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Family and nonfamily female directors' effect on CSR strategy

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Abstract

By investigating a sample of industrial Italian listed firms for the years 2003–2020, this research aims to explore two main relationships. First, the study examines the association between the ratio of female directors and CSR strategy score in both family and nonfamily firms. Second, it investigates the link between family female directors and nonfamily female directors within the subsample of family firms. The empirical findings show the existence of a positive link between the ratio of female directors and CSR strategy score only in the subsample of family firms and that this result is driven by the percentage of nonfamily female directors. Additional analyses, aiming to elucidate the heterogeneity of family female directors, report that family females who have an executive role on the board are beneficial for the CSR strategy score, whereas family females who are interlocked and with long tenure are detrimental for the CSR strategy score.

KEYWORDS

CSR strategy, family female directors, family firms, gender diversity, nonfamily female directors

1 | INTRODUCTION

To attain gender parity in the decision-making processes, several nations have legislation establishing gender policies on the makeup of the board of directors (Valls Martinez et al., 2019). Italy is among the most developed countries in Europe in this regard because of the Law 120/2011 (hereafter Golfo-Mosca Law). This law, approved in 2011, forced Italian listed companies to ensure at least one-fifth of the first term (2012–2015) and one-third of subsequent years to the less represented gender. The Golfo-Mosca Law led to a substantial growth in the number of female directors, also determining an improvement in the quality of the corporate bodies' structures by prompting companies to carry out a more careful selection of directors based on skills and abilities. The Italian 2020 Budget Law extended the Golfo-Mosca Law and raised the minimum percentage of female directors on the boards to 40% (Rubino et al., 2021).

The importance of discussing the position of female directors in the company has grown over the past few decades. According to prior research, a gender diverse board is linked to better corporate governance (Adams & Ferreira, 2009), financial performance (Post & Byron, 2015), corporate social performance (Byron & Post, 2016) and in promoting stakeholder engagement and social responsibility (Amorelli & García-Sánchez, 2021). Female directors often exhibit a heightened sensitivity to the needs of various stakeholders, such as employees, customers, and local communities, and are inclined to champion their interests in boardroom discussions (Erhardt et al., 2003).

While previous research has largely focused on nonfamily companies, there has been less attention given to the role of female directors in family firms and nonfamily firms. Family firms are a significant driver of economic growth and employment, accounting for a large proportion of businesses worldwide (Bertrand & Schoar, 2006). These types of companies are often characterized by strong family ties and a commitment to long-term sustainability. In this vein, Nadeem et al. (2020) clarify that family ownership typically channels its focus predominantly toward environmental stakeholders. Diversely, nonfamily firms are typically driven by shareholder value and may have different priorities when it comes to sustainability (Campopiano & De Massis, 2015).

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Family firms have unique dynamics and decision-making processes compared to nonfamily firms (Campopiano & De Massis, 2015). Understanding how female directors influence CSR strategy within these different organizational structures can shed light on the role of gender diversity in shaping corporate social responsibility initiatives (Rodríguez-Ariza et al., 2017). Furthermore, family firms are often driven by long-term sustainability goals, including concerns about legacy and reputation. Examining the involvement of female directors in CSR strategy within family firms can provide insights into how these firms balance economic interests with social and environmental responsibilities over time.

The presence of women in leadership roles has been shown to positively impact both the financial and non-financial performance of companies (Alodat et al., 2023; Kakabadse et al., 2015; Naciti, 2019). However, there is still a need for a thorough understanding of how "family norms" hinder women in family businesses, the various ways daughters can be incorporated into these businesses, and the overall impact on family enterprises (Campopiano et al., 2017). Indeed, while previous research has mainly focused on nonfamily firms, there is a gap in understanding the role of female directors in family firms and their impact on sustainability initiatives. By focusing on the Italian market and its regulatory framework, which mandates female representation on corporate boards, the study aims to fill this gap and provide insights into how gender diversity influences the adoption of a CSR strategy in both family firms and nonfamily firms. Consequently, this study seeks to examine the nuances of the relationship between gender diversity on boards and sustainable business practices by analyzing the impact of female directors on CSR strategy over a significant timeframe, encompassing both pre- and post-enactment periods of the Golfo-Mosca Law. By doing so, this study seeks to respond to a call put forth by Rodríguez-Ariza et al. (2017) regarding the need for a more refined measure of family management, potentially through indicators like the proportion of family members occupying senior management roles.

This study looks at how women's quotas affected the CSR strategy score of Italian listed firms between 2003 and 2020, taking into account the differential between family firms and nonfamily firms. Analyzing the Italian market is a choice dictated by a context certainly suitable for testing our research hypotheses, considering the high presence of family firms which are also the majority of listed companies (Rubino et al., 2017; Scafarto et al., 2020) and the regulatory provisions which, for about a decade, have aimed at strengthening the presence of female representation in the company, which has also been the subject of interesting analyzes in recent years (Provasi & Harasheh, 2021; Veltri et al., 2021).

The research is timely, as very few post-reform studies have been undertaken in relation to the structure of corporate governance. Previous studies have only examined the years after the introduction of the Golfo-Mosca Law and/or analyzing the 40 larger firms that have been listed on the FTSE-MIB index (De Masi et al., 2022), thus not allowing to capture the benefits arising from the presence of more and dissimilar females on boards as a consequence of the gender law.

As far as we know, this is the first article in the Italian context that investigates the impact of female directors on the CSR strategy of companies, also with reference to the difference between family firms and nonfamily firms and the distinction between family and nonfamily female directors.

The empirical findings show that a higher percentage of female directors on the boards of listed companies leads to a superior CSR strategy. However, this effect is contingent on the ownership structure of the companies. Indeed, the positive effects of CSR strategy persist only in family firms, where, in spite of that, the positive impacts seem to be related to the presence of female directors not belonging to the family shareholders.

This study enlarges the expanding body of research on the function of female directors in corporate social responsibility and provides insights into the unique environment of family and nonfamily firms, paying considerable attention on how the connection between gender diversity on boards and sustainable business practices could be affected by the existence of a family link in the female directors.

2 | THEORETICAL BACKGROUND

2.1 | Cognitive diversity theory and social identity theory

Cognitive diversity theory posits that diversity in cognitive styles, perspectives, and approaches can improve problem-solving, decision-making, and innovation in organizations (Jehn et al., 1999). According to this theory, gender diversity can enhance cognitive diversity in organizations, as women and men may have different cognitive styles and perspectives due to socialization and experiences (Cohen, 2017). From the viewpoint of cognitive diversity theory, several research has looked at the connection between gender diversity and organizational sustainability performance. Lee et al. (2018) discovered, for instance, that gender-diverse teams in Korean businesses were more likely to embrace environmentally friendly practices, which aided in improving sustainability performance. Similarly, Liao et al. (2015) demonstrated a favorable correlation between the adoption of sustainability measures and gender diversity in senior management teams in UK businesses. These findings suggest that gender diversity can enhance cognitive diversity in organizations, which in turn can improve sustainability performance. However, existing studies found mixed results. In this regard, Kabir and Thai (2021) did not find a significant association between sustainability performance and gender diversity in Vietnamese enterprises. The authors argued that this may be due to the limited understanding of the benefits of gender diversity in the Vietnamese context.

Social identity theory posits that individuals' self-concept and behavior are shaped by their membership in social groups, such as gender, race, and ethnicity (Tajfel et al., 1979). According to this theory, gender diversity can improve organizational sustainability performance by increasing employee engagement, satisfaction, and commitment, as well as by enhancing the reputation of the organization (Hunt et al., 2015). Several research examines the relationship between gender diversity and sustainable performance using the social identity theory as a lens. For instance, Gao et al. (2015)

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discovered that the effectiveness of Chinese companies' corporate social responsibility (CSR) programs was positively correlated with gender diversity in their senior management teams. These findings suggest that gender diversity can improve organizational sustainability performance by enhancing employee engagement, satisfaction, and commitment, as well as by enhancing the reputation of the organization.

Most of the scholarly research to date points to the possibility that gender diversity might enhance organizational sustainability performance. The cognitive diversity theory, which holds that diversity in cognitive styles, viewpoints, and methods may improve problem-solving, decision-making, and creativity in companies, can be used to explain this link. Social identity theory, which contends that gender diversity may improve organizational sustainability performance by raising staff involvement, contentment, and commitment as well as by boosting the organization's reputation, can also be used to elucidate the ness between gender diversity and CSR strategy score.

3 | LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

3.1 | Female directors and CSR strategy

In academic debate, the concepts of CSR, Environmental, Social, and Governance (ESG) criteria, Sustainable Development (SD), Environmental Performance (EP), and Sustainable Development Goals (SDGs) are frequently conflated, yet they represent different facets of the same overarching theme. In reviewing prior literature concerning the relationship between gender diversity in family and nonfamily business and CSR strategy, we have undertaken an analysis of these concepts.

Environmental, Social, and Governance strategy is rapidly gaining popularity among corporations as they seek to integrate environmental and social concerns into their decision-making processes. The benefits of gender diversity in the boardroom are also acknowledged in a growing corpus of literature. In particular, CSR strategy refers to the incorporation of environmental, social, and governance factors into corporate decision-making (Rubino et al., 2016). Companies that have adopted ESG strategies are typically focused on the long-term sustainability of their businesses, which in turn means that they factor environmental and social concerns into their decision-making. ESG strategies are designed to create value for all stakeholders, including shareholders, employees, customers, the community, and the environment. The adoption of ESG strategies leads to several benefits for the company, such as higher returns on investment, lower risk, stronger reputation, and better access to capital. Moreover, a company that adopts ESG strategies is more likely to have a long-term focus and is thus able to weather short-term economic storms.

Gender diversity in the boardroom has been a source of debate in the corporate world for years. However, the evidence is clear that having women in leadership positions results in better decision-making, improved financial performance, and a stronger corporate reputation (Naciti, Noto et al., 2022).

Research suggests that female directors are more likely to ask critical questions, challenge groupthink, and bring new perspectives to discussions (Konrad et al., 2008; Terjesen et al., 2009). This leads to better decision-making as it brings a diverse range of perspectives to the boardroom. In addition, having more women on boards is linked to greater business reputation, higher shareholder value, and better corporate performance. The literature suggests that companies that adopt ESG strategies are more likely to have a diverse range of directors, including women. Companies that focus on environmental and social sustainability are more likely to be aware of the benefits of diversity and inclusion, which may lead to the appointment of female directors. On the other hand, companies with low ESG scores have a lower level of gender diversity in their boardrooms.

Women are more likely to support sustainable measures, claim Provasi and Harasheh (2021). For instance, women and men differ psychologically from one another, which may improve sustainability performance (Zhang et al., 2013). Indeed, according to the theory of socialization, they hold higher moral principles (Pan & Sparks, 2012). Women are more cautious and attentive to welfare policies (Adams et al., 2011), more inclined to socialize (Ben-Amar et al., 2017), with more difficulty adopting unethical behaviors (Boulouta, 2013; Huse et al., 2009), are more aware and, therefore, more sensitive to decisions related to ESG policies (Davidson & Freudenburg, 1996; Li et al., 2015; Nielsen & Huse, 2010), are more oriented toward collaboration and information sharing (Daily & Dalton, 2003; Van Knippenberg et al., 2004) are more attentive to the interests of stakeholders, have more emotional intelligence (Báez et al., 2018), have a greater participatory leadership style (Eagly et al., 2003) and are more oriented than men toward long-term projects. These characteristics of women particularly affect the social and environmental sphere of sustainability and its reporting, generating sustainable value over time (Post et al., 2015). For these reasons, gender diversity in boards is likely to positively influence the social and environmental aspects of the firm (Barako & Brown, 2008).

Numerous authors argue that gender is one of the driving factors of corporate ESG activities (Deschênes et al., 2015; Galletta et al., 2022; Harjoto et al., 2015; Setó-Pamies, 2015). While Lu and Herremans (2019) claim that gender diversity is favorably connected to environmental performance, Walls and Hoffman (2013) show a favorable association between gender diversity and social responsibility policies. Yet, women directors seem to be more aligned with stakeholder subjects and advocate for solutions that enhance sustainability performance (Post et al., 2015). According to Setó-Pamies (2015), women's skills can be strategically important in helping businesses manage their social responsibility and sustainable practices. Peng and Chandarasupsang (2023) look at how female directors affect the use of ESG in China. The authors discover that businesses with a greater percentage of female directors typically perform better in terms of ESG, especially when it comes to social responsibility and environmental preservation. According to the study, female directors could offer diverse viewpoints and experiences to the boardroom, which might result in a more thorough analysis of ESG concerns. Additionally, Menicucci and Paolucci (2023) found that companies with a higher percentage of female directors are associated with superior

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ESG performance, particularly in the areas of environmental protection and governance. According to this study, the existence of female directors may result in a decision-making process that is more inclusive and varied, which may improve the way ESG problems are taken into account.

Environmental, Social, and Governance performance is associated with better decision-making, a stronger reputation, and improved financial performance. Meanwhile, the presence of women in the boardroom is linked to better decision-making, improved corporate performance, and a stronger corporate reputation. Therefore, companies that prioritize ESG issues are more likely to have a diverse range of directors, including women directors. This, in turn, enhances their decision-making capabilities, improves their reputation, and attracts socially responsible investors. Therefore, based on the cognitive diversity theory and social identity theory and extensive literature, we hypothesize that:

> **Hypothesis 1.** Female representation on the board is positively related to the firm's CSR strategy.

3.2 | Female directors and CSR strategy in family firms and nonfamily firms

The family firm stands as the prevailing business model worldwide. While there exists no universally accepted definition of a "family firm," the discourse often revolves around issues related to management, ownership, or succession. Broadly speaking, a family firm is characterized by the continued presence of one or more family founders in senior managerial roles, board membership, or substantial control over the company's shares (Chen et al., 2008; Shanker & Astrachan, 1996). Additionally, the aspiration to pass the business down to future generations is a key consideration in delineating a family business (Astrachan & Shanker, 2003). This acknowledgment underscores the significance of vision, intentions, and the dominant coalition in ensuring the company's enduring status as a family enterprise (Chua et al., 1999).

From the perspective of nonfamily firms, diversification is often viewed as an opportunity for managers to showcase their entrepreneurial skills or impress the market by managing diverse business areas, even if unprofitable. However, research has shown that corporate-level diversification does not necessarily increase market value and can be seen as a sign of managerial inability, thus reducing market value (Berger & Ofek, 1995).

For family firms, diversification carries a different significance. Since family-managed businesses prioritize stability and reputation, they are cautious about investments that could jeopardize the company or family reputation. The alignment between ownership and control in family businesses reduces the risk of conflicts (Fama & Jensen, 1983), as the family invests most of its wealth in the company, fostering a greater sense of responsibility and commitment. Consequently, family businesses prioritize stability and responsible long-term investments over short-term gains.

Previous research has primarily concentrated on assessing the extent of women's presence in family firms and pinpointing the individual and contextual elements influencing their roles, objectives, and contributions to management (Brundin et al., 2014; Sharma, 2004). Women's involvement in leadership and managerial positions holds significance even within family businesses, which are characterized as enterprises governed or managed to fulfill the vision of a dominant coalition from the same or few families, aiming for sustainability across generations (Naciti, Rupo et al., 2022).

Evaluations of the degree of gender diversity in family-owned enterprises have been made in several studies. The results indicate that family businesses have less gender diversity than nonfamily businesses. According to a study by Froide (2022), family businesses are male-dominance and male-centered, which creates a system that favors male succession. Furthermore, family businesses may not see gender diversity as important since they operate on values such as nepotism, camaraderie, and loyalty, which create a bias toward male family members (Liu et al., 2015). Family businesses are further hindered in achieving gender diversity due to control mechanisms that restrict outsiders' entry, hence limiting the ability of qualified women to join the business (Bagheri et al., 2023). In contrast, family businesses are more likely to advance and promote women's leadership within the business hierarchy. Ahrens et al. (2015) observed that family firms are more likely to elect females to top management since they perceive their contribution as a means of preserving the family legacy.

Research has shown that gender diversity in family businesses can improve their performance. Kirby and Lee (1996) found that gender diversity in the workforce improves decision-making processes, creativity, and innovation in family businesses. Gender diversification can enable the company to move beyond traditional solutions and increase the firm's adaptability to change.

Nonfamily businesses have relatively better levels of gender diversity. Various factors contribute to this trend. First, nonfamily businesses outside ownership structure increase the pool of potential employees from diverse demographics. Second, professionalization and diversification policies adopted by nonfamily businesses make it easier to incorporate diversity in their business practices (Stenholm et al., 2016). Research shows that nonfamily businesses are likely to hire more qualified women who have diverse skill sets that are crucial for executing the success of the business. Furthermore, nonfamily businesses have more opportunities for women to work in environments where there are fewer biases due to unrestricted entry (Naciti, Rupo et al., 2022; Ten Brummelhuis & Greenhaus, 2018).

Furthermore, other studies show that family businesses have a unique organizational structure and governance compared to nonfamily businesses, and the number of female board members can have different implications on firm performance. A study by Schulze et al. (2003) found that financial performance benefits from having more female board members in family businesses. The study attributes these findings to factors, such as trust, a value for long-term orientation, and stakeholder interests in family businesses. On the other hand, research conducted by Terjesen and Singh (2008) in nonfamily

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businesses found that accounting returns, market value, and social responsibility performance benefit from having women on the board.

Ben-Amar et al. (2013) suggest that ownership structure plays a role in affecting board composition and diversity, as different owners are motivated to pursue diverse goals. This creates significant effects on firm governance, particularly on board composition and leadership choices. Firms with high ownership concentration are of particular interest, as controlling shareholders tend to influence board composition.

This includes the selection of board members and leadership, which needs to be examined. Companies with high ownership concentration are particularly interesting as controlling shareholders often have power over minority shareholders, potentially leading to wealth expropriation and a "secondary" agency problem (Young et al., 2008).

Large shareholders often have dominant control over minority shareholders, creating secondary agency problems. Family firms are more prone to engage in social and environmental activities that yield a socioemotional reward for the family, even in cases where there is no commensurate economic benefit (Mariani et al., 2023). Family firms may appoint directors sympathetic to CSR to help advance their agenda through the board. Women directors are more likely to prioritize the wishes of the family members and are thus more influenced by family values in their decision-making. As a result, family firms are more likely to link diversity in gender with corporate environmental performance compared to nonfamily firms.

Cordeiro et al. (2020) examine the connection between corporate environmental performance and board gender diversity in the context of family- and nonfamily-owned businesses, as well as dual-class majority ownership structures. The study employs a sample of 1433 firms listed on the S&P Global 1200 index from 2008 to 2017. The authors find that board gender diversity improves corporate environmental performance, but this effect is moderated by the ownership structure of the firm, suggesting that female directors may be more effective in promoting environmental initiatives in family businesses, potentially due to their ability to bring a different perspective to the boardroom and challenge traditional ways of thinking.

Furthermore, female representation on boards brings different cognitive styles, viewpoints, and experiences that contribute to a diverse range of perspectives in decision-making processes. In family firm settings, where there might be a variety of family members involved in the business, the inclusion of women on the board can introduce fresh perspectives and approaches to tackling corporate social responsibility issues. This diversity of thought and perspective is particularly valuable in addressing complex societal and environmental challenges that are central to CSR strategies. In contrast, nonfamily firms may have a more homogeneous leadership structure, which could limit the range of perspectives considered in CSR strategy development. In addition, female representation on boards can enhance employee engagement, satisfaction, and commitment by providing role models and fostering a sense of inclusivity and representation for women within the organization. In family firm settings, where family values and long-term orientation often play a significant role, there may be a greater emphasis on social responsibility and sustainability as part of the firm's identity. Women directors, especially those with family ties, maybe more aligned with family values and more likely to prioritize CSR initiatives that contribute to the long-term sustainability and reputation of the business. This alignment with family values and long-term goals can lead to a stronger integration of CSR strategies into the core operations of family firms compared to nonfamily firms, where priorities may be more focused on short-term financial gains. Therefore, based on the extensive literature, we hypothesize that:

Hypothesis 2. The positive relationship between female representation on the board and CSR strategy is higher in family firms than in nonfamily firms.

The role of women appears, therefore, extremely controversial in family firms and nonfamily firms. Although we hypothesized a positive correlation with CSR strategy (hypothesis H1), we believe that this impact is different in family firms and nonfamily firms (hypothesis H2).

Analyzing instead the literature that focuses only on family firms, we can assume that, in family-owned businesses, female directors present on the board and belonging to the family are influenced by family interests in their decision-making process and, therefore, may not be truly independent (Veltri et al., 2021). Furthermore, they are likely to be selected solely based on family ties and not on personal skills (Beji et al., 2021). Indeed, recent studies show that family firms mainly appoint family females as board members (Chadwick & Dawson, 2018).

In their study, Cruz et al. (2019) examine how female directors affect the corporate social performance (CSP) of family businesses and the moderating effect of family participation on the connection between female directors and CSP. The econometric findings show that the positive impact of female directors on CSP is stronger in family firms with low family participation levels, indicating that female directors may have a greater influence on the firm's strategic orientation when there is less family influence on decision-making.

All of this leads us to hypothesize that a larger number of family female directors on the corporate board of the family firms could lead to a reduction in company performance, including ESG performance. Similarly, it is possible to hypothesize that increasing the number of women not belonging to the family could determine better company performance, including those of ESG. Nonfamily women would be selected on the basis of their curriculum vitae and their past experiences. Moreover, they would be released from family ties and, therefore, more independent in undertaking decisions or in making choices. Therefore, nonfamily female directors are expected to have a higher positive impact on CSR strategy in family-owned businesses due to their presumed independence, merit-based selection, and potential to bring diverse perspectives to the board. The contrast is made with family female directors, who may be perceived as having strong family ties and potential influences on decision-making that might not align with broader CSR goals.

Furthermore, female representation on the board in family firms may not always lead to significant cognitive diversity if the directors,

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including women, predominantly share similar perspectives and approaches influenced by family dynamics. On the other side, non-family female directors in family firms may bring fresh perspectives and alternative viewpoints that challenge conventional thinking and contribute to the development of more robust CSR strategies that encompass a broader spectrum of social and environmental issues. Based on these premises, we develop the third research hypothesis as follows:

> **Hypothesis 3.** In family firms, the positive relationship between female representation on the board and the firm's CSR strategy is higher for nonfamily female directors than for family female directors.

4 | RESEARCH METHODOLOGY

4.1 | Sample

This research examines a sample of Italian industrial listed firms for the years 2003–2020. The long period under investigation starts from the years characterized by a low presence of women directors (before 2012) and continues until the current years in which female representation on boards of directors has increased considerably thanks to specific legislation introduced in Italy. The governance data were manually gathered from the annual company corporate governance reports and integrated with information available on the companies' websites (Cambrea et al., 2023).

4.2 | Variables

The *CSR strategy score* is the dependent variable (Orazalin, 2020; Padungsaksawasdi & Treepongkaruna, 2024). The dependent variable is supplied by Thomson Reuters Asset4, a global database that evaluates a company's ESG performance based on the data it publishes. According to Issa and Bensalem (2023), a company's practices demonstrating how it incorporates the economic (financial), social, and environmental components into its daily decision-making processes are reflected in its *CSR strategy score*. Specifically, this index captures firm-level CSR policies and initiatives, with a higher CSR strategy score indicating greater CSR-related activism of a firm and, hence, more proactive board-level CSR planning, oversight and communication strategy (Helfaya & Moussa, 2017).

To test the first research hypothesis, we used a measure of gender diversity (*Female directors*), which is determined by dividing the number of women directors by the total number of board members. Subsequently, to empirically investigate the second research hypothesis, we distinguished between family-affiliated female directors (*Family females*) and nonfamily female directors (*Nonfamily females*). According to Cruz et al. (2019), the family relationships of female directors were identified by inspecting their surnames. We classified a director as family-affiliated if she is (1) the controlling or a significant shareholder[1] of the listed company or (2) a close relative of the latter, being one's wife, daughter, granddaughter, sister, cousin, aunt, or niece. In case the profile did not confirm to any of the two conditions, the director was then classified as a nonfamily female director.

In line with prior studies on gender diversity and CSR proxies (Cambrea et al., 2023; Cucari et al., 2018; Kassinis et al., 2016), we included both financial and governance variables as controls in all regressions, which allowed us to account for potentially confounding effects that may affect CSR strategy. ROA is a proxy of firm profitability and is defined as earnings before interest, taxes, depreciation and amortization scaled by total assets operating income divided by total assets. The natural logarithm of the total assets is used to calculate firm size. The ratio of total debt to total assets is known as leverage. The percentage of cash and cash equivalents to total assets is known as cash holdings. R&D is calculated as the ratio of R&D expenditures to total assets and serves as a stand-in for firm innovation input. Capex is a stand-in for the company's capital outlays, which are calculated as capital outlays divided by total assets. The difference between the year of the observation and the company's founding year has been used to calculate firm age, which is the number of firm years. As control variables, we also used some features of the board of directors. Board size is determined by the number of directors on the board. CEO duality is a dummy variable that is calculated and coded as one if there is just one CEO on the board (which also includes the position of the board chair) and zero otherwise. The percentage of male independent directors on the board is used to calculate the number of male independent directors. Finally, we added industry dummy variables because prior research indicated that sectors may affect the ESG activity of companies (Berrone et al., 2010), determining a variation in ESG activities in some energy-related industries compared to other less energy-related sectors. We also included year dummies to capture the variability across time periods. (Cambrea et al., 2023).

4.3 | Descriptive statistics

The main descriptive statistics for each variable utilized in our model are displayed in Table 1. Corporate social responsibility strategy Score is the dependent variable used to test the research hypotheses in the main estimated model. Italian listed companies, on average, have achieved a CSR strategy score of 0.361. Regarding our independent variables, female directors are 24.5% of the board members, of which 4.4% are female directors belonging to the family shareholder, whereas 20.1% are nonfamily female directors without any ties with the owner of the firms. Regarding the family female heterogeneity, 1.7% of the family female directors fulfill an executive position on the board and 7.3% hold more than two other directorships. The average tenure of family females is 4.576.

The correlation among the independent variables and the dependent variable shows a positive and significant correlation between

[1]According to the Article 120, paragraph 2, of the Consolidated Law on Finance (Testo Unico Finanza), which provides a shareholder is qualified as "relevant" when the share of capital held in the company exceeds the threshold of 3%.

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TABLE 1 Descriptive statistics.

Variable	Mean	Standard deviation	First quartile	Median	Third quartile
CSR Strategy Score	0.361	0.267	0.154	0.335	0.546
Female directors	0.245	0.134	0.143	0.273	0.333
Family females	0.044	0.056	0.000	0.000	0.083
Nonfamily females	0.201	0.121	0.091	0.222	0.300
Executive family females	0.017	0.041	0.000	0.000	0.000
Interlocked family females	0.073	0.146	0.000	0.000	0.091
Tenure family females	4.576	7.045	0.000	0.000	8.000
ROA	0.059	0.065	0.031	0.051	0.083
Firm size	21.212	1.008	20.603	21.154	22.004
Leverage	0.287	0.144	0.188	0.274	0.377
Cash holdings	0.136	0.082	0.079	0.124	0.166
R&D	0.005	0.013	0.000	0.000	0.000
Capex	3.946	3.352	1.515	2.821	5.564
Firm age	3.398	0.684	2.996	3.401	3.912
Board size	11.946	2.869	9.000	12.000	14.000
CEO duality	0.050	0.219	0.000	0.000	0.000
Independent male directors	0.253	0.130	0.167	0.250	0.333

CSR strategy score and the percentage of female directors. This effect seems to be driven by nonfamily females. Indeed, exploring the correlation between CSR strategy score and both family and nonfamily female directors, only these latter are positively related to the CSR strategy score. Looking at the link between the control variables and CSR strategy score, data display a positive correlation between firm size, leverage, capital expenditures, and board size, whereas it seems the aged companies present a negative correlation with CSR strategy score. In sum, data show acceptable levels of correlation. In addition, the variance inflation factors (VIF) mean value is 3.36, indicating that multicollinearity is not an issue in our empirical analyses (Table 2).

4.4 | Results

Table 3 shows the empirical results related to the previously formulated research hypotheses. To identify the appropriate econometric method, we followed the Bueno-Garcia et al. (2021) procedure and conducted the Breusch and Pagan Lagrangian multiplier test to recognize whether the data have a panel effect. The result ($p > \chi 2 = 0.10$) does not suggest implementing a panel methodology, indicating the OLS as the most suitable method. Therefore, in line with previous empirical research on a similar sample (Amore et al., 2019; Cambrea et al., 2023; Katmon et al., 2019), the method used to estimate the regressions is the Ordinary Least Squares (OLS) method with the clustered standard errors (SE) adjusted for heteroskedasticity (Tenuta & Cambrea, 2022). Because the econometric estimates may suffer from reverse causality, all empirical models employed control variables lagged by 1 year (Atif et al., 2021).

Model 1 shows the effect of the percentage of female directors on the CSR strategy score for the entire sample of both family and nonfamily firms. The coefficient of the variable *female directors* is positive and statistically significant ($\beta = 0.376$; $p < 0.01$), allowing us to support the first research hypothesis, according to which increasing the ratio of women on the boards leads to superior ESG company's strategy CSR. This result is in line with that of previous empirical studies investigating the link between board gender diversity and ESG performance (Ben-Amar et al., 2017; Liao et al., 2015; Shaukat et al., 2016), confirming the ESG strategic relevance of having more women directors on corporate boards.

Models 2 and 3 present the effect of the percentage of female directors on the CSR strategy score of nonfamily and family firms, respectively. The empirical findings report that the variable *female directors* is not statistically significant ($\beta = 0.227$; $p > 0.10$) in the subsample of nonfamily firms, whereas it becomes positive and statistically significant ($\beta = 0.540$; $p < 0.01$) within the population of family firms. Thus, the empirical results of Models 2 and 3 support the second research hypothesis, according to which the ownership structure plays a crucial role in affecting the link between the ratio of female directors and the company's CSR strategy. Taken together and viewed from an ownership perspective, it seems that women directors are particularly relevant for implementing a CSR strategy in family businesses, contributing to creating and reinforcing longer-term relationships with their stakeholders (Le Breton-Miller & Miller, 2016).

Finally, Model 4 shows how female directors' heterogeneity on the board can affect the corporate CSR strategy of family firms. In this vein, the empirical regression includes both the percentage of female directors belonging to the family and those not belonging to the family shareholders. The empirical findings reveal that the percentage of nonfamily females drives the positive effect of the ratio of female directors in family firms. Indeed, only the coefficient of the proxy *nonfamily females* is positive and statistically significant ($\beta = 0.637$;

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TABLE 2 Correlation matrix.

	Variable	1	2	3	4	5	6	7	8	9
1	CSR Strategy Score	1								
2	Female directors	0.182**	1							
3	Family females	−0.0922	0.420***	1						
4	Nonfamily females	0.237***	0.931***	0.0603	1					
5	Executive family females	−0.0623	0.282***	0.565***	0.0831	1				
6	Interlocked family females	−0.223**	0.164*	0.616***	−0.0672	0.417***	1			
7	Tenure family females	−0.156*	0.242***	0.656***	0.00254	0.452***	0.451***	1		
8	ROA	0.0473	0.110	0.0731	0.0920	0.0171	−0.00105	−0.0256	1	
9	Firm size	0.149*	−0.486***	−0.279***	−0.423***	−0.247***	−0.0567	−0.0795	−0.236***	1
10	Leverage	0.274***	−0.160*	−0.0833	−0.142*	−0.133	−0.137*	−0.129	−0.173*	0.144*
11	Cash holdings	0.0138	0.273***	0.0962	0.262***	0.206**	0.105	−0.123	0.351***	−0.231***
12	R&D	0.00799	0.165*	0.150*	0.122	0.162*	0.123	0.0831	0.266***	−0.187**
13	Capex	0.139*	−0.114	−0.0322	−0.112	−0.0898	−0.208**	−0.175*	0.281***	0.0494
14	Firm age	−0.142*	0.0999	−0.0208	0.118	−0.0152	−0.0461	0.0282	−0.235***	−0.0133
15	Board size	0.162*	−0.327***	−0.245***	−0.261***	−0.274***	−0.0525	0.0363	−0.145*	0.356***
16	CEO duality	−0.0818	0.143*	0.0760	0.126	0.181**	−0.0601	0.0808	0.0468	−0.233***
17	Independent male directors	0.0440	−0.505***	−0.269***	−0.447***	−0.296***	−0.273***	−0.115	−0.0260	0.298***

		10	11	12	13	14	15	16	17
1	CSR Strategy Score								
2	Female directors								
3	Family females								
4	Nonfamily females								
5	Executive family females								
6	Interlocked family females								
7	Tenure family females								
8	ROA								
9	Firm size								
10	Leverage	1							
11	Cash holdings	−0.300***	1						
12	R&D	−0.178**	0.207**	1					
13	Capex	0.162*	−0.0609	−0.0542	1				
14	Firm age	−0.438***	0.0568	0.153*	−0.0500	1			
15	Board size	0.0340	−0.250***	−0.0326	−0.0165	0.161*	1		
16	CEO duality	−0.109	0.0114	−0.0540	0.132	0.0514	−0.0619	1	
17	Independent male directors	0.193**	−0.303***	−0.0405	0.0778	−0.0210	0.325***	−0.0937	1

*p <0.05,**P <0.01,***P <0.001.

$p < 0.01$). Differently, the percentage of family females does not seem to be correlated to the CSR strategy score of family firms. These results support our Hypothesis 3, which suggests that the influence on CSR strategy score is higher for nonfamily female directors than family females. This may suggest that family female directors are less prone to pursue a CSR strategy than nonfamily female directors. The findings are in line with recent literature arguing that the two female directors' profiles may differ in their discretion on the board (Cruz et al., 2019), clarifying that nonfamily female directors are in a better position to exercise influence on the board than their family counterparts, preferring not only to preserve family goals but also protecting the interests of a wide range of stakeholders including nonfamily shareholders (Herdhayinta et al., 2021). Despite the empirical results in Model 4 of Table 3 clearly show that family female directors are

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TABLE 3 Relationship between female directors and CSR Strategy Score.

Variables	(1) Whole sample	(2) Nonfamily firms	(3) Family firms	(4) Family firms	(5) Family firms
Female directors	**0.376*** **	0.227	**0.540*** **		
	(0.002)	(0.337)	**(0.007)**		
Family females				0.152	
				(0.605)	
Nonfamily females				**0.637*** **	**0.420** **
				(0.002)	**(0.042)**
Executive family females					**0.643* **
					(0.058)
Interlocked family females					**−0.138* **
					(0.081)
Tenure family females					**−0.003* **
					(0.080)
ROA	0.328	−0.868*	0.150	0.182	0.281
	(0.127)	(0.052)	(0.520)	(0.441)	(0.248)
Firm size	0.065***	0.002	0.058***	0.059***	0.064***
	(0.000)	(0.863)	(0.001)	(0.000)	(0.000)
Leverage	0.338***	0.257*	0.315**	0.284**	0.247*
	(0.000)	(0.057)	(0.017)	(0.034)	(0.068)
Cash holdings	−0.060	−0.050	0.206	0.143	0.043
	(0.700)	(0.883)	(0.386)	(0.514)	(0.848)
R&D	−2.828***	−3.432***	−2.003	−1.772	−1.630
	(0.000)	(0.008)	(0.121)	(0.157)	(0.175)
Capex	−0.000	−0.003*	0.013***	0.013***	0.011***
	(0.979)	(0.061)	(0.001)	(0.001)	(0.006)
Firm age	−0.003	0.063***	−0.030	−0.031	−0.030
	(0.826)	(0.001)	(0.175)	(0.144)	(0.176)
Board size	0.010***	0.005	0.021***	0.019***	0.021***
	(0.009)	(0.423)	(0.001)	(0.003)	(0.001)
CEO duality	−0.076	−0.378***	−0.115	−0.119	−0.127
	(0.200)	(0.000)	(0.139)	(0.140)	(0.121)
Independent male directors	0.275***	0.132	0.214	0.200	0.150
	(0.000)	(0.375)	(0.107)	(0.130)	(0.242)
Constant	−1.429***	0.263	−1.429***	−1.419***	−1.477***
	(0.000)	(0.468)	(0.001)	(0.000)	(0.000)
Year dummies	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
R-squared	0.510	0.582	0.483	0.485	0.494
Observations	482	218	264	264	264

Note: Robust pval in parentheses.
***p <0.01,**p <0.05,*p <0.1.

not associated with superior CSR strategy score, the relationship between family females and CSR strategy could depend on the personal characteristics of the family female directors. Thus, in Model 5, we explored whether different characteristics arising from the family females' heterogeneity on the board may determine a dissimilar behavior, in terms of CSR strategy, of family female directors. To this aim, we considered some specific features such as the role that family female directors hold in the board, their number of other board directorships and their years of experience. These attributes might be able to shape the correlation between family female directors and CSR

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strategy score, determining an impact on the CSR strategy score. From an empirical perspective, to investigate the family females' role on the board, we employ in the regression a variable named *executive family females*, measured by the proportion of family females with as executive role on a corporate board. To check the effect of their networking, we employ a proxy called *interlocked family females, which* identifies the proportion of family females that serves on two or more boards. Finally, to examine the years of experience, we built a variable named *tenure family females*, which is the average board tenure years of the family female directors. The empirical findings presented in Model 5 of Table 3 indicate that the individual characteristics of the family female directors significantly influence the relationships between family female directors and CSR strategy score. More in detail, the results suggest that family female directors who have an executive role on the board are associated with superior CSR strategy scores. Diversely, family female directors who have multiple directorships on other boards and those who have a longer tenure lead to a lower CSR strategy score. These results shed light on a central theme for strategic scholars, which are the consideration of the board members' heterogeneity, enriching the debate on the heterogeneity of directors' attributes to improve the effectiveness of the board (Anderson et al., 2011).

5 | ROBUSTNESS TESTS

In this section, we tried to mitigate potential endogeneity problems using a two-stage least squares methodology (2SLS). As our econometric analyses employed three main independent variables (*Female directors*, *Family females* and *Nonfamily females*), to employ a 2SLS, we needed at least three instrumental variables. Following previous literature (Chen et al., 2017; Herdhayinta et al., 2021; Solal & Snellman, 2019), we adopted the average level of board diversity in the industry (*Industry diversity*), the personal name dummy (*Eponimy*) and the fraction of male directors linked to female directors (*Fraction of male directors*).

The first instrument is calculated as the percentage of all female board members in the industry for that year, excluding the board members of the focal firm (Liu et al., 2014). The second instrumental variable is a dummy variable that equals one when the name of the company contains a personal name or a part of a personal name related to the family owner (Ma et al., 2017). The third instrument is computed as the fraction of male directors on the board who sit on other boards with at least one female director (Adams & Ferreira, 2009).

Models 1, 3 and 5 of Table 4 report the results of the first-stage regression where the dependent variables are the ratio of female directors, family female directors and nonfamily female directors, respectively. As expected, we find that all three instruments are significantly correlated with the fraction of female directors and family and nonfamily female directors.

Models 2, 4 and 6 of Table 4 show the results for the second-stage regressions, in which the dependent variable is the CSR strategy score. All the regressions confirm the main findings shown in Table 3, supporting our hypotheses and suggesting that endogeneity issues may not affect our main result.

6 | DISCUSSION AND CONCLUSIONS

This research aims to explore the role of female directors in affecting the firms' CSR strategy score. Despite female directors having received large attention from academic scholars (Adams & Ferreira, 2009; Beji et al., 2021; Cruz et al., 2019), extant literature paid scarce consideration both to the ownership structure and female directors' heterogeneity in the specific context of family firms (De Masi et al., 2022; Rodríguez-Ariza et al., 2017). Building on cognitive diversity theory and social identity theory, we argue that female directors, bringing a unique perspective to the boardroom, can help to improve sustainability performance through the adoption of a CSR strategy. Additionally, we posit that female directors may behave differently in family and nonfamily firms. Family businesses may have a distinct approach to environmental issues, driven by long-term sustainability and a personal connection to the business as a legacy for future generations. Diversely, nonfamily firms, which are mainly focused on short-term financial gains, may prioritize different objectives. Thus, ownership structure plays a significant role in board composition and diversity, with controlling shareholders often influencing board choices (Cordeiro et al., 2020). In this context, where high ownership concentration in family firms can lead to wealth expropriation and secondary agency problems, we claim that female directors are more likely to engage in social and environmental activities.

Our empirical analysis focusing on Italian listed family and nonfamily firms supports our hypotheses, suggesting that female directors are able to determine higher CSR strategy scores only in family firms. Additionally, we find evidence that only nonfamily female directors are associated with a positive influence on family firm CSR strategy score, whereas family females do not seem to be related to family firm CSR strategy score. Nonfamily female directors, who are selected based on their qualifications and experiences rather than family ties, are likely to be more independent in decision-making and bring diverse perspectives to the company. Consequently, their contribution may positively impact the company's CSR strategy. Taken together, our analyses indicate that the effect of female directors on corporate CSR strategy depends on the type of ownership structure and whether females belong to the family shareholders who hold the company.

The results are in line with our theoretical framework, which identified the cognitive diversity (Jehn et al., 1999) the social identity (Tajfel et al., 1979) theories as the theoretical lens to explain how gender-diverse board, bringing a range of perspectives and experiences to the decision-making process, may lead to better decisions (Cohen & Bacdayan, 1994). In our study, female directors may bring a unique perspective to the boardroom, challenging groupthink and promoting diversity of thought (Boulouta & Pitelis, 2014). People with certain social groups and are more likely to support decisions that

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TABLE 4 Robustness tests–2SLS.

Variables	(1) First-stage % Female directors	(2) Second-stage CSR strategy score	(3) First-stage % family female directors	(4) Second-stage CSR strategy score	(5) First-stage % nonfamily female directors	(6) Second-stage CSR strategy score
Industry diversity	0.979***					
	(0.000)					
Female directors		**0.440*** **				
		(0.000)				
Eponimy			0.037***			
			(0.001)			
Family females				**1.868**		
				(0.145)		
Fraction of male directors					−0.100***	
					(0.000)	
Nonfamily females						**0.901* **
						(0.067)
ROA	−0.011	0.337*	0.015	0.137	−0.064	0.191
	(0.486)	(0.099)	(0.791)	(0.555)	(0.412)	(0.398)
Firm size	0.001	0.065***	−0.004	0.061***	−0.003	0.058***
	(0.282)	(0.000)	(0.429)	(0.002)	(0.700)	(0.000)
Leverage	0.005	0.340***	−0.063*	0.472**	0.049	0.254**
	(0.522)	(0.000)	(0.063)	(0.024)	(0.256)	(0.043)
Cash holdings	0.021*	−0.059	−0.101*	0.412	0.078	0.105
	(0.068)	(0.690)	(0.055)	(0.123)	(0.302)	(0.606)
R&D	0.172**	−2.836***	0.345	−2.957**	−0.426	−1.528
	(0.018)	(0.000)	(0.331)	(0.045)	(0.176)	(0.192)
Capex	−0.000**	−0.000	−0.000	0.012***	−0.001	0.014***
	(0.043)	(0.983)	(0.991)	(0.004)	(0.396)	(0.000)
Firm age	−0.000	−0.003	−0.004	−0.017	0.012	−0.036*
	(0.961)	(0.805)	(0.398)	(0.510)	(0.150)	(0.099)
Board size	0.001***	0.010***	−0.003**	0.028***	0.005***	0.017***
	(0.004)	(0.006)	(0.035)	(0.000)	(0.008)	(0.004)
CEO duality	−0.004	−0.077	0.000	−0.108*	−0.018	−0.118
	(0.401)	(0.182)	(0.982)	(0.085)	(0.355)	(0.125)
Independent male directors	−0.031***	0.282***	−0.070**	0.233	−0.157***	0.228*
	(0.000)	(0.000)	(0.029)	(0.138)	(0.000)	(0.097)
Constant	−0.008	−1.308***	0.183	−1.419***	0.044	−1.288***
	(0.750)	(0.000)	(0.138)	(0.004)	(0.796)	(0.000)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.979	0.510	0.370	0.305	0.722	0.478
Observations	482	482	264	264	264	264

Note: Robust pval in parentheses.
***p <0.01,**p <0.05,*p <0.1.

benefit their group. Female directors may identify more strongly with sustainability issues, leading to greater attention and investment in sustainability initiatives (Carter et al., 2010).

The study has academic implications by contributing to the literature, examining theoretical perspectives, considering contextual factors, and providing insights for policy and practice. It advances

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knowledge of how gender diversity and ESG activities interact in the context of family and nonfamily firms in Italy. The study adds to the expanding body of research on the function of female directors in driving a CSR strategy, offering insights into the context of family and nonfamily companies. Furthermore, the study emphasizes the necessity of more studies to comprehend the connection between board gender diversity and corporate sustainability behaviors. This suggests that the research's findings may help to clarify the complicated link between gender diversity and CSR strategy in various organizational and cultural situations. This is in line with the cognitive diversity theory, which highlights the importance of diversity in cognitive styles, perspectives, and approaches in organizations, which implies that promoting gender diversity can contribute to a wider range of perspectives within an organization (Qi et al., 2022).

The research has implications for policymakers and practitioners involved in corporate governance and sustainability. The findings suggest that gender diversity can lead to improved corporate governance and, in turn, sustainability practices. This implies that policy initiatives promoting gender diversity on boards, such as women's quotas, can have positive effects on organizational sustainability. Practitioners can also benefit from the study by understanding the potential benefits of gender diversity and integrating it into their corporate decision-making processes.

Finally, this research attempts to disentangle the effect of family female directors on CSR strategy scores. Considering that family female directors are not a homogenous group, our additional analyses suggest that the ability of family females to shape corporate strategy to a CSR path is contingent on contextual factors, such as the role they cover on the board, additional positions in other boards and their tenure, expressed in the number of years they sit in the same board. This result emphasizes the need for further research to deepen our understanding and guide practical strategies for organizations aiming to improve board diversity and corporate sustainability.

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