47.3	22.2	22.4	11.0	18.5	-
Hungary	63.1	13.5	15.7	14.5	14.5	14.0
Iceland	81.0	4.7	8.8	3.5	3.6	15.3
Ireland	64.8	19.1	15.7	7.9	10.8	14.4
Italy	50.1	26.3	18.7	9.0	18.2	5.0
Latvia	70.9	14.6	10.5	3.2	3.7	19.8
Lithuania	73.0	10.4	7.3	0.4	0.4	15.2
Luxembourg	63.8	9.4	4.0	8.5	8.0	2.6
Malta	63.1	36.0	11.7	10.9	20.5	13.2
Netherlands	74.3	15.0	7.8	3.6	8.0	15.1
Norway	73.1	7.8	8.3	2.4	4.3	14.3
Poland	60.9	15.8	23.2	8.6	15.2	7.0
Portugal	67.8	12.4	5.5	1.5	5.8	10.8
Romania	56.6	26.4	19.4	3.8	18.6	2.9
Slovakia	62.5	7.1	13.3	12.1	12.0	20.1
Slovenia	69.4	1.6	9.4	3.7	4.2	8.4
Spain	58.5	17.8	12.9	6.2	10.4	13.5
Sweden	75.2	11.7	5.1	1.8	3.0	12.5
UK	71.5	14.4	10.0	6.0	8.1	20.8

Note: [1] The employment gap measures the difference between the employment rates of men and women aged 20 to 64. The indicator is based on the EU Labour Force Survey. Employment gap by education specifies the employment gap between: levels 0–2 = less than primary and lower secondary education; levels 3–4=upper secondary and postsecondary nontertiary education; levels 5–8 = tertiary education International Standard Classification of Education (ISCED 2011) (UNESCO Institute for Statistics, 2012).
[2] The pay gap is the difference between the average hourly earnings of males and females.
Data source: European Institute for Gender Equality (EIGE) and Eurostat, our elaboration.

Table A.2. Female board members in the EU's largest listed companies (Part 1)

	2003	*2005*	*2007*	*2009*	*2011*	*2013*	*2015*	*2017*	*2018*	*2019*	*2020*[1*]
EU 28	8.5	9.8	10.4	11.0	13.7	17.8	22.7	25.3	26.7	28.8	29.2
Austria	5.6	7.1	5.0	7.0	11.1	12.6	20.0	19.2	26.1	31.3	29.6
Belgium	6.0	6.2	6.4	7.6	10.9	16.7	26.0	30.7	32,0	35.9	36.5
Bulgaria	11.4	18.7	14.5	17.2	15.2	16.7	19.0	17.1	14.5	18.5	17.5
Croatia			13.7	15.0	19.0	15.1	22.2	21.6	17.2	27.0	26.7
Cyprus	6.2	6.9	2.1	3.3	4.6	7.3	9.0	10.4	11.9	9.4	8.1
Czechia		11.3	10.6	13.3	15.9	11.3	10.4	14.5	13.8	18.2	18.5
Denmark	12.5	11.0	15.3	17.6	16.3	22.9	25.8	30.3	27.7	30	33.5
Estonia	14.7	12.7	10.1	6.4	6.7	7.3	8.1	7.4	8.0	9.4	8.9
Finland	11.7	19.9	18.5	23.6	26.5	29.8	29.2	32.8	34.5	34.2	34.3
France	5.3	7.3	8.8	10.2	21.6	29.7	35.6	43.4	43.9	45.3	45.0
Germany	9.8	12.2	11.3	12.9	15.2	21.5	26.1	31.9	33.8	35.6	36.1
Greece	7.8	7.1	11.2	5.1	6.5	8.4	9.8	11.3	9.1	10.3	12.4
Hungary	11.1	9.6	10.8	13.3	5.3	11.3	17.8	14.5	14.9	12.9	12.9
Iceland	4.0	7.5	9.7	15.9	21.1	48.1	44.2	43.5	45.7	45.9	42.3
Ireland	6.8	6.0	6.7	8.3	8.8	11.1	15.3	17.6	18.7	26	26.6
Italy	1.9	2.7	3.2	4.0	5.9	15.0	28.6	34.0	36.4	36.1	36.8
Latvia	16.8	19.3	17.4	17.1	26.6	28.6	30.4	28.8	29.0	31.7	29.1
Lithuania		10.7	17.5	15.0	14.0	16.1	14.3	14.3	10.8	12.0	12.0
Luxembourg	3.8	3.2	2.6	2.7	5.6	11.3	12.1	12	13.3	13.1	15.3
Malta		3.3	4.1	4.1	2.3	2.1	4.5	8.4	9.6	10.0	11.0
Netherlands	7.6	6.9	13.9	15.0	17.8	25.1	25.5	29.5	30.7	34.2	33.3
Norway	20.9	28.8	34.2	41.6	41.3	42.0	38.8	42.1	40.2	40.2	39.5

Table A.2. Female board members in the EU's largest listed companies (Part 2)

	2003	*2005*	*2007*	*2009*	*2011*	*2013*	*2015*	*2017*	*2018*	*2019*	*2020¹**
Poland		10.7	11.9	9.5	11.8	12.3	19.4	20.1	21	23.5	22.6
Portugal	3.5	6.1	3.2	3.7	5.9	8.8	13.5	16.2	21.6	24.6	24.6
Romania	21.4	12.8	17.6	11.7	10.4	7.8	11.8	11.0	11.0	12.6	13.0
Serbia				14.3	17.3	17	21.4	19.1	21.2	15.6	15.3
Slovakia	7.6	11.1	23.5	18.2	14.6	24	12.7	15.1	24.1	29.1	26.4
Slovenia	22.9	18.9	15.4	10.0	14.2	21.6	21.5	22.6	27.9	24.6	21.6
Spain	3.3	4.3	6.2	9.6	11.1	14.8	18.7	22.0	23.7	26.4	27.4
Sweden	17.5	24.0	23.8	26.8	24.7	26.5	32.6	36.3	36.1	37.5	38.6
UK	15.2	12.7	11.4	12.3	16.3	21.0	27.8	27.2	29.9	32.6	34.6

Source: Our elaboration from the Eurostat-EIGE database, where companies are extracted from a sample of blue chips.
*Note: Board member data cover all members of the highest decision-making body in each company (i.e., chairperson, non-executive directors, senior executives, and employee representatives, where present). The highest decision-making body is usually termed the supervisory board (in the case of a two-tier governance system) or the board of directors (in a unitary system). * First semester.*

Table A.3. Board female executives in the EU's largest listed companies

	2012	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
EU 28	10.4	11.8	12.9	14.3	14.9	15.8	16.8	18.6
Austria	4.7	2.8	4.2	4.3	5.4	4.1	5.1	7.5
Belgium	9.6	11.8	13.3	15.2	17.1	13.4	14.4	13.4
Bulgaria	11.5	9.6	15.3	27.1	26.1	22.0	26.5	26.9
Croatia	16.7	18.1	16.3	22.0	22.2	19.1	20.6	12.3
Cyprus	8.6	13.8	14.9	17.6	15.2	15.2	17.4	17.5
Czechia	6.3	3.9	4.4	8.8	6.8	6.9	6.1	10.9
Denmark	11.2	11.8	11.7	8.3	9.4	15.9	11.0	17.1
Estonia	20.0	24.4	17.1	18.4	34.8	30.2	23.9	32.6
Finland	14.5	13.0	16.4	16.1	16.3	18.6	18.0	20.9
France	8.4	11.3	11.4	13.1	14.9	15.2	17.0	19.6
Germany	7.2	6.8	7.0	8.4	10.6	13.4	13.8	14.2
Greece	5.2	12.0	13.0	12.9	15.5	16.5	17.8	17.6
Hungary	2.5	7.3	10.6	11.9	11.1	13.3	13.3	20.9
Iceland	7.9	15.2	15.3	17.0	16.3	21.4	23.7	20.4
Ireland	6.5	9.0	6.4	12.3	10.6	11.9	15.5	21.5
Italy	4.3	7.5	8.1	8.3	10.0	9.9	9.9	11.8
Latvia	21.9	22.4	20.4	22.2	23.9	23.5	27.3	28.6
Lithuania	11.5	16.0	19.0	18.0	21.5	25.3	28.0	30.1
Luxembourg	10.2	13.3	8.9	7.8	12.5	12.0	12.7	6.0
Malta	6.8	10.6	12.8	15.6	12.6	13.8	20.3	20.9
Netherlands	6.8	6.2	9.2	12.5	11.8	12.4	16.5	14.5
Norway	17.4	17.9	18.0	17.2	19.7	24.5	24.0	27.1
Poland	5.0	4.6	4.4	10.5	11.2	13.5	13.0	13.6
Portugal	9.6	8.0	8.5	12.2	10.6	9.0	10.0	14.6
Romania	30.5	21.9	22.7	16.3	21.6	33.3	25.4	33.8
Serbia	18.3	21.1	23.0	29.7	24.1	19.3	21.7	20.7
Slovakia	13.7	18.2	12.5	14.6	13.3	13.0	20.0	13.3
Slovenia	17.9	19.2	21.1	22.9	19.0	20.6	24.7	26.6
Spain	5.7	9.1	9.6	10.6	11.5	13.2	14.7	16.2
Sweden	19.2	21.5	23.0	23.6	23.9	24.5	23.6	23.7
UK	11.1	12.9	16.6	18.1	16.4	17.9	18.7	22.5

Source: Our elaboration from the Eurostat-EIGE database.
Note: The indicator measures the share of female executives in the two highest decision-making bodies of the largest nationally registered companies listed on the national stock exchange. The two highest decision-making bodies are usually referred to as the supervisory board and the management board (in case of a two-tier governance system) and the board of directors and executive/management committee (in a unitary system). The "largest" companies are taken to be the members (max. 50) of the primary blue-chip index, which is an index maintained by the stock exchange and covers the largest companies by market capitalization and/or market trades.

Table A.4. Positions held by female directors in Italian listed companies

		2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
Listed firms boards	Number	246	240	237	233	233	234	231
Directorship	Number	421	521	622	701	760	812	807
	%²	17.8	22.7	27.6	31.6	33.6	36.0	36.4
Chairman/ Honorary chairman	Number	10	16	17	21	27	25	25
	%	2.5	3.1	2.7	3.1	3.6	3.1	3.1
Deputy chairman/ Executive committee	Number	33	32	36	40	39	39	33
	%	8.1	6.1	5.8	5.8	5.7	4.8	4.1
CEO	Number	13	16	16	17	17	14	15
	%	3.2	3.1	2.6	2,5	2.2	1.7	1.9

Source: Consob (2020).
Note: Figures refer to board seats held by women. While not necessarily falling within the provided categories, the same woman may fall within one or more such categories. ² Weighted by a total number of directorships. For 2011 and 2012, the numbers of female chairs and CEOs are not detected.