THE ROLE OF BOARD COMPOSITION IN CSR DISCLOSURE: AN EMPIRICAL ANALYSIS IN FOUR EUROPEAN COUNTRIES

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Abstract

The purpose of this study is to provide evidence of the influence of corporate governance mechanisms on corporate social responsibility (CSR) disclosure released by 483 European listed companies after the EU Directive (2014/95) entered into force. The sample includes 483 listed companies, all from the top four European countries by GDP value — Germany, France, Italy, and Spain — that issued CSR reports in the period 2017–2020. The study uses an ordinary least squares regression model to test six hypotheses on the relationship between board characteristics and CSR disclosure. The results of the study confirm that gender diversity, board independence, and CSR committee are positively related to CSR disclosure, while no significant relationship was found with CSR disclosure board meeting, the board size, and CEO duality. This article contributes to academic literature (Pucheta-Martín et al., 2019; Fuente et al., 2017) by showing the functioning of six board characteristics in influencing CSR disclosure released by European listed companies after EU Directive (2014/95) entered into force. It also provides interesting insights for governments and other regulatory bodies when formulating future guidelines and policies in this regard.

Keywords: Board Attributes, CSR Disclosure, Engagement, EU Directive (2014/95), Western Europe


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1. INTRODUCTION

During the last decades, there has been increasing public awareness concerning sustainability issues and growing pressure on companies’ behaviour in respect of environmental and social issues (Xie et al., 2019). As a result, companies worldwide have started to use corporate social responsibility (CSR) reporting as a tool through which to regulate their relationships with relevant stakeholders (Bhattacharyya & Cummings, 2013; Gray, Kouhy, & Lavers, 1995). To gain
legitimacy (Suchman, 1995) and influence public perception, companies tend to release non-financial information to show that their operations are kept well within the boundaries of social acceptance (García-Sánchez, Cuadrado-Ballesteros, & Sepulveda, 2014).

Several studies (e.g., Schaltegger & Zvezdov, 2015), however, have evidenced how information overload and the adoption of greenwashing practices caused stakeholders’ increasing scepticism towards CSR reporting. The relevance of CSR disclosure in addressing economic operators’ choices and the growing demand for reliable information have brought legislators worldwide to issue laws to regulate companies’ CSR disclosure and to strengthen corporate governance mechanisms. In 2014, the European Legislation issued a Directive on Non-Financial Reporting (2014/95/EU)1, requiring listed companies to prepare a non-financial statement containing CSR information, including environmental-friendly actions, safeguarding employees and human rights, implementing anti-corruption and bribery strategies, and promoting gender diversity.

Whether a requirement or a strategic decision to enhance the company’s value, CSR disclosure has assumed a crucial role in corporate strategy, changing the way companies interact with and create value for their stakeholders. This has brought academic scholars to investigate the drivers that can influence the quantity and quality of CSR disclosure (Cormier & Magnan, 2015).

Much of the previous literature has focused on the role of the independent directors in enhancing CSR disclosure (Rao & Tilt, 2016; Ducassy & Montandrou, 2015), with mixed results. While several studies, in fact, confirm a positive relationship (e.g., Fernández-Gago, Cabeza-Garcia, & Nieto, 2018), highlighting the decisive role of independent directors in enhancing voluntary disclosure in order to gain legitimacy, other studies find a negative (Pucheta-Martínez & Gallego-Álvarez, 2019) or no relationship (Mahmood & Orazalin, 2017), showing the ineffectiveness of the independence of the board in stimulating CSR disclosure (Michelon & Parbonetti, 2012). Contrasting results have brought researchers to investigate other characteristics of the board, such as board meeting, CEO duality, or gender diversity, potentially able to influence the amount and quality of information disclosed to the public, however, no convergence has been found on the determinants of CSR disclosure, leaving the way open for further research explorations.

In the light of this heterogeneity, and given the increased relevance of corporate governance mechanisms in influencing the level of market transparency, we investigate the relationship between six different board attributes and CSR disclosure, analysing the board structure and non-financial reports of 483 European listed firms from 2017 to 2020.

The aim of this work is to provide an adequate understanding of the role of board composition as an internal corporate governance mechanism, able to influence the amount and quality of information companies release to the public. Our results evidence that board independence, gender diversity, and CSR committee are positively related to CSR reporting, while for board size, board meetings, and CEO duality no relationship has been found. This study provides insights for scholars, evidencing the overall impact of board composition attributes on CSR disclosure in four western European countries, unlike several studies conducted on this issue, most of which analyse few attributes and focus on a single country. Our findings have also interesting implications for legislators and companies, providing suggestions on how to design effective boards.

The remainder of this paper is structured as follows. The second section is dedicated to the theoretical background and hypotheses development. The third section illustrates the methodology. The fourth section analyses the results that are discussed in the fifth section. Finally, the sixth section draws conclusions and exposes the implications and limitations of this study.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In the last decades, firms have paid increasing attention to CSR issues, changing their strategies and choices in response to the enhanced request by stakeholders to be sustainable (Hussain, Rigoni, & Orji, 2018).

Firms use CSR disclosure to show their alignment with societal values and improve their connections with stakeholders (Garcia-Sanchez et al., 2014).

This has brought academic research to investigate the role of corporate governance in influencing CSR policies (Fernandez-Fejoo, Romero, & Ruiz-Blanco, 2014). Most scholars have identified the board of directors (BoD) as one of the principal corporate governance mechanisms, able to condition the quantity and quality of the information disclosed (Soobaroyen, Ramdhony, Rashid, & Gow, 2022; Sekarlangit & Wardhani, 2021; Rao & Tilt, 2016; Michelon & Parbonetti, 2012).

The responsibility of the board, in fact, is to ensure companies’ profitability, aligning the firm’s behaviour to the interests of its shareholders and relevant stakeholders (Jo & Harjoto, 2011), and they are called to assume strategic decisions. However, the composition of the board determines what board members can do (Cucari, Esposito De Falco, & Orlando, 2017) since board dimension and board composition impact the supervisory capacity of the board of directors (Villanueva-Villar, Rivo-López, & Lago-Peñas, 2016).

In this perspective, the BoD assumes an advisory function aimed at obtaining and supplying the resources necessary for the formulation and application of the corporate strategy, which is to be understood in a broad sense with respect to what may be the connatural economic-corporate meaning.

Indeed, their tasks include managing relationships with the external environment and ensuring access to strategic resources for the company, through the network of their personal and professional relationships (Conger, Lawler, & Finegold, 2001). For these reasons, as theorized by the resource dependence theory (Pfeffer & Salancik, 1978), independent directors, to increase their

reputation, are disposed to release information on CSR in order to demonstrate externally that companies operate responsibly and follow the rules. In their decision-making processes, they should consider all different stakeholders' interests, most of which go beyond economic interest, including also social and environmental sustainability, encouraging companies to release more information about their CSR strategies.

However, the effectiveness of board members in acting as a stimulus mechanism for CSR disclosure depends also on their real degree of independence from top management or controlling shareholders (Fama & Jensen, 1983). To reduce the risk of collision, a number of independent directors, who have no connection with the property or management, are usually appointed.

A high degree of independence of the board of directors impacts positively on the level of disclosure of CSR matters, ensuring more effective monitoring functions (Jo & Harjoto, 2011). Fama (1980) argues that a higher percentage of independent directors leads to more significant board control and restricts opportunistic behaviour by top management and dominant shareholders (Zattoni & Cuomo, 2010). Moreover, the concern for the reputation that animates independent directors can generate behaviours that safeguard the interests of all the stakeholders and not just the shareholders (Fama & Jensen, 1983). Sustainability becomes a decisive element for independent directors to avoid exposure to negative external observations that could compromise their own and the company’s image (Zahra & Stanton, 1988).

Consequently, the presence of independent directors should encourage the adoption of sustainable strategies and higher levels of CSR disclosure, improving the completeness and accuracy of companies’ disclosure, by increasing their level of transparency and accountability (Arenas-Parr & Álvarez-Otero, 2020; Prado-Lorenzo, Gallego-Álvarez, & García-Sánchez, 2009; Cheng & Courtenay, 2006). Based on this reasoning, the following hypotheses have been developed:

**H1: There is a positive relationship between the independence of the board of directors and the level of communication on CSR.**

However, the board independence alone could be not enough to explain the level of CSR disclosure. In some contexts, where companies are characterized by a high ownership concentration, for instance, its effectiveness as a corporate governance mechanism able to eliminate opportunistic behaviours and stimulate CSRdisc could be reduced (Lepore, Landriani, Pisano, D’Amore, & Pozzoli, 2022). This has prompted other scholars to extend the analysis to other board attributes, in order to verify how these can influence the level of CSR disclosure.

Board diversity is considered one of the board characteristics that strongly influence corporate environmental disclosure (Post, Rahman, & Rubow, 2011); the information resources and broadening of the cognitive and behavioural range of the board can be improved by the gender diversity of directors sitting on the board (Rao & Tilt, 2016).

Research on corporate governance evidence that female directors can play a considerable role in improving the effectiveness of the board and the financial performance of companies (Musviyanti, Ulfah, & Yudaruddin, 2021). Besides, the presence of women has been associated with a higher quality of financial information and the promotion of good corporate practices (Pucheta-Martínez, Bel-Oms, & Olcina-Sempere, 2016).

The study conducted by Matsa and Miller (2013) suggests that women are more responsive to and inclined towards the requests of stakeholders, especially with reference to social and environmental issues. As a result, female leadership would tend to favour the disclosure of CSR issues thanks to the assumption that women placed in top positions are more sensitive about this topic than male subjects (Kim, 2013).

Psychological, sociological, and cognitive perspectives also argue that female directors influence corporate governance and strategic decisions. In fact, previous studies (e.g., Levi, Li, & Zhang, 2014) found that women administrators are more prudent in decision-making processes relating to relevant issues.

These qualities demonstrate the possession of greater social and ethical skills than male directors, with the consequence of adopting more responsible behaviours, finalized to equalizing the interests of managers and shareholders in the adoption of strategic decisions, such as the disclosure of CSR.

According to stakeholder theory (Freeman, 1984), the external environment can perceive that companies are committed to CSR issues, when female representatives are part of the boards of directors, showing a concrete orientation of the company towards the expectations and interests of stakeholders (Ibrahim & Angelidis, 1994).

Therefore, the attitude and sensitivity of female directors, in combination with other characteristics of their leadership style, are factors capable of influencing the board to become more engaged in these issues, leading to increased disclosure of CSR information. Thus, based on the above studies, we formulated the following hypothesis:

**H2: There is a positive relationship between gender diversity and the level of communication on CSR.**

Another board characteristic that has been widely investigated by academic research for its potential impact on disclosure is the level of activity — that is, the number of meetings held during the year.

Studies such as González and García-Meca (2014) have shown that a greater number of board meetings and participation in typical tasks and activities, such as monitoring, and supervision of business, are associated with higher quality information without distortion. Some studies (Evans, Evans, & Loh, 2002) clarify that too frequent meetings reduce firm performance, consuming part of the management time and increasing board expenses, due to the need to pay for meeting expenses (such as travel expenses). Other studies (Alegaab & Ighnaim, 2021; Che-Adam, Lode, & Abd-Mutalib, 2019; Fadzilah, 2017; Ahmed, 2013), on the other hand, show no influence of this characteristic on company performance. About the level of CSR disclosure, in this regard, there are two opposite views: the first suggests that a greater number of meetings of the board of directors may indicate excessive powers in the hands of directors, thus negatively affecting companies’ performance (Vafeas, 1999); the second view argues that more active councils, and therefore those that meet more
Based on these considerations, we formulated the following hypothesis: **H3: There is a positive relationship between the level of activity of the board and the level of communication on CSR.**

The literature review also reveals how the duality of the roles of the CEO and chairman of the board can influence corporate disclosure. CEO duality occurs when CEO simultaneously is in charge of the chairman of the board of directors, configuring a combination of managerial and control functions. Its impact on CSR disclosure has been widely investigated in corporate governance studies, revealing heterogeneous and sometimes contradictory results. Agency theory can help explain the contrasting evidence since, managers’ personal interests are likely to influence their engagement in CSR disclosure practices. Therefore, if the CEO perceives that CSR activities have no value, he can incentivize management to consider those as not strategic issues, thereby reducing the monitoring role performed by the directors and the amount of information disclosed to shareholders and all stakeholders (Sundararajan, Je-Yen, & Rajagunam, 2016; Giannarakis, 2014). Some authors, like Chau and Gray (2010), have theorized the negative impact of the role duality of CEO and chairman on the transparency of a company, especially as a factor decreasing voluntary disclosure, including information on CSR.

However, according to some scholars (Finkelstein & D’Aveni, 1994), CEO duality can have also a positive effect on the actions carried out by companies thanks to the supervisory role of the CEO/President. When CEOs are also chairmen of the board of directors, they may be encouraged to disclose CSR information, to show the company’s commitment to sustainability issues. In this way, they can improve their reputation, the chance of staying in charge, their legitimacy, and, consequently, their success and remuneration (Jiraporn & Chintrakarn, 2013). Despite empirical evidence showing contrasting findings, most previous research (Ananzeh, 2022; Ananzeh, Alshurafat, Bugshan, & Husain, 2014) supports a negative effect of CEO duality on CSR disclosure. Therefore, based on these studies, the next hypothesis is: **H4: There is a negative relationship between CEO duality and the level of communication on CSR.**

We finally consider the presence of a CSR committee in the board of directors, as a useful mechanism for improving policies to sustainability issues. The creation of CSR committees should involve a greater commitment to providing better quality information on companies’ CSR (Sekarlangit & Wardhani, 2021; Adnan, van Staden, & Hay, 2010). The main purpose of the CSR committee lies in increasing information on CSR and ensuring greater transparency of company operations and communication policies (Fuente, García-Sánchez, & Lozano, 2017).
for all stakeholders. The same approach is used by Michelon and Parbonetti (2012), who affirm that the quantity and quality of CSR policies are positively influenced by CSR committees. Fuente et al. (2017) provide the same evidence, supporting the assumption that CSR committees are positively associated with greater corporate transparency on sustainability. Based on these results, we hypothesize that:

H6: There is a positive relationship between the presence of a CSR committee and the level of communication on CSR.

3. RESEARCH METHODOLOGY

3.1. Sample selection and data source

To test our hypotheses, we gathered data from the Refinitiv Eikon Datastream. Refinitiv offers one of the most comprehensive environmental, social, and governance (ESG) databases, covering over 80 percent of global market capitalization across more than 450 different ESG metrics.

We selected the companies listed in regulated markets in Germany, France, Italy, and Spain, the four strongest European countries by GDP value, in the period 2017–2020. We removed those firms that had not issued a CSR report and firms without ESG and financial data useful for our analysis.

The final sample consists of 483 companies (1,369 observations).

3.2. Variables

3.2.1. Dependent variable

Our dependent variable is CSR disclosure (CSR_Disc). It measures the level of information on sustainability disclosed by companies. The value attribute is the result of the sum of 19 individual ESG items contained and available in the Refinitiv Eikon Datastream pertaining to environmental and social issues and categorized in Eikon as external corporate communication.

For each company in the sample, each indicator was assigned a value of 1 if the information is disclosed, and 0 otherwise. The sum of the value of the 19 indicators gives the overall CSR_Disc score for each company in the sample.

### Table 1. Description of dependent variable and measurement

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Healthy Food or Product</td>
<td>The company develops or markets products and services that promote specific health and safety benefits to consumers.</td>
</tr>
<tr>
<td>2</td>
<td>Internal Promotion</td>
<td>The company reports information regarding career advancement opportunities for its employees.</td>
</tr>
<tr>
<td>3</td>
<td>HIV-AIDS Programme</td>
<td>The company systematically reports information regarding the adoption of policies or programmes to prevent or combat HIV-AIDS.</td>
</tr>
<tr>
<td>4</td>
<td>Crisis Management Systems</td>
<td>The company routinely reports information on crisis management systems.</td>
</tr>
<tr>
<td>5</td>
<td>Green Buildings</td>
<td>The company routinely reports information regarding the possession or adoption of green facilities and/or buildings.</td>
</tr>
<tr>
<td>6</td>
<td>Toxic Chemicals Reduction</td>
<td>The company reports initiatives to reduce, reuse, replace or phase out chemicals or toxic substances.</td>
</tr>
<tr>
<td>7</td>
<td>Staff Transportation Impact Reduction</td>
<td>The company systematically reports on initiatives to reduce the environmental impact of transportation used for its staff.</td>
</tr>
<tr>
<td>8</td>
<td>Waste Reduction Initiatives</td>
<td>The company routinely reports initiatives to recycle, reduce, reuse, substitute, treat or phase out waste.</td>
</tr>
<tr>
<td>9</td>
<td>VOC Emissions Reduction</td>
<td>The company routinely reports on efforts to reduce, replace, or phase out volatile organic compounds (VOC).</td>
</tr>
<tr>
<td>10</td>
<td>NOx and SOx Emissions Reduction</td>
<td>The company reports initiatives to reduce, reuse, recycle, replace or phase out SOx (sulphur oxide) or NOx (nitrogen oxide) emissions.</td>
</tr>
<tr>
<td>11</td>
<td>Human Rights Breaches Contractor</td>
<td>The company reports or demonstrates that it is prepared to terminate a collaboration with a sourcing partner if human rights criteria are not met.</td>
</tr>
<tr>
<td>12</td>
<td>Human Rights Contractor</td>
<td>The company reports or shows that it uses human rights criteria in the process of selecting or monitoring its suppliers or sourcing partners.</td>
</tr>
<tr>
<td>13</td>
<td>Day Care Services</td>
<td>The company claims to provide day care services (day-care, vouchers, disability assistance) to its employees.</td>
</tr>
<tr>
<td>14</td>
<td>OECD Guidelines for Multinational Enterprises</td>
<td>The company claims to follow Organization for Economic Cooperation and Development (OECD) guidelines for multinational enterprises.</td>
</tr>
<tr>
<td>15</td>
<td>Global Compact Signatory</td>
<td>The company has signed the United Nations Global Compact, a non-binding pact to encourage businesses around the world to adopt sustainable and socially responsible policies.</td>
</tr>
<tr>
<td>16</td>
<td>Policy Community Involvement</td>
<td>The company reports on adopting a policy to improve its good corporate citizenship through donations, volunteering, philanthropic activities, and community investments.</td>
</tr>
<tr>
<td>17</td>
<td>Policy Business Ethics</td>
<td>The company reports on adopting a policy to improve its good corporate citizenship through donations, volunteering, philanthropic activities, and community investments.</td>
</tr>
<tr>
<td>18</td>
<td>Flexible Working Hours</td>
<td>The company reports on the adoption of programmes or processes that help employees have a good work-life balance.</td>
</tr>
<tr>
<td>19</td>
<td>Management Training</td>
<td>The company claims to provide regular training to staff and management.</td>
</tr>
</tbody>
</table>

3.2.2. Independent and control variables

Board independence (BoInd) measures the percentage of independent directors appointed to the board. In line with the prevailing literature, a positive association has been hypothesized between board independence and CSR disclosure. In fact, a greater number of independent directors can lead to a decrease in conflicts of interest between shareholders and stakeholders, and independent
directors, being more inclined towards issues of external interest, encourage CSR disclosure activities.

The board gender diversity (BoGenDiv) variable measures the percentage of women sitting on the board. It is based on the common idea that the female gender has a greater inclination towards and sensitivity to stakeholder expectations and respect for collectively shared and recognized principles. Thus, a positive relationship has been hypothesized between the presence of women on boards and the level of communication on CSR.

The board meetings variable (BoMeetings) measures the number of meetings held by the board during the year, as it is assumed that a greater number of meetings will make it possible to exercise the functions of controlling and monitoring the board’s activities more effectively (Adams & Ferreira, 2009).

We also inserted board size (BoSize), indicating the number of directors, based on the assumption that more administrators can better perform their monitoring role. We expected to find a positive association with CSR disclosure (Cheng & Courtenay, 2006).

We considered CEO duality (CEOChDual) and predicted a negative relationship with CSR disclosure ESG items score, in line with the idea that the concentration of power deriving from the duality of the positions of CEO and chairman compromises the monitoring role of the board of directors, assuming that this concentration of power significantly reduces the supervisory role of the board of directors (Pisano, Lepore, & Agrifoglio, 2015).

CSR committee (CSRCComm) is a dummy variable that takes a value of 1 if a specific committee for sustainability issues has been established, or 0 otherwise.

Three control variables were included in the regression model that express the size and performance of the company in economic and financial terms. The variable LN_TA measures the size of companies through the natural logarithm of total assets. In this regard, a positive association with CSR disclosure has been hypothesized, as large companies, in order to meet the expectations and requests of investors, should increase the level of communication, including in relation to the average costs they incur for the operations of collecting and disseminating information. Leverage (LTD_TA) was then considered, calculated as the ratio between long-term debt and total assets, assuming that it has a positive association with CSR disclosure.

Therefore, companies whose financial leverage is higher are more willing to disclose information in order to reduce agency costs with creditors. Finally, the corporate profitability index return on assets (ROA) was introduced into the model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Measurement</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRDisc</td>
<td>CSR disclosure</td>
<td>Sum of the number of non-financial indicators relevant to environmental, social, and governance issues</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>BoInd</td>
<td>Board independence</td>
<td>The ratio between independent directors appointed by minorities and the total number of directors</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>BoGenDiv</td>
<td>Board gender diversity</td>
<td>Percentage of women on the board of directors</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>BoMeetings</td>
<td>Board meetings</td>
<td>Number of board meetings during the year</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>BoSize</td>
<td>Board size</td>
<td>Total number of board members at the end of the fiscal year</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>CEOChDual</td>
<td>CEO duality</td>
<td>Dummy variable that takes on the value 1 if the chairman of the board of directors of the company is simultaneously the CEO or 0 otherwise</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>CSRCComm</td>
<td>CSR committee</td>
<td>Dummy variable that assumes the value of 1 if a CSR committee is present, or 0 otherwise</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>LN_TA</td>
<td>Size</td>
<td>Natural logarithm of total assets</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>LTD_TA</td>
<td>Leverage</td>
<td>Long-term debt divided by total assets</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on assets</td>
<td>Natural logarithm of the ratio between the market value and the balance sheet value of assets</td>
<td>Refinitiv Eikon Datastream</td>
</tr>
</tbody>
</table>

### 4. RESULTS

#### 4.1. Descriptive statistics

Table 3 below shows the descriptive statistics of the variables.

CSRDisc shows an average value of 9.04, the minimum and maximum values being 1 and 17, respectively. The data show that, on average, the sampled companies disclose information on 9 indicators out of a total of 19, reaching a minimum of 1 and a maximum of 17, and thus covering almost all the elements surveyed.

The standard deviation is equal to 3.72, indicating wide heterogeneity in the behaviours adopted by companies regarding the disclosure of information on sustainability. There are optimal situations in which information disclosure is almost global, and others in which it is, instead, absolutely unsatisfactory. Such dissimilar levels can lead to a variety of evaluations: if, for those companies whose level of communication is minimal, there is a clear lack of perception of the strategic role played by disclosure in the field of sustainability, then for the others, whose levels reach satisfactory standards, the levels could indicate both opportunistic behaviour in terms of a compliant nature with respect to regulatory obligations, and true attention to the subject matter and the interests of stakeholders.

BoInd shows a minimum value of 0, signifying boards in which there is an absence of independent
directors, and a maximum value of 100, indicating that all board directors are independent members. On average, boards of directors show independence of 50.44 percent. The data reported, therefore, show relatively consolidated independence of boards, suggesting an adequate capacity of directors to safeguard and respond to the widespread interests of stakeholders.

Regarding BoGenDiv, descriptive statistics show that, on average, the percentage of women members of the board of directors is equal to 33.39 percent, with minimum values equal to 0 and maximum values equal to 66.67. The results are extremely varied, ranging from situations in which there is a total absence of women directors to situations in which more than half the board is represented by female members. Examining the other variables considered, on average, 8.84 meetings are held per year by boards of directors that are composed, on average, of 11.63 members, with compositions ranging from 2 members to 23. In 34.11 percent of the companies surveyed, the CEO is also president of the board, and, on average, there is a specific committee for CSR in 77.64 percent of the companies.

Table 3. Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRDisc</td>
<td>1.369</td>
<td>0.046749</td>
<td>3.727467</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>BoInd</td>
<td>1.369</td>
<td>50.43943</td>
<td>26.65994</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>BoGenDiv</td>
<td>1.369</td>
<td>33.39279</td>
<td>13.68353</td>
<td>0</td>
<td>66.66667</td>
</tr>
<tr>
<td>BoMeetings</td>
<td>1.369</td>
<td>8.848795</td>
<td>4.477666</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>BoSize</td>
<td>1.369</td>
<td>11.63112</td>
<td>4.301733</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>CEOChDual</td>
<td>1.369</td>
<td>0.3411249</td>
<td>0.4742605</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CSRCComm</td>
<td>1.369</td>
<td>0.388235</td>
<td>4.514406</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>LN_TA</td>
<td>1.369</td>
<td>0.7764792</td>
<td>1.777696</td>
<td>16.69133</td>
<td>18.86306</td>
</tr>
<tr>
<td>LTD_TA</td>
<td>1.369</td>
<td>0.2251432</td>
<td>0.1517665</td>
<td>1</td>
<td>1.019485</td>
</tr>
<tr>
<td>ROA</td>
<td>1.369</td>
<td>0.7764792</td>
<td>1.777696</td>
<td>0.6033972</td>
<td>0.9635</td>
</tr>
</tbody>
</table>

Table 4. Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>CSRDisc</th>
<th>BoInd</th>
<th>BoGenDiv</th>
<th>BoMeetings</th>
<th>BoSize</th>
<th>CEOChDual</th>
<th>CSRCComm</th>
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</table>

Note: * p < 0.05.

4.2. Regression analysis

Figure 1 describes our research model, and the relationships between the variables. We used the following research model:

Figure 1. Research model
We developed the following regression model to test the hypotheses developed:

Model 1

\[ CSR_{Disc} = \alpha + \beta_1 Bo\text{Ind} + \beta_2 Bo\text{GenDiv} + \beta_3 Bo\text{Meetings} + \beta_4 Bo\text{Size} + \beta_5 CeoChDaul + \beta_6 CSRComm + \beta_7 Control + \epsilon \]  

(1)

Table 4 shows the results of the regression models, providing evidence for the hypotheses developed.

In order to verify the robustness of the fixed effects panel model used in this study, specific comparison tests were conducted with the pooled ordinary least squares (OLS) and random effects (RE) models. The Breusch and Pagan Lagrangian multiplier test was performed to compare the pooled OLS and the RE models. The results of the comparison, given the wide heterogeneity of the data from the countries in the sample, led us to consider the RE model more appropriate than a simple OLS regression. We then compared the fixed effects model with the variable effects model using the Hausman test, which confirmed the greater appropriateness of the fixed effects model. Finally, the Chow test was performed as the ultimate test of the appropriateness of the fixed effects model compared to the OLS model. A comparison of these models allowed us to conclude that the fixed effects model is preferred to the OLS model.

The R-squared is 20 percent, a value that, in line with prevailing studies on the topic, confirms a reliable explanatory power of the regression.

Analysing the data in Table 4, the first hypothesis, H1, is confirmed. A significant and positive relationship between the independence of the board and the level of disclosure is confirmed by the results obtained. The reference coefficient, with a significance of 5 percent, confirms the hypothesis that greater independence of the board of directors leads to an increased level of disclosure on CSR.

In respect of the second hypothesis, H2, the results obtained confirm the presence of a positive relationship, with a significance of 5 percent, between gender diversity and CSR disclosure. It is therefore confirmed that women on the board of directors influence the level of CSR disclosure. The results of the regression do not confirm hypothesis H3. There is no significance in the relationship between a number of meetings and CSR disclosure. Similarly, hypotheses H4 and H5 are not confirmed by the regression results. Neither board size nor CEO duality shows evidence of statistical significance. Therefore, it is not possible to confirm the thesis that there is a positive relationship between board size and the level of disclosure of information; as a result, it is also not possible to confirm the negative relationship between the disclosure of information and the dual role of chief executive officer and chairman.

Hypothesis H6 is confirmed with significance at the 10 percent level, indicating that the presence of a sustainability committee has a positive impact on the level of information provided by the company. It is, therefore, confirmed that CSR committees represent optimal governance mechanisms to respond to the specific needs of both economic operators and the stakeholders they address. Specifically, CSR committees represent drivers for companies in terms of transparency and communication on sustainability.

The control variables exhibit mixed results. The economic dimension of the firm shows a positive and significant effect on disclosure; leverage exhibits a positive but not statistically significant influence, while ROA shows significant and negative results.

<table>
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<th>Table 5. Regressions</th>
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<td>Number of companies</td>
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5. DISCUSSION

The results obtained clearly demonstrate that board independence, in line with the prevailing literature (Fernández-Gago et al., 2018; García-Sánchez et al., 2014; Haniffa & Cooke, 2005; Rao, Tilt, & Lester, 2012; Jo & Harjoto, 2011; Zahra & Stanton, 1988; Pfeffer & Salancik, 1978) is a useful governance mechanism to increase CSR disclosure. A greater number of independent directors can lead to a decrease in the conflicts of interest between shareholders and stakeholders, as independent directors are more inclined towards issues of external interest and aware and attentive to stakeholder expectations, thus facilitating CSR disclosure activities.

This is also the consequence of the reputational factor to which the directors are subject; in fact, independent directors have more direct relationships with stakeholders and, consequently, are subject to their judgments. This clearly stimulates them to motivate companies to engage more concretely and more widely in CSR activities (Khan, 2010; Haniffa & Cooke, 2005). The directors’ reputation depends on the ethical and responsible approach put in place by companies (Zahra & Stanton, 1988), for this reason, they are motivated to make sustainable activities and, above all, to disclose information about it (Prado-Lorenzo et al., 2009; Cheng & Courtenay, 2006).

Regarding hypothesis H2, the results confirm the presence of a positive relationship between gender diversity and CSR disclosure. Consistent with reference studies (Fernández-Feljoo et al., 2014; Lone, Ali, & Khan, 2016), the results of our analysis show that the presence of women on boards of directors represents a strong influence on the level of disclosure of sustainability, confirming the female gender’s tendency to pay more attention to issues of social and ethical interest (Levi et al., 2014) and to adopt more responsible actions and behaviours that are oriented to the interests of all stakeholders.

The regression results do not support hypothesis H3 about the existence of a correlation between the number of board meetings and CSR disclosure. The results of similar studies have shown the existence of both positive (Lipton & Lorsch, 1992) and negative (Vafeas, 1999) relationships, motivated respectively by increased board activity as a mechanism that amplifies control over corporate management and decision-making processes, or by excessive power on the part of directors. In line with other studies (e.g., Dienes & Velte, 2016), we found no significance in the relationship between these variables.

Also, the hypothesis H4 that the size of the board can have a positive impact on the level of CSR disclosure released by the company, has not been confirmed. In line with previous studies (Dienes & Velte, 2016; Cheng & Courtenay, 2006), we may assume that a greater number of board members can lower the level of monitoring and therefore reduce CSR disclosure due to a greater dispersion of functions.

The results obtained with regard to hypothesis H5 concerning role duality are not statistically significant. It is therefore not possible to confirm the assumption that there is a negative relationship between sustainability disclosure and the dual roles of CEO and chairman. These results are also in line with previous studies that have used duality as a control variable when investigating the relationship between board characteristics and corporate disclosure (García-Sánchez, Gómez-Miranda, David, & Rodríguez-Ariza, 2019; Helfaya & Moussa, 2017; Fuente et al., 2017).

Hypothesis H6 instead has been confirmed. The presence of a CSR committee has a positive impact on the level of information provided by the company, confirming the consideration that the presence of committees dedicated to specific aspects represents an optimal governance mechanism to respond to the specific needs of both economic operators and the stakeholders they address. Specifically, CSR committees represent drivers for companies in terms of transparency and communication in order to guarantee the quality of the company’s sustainability reporting activities (Michelon & Parbonetti, 2012). In fact, CSR committees potentially act as a useful governance mechanism in terms of fostering the quantity and quality of firms’ CSR disclosure (Pucheta-Martínez & Gallego-Alvarez, 2019; Mahmood & Orazalin, 2017; Fuente et al., 2017).

The results obtained in this work show that in the European countries investigated, the higher independence of directors, the presence of women sitting on the board, and the establishment of CSR committee with specific competences on sustainability issues turn out to be factors that have a positive impact on the level of disclosure regarding sustainability, confirming that these attributes are tools for reducing conflicts between parties.

Contrary to what several previous studies (Guerrero-Villegas, Pérez-Calero, Hurtado-González, & Giráldez-Puig, 2018; Jizi, 2017; González & García-Meca, 2014) have found, other board characteristics, such as CEO duality, a number of meetings and board size have not been shown to exert any influence on the level of disclosure.

6. CONCLUSION

During the last decades, CSR disclosure has been widely investigated by scholars as an internal corporate governance mechanism able to influence the increase in financial performance. Several studies (Ananzeh, 2022; Arenas-Parra & Alvarez-Otero, 2020; Fernández-Gago et al., 2018; Rao & Tilt, 2016) have analysed its relationship with board compositions, most of which focus on board independence, finding no convergence on the determinants of CSR disclosure.

This paper investigates the role of board composition in influencing the CSR disclosure released by companies located in the big four western European countries, analysing six different board attributes.

This study shows how greater heterogeneity in the characteristics of the board can be a useful mechanism for the implementation of actions and operations of transparency and consideration of the expectations and needs of stakeholders, not only from the point of view of accountability of the company’s work but also from the stakeholder engagement perspective.
These results have important implications for legislators, companies, and operators in the sector with regard to the definition of roles and functions of directors, observing, for example, the impact of independent directors and the presence of women on the board.

In designing new regulations or corporate governance codes, legislators should take into consideration the role that board independence, gender diversity, and CSR committee can play in improving the level of disclosure, accountability, and transparency of companies towards their stakeholders. The results suggest that companies characterized by higher levels of board independence, with a high percentage of women sitting on the board and with a CSR committee are expected to behave in a socially and environmentally responsible way and to be more transparent and accountable.

Our findings should be taken into consideration also by companies, especially those located in contexts characterized by a low level of transparency when they appoint board members. According to the results of this study, companies should establish a CSR committee and appoint more independent and female directors, that are more inclined to disclose CSR information, by protecting all stakeholders’ interests and increasing companies’ accountability. The results obtained in this work should logically be considered in light of the limited sample size. Therefore, every observation and consideration based on the results obtained suffers from a primary objective limitation that precludes any claim to generalized application. However, this limitation represents a first element and opportunity for future research explorations. In the future, the sample size could be increased by extending the analysis to other European countries, also by including country-specific variables, in order to understand how context can influence the effectiveness of corporate governance mechanisms.

Furthermore, it should be considered that this study only analyzed the quantity of CSR information released without analyzing its quality; this aspect can be implemented in future studies by focusing attention on different characteristics of the information disclosed. Finally, the overall spread of CSR, covering all environmental, social, and governance aspects, was considered. It might be interesting for future research to analyse the effect of the board composition in each of these dissemination categories.

REFERENCES


