



# Adopting a social purpose in for-profit firms: the role of the board of directors

Francesca Collevocchio<sup>1</sup> · Gianluca Gionfriddo<sup>2</sup>

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## Abstract

The debate on the purpose of corporations has intensified over the past decade, compelling businesses to reassess their societal roles. To effectively integrate sustainability into corporate strategies, for-profit firms are increasingly encouraged to adopt a pro-social purpose (SP).

However, adopting and integrating an SP is a substantial shift that necessitates an internal push from corporate actors. In particular, due to its function of strategic decision-making, the board of directors represents a pivotal player in promoting the adoption of an SP.

This research delves into the impact of board characteristics on the likelihood of adopting an SP in for-profit firms. We examined 580 European firms employing propensity score matching and logistic regression methodologies. Our findings offer initial insights on the effect of the board composition on adopting an SP. In particular, we found that cultivating the directors' network with employees, fostering gender and age diversity, and welcoming highly qualified directors on board are key factors in facilitating the adoption and implementation of an SP in EU for-profit firms.

Our study represents the first attempt to quantitatively examine the relationship between the board and SP. By doing so, we contribute to the theoretical advancement of the complementarity of corporate governance and corporate purpose. Moreover, we encourage practitioners to accrue awareness of the board characteristics that facilitate the adoption of an SP within their firms.

**Keywords** Social purpose · Board of directors · CSR · Corporate governance

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✉ Francesca Collevocchio  
f.collevocchio@pm.univpm.it; fra.collevocchio@gmail.com

Gianluca Gionfriddo  
gianluca.gionfriddo@santannapisa.it

<sup>1</sup> Department of Management, Università Politecnica delle Marche, Ancona, Italy

<sup>2</sup> Institute of Management and Department EMbeDS, Scuola Superiore Sant'Anna, Pisa, Italy

## Introduction

The debate around corporate purpose in the modern economic system has gained considerable momentum over the last decade (Battilana et al., 2022; Birkinshaw et al., 2014; George et al., 2021; Henderson, 2021b; Henderson & Van Den Steen, 2015; Hollensbe et al., 2014; Mayer, 2021; Morrison & Mota, 2023; Rey et al., 2019). Increasingly, for-profit firms are called to revise their traditional profit-maximization objective and adopt a social purpose (SP), i.e., goals aimed at creating value by contributing to the welfare of society and the planet (Brosch, 2023). According to prior literature, despite the financial/social trade-offs that can arise in dual-purpose firms (Battilana et al., 2022; de Mon et al., 2022), adopting an SP is not conflictual with generating profits (Brosch, 2023). It provides several benefits to firms that can translate to good financial and sustainability outcomes. More specifically, the adoption of an SP may lead to more outstanding corporate stewardship towards people, values, and natural resources (Hollensbe et al., 2014), to greater creation of societal value thanks to a multiple stakeholders orientation (Harrison et al., 2020), or to more effective implementation of systemic innovations aimed at tackling sustainability challenges, such as climate change or social inequalities (Henderson, 2021b).

However, adopting an SP is not a straightforward process (Quinn & Thakor, 2018; Rey et al., 2019). It requires individual efforts to embed an SP in firms' decision-making processes (Morrison & Mota, 2023) and business models (Parida & Wincent, 2019; Schaltegger et al., 2016). Thus, the people who make key decisions in the firm play a critical role (Battilana et al., 2019, 2022).

In for-profit firms, members of the board of directors (hereafter board) are one of the most critical agents for the adoption of an SP, given their “generative role that involves interpreting and reinterpreting the mission in light of current trends and changing circumstances” (Ebrahim et al., 2014, p. 85). While there has been substantial debate over the active vs. passive role of the board in influencing strategic choices, academic literature has widely recognized a key strategic role of the board (Castellanos & George, 2020; Forbes & Milliken, 1999; Golden & Zajac, 2001; Kim et al., 2009; Ruigrok et al., 2006). The board provides and allocates resources to achieve firm objectives (Hillman & Dalziel, 2003), establishes crucial value commitments (Forbes & Milliken, 1999), and mitigates trade-offs between divergent institutional logics, such as social and financial ones, that may occur from the adoption of an SP (Battilana et al., 2022). Thus, investigating the role of the board in adopting a corporate SP is fundamental to better understanding how for-profit firms may drive the change to respond to the call of paying closer attention to their impact on communities and the environment (Battilana et al., 2019).

Each board differs in terms of the composition and characteristics of directors, which impact board dynamics and effectiveness, thereby influencing firm decision-making, strategies, and outcomes. For this reason, the study of board characteristics has become a topic of extreme interest in the management literature (Chams & García-Blandón, 2019; Chang et al., 2017; García Martín & Herrero, 2020; Kagzi & Guha, 2018; Kang et al., 2007; Naciti et al., 2022; Roffia et al., 2022; Zattoni et al., 2022).

Given the growing pressure on sustainability issues, many scholars have analyzed the impact of board characteristics on corporate social responsibility (CSR) performance in recent years, highlighting mixed results (Endrikat et al., 2021). However, despite the strict relatedness between corporate purpose and CSR (Brosch, 2023), CSR performance is not always indicative of a real commitment to pursuing an SP but could result from greenwashing strategies. Therefore, specific analyses are needed to understand the association between board characteristics and the adoption of an SP.

However, to the best of our knowledge, no study has yet attempted to empirically examine the relationship between the board of directors and corporate social purpose. In our study, we attempt to fill this gap by addressing the following research question: *How do board characteristics affect the probability of adopting a social purpose in for-profit firms?*

Building on the mainstream board and corporate purpose theories, we evaluate whether the strategic adoption of an SP in the setting of for-profit firms is positively associated with specific board characteristics.

We conducted a quantitative cross-sectional empirical study on a sample of 580 European for-profit firms. We collected data from the Refinitiv Eikon and BoardEx databases as of December 2020 and triangulated information from firms' reports and websites. The analysis consists of two phases. First, we used a propensity score matching (PSM) approach to determine which board characteristics are important in influencing the adoption of an SP while controlling for self-selection biases. Second, we perform a logistic regression analysis to estimate the impact of board characteristics on the probability of adopting an SP.

Overall, our results provide preliminary evidence about the impact of board composition on adopting a social purpose in for-profit firms. More specifically, we found significant differences between the board of firms with an SP and those without an SP, and, as showed by the logistic regression analysis, specific board characteristics affect the probability of adopting an SP. More in detail, we found a positive and significant impact of gender diversity, internal network size, and directors' educational background on the adoption of SP. In contrast, we found that the age and tenure of the board negatively impact the adoption of SP.

Our study makes several theoretical contributions. First, we contribute to the intersection of corporate governance and corporate purpose theories by highlighting that the board is a key agent for moving toward an SP. Second, by doing so, we provide evidence supporting the board strategic role that goes beyond the mere approval of strategic management decisions. Third, according to the upper-echelons theory, we pointed out that not only structural and demographic characteristics of the board are important, but directors' personal qualities are especially relevant for adopting an SP. Finally, we encourage corporate practice to acknowledge corporate governance and social purpose as intertwined issues and to become aware of the board's personal and structural features that promote the integration of a social purpose into the organization.

The remainder of the paper is organized as follows. The following paragraph briefly reviews the existing literature on social purpose in for-profit firms, boards of directors, and the intersection between the two streams of literature. Then, we present methods and data for quantitative analysis. Next, we illustrate and comment

our results, which are discussed in the subsequent paragraph, where we highlight theoretical contributions and practical implications. Finally, we conclude by detailing limitations and avenues for future research.

## Theoretical background

Today, business ethics play a central role in our globalized and interconnected world, increasingly assuming a political dimension (Lynn, 2021). Firms are increasingly pressured to pay more attention to their impact on the society in which they operate, moving beyond their single-minded pursuit of financial gains (Battilana et al., 2019). Firms strive to proactively contribute to sustainable development by undertaking transformative processes (M. P. Johnson & Schaltegger, 2020) that go beyond mere legal compliance (Harjoto & Jo, 2015), symbolic adoption of CSR practices (Graafland & Smid, 2019) or corporate greenwashing (Laufer, 2003). By engaging in public discourses with nonmarket actors, they try to manage and gain legitimacy regarding the fairness of their actions that bring environmental (Battilana & Casciaro, 2012) or social change (Girschik, 2020).

CSR disclosure is one of the most institutionalized corporate approaches to seeking legitimacy (Archel et al., 2009). Social and sustainability reports have become mainstream documents, and, looking at firms' websites, several firms declare to be concerned about the environment, employees and critical social issues (Jose & Lee, 2007). However, this approach can be merely symbolic (Nadeem, 2021) and not reflective of a genuine desire to positively impact society. Many firms engage in greenwashing strategies, disclosing just salient and immediately observable CSR initiatives or engaging in symbolic communication that ignores substantial but unobservable sustainable actions (Walker & Wan, 2012; Wu et al., 2020).

Such decoupling behaviors of firms are related to the conception of a business's role and purpose in society. For about half a century, maximizing shareholder value has been the dominant corporate purpose for firms (Friedman, 1970). Consequently, any alternative objective was regarded as a planet orbiting the sun of profit maximization. As a result, CSR approaches have been generally considered a corollary to pursuing the firm's competitiveness (Porter & Kramer, 2006, 2011). However, with the worsening of environmental crisis and social inequalities, Friedman's dictate has been strongly contested. Various scholars claim that shareholder primacy is an ontological impediment to the pursuit of effective CSR (Campbell, 2007; Phillips et al., 2003; Smith & Rønnegard, 2016).

The adoption of an SP – referred to as “the concrete goal or objective for the firm that reaches beyond profit maximization” (Henderson & Van Den Steen, 2015, p. 105) – is increasingly understood as the essential condition for firms to implement substantial CSR programs that contribute to a better society (Henderson, 2021b; Hollensbe et al., 2014). This is because for-profit firms with an SP aim to solve societal needs that deliver value for people and the planet (Mayer, 2021) without renouncing to generate profits (Birkinshaw et al., 2014; Brosch, 2023; Mazzucato, 2018).

The call to adopt an SP in the context of for-profit firms no longer comes exclusively from nonmarket actors but also from the major financial institutions. For

instance, in his 2018 letter to CEOs, Larry Fink wrote that “purpose is not a mere tagline or marketing campaign; it is a firm’s fundamental reason for being – what it does every day to create value for its stakeholders. Purpose is not the sole pursuit of profits but the animating force for achieving them” (Fink, 2018). Soon after, in August 2019, 181 for-profit firms belonging to the American Business Roundtable signed the new statement on the purpose of a corporation, which caused clamor for the declared commitment towards all the corporate stakeholders, including community, environment and employees (Harrison et al., 2020).

### **Social purpose and corporate social responsibility**

For purpose-driven firms, a public declaration about their pro-social intentions is vital. Indeed, declaring to adopt an SP represents an official commitment to society and acts as a driving force for the firms to materialize these intentions (Battilana et al., 2022; George et al., 2021; Rey et al., 2019).

However, while necessary, simply declaring to pursue an SP is not sufficient. Firms may declare to adopt a specific pro-social purpose to gain legitimacy among stakeholders (Scherer & Palazzo, 2007) or satisfy their pressures concerning CSR (Diouf & Boiral, 2017). Nevertheless, firms that publicly commit to an SP without following through with corresponding actions risk damaging their reputations. If these declarations are not supported by genuine dedication and tangible actions, the symbolic adoption of an SP can lead to a significant loss of trust among stakeholders.

For instance, one case that invites critical analysis is signing the new Statement on the Purpose of a Corporation by 120 CEOs of the American Business Roundtable in August 2019. These signatories publicly declared an intent to shift from a shareholder-centric approach to a multi-stakeholder strategy (Harrison et al., 2020). The declaration claimed a commitment to equally deliver value to customers, employees, suppliers, communities, and shareholders. However, observing real and substantial corporate commitment to these declarations is crucial to avoid empty promises and superficial gestures (Aguilera, 2023).

In conclusion, while the public declaration of adopting an SP is the first essential step, SP firms need to do more in order to integrate their pro-social purpose into their strategies and activities through substantive CSR practices. Indeed, as pointed out by Brosch (2023), “CSR can be regarded as one vehicle for an organization to live its purpose and to endow it with authenticity”.

Extant literature has explored the relationship between adopting an SP and CSR using different investigation lenses. A first research avenue focuses on the impact of SP on CSR performance. Hollensbe et al. (2014) suggest that stewardship in service to SP can drive firms’ commitment towards CSR issues, thanks to a greater acceptance of corporate responsibilities towards future generations and natural resources. Henderson and Serafeim (2020, p. 178) claim that “actively encouraging firms to embrace an authentic social purpose might significantly accelerate the process of decarbonization and have a very significant effect on the problem of climate change.” More specifically, the authors believe that purpose-driven firms are more likely to embrace innovation and take the necessary risks to invest in a carbon-neutral economy, thus outperforming their counterparts in sustainability outcomes. Along the

same line, Schaltegger et al. (2019) discussed the potential business case for sustainability from a stakeholder theory perspective. Firms can effectively achieve higher CSR performance by going beyond profit maximization and embracing an SP that benefits multiple stakeholders.

The second perspective of investigation concerns the dynamics through which purpose facilitates CSR actions and practices. Firms may leverage SP to intervene with CSR actions in extreme events, such as natural disasters or global pandemics. In particular, Forcadell and Aracil (2021) empirically found that SP facilitates effective and efficient post-shock CSR responses – and also time response – through specific sustainable dynamics capabilities. To rapidly fight against the Covid-19 pandemic and support the sustainability of local communities, firms may also combine R&D management strategies with the implementation of SP actions (Ferrigno & Cucino, 2021), thus exploiting purpose-driven innovation to deliver social benefits.

Henderson (2021b) pointed out how purpose-driven firms can actually reshape our capitalistic system thanks to their ability to catalyze systemic change and seize opportunities for sustainable growth. More specifically, she believes that SP may drive (1) higher vision and strategic alignment, (2) higher employee engagement, effort and creativity, (3) and a higher level of trust across the firm. These dynamics, in turn, make it easier to implement architectural innovation, which “will undoubtedly be important in solving many of the social and environmental challenges we now face” (Henderson, 2021a, p. 5479).

### **Board of directors as a key agent for SP adoption**

A meaningful sustainable transition requires for-profit firms to integrate an SP into business models and corporate strategies (Morrison & Mota, 2023). By doing so, firms can ensure that a pro-social commitment becomes more than a marketing strategy but rather a behavioral model. However, adopting an SP requires a significant shift in the firm’s values, beliefs, and behaviors (Quinn & Thakor, 2018; Rey et al., 2019). Such a revolution is challenging due to the difficulty of taken-for-granted norms (Greenwood & Hinings, 1996), and it does not occur by itself (Schaltegger et al., 2016). It necessitates the internal push of individuals belonging to the firm.

Among these, the board plays a vital role in leading strategic change (Golden & Zajac, 2001) as it contributes to strategic decision-making by both monitoring and advising management (Hillman & Dalziel, 2003). In particular, as the firm’s governing body, the board is responsible for defining corporate purpose (Mayer, 2021; Tuggle et al., 2010) and ensuring that it is effectively integrated into business plans and corporate strategies (Battilana et al., 2022; Ebrahim et al., 2014). Therefore, the board can play a transformative role in the strategic adoption of an SP that directly affects the sustainable transition of firms.

For instance, empirical evidence from a sample of 180 firms shows that highly sustainable firms have boards that are more accountable towards CSR issues than less sustainable firms, thanks to their ability to direct governance mechanisms towards the fulfilment of an SP (Eccles et al., 2014). Battilana et al. (2022) theorized that the board could lower the intensity of trade-offs between financial and social objectives in firms adopting an SP since they focus corporate attention on selected dimensions

of organizational performance, such as CSR performance. They also claim that “as the guardians of organizational purpose, board members help the firm maintain these [value] commitments through their role in the allocation of the requisite attention to a limited number of critical organizational issues” (Battilana et al., 2022, p. 247).

Yet, different managerial theories give alternative, but not mutually exclusive, interpretations of the board’s role in corporate governance, specifically in governing CSR.

For decades, the primary reference theory to study the governance role of the board has been the agency theory, which argues that it had the main function of monitoring managers to avoid opportunistic behaviors eroding shareholder values (Fama & Jensen, 1983). With the burgeoning of the stakeholder theory, agency theory has been broadened to encompass the larger perspective of stakeholders as agents (Hill & Jones, 1992). In this scenario, the agency problem concerns the misalignment of management’s interests with the interests of all firm stakeholders. Drawing on this theory, several scholars contended that managers might be reluctant to pursue CSR actions since they entail significant investment that may only materialize in the long term, undermining the short-term wealth of managers (Aguilera et al., 2021; de Villiers et al., 2011). Therefore, the monitoring role of the board is critical to reaching CSR outcomes (de Villiers et al., 2011; Naciti, 2019; Post et al., 2011). From the agency theory perspective, the board has minimal power in influencing strategy and acts as the guarantor of shareholders’ long-term interests; thus, CSR actions are no more than instrumental to achieving financial goals.

In line with the agency theory, for many decades, strategic leadership roles were thought to belong exclusively to the CEO or, more broadly, to the top management team. If, on the one hand, directors who were appointed from the CEO’s or the Chairperson’s circle could not be truly independent, on the other hand, those appointed externally often lacked the motivation to play an active role. Thus, the notion of the board being actively involved in strategy was largely seen as a myth (Mace, 1971; Zahra, 1990). However, over the past few decades, the importance of directors’ active contribution to corporate strategy has increasingly been recognized, especially in response to scandals revealing unethical corporate governance practices, with the Lehman Brothers case being a prominent example (Zattoni, 2020). As such, academia and practice have increasingly acknowledged and pointed to the strategic role of the board, which is deemed critical in reviewing and guiding corporate strategy, as highlighted by the corporate governance codes (OECD, 2015).

Several scholars analyzed the relationship between the board and CSR using the resource dependence theory (Mallin et al., 2013; Mallin & Michelon, 2011). According to it, the board plays the crucial role of acquiring and allocating strategic resources. Indeed, the board represents a good source of knowledge, skills, experience, and network (Hillman et al., 2000; Hillman & Dalziel, 2003). With proper skills and competences, the board can foster CSR implementation within the firm, helping managers to adopt pro-social behaviors and boosting the sustainable value created by the firm (Berrone & Gomez-Mejia, 2009; Chams & García-Blandón, 2019). Under this theoretical perspective, characteristics such as experience and internal network size of the board are crucial for a conscious and effective allocation of resources.

A third theoretical perspective on the governance role of the board builds on the upper-echelons theory (Hambrick, 2007; Hambrick & Mason, 1984), which argues that strategic decisions and outcomes reflect the leadership's values, personality, and background. Therefore, individual characteristics of the board may directly influence the adoption and implementation of CSR strategies. Accordingly, several scholars analyzed the impact of personal characteristics of board members on CSR outcomes, focusing mainly on gender, education, and professional experience (Cosma et al., 2021; De Masi et al., 2021; Glass et al., 2016; Naciti et al., 2022).

### Impact of board characteristics on the adoption of SP

Although the relationship between board characteristics and CSR has been widely explored (Aguilera et al., 2021; Chams & García-Blandón, 2019), management literature has overlooked the potential relationship between the board and the adoption of an SP. As was previously noted, it necessitates special attention since, despite their close connection, CSR and SP are distinct concepts. While an organization's corporate purpose establishes the fundamental rationale for its existence, CSR has a more functional focus and can be considered as one vehicle for implementing corporate purpose (Brosch, 2023).

As argued above, board engagement is key for real enforcement of SP that is far from simple compliance, advertising, or a merely symbolic approach. Indeed, “by articulating *for what* a company is accountable as well as *to whom* it is primarily accountable, the board helps the company set some of its fundamental value commitments” (Battilana et al., 2022, p. 247).

As the board of directors is a team of people with different demographic and cognitive characteristics that define together the goals of the firm, its composition is critical in driving decision-making. Thus, analyzing the effect of board characteristics on sustainability-related strategies has become a topic of increasing interest (Disli et al., 2022; Endrikat et al., 2021; Ludwig & Sassen, 2022).

Accordingly, we contend that board characteristics may affect the adoption of an SP. To explore such a relationship that has not yet been investigated by prior research but requires specific attention, we focused on the most used board characteristics according to the mainstream theories of the board of directors.

#### Board size

Previous research has shown that board size is closely related to board effectiveness and its involvement in strategic decision-making (Cornforth, 2001; Eisenberg et al., 1998; Golden & Zajac, 2001; Jensen, 1993). Moreover, several studies highlighted that board size influences sustainability strategies (Aguilera et al., 2021; Chams & García-Blandón, 2019), and such a relationship might result from SP adoption. Therefore, we speculate that board size may affect the adoption of an SP.



## Independence

Previous literature examined the impact of board independence on firm outcomes, revealing that it is crucial for conducting an effective monitoring and accountability mechanism (Hillman & Dalziel, 2003) as the duty of independent directors is to ensure that firms are long-term sustainable. Although independent directors, as outsiders, are less involved in strategic decision-making (Ruigrok et al., 2006), their presence affects the quality of non-financial disclosure and CSR performance (Aguilera et al., 2021). Prior research suggests that having a higher percentage of independent directors increases the attention on social and environmental issues, following the interests of both shareholders and other stakeholders (García-Sánchez & Martínez-Ferrero, 2018; Walls et al., 2012). Thus, we accounted for board independence in our study.

## Age

According to Kang, Cheng, and Gray (Kang et al., 2007), “age remains one of the most important observable background diversity issues for the board of directors.” As directors’ age influences their experience and social background, age diversity ensures a greater heterogeneity in visions and perspectives within the board, fostering constructive debate and, eventually, strategic change. Indeed, several studies show that directors’ age is positively related to strategic change, arguing that young directors are more likely to initiate changes than older directors (S. G. Johnson et al., 2013). Prior research showed that directors’ age positively affects social performance (Hafsi & Turgut, 2013). Indeed, age is closely related to personal moral judgment (Post et al., 2011), which may reflect in personal sensitivity to the social impact of firms and, therefore, to the adoption of SPs.

## Gender diversity

Gender diversity is another critical variable for board diversity, which scholars have increasingly analyzed (Cabrera-Fernández et al., 2016; De Masi et al., 2021; Khatib et al., 2020). According to recent research, gender diversity impacts beyond readily observable data, providing valuable information that is unobservable, such as knowledge, skills, values, attitudes, and behavioral styles that may differ between men and women (Kirsch, 2018). Such personal characteristics are reflected in social sensitivity (Amorelli & García-Sánchez, 2020; Boulouta, 2013). Indeed, while women are historically underrepresented on corporate boards, they are often notably inclined towards implementing sustainable and socially responsible strategies (Glass et al., 2016; Setó-Pamies, 2015; Yang et al., 2019). Prior research has shown that women tend to possess unique perspectives, values, and leadership styles that may influence the broader impact of business decisions on various stakeholders (Galbreath, 2018). Accordingly, we contend that this inclination towards a more holistic and inclusive approach to decision-making can foster a greater emphasis on SP strategies that prioritize ethical considerations, sustainability, diversity and inclusion, and community engagement (Boulouta, 2013; Byron & Post, 2016).

## Nationality diversity

Directors' nationality is another dimension of diversity becoming increasingly analyzed in the board diversity literature (Adams et al., 2015; Jo et al., 2016; Kagzi & Guha, 2018; Kent Baker et al., 2020; Naciti et al., 2022). In particular, it appears to be relevant in the European context (Ruigrok et al., 2007). Different nationalities bring cultural diversity within the board, which also concerns the perspective on the role of firms in society. Thus, board nationality diversity may impact the adoption of SPs.

## Tenure

The longer directors have been operating in a firm, the more thoroughly they will know and identify themselves with it. Indeed, previous literature has shown that tenure is closely linked to directors' identification with the firm, which in turn influences board cooperation, behavior and motivation in carrying out its functions (Hillman et al., 2008). We argue that identifying with the firm is crucial to defining corporate purpose and pursuing SP. Indeed, identification leads individuals to mirror their own achievements, values and goals with those of the firm (Ashforth et al., 2008). Organizational studies underlined the deep connection between personal purpose and corporate purpose (Quinn & Thakor, 2018), highlighting how the internalization of corporate values can facilitate the commitment towards a shared strategy (Hillman et al., 2008). Therefore, the greater the identification, the greater the leadership commitment to SP is expected to be (Rey et al., 2019). However, on the other hand, as the time spent within the firm increases, directors would adapt to existing routines and organizational culture, thus being reluctant to introduce radical change.

## Internal network size

According to Gartenberg et al. (2019, p. 4), corporate purpose is “enacted via the set of beliefs held by employees.” Therefore, the relationship between the board and employees is relevant to fully integrating of corporate purpose into the firm's business model, which can lead to the adoption of SP. We accounted for the possibility of sharing and connecting between the board and employees by measuring the size of the board network within the firm, i.e., the average number of individuals with whom administrators overlap while employed in other activities or education roles in the same firm.

## Education

Previous studies argued that directors with advanced educational backgrounds tend to have broader societal concerns, resulting in more accountability to CSR (Chams & García-Blandón, 2019; Post et al., 2011). Therefore, the educational background of board members may also influence SP adoption.

## Methods and data

### Research design

Our analysis aims to explore whether and which board characteristics may influence the adoption of SP. Because the adoption is non-random but self-selected, we need to account for self-selection bias using non-experimental methods. Therefore, we carried out a propensity score matching (PSM) analysis to understand the relevant variables that impact the adoption of SP, controlling for self-selection biases. After the PSM analysis, we conducted a logistic regression analysis to empirically evaluate how each board characteristic impacts the adoption of SP, both in extent and statistical significance.

### Sample selection

Our starting sample originated from the 5357 European firms included in the BoardEx database, for which we have information on board composition and directors' characteristics as of December 31, 2020. We used cross-sectional data because it was not possible to retrieve longitudinal data on a firm's adoption of SP. However, as previous research on board has shown (e.g. Ben-Amar and Zeghal, 2011; Hu and Loh, 2018), while not capturing temporal effects, cross-sectional analyses can provide important insights, especially in exploratory research settings.

We then gathered the CSR data provided by Refinitiv Eikon, available for 1799 firms. Because the amount of data collected did not allow us to singularly investigate firm's website and documents, the analysis is based on a smaller final sample. More specifically, to develop the dependent variable "SP adoption", we singularly investigated firms' websites and such hand data collection for the entire population would have been excessively time-consuming. Therefore, we opted for a simple random sampling technique, which ensured that every firm had an equal chance of being selected (Kgoroadira et al., 2019). We randomly selected one-third of the firms from the entire population, resulting in 600 firms. Twenty were then dropped due to missing values, obtaining the final sample of 580 observations. Such a sample size has sufficient statistical power for the analysis, as it aligns with the minimum sample size required by Yamane's formula (Yamane, 1967)<sup>1</sup>. Moreover, it meets the requirement of ten observations per variable (Austin & Steyerberg, 2015; Cappa et al., 2021), given that we processed one independent and seven control variables in each model.

### Propensity score matching analysis

The PSM method allows us to reduce selection bias and construct a plausible counterfactual based on observed characteristics (Dehejia & Wahba, 2002). PSM combines all covariate information into an estimate of the probability of being treated, i.e., propensity scores. As the treatment effect is a dummy, propensity scores can be

<sup>1</sup> Yamane's formula:  $n = \frac{N}{1 + Ne^2}$  Where, n=unknown sample size. N=Population size (1799). e=Margin of error (0.05, 95% confidence interval). So, we get n=327.

estimated using a probit or logit model (Rosenbaum & Rubin, 1983). In this paper, we measure propensity scores using logit regression:

$$p(X) \equiv \text{logit}(D = 1|X) = E(D | X)$$

where  $D = \{0, 1\}$  is the treatment, i.e., the adoption of an SP, and  $X$  is a vector of observed characteristics unaffected by the treatment, i.e., the matching variables.

Once obtained propensity scores, we measured the effect of the treatment on the observed outcomes, i.e., board characteristics, by estimating the average treatment effect on the treated (ATT). It is the difference in outcomes between the treated and control groups appropriately matched by the propensity score.

To check for the robustness of PSM results, we performed the analysis using different matching techniques: (1) Kernel, (2) Nearest-Neighbour (NN), and (3) Radius. Kernel matches the outcome of a treated individual with the outcomes of all untreated ones with similar propensity scores, which are weighted proportionally to the proximity of the propensity scores of treated and untreated individuals (Heckman et al., 1998). The NN technique matches a treated firm with the untreated one with the closest propensity score. The risk of this method is to obtain inadequate matching if the nearest neighbour is too far away (Caliendo & Kopeinig, 2008). This limitation can be overcome by imposing a maximum propensity score distance, referred to as radius or caliper. In radius matching, each adopter is matched with firms in the control group with the closest propensity score within a predetermined region. Following the recommendation by Austin (2011), we set the caliper to 0.02, which is 0.2 multiplied by the standard deviation of the logit estimation of the propensity score. We use matching without replacement, which improves the accuracy of the estimates (Dehejia & Wahba, 2002).

## Variables measurement

### Treatment variable

As anticipated, our study analyzes SP firms versus non-SP firms. Thus, the treatment variable is the adoption of an SP by the analyzed firms. Because of its inherent intangibility, measuring the adoption of SP is extremely complex. In fact, only a few studies have pursued to deal with corporate purpose measurement, adopting qualitative methods of data collection such as interviews and questionnaires (Bhattacharya et al., 2023; Gartenberg et al., 2019; Lashitew et al., 2023). However, these methods are subject to respondents' subjectivity, as well as researchers' discretion. Therefore, we measured the adoption of an SP from secondary data.

We argue that publicly declaring to adopt a social purpose is firstly essential as it represents a public commitment of the firm towards the external society (Battilana et al., 2022; George et al., 2021; Rey & Bastons, 2018). Therefore, we first verified that the firms in the sample had specifically and explicitly set social goals while communicating their corporate purpose. We manually analyzed each firm's website and public corporate documents to identify firms with a clear social purpose. However, despite being representative of the firm consciousness of its social role, publicly declaring

to pursue a social purpose is not sufficient, as it can be merely symbolic, resulting in the so-called ‘purpose washing’ (Aguilera, 2023). For a firm to be purpose-driven, it must concretize its commitment towards society (Battilana et al., 2022; George et al., 2021). Thus, corporate purpose should be reflected in the realized social outcomes. To gauge the firms’ efforts in materializing SP, we relied on information provided by Refinitiv Eikon to check whether the firm published an extra-financial statement that communicates its commitment to sustainable development by reporting on the social impact of at least 50% of the global firm activities. In fact, as firms simultaneously implement actions of different ethical levels on different planes (Lynn, 2021), we contend that placing the focus on the social impact of more than half of the firm’s activities is indicative of a real commitment to actualize its purpose.

Based on the above, we identified SP firms following three criteria, which must be jointly met: (1) the firm explicitly discloses the adoption of a specific corporate purpose; (2) the firm published an extra-financial report, such as a CSR/H&S/Sustainability report, in recent years, i.e., in 2019 or 2020, to explain how its activities fit the social purpose; (3) the firm’s extra-financial report covers at least 50% of the firm’s global activities.

### Matching variables used for propensity scores construction

Researchers indicated some requirements to guide the choice of matching variables to be incorporated into the propensity score model (Caliendo & Kopeinig, 2008). First, these variables should be the determinants of both treatment and outcome variables. Thus, in our research, only variables that simultaneously influence the adoption of SP and board characteristics should be included in the model. In addition, endogeneity due to reverse causality must not occur, i.e., matching variables must not be affected by the treatment. In order to satisfy these conditions, the variable selection was based on the existing theories of corporate purpose (Birkinshaw et al., 2014; Hollensbe et al., 2014; Morrison & Mota, 2023) and previous empirical findings (Caliendo & Kopeinig, 2008).

We selected the following matching variables for SP and non-SP firms: revenues, assets, equity, debt, and employees. Financial variables have been used to exclude the potential bias of firms adopting SP after profit maximization, which is contrary to the definition of SP. This allowed us to analyze SP and non-SP firms for similar level of revenues, assets, equity, and debt. Moreover, we took into account heterogeneity in employee size, which may impact SP adoption (Gartenberg, C., Prat, A., & Serafeim, G., 2019; Rey et al., 2019).

Financial and employee data were retrieved through the Refinitiv Eikon software. All of these variables are winsorized at 0.01 level to exclude outsider values. Moreover, we used the logarithmic transformation for the matching variables in order to obtain directly interpretable coefficients.

### Outcome variables

In order to explore potential differences in the board of SP firms relative to non-SP ones, our outcome variables relate to board characteristics. In particular, based on

previous corporate governance literature, we focus on the following characteristics of the board:

- *Board size*. The size is measured by the number of directors who sit on the board.
- *Independence*. We accounted for board independence with two measures: the percentage of independent directors sitting on the board (NED) and CEO duality, i.e., the overlapping role of the chairman and the CEO.
- *Board Age*. We analyzed the effect of age on SP by measuring both the board average age of directors (*Age*) and the percentage of directors *Under35*, *Under40* and *Under45*.
- *Gender diversity*. Following previous studies, we measured gender diversity as the percentage of women sitting on the board (*Female*).
- *Nationality diversity*. We accounted for nationality diversity by measuring the percentage of different nationalities represented on the board (*Diff Nationality*).
- *Tenure*. We evaluated tenure both by measuring how long, on average, directors have sat on the board (*Time on board*) and how long directors have been involved with the firm (*Time in firm*).
- *Internal network size*. We accounted for the possibility of sharing and connecting between the board and employees by measuring the size of the board network within the firm (*internal network size*), i.e., the average number of individuals with whom the board members overlap while employed in other activities or education roles in the same firm.
- *Education*. We measured education by accounting for the number of qualifications held, on average, by board members (*N. Qualifications*). In addition, we also measured the level of education with ordinal values, equal to 1 if the director has a diploma, to 2 if he or she has a bachelor's degree, to 3 indicates a master's degree, to 4 for postgraduate education titles, i.e., MBA, executive master, etc., and to 5 if the director holds a PhD. We then measured the *Qualification level* of the board, that is the average level of qualifications held by board members.

All the measures for the outcome variables were directly gathered or elaborated using data from the BoardEx database. Table 1 shows the list of all variables used in our analysis with their description.

### Logistic regression analysis

Following Gomes (2019), we also performed logistic regressions to quantitatively evaluate the impact of board characteristics on SP. In particular, we used SP as the dependent variable, board characteristics as independent variables – examined one at a time in separate models – and financial measures as control variables. We also controlled for sectors and countries. Logistic analyses were carried out by applying the following model:

$$\log it (PDS = 1 | BOD \text{ characteristic}) = \frac{1}{1 + e^z}$$

**Table 1** Variables definition

Variables	Definition
SP	Dummy variable which takes value 1 if the for-profit firm adopted a social purpose, 0 otherwise
Board size	Number of directors sitting on the board (source: BoardEx)
NED	Percentage of non-executive independent directors (source: BoardEx)
CEO duality	Dummy variable which takes value 1 if the chairman is also the CEO of the firm, 0 otherwise (source: BoardEx)
Age	Average age of directors (source: BoardEx)
Under35	Percentage of directors under 35 (source: elaborated by BoardEx data)
Under45	Percentage of directors under 45 (source: elaborated by BoardEx data)
Under50	Percentage of directors under 50 (source: elaborated by BoardEx data)
Female	Percentage of female directors (source: BoardEx)
Diff Nationality	Percentage of different nationalities represented on the board (source: elaborated by BoardEx data)
Time on board	Average time since directors have sat on the board, measured in years (source: BoardEx)
Time in firm	Average time since directors have been employed by the firm, measured in years (source: BoardEx)
Internal network size	Average number of individuals with whom the board members overlap while in employment, other activities, or education roles at the same firm (source: BoardEx)
N. Qualifications	Average number of qualifications hold by directors (source: BoardEx)
Qualification level	Average level of qualifications held by directors. The qualification level It is an ordinal variable that takes a value from 1 to 5 depending on the level of education achieved: 1 = diploma, 5 = PhD (source: elaborated by BoardEx data)
Revenues	Natural logarithm of total revenues (source: Refinitiv Eikon)
Asset	Natural logarithm of total asset (source: Refinitiv Eikon)
Debt	Natural logarithm of total debt outstanding (source: Refinitiv Eikon)
Equity	Natural logarithm of total equity (source: Refinitiv Eikon)
Employees	Natural logarithm of the number of employees (source: Refinitiv Eikon)

$$\text{with } z = b_0 + b_1x\text{BODCharacteristic} + b_2x\text{Revenues} + b_3x\text{Asset} + b_4x\text{Debt} + b_5x\text{Equity} + b_6x\text{Employees} + b_7x\text{Sector} + b_8x\text{Country}$$

## Results

Descriptive statistics of the variables included in the analysis are reported in Table 2. As shown, 26% of the firms exhibit an SP. On average, each board consists of 10 directors, about 50% of whom are non-executive. In most firms, the Chairman and the CEO are distinct individuals, with CEO duality occurring in only 21% of firms.

Board members are generally around 60 years old, with average ages ranging from 43 to 74. This data aligns with other findings, indicating that the presence of young directors on European boards is still very low. This is also confirmed by the percentage of directors under 35, 40, and 45, which are, on average, 1%, 3%, and 8%, respectively.

Women constitute, on average, a mere 28% of board members, despite their representation ranging from 0 to 80% across different boards and a standard deviation of

**Table 2** Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
SP	0.26	0.44	0	1
Board size	10.44	4.54	3	29
NED	0.51	0.27	0	1
CEO duality	0.21	0.41	0	1
Age	57.79	4.26	43.10	74.58
Under35	0.01	0.03	0	0.21
Under40	0.03	0.07	0	0.50
Under45	0.08	0.11	0	0.71
Female	0.28	0.15	0	0.80
Diff Nationality	0.22	0.25	0	1
Time on board	6.11	3.26	0.59	32.52
Time in firm	7.42	4.10	0.59	37.62
Internal network size	862.39	754.40	17	5155.79
N. Qualifications	19.41	10.22	1	66
Qualification level	2.87	0.41	1	4.11
Revenues(ln)	21.19	1.82	17.11	25.37
Asset(ln)	22.03	2.02	18.09	27.38
Debt(ln)	20.44	2.25	14.56	25.69
Equity(ln)	20.85	1.85	13.48	24.90
Employees(ln)	8.47	1.99	2.83	12.59

15%. So, even with growing awareness and regulations about gender quotas, women continue to be significantly underrepresented on EU firm boards. Moreover, only about 22% of board members are of a nationality different from their respective firms.

Concerning board tenure, on average, directors have about six years of board service, and they have usually been part of the firm for around seven years.

As for the educational background, although directors hold an average of 19 qualifications, the average qualification level is 2.87. This suggests that the majority of directors do not hold a master's degree or higher.

The correlation matrix (see Table 3) shows correlation coefficients below 0.9 for all the variables, which, according to Hair, Black, Babin, Anderson, & Tatham (Hair et al., 2006), may not cause serious multicollinearity problems. However, other scholars argued that multicollinearity problems might arise with correlation coefficients greater than 0.7 (Mela & Kopalle, 2002). Therefore, we also performed the variance inflation factor (VIF) test to check for multicollinearity (see Table 4), which is confirmed to be absent since all the values are less than 10 (Gujarati & Porter, 2009), with an average value of 2.92.

### Propensity score matching results

A requirement to use PSM is that observations with the most similar propensity score must have the same distribution of observable attributes, i.e., matching variables, regardless of treatment. In other words, the balancing property test must be satisfied (Dehejia & Wahba, 2002). There is no strict rule about the level of acceptable imbalance in a propensity score. However, some researchers indicated the maximum tolerable level for the standardized difference in specific covariates ranges, ranging from



**Table 3** Correlation matrix

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) SP	1																			
(2) Board size	0.12	1																		
(3) NED	0.18	-0.13	1																	
(4) CEO duality	-0.02	0.25	-0.14	1																
(5) Age	0.01	0.01	0.19	0.02	1															
(6) Under35	-0.07	-0.04	-0.08	-0.04	-0.28	1														
(7) Under40	-0.06	-0.07	-0.07	-0.06	-0.45	0.51	1													
(8) Under45	-0.10	-0.05	-0.14	0.02	-0.63	0.33	0.65	1												
(9) Female	0.18	0.07	0.28	-0.05	-0.06	0.00	0.05	0.02	1											
(10) Diff Nation.	0.13	0.00	0.23	-0.06	0.20	-0.14	-0.08	-0.09	-0.07	1										
(11) Time on board	-0.14	0.02	-0.19	0.16	0.35	0.03	-0.05	-0.14	-0.04	-0.14	1									
(12) Time in firm	-0.07	0.21	-0.24	0.16	0.26	0.00	-0.05	-0.12	-0.02	-0.17	0.88	1								
(13) Int. Net. Size	0.21	0.07	0.29	-0.02	0.21	-0.13	-0.16	-0.14	0.03	0.59	-0.11	-0.12	1							
(14) N. Qual.	0.18	0.81	0.01	0.15	0.06	-0.08	-0.10	-0.11	0.04	0.20	-0.06	0.09	0.30	1						
(15) Qual. Level	0.08	-0.03	0.08	-0.09	0.02	-0.01	-0.02	-0.01	0.01	0.08	-0.07	-0.05	0.11	0.10	1					
(16) Revenues(ln)	0.22	0.61	0.02	0.17	0.14	-0.05	-0.11	-0.10	0.10	0.21	0.05	0.18	0.27	0.57	0.01	1				
(17) Asset(ln)	0.22	0.60	0.10	0.12	0.15	-0.07	-0.11	-0.11	0.18	0.21	-0.02	0.11	0.36	0.63	0.04	0.86	1			
(18) Debt(ln)	0.18	0.50	0.15	0.12	0.12	-0.05	-0.06	-0.08	0.18	0.21	-0.07	0.04	0.33	0.54	0.02	0.73	0.89	1		
(19) Equity(ln)	0.21	0.58	0.09	0.12	0.15	-0.06	-0.09	-0.09	0.16	0.25	0.03	0.15	0.35	0.61	0.06	0.80	0.94	0.80	1	
(20) Employees(ln)	0.18	0.53	-0.03	0.17	0.15	-0.04	-0.11	-0.12	0.00	0.20	0.10	0.23	0.26	0.49	0.03	0.88	0.62	0.55	0.60	1

10 to 25% (Austin, 2009; Duong & Thanh, 2019; Garrido et al., 2014). Results of the balancing test of unmatched and matched samples are reported in Table 5. Before matching, many covariates show standardized differences greater than 25%. After matching, all covariates show standardized differences below 25%, and most of them below 10%. Therefore, the balancing property is satisfied.

The results of PSM are reported in Table 6, which shows the difference in board characteristics between SP firms and non-SP firms, matched according to the closest probability to be treated. We observe significant differences between SP and non-SP firms for several board characteristics. In particular, SP firms have more independent directors than non-SP counterparts. Indeed, the percentage of NED is, on average, from 0.09 to 0.11 higher at a significant level of 1%, regardless of the applied matching method. On the contrary, the differences in board size and CEO duality are not statistically significant. Although the average age of directors is not statistically significant, there is a significant difference in the percentage of directors under 45 who are less represented on corporate boards of SP firms. While this difference is slight in coefficients, around 0.02 points lower in SP firms than in non-SP firms, it shows statistically significant 5% and 10% levels with Kernel and Radius methods, respectively. While not holding with the NN method, this result is valid, given the higher accuracy of Radius matching. On the contrary, women are more present in SP firms' boards, as highlighted by the 5% increase in gender diversity in SP firms. This result holds whatever the model used at a significant level of 1%. In addition, the boards of SP firms exhibit around 5% greater nationality diversity at a significance level of 10% regardless of the applied method.

Board tenure empirically plays a relevant role in the adoption of SP. In fact, time on board and time in the firm significantly differ between SP and non-SP firms. In the latter, directors have, on average, at least one year less board experience, and this difference is significant at 1%. Time in firm is also significant, resulting in an average of 0.94 to 1.13 years shorter in SP firms (at a significance level of 5% in Kernel and Radius methods and 1% in the NN method). There is also a positive and strongly significant difference in the internal network size of SP firms compared to non-SP firms. On average, boards of SP firms have 206 to 252 more overlaps with other firm colleagues than similar non-SP firms.

Finally, concerning educational diversity, while the results of the number of qualifications are not significant, there is a significant difference in the average level of qualifications. More specifically, the average level of qualifications is 0.07 points higher in the boards of SP firms, and this result holds with both Kernel and Radius models at a 10% significance level. Although not confirmed by all three matching models, taken together, these results suggest that directors' education is a relevant discriminator between SP and non-SP firms.

## Logistic regression results

Logistic regression results are shown in Table 7. Our analyses reveal that specific board characteristics have significant effects on the adoption of an SP. In particular, results highlight a positive and statistically significant effect of gender diversity (1%

**Table 4** VIF test

VARIABLES	VIF	1/VIF
Time on board	6.60	0.15
Time in firm	6.41	0.16
Revenues(ln)	5.79	0.17
Equity(ln)	5.54	0.18
Board size	4.17	0.24
N. Qualifications	3.84	0.26
Debt(ln)	2.56	0.39
Under45	2.43	0.41
Age	2.22	0.45
Asset(ln)	2.19	0.46
Under40	2.16	0.46
Internal network size	1.97	0.51
Diff Nationality	1.73	0.58
Employees(ln)	1.7	0.59
Under35	1.40	0.72
NED	1.40	0.72
Female	1.21	0.86
CEO duality	1.16	0.87
Qualification Level	1.08	0.92
<b>Mean VIF</b>	<b>2.92</b>	

significance level), internal network size (5% significance level), and the average number of qualifications held (1% significance level).

On the contrary, we found a negative and statistically significant impact on the adoption of an SP for the following board characteristics: average percentage of directors younger than 35, time on board and time in firm (at a significance level of 5%, 1% and 1% respectively). We repeated these regressions using probit models to check for robustness, and the results hold (see Table 8).

## Discussion

Overall, our results highlight that specific board characteristics affect the probability of adopting an SP in for-profit firms (see Table 9), while others have no effect, as discussed below.

Our findings confirm the inconclusive results highlighted by previous research on the influence of board size on strategic decision-making (Cornforth, 2001; Golden & Zajac, 2001; Goodstein et al., 1994). Indeed, both PSM and regression analyses show non-significant coefficients.

Regarding board independence, while CEO duality is not significant in both PSM and regression analyses, the PSM analysis showed highly significant differences in the percentage of independent directors between treated and untreated firms, suggesting that it could be a possible driver of adopting an SP. However, the regression analyses revealed that it does not directly affect the probability of adopting an SP. Therefore, we cannot conclude that the independency of the board directly affects the adoption of an SP in European for-profit firms.

**Table 5** Balancing test of unmatched and matched samples

Variable	Unmatched			Kernel			NN			Radius		
	Treated	Control	Stand. Diff. In %	Treated	Control	Stand. Diff. In %	Treated	Control	Stand. Diff. In %	Treated	Control	Stand. Diff. In %
Revenues(ln)	21.88	20.92	54%*	21.65	21.64	0.47%	21.55	21.45	5.33%	21.84	21.90	-3.39%
Asset(ln)	22.55	21.53	55%*	22.26	22.26	-0.27%	22.11	22.05	3.00%	22.49	22.50	-0.96%
Debt(ln)	20.89	19.97	45%*	20.67	20.67	0.04%	20.51	20.45	3.25%	20.85	20.98	-6.38%
Equity(ln)	21.39	20.47	52%*	21.17	21.14	1.85%	21.02	20.94	4.23%	21.36	21.29	3.51%
Employees(ln)	9.01	8.22	40%*	8.84	8.83	0.63%	8.76	8.71	2.67%	8.99	9.12	-6.61%
Obs (on-support)	580			563			298			572		
Obs (off-support)				17			282			8		

\* Absolute value of mean standardized difference above 25%

Counterintuitively to the extant literature, our findings indicate a negative effect of young directors on adopting an SP. Perera et al. (2018) argued that younger generations exhibit greater sensitivity to environmental and social issues, thus being flexible to drive structural change for societal good within organizations. However, younger directors may also be hindered from implementing changes within the corporate board by older directors who are accustomed to “it’s always been done this way” practices. Moreover, compensation incentives the maintenance of the status quo and career growth opportunities may also greatly paralyze younger directors to adopt SP, representing a radical change in the firm’s strategic structure (Henderson, 2021a; Izzo & Vanderwielen, 2018).

Concerning gender diversity, our findings show that as the number of women on boards increases, the likelihood of adopting an SP increases too. This result is in line with recent studies on gender diversity that stressed women’s capacity to shift the corporate governance focus from a shareholder to a multi-stakeholder perspective (De Masi et al., 2021), showing that women directors lead the firm to adopt an SP. In particular, the adoption of an SP requires going beyond profit maximization to look at the needs of people and the environment (Mayer, 2021), and gender diversity positively impacts such corporate capacity as women are more sensitive to sustainability initiatives than men (Amorelli & García-Sánchez, 2020; Boulouta, 2013). As highlighted by previous research, they are more inclined towards implementing sustainable and socially responsible strategies (Glass et al., 2016; Setó-Pamies, 2015; Yang et al., 2019), thus favoring a more holistic and inclusive approach to decision-making that can foster a greater emphasis on SP strategies.

Moreover, our findings demonstrate that board tenure, measured in terms of how long the directors are employed in the firm and on the board, is negatively and significantly associated with the probability of adopting an SP. Such a result suggests that the longer directors have sat on the board or worked for the firm, the less they will be motivated to introduce changes by adopting an SP.

The positive effect of directors’ educational background on adopting an SP is consistent with previous corporate governance studies that showed it positively affects sustainability performance (Chams & García-Blandón, 2019; Post et al., 2011). Indeed, such a positive effect highlighted by previous research could result from consciously adopting a purpose beyond profit maximization. A further explanation besides the greater environmental awareness and social concern of people driven by higher levels of education may also be the higher pro-social orientation of the education system. Therefore, people with a higher education level can be more aware of social and environmental issues, and this, in turn, positively impacts the willingness to adopt SP.

Finally, board internal network size positively affects the likelihood of adopting an SP. Indeed, tight connections of board members with firm employees facilitate the implementation of SP, which in turn, is demonstrated to drive employees’ engagement, creativity and effort (Henderson, 2021a). Within this auto-reinforcing circle, the preliminary condition is that board members connect as much as possible with employees, as empirically verified by our analysis. The higher the connections between the board and employees, the higher the likelihood of adopting an SP. Moreover, sharing activities and roles between individuals is the basis for building orga-

**Table 6** Board composition difference between SP firms and non-SP firms

	(1) Kernel	(2) NN	(3) Radius
Board size	0.059 (0.12)	-0.126 (-0.24)	-0.214 (-0.43)
NED	0.114*** (4.27)	0.097*** (3.46)	0.096*** (3.56)
CEO duality	-0.029 (-0.68)	-0.066 (-1.61)	-0.062 (-1.47)
Age	-0.27 (-0.61)	-0.462 (-1.06)	-0.309 (-0.78)
Under35	-0.003 (-1.13)	-0.003 (-1.39)	-0.003 (-1.35)
Under40	-0.005 (-0.82)	-0.003 (-0.43)	-0.004 (-0.66)
Under45	-0.021** (-2.10)	-0.013 (-1.30)	-0.019* (-1.93)
Female	0.052*** (3.7)	0.046*** (3.24)	0.049*** (3.63)
Diff Nationality	0.045* (1.66)	0.049* (1.72)	0.052* (1.96)
Time on board	-1.166*** (-4.00)	-1.062*** (-3.71)	-1.215*** (-4.31)
Time in firm	-1.071*** (-2.76)	-0.936** (-2.36)	-1.13*** (-2.99)
Internal network size	230.1*** (3.06)	206.9** (2.31)	252.7*** (3.23)
N qualifications	1.735 (1.64)	1.406 (1.29)	1.243 (1.18)
Qualification Level	0.065* (1.68)	0.045 (1.14)	0.068* (1.69)

This table reports the results of pair-matched analysis for board characteristic. Matching is done using different PSM methods: (1) Kernel (Epanechnikov kernel), (2) Nearest-Neighbor (with  $n=1$ ), and (3) Radius (with caliper=0.02).  $t$  statistics in parentheses. \*  $p<0.1$ , \*\*  $p<0.05$ , \*\*\*  $p<0.01$

nizational unity, which is necessary to realize the change, as in the case of adopting an SP.

Overall, our findings provide evidence that the board can be a key agent for SP adoption as both structural characteristics (board size, independence, internal network size, and tenure) and directors' personal characteristics (education, gender diversity, and age) affect the likelihood to adopt an SP.

### Theoretical contributions

Our study contributes to the academic literature in several ways. First, our research contributes to the intersection of corporate governance and corporate purpose literature streams. By empirically testing the relationship between the board and the adoption of a social purpose in for-profit firms, we highlighted that the board is a key agent for moving toward an SP. In particular, we showed that specific board characteristics play a key role in leading the firm to adopt an SP. In so doing, we provide first empiri-

**Table 7** Board characteristics and the probability of adopting an SP

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(13)	(14)	(8)	(9)	(10)	(11)	(12)
	Board size	NED	CEO duality	Age	Under 35	Under 40	Under 45	Female	Diff Nation.	Time on Board	Time in Firm	Internal network Size	N. Qual.	Qual. Level
Indep var	0.045 (0.04)	0.82 (0.56)	0.04 (0.36)	-0.04 (0.03)	-10.42** (4.98)	-2.14 (1.94)	-1.34 (1.21)	3.13*** (1.09)	0.18 (0.64)	-0.16*** (0.05)	-0.10*** (0.03)	0.0004** (0.00)	0.05*** (0.02)	0.38 (0.28)
Revenues(ln)	0.04 (0.27)	0.09 (0.26)	0.07 (0.26)	0.07 (0.27)	0.02 (0.26)	0.05 (0.26)	0.06 (0.26)	0.11 (0.26)	0.08 (0.26)	0.06 (0.27)	0.09 (0.27)	0.11 (0.26)	0.08 (0.28)	0.09 (0.26)
Asset(ln)	0.72** (0.36)	0.66* (0.36)	0.72** (0.35)	0.74** (0.36)	0.82** (0.35)	0.74** (0.35)	0.73** (0.35)	0.55 (0.36)	0.72** (0.35)	0.63* (0.35)	0.66* (0.35)	0.61* (0.37)	0.67* (0.36)	0.71** (0.36)
Debt(ln)	-0.07 (0.13)	-0.07 (0.13)	-0.07 (0.13)	-0.06 (0.13)	-0.09 (0.14)	-0.07 (0.13)	-0.07 (0.13)	-0.02 (0.14)	-0.07 (0.13)	-0.07 (0.14)	-0.08 (0.13)	-0.08 (0.13)	-0.09 (0.14)	-0.07 (0.13)
Equity(ln)	-0.22 (0.22)	-0.17 (0.23)	-0.19 (0.22)	-0.21 (0.22)	-0.21 (0.22)	-0.18 (0.22)	-0.18 (0.22)	-0.16 (0.22)	-0.19 (0.22)	-0.10 (0.21)	-0.11 (0.22)	-0.16 (0.23)	-0.25 (0.22)	-0.20 (0.22)
Employees(ln)	-0.11 (0.16)	-0.10 (0.16)	-0.11 (0.16)	-0.09 (0.16)	-0.11 (0.15)	-0.11 (0.15)	-0.12 (0.16)	-0.09 (0.16)	-0.11 (0.16)	-0.05 (0.16)	-0.07 (0.16)	-0.13 (0.16)	-0.13 (0.16)	-0.11 (0.16)
Constant(ln)	-11.60*** (3.11)	-12.68*** (3.00)	-12.34*** (3.01)	-10.08*** (3.43)	-12.37*** (2.99)	-12.11*** (3.01)	-12.11*** (3.03)	-11.97*** (2.997)	-12.32*** (2.996)	-11.65*** (3.054)	-12.71*** (3.058)	-11.88*** (3.019)	-10.96*** (3.258)	-13.19*** (3.091)
Obs	528	523	528	527	528	528	528	528	528	528	528	528	528	528
Sector	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
LR Chi2	86.20	85.04	80.33	79.22	81.32	82.20	83.96	87.91	80.22	84.19	86.40	80.22	90.75	82.95
Prob>chi2	0.01	0.01	0.03	0.03	0.02	0.02	0.01	0.01	0.03	0.01	0.01	0.03	0.00	0.01
Pseudo R2	0.18	0.18	0.18	0.18	0.19	0.18	0.18	0.19	0.18	0.20	0.19	0.19	0.19	0.18

Robust standard errors in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

**Table 8** Robustness check: Probit regression

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(13)	(14)	(8)	(9)	(10)	(11)	(12)
	Board size	NED	CEO duality	Age	Under 35	Under 40	Under 45	Female	Diff Nation.	Time on Board	Time in Firm	Internal network Size	N. Qual.	Qual. Level
Indep. Var.	0.05 (0.04)	0.82 (0.55)	0.04 (0.35)	-0.04 (0.03)	-10.42** (5.20)	-2.14 (1.95)	-1.34 (1.23)	3.13*** (1.15)	0.18 (0.68)	-0.16*** (0.05)	-0.10*** (0.04)	0.0004** (0.00)	0.05*** (0.02)	0.38 (0.32)
Revenues(ln)	0.02 (0.15)	0.06 (0.15)	0.04 (0.15)	0.04 (0.15)	0.02 (0.14)	0.03 (0.15)	0.04 (0.15)	0.08 (0.27)	0.06 (0.27)	0.09 (0.27)	0.11 (0.27)	0.08 (0.27)	0.09 (0.27)	0.08 (0.27)
Asset(ln)	0.41** (0.21)	0.39* (0.21)	0.41** (0.20)	0.42** (0.20)	0.47** (0.20)	0.42** (0.20)	0.42** (0.20)	0.72** (0.37)	0.63* (0.38)	0.66* (0.38)	0.611 (0.37)	0.67* (0.37)	0.71* (0.37)	0.72* (0.37)
Debt(ln)	-0.03 (0.08)	-0.04 (0.08)	-0.03 (0.08)	-0.03 (0.07)	-0.05 (0.08)	-0.03 (0.08)	-0.03 (0.08)	-0.07 (0.14)	-0.07 (0.15)	-0.08 (0.14)	-0.08 (0.14)	-0.09 (0.1)	-0.07 (0.14)	-0.07 (0.14)
Equity(ln)	-0.13 (0.13)	-0.11 (0.13)	-0.12 (0.13)	-0.12 (0.13)	-0.13 (0.13)	-0.11 (0.13)	-0.11 (0.13)	-0.19 (0.21)	-0.10 (0.22)	-0.11 (0.22)	-0.16 (0.22)	-0.25 (0.22)	-0.20 (0.22)	-0.19 (0.21)
Employees(ln)	-0.06 (0.09)	-0.06 (0.09)	-0.06 (0.09)	-0.05 (0.09)	-0.07 (0.09)	-0.07 (0.09)	-0.07 (0.09)	-0.11 (0.17)	-0.05 (0.17)	-0.07 (0.17)	-0.13 (0.17)	-0.13 (0.17)	-0.11 (0.17)	-0.11 (0.17)
Constant(ln)	-11.60*** (3.15)	-12.68*** (3.11)	-12.34*** (3.08)	-10.08*** (3.58)	-12.37*** (3.09)	-12.11*** (3.08)	-12.11*** (3.08)	-11.97*** (3.10)	-12.32*** (3.07)	-11.65*** (3.10)	-12.71*** (3.10)	-11.88*** (3.09)	-10.96*** (3.15)	-13.19*** (3.18)
Observations	528	523	528	527	528	528	528	528	528	528	528	528	528	528
Sector	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
LR Chi2	112.1	112.8	110.9	111.8	115.8	112.2	112.2	118.5	111	122.6	119.2	115.2	118.9	112.3
Prob>chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pseudo R2	0.18	0.18	0.18	0.18	0.19	0.18	0.18	0.19	0.18	0.20	0.19	0.19	0.19	0.18

Robust standard errors in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01



cal evidence supporting the importance of internal corporate governance mechanisms for integrating the corporate purpose within the firm (Battilana et al., 2022).

Second, while prior research has adopted qualitative methods of data collection to measure corporate purpose, such as interviews and questionnaires (Bhattacharya et al., 2023; Gartenberg et al., 2019; Lashitew et al., 2023), that are affected by respondents' subjectivity as well as researchers' discretion, we developed a measure to identify firms with social purpose based on secondary data, thus contributing to the call for developing objective metrics to empirically test corporate purpose conceptualizations (Battilana et al., 2022; Brosch, 2023; Lashitew et al., 2023). More specifically, based on prior literature, we identified three criteria that must be jointly met: (1) the firm explicitly discloses the adoption of a specific corporate purpose; (2) the firm publishes an extra financial report to explain how its activities fit the social purpose by communicating its commitment to sustainable development; (3) this supplementary report discloses the social impact of at least 50% of the firm's overall activities.

Third, by highlighting which board characteristics influence the adoption of an SP, we pointed out that not only structural and demographic characteristics of the board are important, but directors' personal qualities are especially relevant for adopting an SP. In particular, according to the upper-echelons theory, we showed that board human capital is crucial to giving ontological meaning to organizations' strategic management. Indeed, personal characteristics are non-negligible elements when pursuing pro-social goals, especially in for-profit business contexts (Battilana et al., 2019, 2022; Goranova & Ryan, 2022). In so doing, we contribute to expanding knowledge on the strategic role of the board, providing empirical evidence that it goes beyond the mere approval and control of strategic management decisions. Indeed, while our results are inconclusive regarding the structural characteristic of the board, such as board size and board independence, we found that specific board demographic and cognitive characteristics significantly affect the probability of adopting an SP, and these findings suggest that boards play a vital role in setting strategies.

## Managerial implications

Our research also contributes to managerial practice by providing useful indications to practitioners and policymakers. First, our findings show that firms can move toward a social purpose by leveraging specific board characteristics. Indeed, we showed that specific board characteristics are positively correlated with the likelihood of adopting a social purpose, while others have no or negative effect. This result points to the relevance of directors' qualities in building a sense of purpose that can lead the firm to pay more attention to its impact on society. In particular, cultivating the network with employees, fostering gender and age diversity, and welcoming highly qualified directors are key factors in facilitating strategic change aimed at solving the grand challenges of our times.

In addition, we provide useful guidance to investors by highlighting which board characteristics are drivers of SP adoption. Investors are increasingly concerned about the social impact of the firms they invest in and demand that they integrate efforts in sustainability into strategy and operations (Block et al., 2021). The board plays a key role in this regard. Thus, by providing initial insights into the board characteristics

**Table 9** Comparison between PSM and regression analysis

	PSM analysis	Regression analysis	Total
Board size	None	None	None
Independence	+	None	None
Age	-	-	-
Gender diversity	+	+	+
Diff Nationality	+	None	None
Tenure	-	-	-
Internal network size	+	+	+
Education	+	+	+

(+) Positive and significant effect, (-) Negative and significant effect, (None) Not significant effect

that favor the adoption of a social purpose, our study offers guidance to investors when selecting directors.

Finally, by showing that various demographic and cognitive characteristics of the board play a pivotal role in guiding firms to adopt and integrate an SP within the organization, our research offers valuable insights to policymakers who are increasingly focusing on board composition regulation to encourage sustainable corporate governance practices. Our research confirms the significance of gender diversity in steering organizations towards purpose-driven goals. However, it also reveals that women are still grossly underrepresented on EU boards. Therefore, our results lend support to the recent regulations aimed at promoting gender balance on EU boards, such as the Directive EU 2022/2381 from the European Parliament and Council on improving the gender balance among directors of listed firms, dated 23rd November 2022. At the same time, our findings underscore the significance of other board characteristics, like age and educational background. Policymakers should also consider these factors when shaping regulations concerning board composition.

## Conclusions

In this explorative study, we empirically analyzed the relationship between the characteristics of the board of directors and the adoption of a social purpose in for-profit firms. We collected data from a sample of 580 European firms, using BoardEx and Refinitiv Eikon databases to measure the variables of interest. In particular, we explored the impact of the following board characteristics on adopting an SP: board size, independence, tenure, age, education, gender diversity, nationality diversity and internal network size. First, we applied Kernel, NN and Radius propensity score matching techniques to explore which board characteristics differ between SP and non-SP firms. We matched firms based on similar financials and employees to control for self-selection bias. Second, we applied logistic regression analyses in our sample of 580 European firms to assess how the abovementioned characteristics affect the adoption of SP.

Our empirical findings provide first evidence that specific board characteristics may affect a firm's probability of adopting an SP, thus suggesting that board composition is crucial for leading firms toward goals beyond profit maximization.

## Limitations and future research

Our study is not exempt from limitations that could be addressed by future research. First, we performed a cross-sectional analysis that may hinder the generalizability of our results. While BoardEx and Refinitiv Eikon databases provide longitudinal board and financial data, we did not find a valid longitudinal measure for the adoption of social purpose. Future researchers may overcome this limitation by observing our dependent variable over time.

Second, we examined the impact of board characteristics on the adoption of an SP, not on its implementation. Understanding how SP can be successfully implemented in for-profit firms and what are the most affected functions within the organization would be extremely interesting to advance knowledge on corporate purpose. Qualitative methods, such as multiple case studies, can adequately evaluate the actual implementation of SP. Therefore, mixed methodologies could be used to properly assess the effects of board characteristics on the actual implementation of SP.

Third, while we perform an explorative analysis through simple models to investigate which board characteristics may drive the adoption of an SP, further research may advance knowledge on the board-SP relationship by focusing on contingency factors.

Fourth, we did not consider corporate performance. In particular, the commitment to solve a societal need other than profit maximization should also increase corporate sustainable performance. Researchers are invited to investigate how different board characteristics affect sustainability performance by differentiating for the adoption of a social purpose.

In addition, because we use secondary data, we were limited to analyzing observable board characteristics and could not examine the internal dynamics of board that foster the adoption of an SP. For example, using qualitative methods would be fascinating to understand how and how much the board discusses corporate purpose.

Furthermore, it would be interesting to analyze the reverse relationship, i.e., whether adopting an SP affects the composition of boards by favoring specific characteristics of directors.

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## Declarations

**Competing interests** We have no known conflict of interests to disclose.

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## References

- Adams, R. B., de Haan, J., Terjesen, S., & van Ees, H. (2015). Board diversity: Moving the field forward. *Corporate Governance: An International Review*, 23(2), 77–82.
- Aguilera, R. V. (2023). Corporate purpose in comparative perspective: The role of Governance. *Strategy Science*, 1–9.
- Aguilera, R. V., Aragón-Correa, J. A., Marano, V., & Tashman, P. A. (2021). The corporate governance of environmental sustainability: A review and proposal for more Integrated Research. *Journal of Management*, 47(6), 1468–1497.
- Amorelli, M. F., & García-Sánchez, I. M. (2020). Critical mass of female directors, human capital, and stakeholder engagement by corporate social reporting. *Corporate Social Responsibility and Environmental Management*, 27(1), 204–221.
- Archel, P., Husillos, J., Larrinaga, C., & Molson, J. (2009). Social disclosure, legitimacy theory and the role of the state. *Accounting Auditing & Accountability Journal*, 22(8), 1284–1307.
- Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. In *Journal of Management* (Vol. 34, Issue 3, pp. 325–374). SAGE Publications/Sage CA: Los Angeles, CA.
- Austin, P. C. (2009). Balance diagnostics for comparing the distribution of baseline covariates between treatment groups in propensity-score matched samples. *Statistics in Medicine*, 28(25), 3083–3107.
- Austin, P. C. (2011). Optimal caliper widths for propensity-score matching when estimating differences in means and differences in proportions in observational studies. *Pharmaceutical Statistics*, 10(2), 150–161.
- Austin, P. C., & Steyerberg, E. W. (2015). The number of subjects per variable required in linear regression analyses. *Journal of Clinical Epidemiology*, 68(6), 627–636.
- Battilana, J., & Casciaro, T. (2012). Change agents, networks, and institutions: A contingency theory of organizational change. *Academy of Management Journal*, 55(2), 381–398.
- Battilana, J., Pache, A. C., Sengul, M., & Kimsey, M. (2019). The dual-purpose playbook. *Harvard Business Review*, 2019(March–April), 124–133.
- Battilana, J., Obloj, T., Pache, A. C., & Sengul, M. (2022). Beyond shareholder value maximization: Accounting for Financial/Social Trade-Offs in dual-purpose companies. *Academy of Management Review*, 47(2), 237–258.
- Ben-Amar, W., & Zeghal, D. (2011). Board of directors' independence and executive compensation disclosure transparency: Canadian evidence. *Journal of Applied Accounting Research*, 12(1), 43–60.
- Berrone, P., & Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: An integrated agency-institutional perspective. *Academy of Management Journal*, 52(1), 103–126.
- Bhattacharya, C. B., Sen, S., Edinger-Schons, L. M., & Neureiter, M. (2023). Corporate purpose and employee sustainability behaviors. *Journal of Business Ethics*, 183(4), 963–981.
- Birkinshaw, J., Foss, N. J., & Lindenberg, S. (2014). Combining purpose with profits. *MIT Sloan Management Review*, 53(3), 49–56. <https://www.researchgate.net/publication/279324286>.
- Block, J. H., Hirschmann, M., & Fisch, C. (2021). Which criteria matter when impact investors screen social enterprises? *Journal of Corporate Finance*, 66, 101813.
- Boulouta, I. (2013). Hidden connections: The Link between Board gender diversity and corporate social performance. *Journal of Business Ethics*, 113(2), 185–197.
- Brosch, N. (2023). Corporate purpose: From a 'Tower of Babel' phenomenon towards construct clarity. *Journal of Business Economics*.
- Byron, K., & Post, C. (2016). Women on boards of directors and corporate social performance: A Meta-analysis. *Corporate Governance: An International Review*, 24(4), 428–442.
- Cabrera-Fernández, A. I., Martínez-Jiménez, R., & Hernández-Ortiz, M. J. (2016). Women's participation on boards of directors: A review of the literature. *International Journal of Gender and Entrepreneurship* (Vol. 8(1), 69–89).

- Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys*, 22(1), 31–72.
- Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review* (Vol. 32(3)), 946–967.
- Cappa, F., Oriani, R., Peruffo, E., & McCarthy, I. (2021). Big Data for creating and capturing value in the digitalized environment: Unpacking the Effects of volume, Variety, and veracity on firm performance. *Journal of Product Innovation Management*, 38(1), 49–67.
- Castellanos, J. D., & George, B. (2020). Boardroom leadership: The board of directors as a source of strategic leadership. *Economics and Business Review*, 6(1), 103–119.
- Chams, N., & García-Blandón, J. (2019). Sustainable or not sustainable? The role of the board of directors. *Journal of Cleaner Production*, 226, 1067–1081.
- Chang, K. Y., Oh, W. Y., Park, H., J., & Jang, G., M (2017). Exploring the relationship between Board characteristics and CSR: Empirical evidence from Korea. *Journal of Business Ethics*, 140, 225–242.
- Cornforth, C. (2001). What makes boards effective? An examination of the relationships between board inputs, structures, processes and effectiveness in non-profit organisations. *Corporate Governance: An International Review*, 9(3), 217–227.
- Cosma, S., Schwizer, P., Nobile, L., & Leopizzi, R. (2021). Environmental attitude in the board. Who are the “green directors”? Evidences from Italy. *Business Strategy and the Environment*, 30(7), 3360–3375.
- De Masi, S., Słomka-Gołębiowska, A., Becagli, C., & Paci, A. (2021). Toward sustainable corporate behavior: The effect of the critical mass of female directors on environmental, social, and governance disclosure. *Business Strategy and the Environment*, 30(4), 1865–1878.
- de Mon, I. A., Gabaldón, P., & Nuñez, M. (2022). Social entrepreneurs: Making sense of tensions through the application of alternative strategies of hybrid organizations. *International Entrepreneurship and Management Journal*, 18(2), 975–997.
- de Villiers, C., Naiker, V., & van Staden, C. J. (2011). The effect of board characteristics on firm environmental performance. *Journal of Management*, 37(6), 1636–1663.
- Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for nonexperimental causal studies. *Review of Economics and Statistics*, 84(1), 151–161.
- Diouf, D., & Boiral, O. (2017). The quality of sustainability reports and impression management: A stakeholder perspective. *Accounting Auditing and Accountability Journal*, 30(3), 643–667.
- Disli, M., Yilmaz, M. K., & Mohamed, F. F. M. (2022). Board characteristics and sustainability performance: Empirical evidence from emerging markets. *Sustainability Accounting Management and Policy Journal*, 13(4), 929–952.
- Duong, P. B., & Thanh, P. T. (2019). Adoption and effects of modern rice varieties in Vietnam: Micro-econometric analysis of household surveys. *Economic Analysis and Policy*, 64, 282–292.
- Ebrahim, A., Battilana, J., & Mair, J. (2014). The governance of social enterprises: Mission drift and accountability challenges in hybrid organizations. *Research in Organizational Behavior*, 34, 81–100.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.
- Eisenberg, T., Sundgren, S., & Wells, M. T. (1998). Larger board size and decreasing firm value in small firms. *Journal of Financial Economics*, 48(1), 35–54.
- Endrikat, J., de Villiers, C., Guenther, T. W., & Guenther, E. M. (2021). Board characteristics and corporate social responsibility: A Meta-Analytic Investigation. *Business and Society*, 60(8), 2099–2135.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law & Economics*, XXVI, 163–188.
- Ferrigno, G., & Cucino, V. (2021). Innovating and transforming during COVID-19: Insights from Italian firms. *R&D Management*, 51(4), 325–338.
- Fink, L. (2018). *Larry Fink's 2018 Letter to CEOs* | BlackRock. <https://www.blackrock.com/corporate/investor-relations/2018-larry-fink-ceo-letter>.
- Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*, 24(3), 489–505.
- Forcadell, F. J., & Aracil, E. (2021). A purpose-action framework for corporate social responsibility in times of shock. *Journal of Cleaner Production*, 312, 127789.
- Friedman, M. (1970). A Friedman doctrine - the Social responsibility of business is to increase its profits. *New York Times Magazine* 6(Newspaper Article), 33, 122–124. <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html?searchResultPosition=3>.

- Galbreath, J. (2018). Do boards of directors influence corporate sustainable development? An attention-based analysis. *Business Strategy and the Environment*, 27(6), 742–756.
- García Martín, C. J., & Herrero, B. (2020). Do board characteristics affect environmental performance? A study of EU firms. *Corporate Social Responsibility and Environmental Management*, 27(1), 74–94.
- García-Sánchez, I. M., & Martínez-Ferrero, J. (2018). How do independent directors behave with respect to sustainability disclosure? *Corporate Social Responsibility and Environmental Management*, 25(4), 609–627.
- Garrido, M. M., Kelley, A. S., Paris, J., Roza, K., Meier, D. E., Morrison, R. S., & Aldridge, M. D. (2014). Methods for constructing and assessing propensity scores. *Health Services Research*, 49(5), 1701–1720.
- Gartenberg, C., Prat, A., & Serafeim, G. (2019). Corporate purpose and financial performance. *Organization Science*, 30(1), 1–18.
- George, G., Haas, M. R., McGahan, A. M., Schillebeeckx, S. J. D., & Tracey, P. (2021). Purpose in the for-profit firm: A review and Framework for Management Research. *Journal of Management*, 0(0).
- Girschik, V. (2020). Shared responsibility for societal problems: The role of internal activists in reframing corporate responsibility. *Business and Society*, 59(1), 34–66.
- Glass, C., Cook, A., & Ingersoll, A. R. (2016). Do women leaders promote sustainability? Analyzing the Effect of Corporate Governance Composition on Environmental Performance. *Business Strategy and the Environment*, 25(7), 495–511.
- Golden, B. R., & Zajac, E. J. (2001). When will boards influence strategy? Inclination  $\times$  power = strategic change. *Strategic Management Journal*, 22(12), 1087–1111.
- Gomes, M. (2019). Does CSR influence M&A target choices? *Finance Research Letters*, 30, 153–159.
- Goodstein, J., Gautam, K., & Boeker, W. (1994). The effects of board size and diversity on strategic change. *Strategic Management Journal*, 15(3), 241–250.
- Goranova, M., & Ryan, L. V. (2022). The corporate objective revisited: The shareholder perspective. *Journal of Management Studies*, 59(2), 526–554.
- Graafland, J., & Smid, H. (2019). Decoupling among CSR Policies, Programs, and impacts: An empirical study. *Business and Society*, 58(2), 231–267.
- Greenwood, R., & Hinings, C. R. (1996). Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 21(4), 1022–1054.
- Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics*. McGraw-Hill. Fifth.
- Hafsi, T., & Turgut, G. (2013). Boardroom diversity and its Effect on Social Performance: Conceptualization and empirical evidence. *Journal of Business Ethics*, 112(3), 463–479.
- Hair, J. F., Black, B., Anderson, R. E., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis. In *Person Education* (7th ed.). Pearson Education. <https://www.pearson.com/uk/educators/higher-education-educators/program/Hair-Multivariate-Data-Analysis-Global-Edition-7th-Edition/PGM916641.html>.
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review*, 32(2), 334–343.
- Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons: The Organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206.
- Harjoto, M., & Jo, H. (2015). Legal vs. normative CSR: Differential Impact on Analyst Dispersion, Stock Return volatility, cost of Capital, and firm value. *Journal of Business Ethics*, 128(1), 1–20.
- Harrison, J. S., Phillips, R. A., & Freeman, R. E. (2020). On the 2019 business Roundtable “Statement on the purpose of a Corporation. *Journal of Management*, 46(7), 1223–1237.
- Heckman, J. J., Ichimura, H., & Todd, P. (1998). Matching as an Econometric evaluation estimator. *Review of Economic Studies*, 65(2), 261–294.
- Henderson, R. (2021a). Innovation in the 21st century: Architectural change, purpose, and the challenges of our time. *Management Science*, 67(9), 5479–5488.
- Henderson, R. (2021b). Changing the purpose of the corporation to rebalance capitalism. *Oxford Review of Economic Policy*, 37(4), 838–850.
- Henderson, R., & Serafeim, G. (2020). Tackling Climate Change requires organizational purpose. *AEA Papers and Proceedings*, 110, 177–180.
- Henderson, R., & Van Den Steen, E. (2015). Why do firms have purpose? The firm’s role as a carrier of identity and reputation. *American Economic Review*, 105(5), 326–330.
- Hill, C. W. L., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies*, 29(2), 131–154.

- Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating Agency and Resource Dependence Perspectives. *The Academy of Management Review*, 28(3), 383.
- Hillman, A. J., Cannella, A. A., & Paetzold, R. L. (2000). The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management Studies*, 37(2), 235–256.
- Hillman, A. J., Nicholson, G., & Shropshire, C. (2008). Directors' multiple identities, identification, and board monitoring and resource provision. *Organization Science*, 19(3), 441–456.
- Hollensbe, E., Wookey, C., Hickey, L., & George, G. (2014). Organizations with purpose. *Academy of Management Journal (Vol, 57(5))*, 1227–1234.
- Hu, M., & Loh, L. (2018). Board governance and sustainability disclosure: A cross-sectional study of Singapore-listed companies. *Sustainability (Switzerland)*, 10(7), 2578.
- Izzo, J. B., & Vanderwielen, J. (2018). The purpose revolution: How leaders create Engagement and competitive advantage in an age of Social Good. *The purpose revolution*. Berrett-Koehler Publishers.
- Jensen, M. C. (1993). The modern Industrial Revolution, exit, and the failure of Internal Control Systems. *The Journal of Finance*, 48(3), 831–880.
- Jo, G. S., Park, G., & Kang, J. (2016). Unravelling the link between technological M&A and innovation performance using the concept of relative absorptive capacity. *Asian Journal of Technology Innovation*, 24(1), 55–76.
- Johnson, M. P., & Schaltegger, S. (2020). Entrepreneurship for Sustainable Development: A review and multilevel causal mechanism Framework. *Entrepreneurship: Theory and Practice*, 44(6), 1141–1173.
- Johnson, S. G., Schnatterly, K., & Hill, A. D. (2013). Board Composition Beyond Independence: Social Capital, Human Capital, and Demographics. In *Journal of Management (Vol. 39, Issue 1, pp. 232–262)*.
- Jose, A., & Lee, S. M. (2007). Environmental reporting of global corporations: A content analysis based on website disclosures. *Journal of Business Ethics*, 72(4), 307–321.
- Kagzi, M., & Guha, M. (2018). Board demographic diversity: A review of literature. *Journal of Strategy and Management*, 11(1), 33–51.
- Kang, H., Cheng, M., & Gray, S. J. (2007). Corporate governance and board composition: Diversity and independence of Australian boards. *Corporate Governance: An International Review*, 15(2), 194–207.
- Kent Baker, H., Pandey, N., Kumar, S., & Haldar, A. (2020). A bibliometric analysis of board diversity: Current status, development, and future research directions. *Journal of Business Research*, 108, 232–246.
- Kgoroadira, R., Burke, A., & van Stel, A. (2019). Small business online loan crowdfunding: Who gets funded and what determines the rate of interest? *Small Business Economics*, 52(1), 67–87.
- Khatib, S. F. A., Abdullah, D. F., Elamer, A. A., & Abueid, R. (2020). Nudging toward diversity in the boardroom: A systematic literature review of board diversity of financial institutions. *Business Strategy and the Environment*, bse.2665.
- Kim, B., Burns, M. L., & Prescott, J. E. (2009). The strategic role of the board: The impact of board structure on top management team strategic action capability. *Corporate Governance: An International Review*, 17(6), 728–743.
- Kirsch, A. (2018). The gender composition of corporate boards: A review and research agenda. *Leadership Quarterly*, 29(2), 346–364.
- Lashitew, A. A., Branzei, O., & van Tulder, R. (2023). Community inclusion under systemic inequality: How for-profit businesses pursue social purpose. *Journal of Management Studies*.
- Laufer, W. S. (2003). Social accountability and corporate Greenwashing. *Journal of Business Ethics*, 43(3), 253–261.
- Ludwig, P., & Sassen, R. (2022). Which internal corporate governance mechanisms drive corporate sustainability? *Journal of Environmental Management*, 301, 113780.
- Lynn, A. (2021). Why “doing well by doing good” went wrong: Getting beyond “good ethics pays” claims in managerial thinking. *Academy of Management Review*, 46(3), 512–533.
- Mace, M. L. (1971). *Directors: Myth and reality*. Division of Research Graduate School of Business Administration Harvard University.
- Mallin, C. A., & Michelon, G. (2011). Board reputation attributes and corporate social performance: An empirical investigation of the US Best Corporate Citizens. *Accounting and Business Research*, 41(2), 119–144.
- Mallin, C., Michelon, G., & Raggi, D. (2013). Monitoring intensity and stakeholders' orientation: How does Governance affect Social and Environmental Disclosure? *Journal of Business Ethics*, 114(1), 29–43.

- Mayer, C. (2021). The future of the Corporation and the economics of purpose. *Journal of Management Studies*, 58(3), 887–901.
- Mazzucato, M. (2018). The Value of Everything: Making and Taking in the Global Economy. In *Hachette UK*.
- Mela, C. F., & Kopalle, P. K. (2002). The impact of collinearity on regression analysis: The asymmetric effect of negative and positive correlations. *Applied Economics*, 34(6), 667–677.
- Morrison, A. D., & Mota, R. (2023). A theory of Organizational purpose. *Academy of Management Review*, 48(2), 203–219.
- Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, 237, 117727.
- Naciti, V., Cesaroni, F., & Pulejo, L. (2022). Corporate governance and sustainability: A review of the existing literature. *Journal of Management and Governance*, 26(1), 55–74.
- Nadeem, M. (2021). Corporate governance and Supplemental Environmental Projects: A restorative Justice Approach. *Journal of Business Ethics*, 173(2), 261–280.
- OECD (2015). *G20/OECD Principles of Corporate Governance*.
- Parida, V., & Wincent, J. (2019). Why and how to compete through sustainability: A review and outline of trends influencing firm and network-level transformation. *International Entrepreneurship and Management Journal*, 15(1), 1–19.
- Perera, C., Auger, P., & Klein, J. (2018). Green Consumption Practices among Young Environmentalists: A practice theory perspective. *Journal of Business Ethics*, 152(3), 843–864.
- Phillips, R., Freeman, R. E., & Wicks, A. C. (2003). What stakeholder theory is not. In *Business Ethics Quarterly* (Vol. 13, Issue 4, pp. 479–502).
- Porter, & Kramer (2006). Strategy and society: The Link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 89, 78–92. [www.fsg-impact.org](http://www.fsg-impact.org).
- Porter, M. E., & Kramer, M. R. (2011). Creating Shared Value. *Harvard Business Review*, 89, 62–77.
- Post, C., Rahman, N., & Rubow, E. (2011). Green governance: Boards of directors' composition and environmental corporate social responsibility. *Business and Society*, 50(1), 189–223.
- Quinn, R. E., & Thakor, A. V. (2018). Creating a purpose-driven Organization: How to get employees to bring their smarts and Energy to work. *Harvard Business Review (HBR)*, 96(4), 78–85.
- Rey, C., & Bastons, M. (2018). Three dimensions of effective mission implementation. *Long Range Planning*, 51(4), 580–585.
- Rey, C., Bastons, M., & Sotok, P. (2019). Purpose-driven organization. *Springer Nature*. Springer Nature.
- Roffia, P., Simón-Moya, V., & Sendra García, J. (2022). Board of director attributes: Effects on financial performance in SMEs. *International Entrepreneurship and Management Journal*, 18(3), 1141–1172.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41–55.
- Ruigrok, W., Peck, S. I., & Keller, H. (2006). Board characteristics and involvement in strategic decision making: Evidence from swiss companies. *Journal of Management Studies*, 43(5), 1201–1226.
- Ruigrok, W., Peck, S., & Tacheva, S. (2007). Nationality and gender diversity on swiss corporate boards. *Corporate Governance: An International Review*, 15(4), 546–557.
- Schaltegger, S., Lüdeke-Freund, F., & Hansen, E. G. (2016). Business models for sustainability: A co-evolutionary analysis of sustainable entrepreneurship, Innovation, and Transformation. *Organization and Environment*, 29(3), 264–289.
- Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: A stakeholder theory perspective. *Organization and Environment*, 32(3), 191–212.
- Scherer, A. G., & Palazzo, G. (2007). Toward a political conception of corporate responsibility: Business and society seen from a habermasian perspective. *Academy of Management Review*, 32(4), 1096–1120.
- Setó-Pamies, D. (2015). The relationship between women directors and corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 22(6), 334–345.
- Smith, N. C., & Rönnegard, D. (2016). Shareholder primacy, corporate social responsibility, and the role of Business Schools. *Journal of Business Ethics*, 134(3), 463–478.
- Tuggle, C. S., Sirmon, D. G., Reutzel, C. R., & Bierman, L. (2010). Commanding board of director attention: Investigating how organizational performance and ceo duality affect board members' attention to monitoring. *Strategic Management Journal*, 31(9), 946–968.
- Walker, K., & Wan, F. (2012). The harm of symbolic actions and Green-Washing: Corporate actions and communications on environmental performance and their financial implications. *Journal of Business Ethics*, 109(2), 227–242.



- Walls, J. L., Berrone, P., & Phan, P. H. (2012). Corporate governance and environmental performance: Is there really a link? *Strategic Management Journal*, 33(8), 885–913.
- Wu, Y., Zhang, K., & Xie, J. (2020). Bad greenwashing, good greenwashing: Corporate social responsibility and information transparency. *Management Science*, 66(7), 3095–3112.
- Yamane, T. (1967). *Statistics: An introductory analysis*. Harper and Row.
- Yang, W., Yang, J., & Gao, Z. (2019). Do Female Board Directors promote corporate social responsibility? An empirical study based on the critical Mass Theory. *Emerging Markets Finance and Trade*, 55(15), 3452–3471.
- Zahra, S. A. (1990). Increasing the board's involvement in strategy. *Long Range Planning*, 23(6), 109–117.
- Zattoni, A. (2020). *Corporate governance. How to design good companies*. Bocconi University Press - EGEA SpA.
- Zattoni, A., Leventis, S., Van Ees, H., & De Masi, S. (2022). Board diversity's antecedents and consequences: A review and research agenda. *The Leadership Quarterly*, 101659.

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