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The Ties That Bind Or Those That Tear Us Apart? Co-CEO Constellations And ESG Performance In Family Firms

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Abstract

While the prevailing perspective on executive leadership has emphasized the effectiveness of a unified command structure, family firms frequently adopt shared leadership structures such as dyads, triads, and larger co-CEO constellations. Given the prevalence of these structures in family firms, it is crucial to understand how family involvement in the firm shapes the dynamics of co-CEO constellations and their implications for firm outcomes. Drawing on the socioemotional wealth (SEW) perspective, we propose that the salience of extended SEW concerns increases the costs associated with a shared leadership structure, ultimately leading to a negative impact on environmental, social, and governance (ESG) outcomes. Our empirical analysis of panel data on 76 Italian firms listed on the Milan Stock Exchange during 2003–2020 suggests that a co-CEO structure is associated with negative ESG performance outcomes in family firms, while observing a positive relationship in nonfamily firms. We find that the negative effect for family firms stems from family-induced cognitive diversity, manifested via the inclusion of both family and nonfamily members or family members from different generations in co-CEO constellations. We then provide empirical evidence that the negative effect of the co-CEO structure on ESG performance is mitigated and turns positive when one of the co-CEOs is also chairing the board. These findings advance our understanding of how family involvement in the shared leadership structure shapes a firm's ethical orientation, having important implications for the governance of family firms.

Keywords: Family firms, co-CEO structures, ESG performance

JEL Classifications: G32, G34, M10, M14

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Abstract

While the prevailing perspective on executive leadership has emphasized the effectiveness of a unified command structure, family firms frequently adopt shared leadership structures such as dyads, triads, and larger co-CEO constellations. Given the prevalence of these structures in family firms, it is crucial to understand how family involvement in the firm shapes the dynamics of co-CEO constellations and their implications for firm outcomes. Drawing on the socioemotional wealth (SEW) perspective, we propose that the salience of extended SEW concerns increases the costs associated with a shared leadership structure, ultimately leading to a negative impact on environmental, social, and governance (ESG) outcomes. Our empirical analysis of panel data on 76 Italian firms listed on the Milan Stock Exchange during 2003–2020 suggests that a co-CEO structure is associated with negative ESG performance outcomes in family firms, while observing a positive relationship in nonfamily firms. We find that the negative effect for family firms stems from family-induced cognitive diversity, manifested via the inclusion of both family and nonfamily members or family members from different generations in co-CEO constellations. We then provide empirical evidence that the negative effect of the co-CEO structure on ESG performance is mitigated and turns positive when one of the co-CEOs is also chairing the board. These findings advance our understanding of how family involvement in the shared leadership structure shapes a firm's ethical orientation, having important implications for the governance of family firms.

INTRODUCTION

The traditional view on leadership emphasizes the importance of a single, strong leader (Fayol, 1949; Finkelstein et al., 2009). However, in family firms, shared leadership structures such as dyads, triads, and larger constellations are not uncommon (Campopiano et al., 2020; MassMutual, 2007). Despite the preponderance of co-CEO structures in family firms, such structures have received only scant attention from family business scholars (Alvarez and Svejenova, 2005; Arena et al., 2011; Krause et al., 2015). The extant literature does not agree on the benefits of such structures. On the one hand, some studies argue that having co-CEOs in family firms brings about benefits such as better management of the business and socioemotional objectives (Rahael, 2012), may help with the intergenerational transition (Cater and Schwab, 2010; Campopiano et al., 2020), may facilitate professionalization (Gibeau et al., 2017), and may also contribute to a reduction in agency costs (Amore et al., 2017). On the other hand, co-CEO structures in family firms may generate conflicts due to dysfunctional interpersonal dynamics between the family and nonfamily co-CEOs, as well as from family opportunism (D'Angelo et al., 2022; Miller et al., 2014). Taken together, this literature suggests that family involvement in co-CEO leadership structures may have a powerful effect on the effectiveness of such structures and their outcomes.

As studies mainly focus on the financial outcomes of co-CEO structures in family firms, the literature is as yet unclear about the implications of such structures for other outcomes, particularly for a firm's environmental, social, and governance (ESG) performance[1] (Alvarez and Svejenova, 2005; Hasija et al., 2017). Gaining an understanding of the implications of co-CEO leadership for family firms' ESG performance is important and relevant, given the significance of the latter for a firm's ability to create long-term value (Fafaliou et al., 2022), as well as the particularly strong impact of executives on this type of performance (Burke, 2022; Hasija et al., 2017; Wernicke et al.,

[1] While acknowledging the different allied terms coined within the ESG field, such as ESG performance, corporate social performance (CSP), sustainability, and corporate social responsibility (CSR), we use the term 'ESG performance' to refer to how corporations integrate environmental, social, and governance concerns into their business models (Gillan et al., 2021) throughout this paper.

2022). Moreover, studying how co-CEO structures shape family firms' ESG outcomes enhances our understanding of the mechanisms that drive the ethical choices of family businesses – an issue that to date has received limited scholarly attention (Dielman and Koning, 2020; Vazquez, 2018; Signori and Fassin, 2023). This gives rise to the following research question: *Does family involvement in a firm influence the impact of a co-CEO leadership structure on ESG performance, and if so, how*? To answer this question, we draw on the socioemotional wealth (SEW) perspective (Gómez-Mejía et al., 2011; Gómez-Mejía et al., 2019) – a theoretical foundation for most family-business research dealing with social issues (Van Gils et al., 2014, p. 195). According to this perspective, family involvement in a firm is reflected in the salience of socioemotional concerns, denoting family owners' affective needs, such as the desire to maintain family control and influence, identification with the firm, social bonding, and the perpetuation of the family's legacy (Davila et al., 2022; Gómez-Mejía and Herrero, 2022). These unique concerns shape the values and ethical orientation of family firms (Déniz Déniz and Cabrera Suárez, 2005; Long and Mathews, 2011; Reck et al., 2022; Vazquez, 2018) and are ultimately reflected in family firms' ESG performance (Berrone et al., 2010; Bingham et al., 2010; Cruz et al., 2014), making the SEW perspective an appropriate theoretical framework to examine the family dynamics in the co-CEO constellation and the implications of family dynamics for ESG performance.

Drawing on the SEW perspective, we propose that in family firms the benefits of a co-CEO structure may be outweighed by the costs stemming from the family's influence on the firm. This results in a negative impact of the co-CEO structure on ESG outcomes. Conversely, nonfamily firms may experience greater benefits from shared leadership with lower associated costs, resulting in an overall positive effect on ESG outcomes. We subsequently delve into the differences within family firms by examining how family-induced cognitive diversity, represented by a mix of family and nonfamily co-CEOs or generational differences among the family co-CEOs, influences the co-CEOs' willingness and ability to engage in ESG initiatives. We argue that greater family-induced cognitive diversity leads to higher interpersonal tensions within the co-CEO structure, exacerbating

the negative effect on ESG performance. In contrast, co-CEO constellations with lower family-induced cognitive diversity exhibit better alignment in behaviors and objectives, leading to more effective communication and coordination and superior ESG performance. Additionally, we investigate the moderating impact of a power difference within the family co-CEO constellation on the link between a co-CEO structure and ESG outcomes. We propose that the presence of the board chair within the co-CEO constellation will serve as a coordinating mechanism, containing the costs of a shared leadership structure while preserving its benefits, resulting in an overall positive influence of a shared leadership structure on ESG outcomes.

We test the validity of our hypotheses on a sample of Italian family firms listed on the Milan Stock Exchange, which offers a unique setting due to the significant presence of family firms (Cirillo et al., 2015; Cucculelli and Micucci, 2008; Minichilli et al., 2016) and the wide adoption of co-CEO structures (Miller et al., 2014; D'Angelo, 2022). Our empirical analysis provides support for our hypotheses, indicating that the co-CEO leadership structure is negatively associated with ESG outcomes in family firms, whereas this relationship is positive for nonfamily firms. Accounting for heterogeneity among family firms, we find that the adverse impact of the co-CEO structure on ESG performance stems from: 1) mixed co-CEO constellations consisting of family and nonfamily co-CEOs, and 2) family co-CEOs belonging to different generations. Furthermore, our research uncovers that family firms with family co-CEO constellations can improve their ESG performance by counterbalancing this structure with the presence of a CEO-chair within the leadership constellation.

The contribution of our study is threefold. First, we advance the debate between shared leadership and the unity of command perspectives (Arena et al., 2011; Krause et al., 2015; Matozza and D'Amico, 2020) by examining the impact of firm ownership context on co-CEO constellations and their implications for firm ESG performance. We challenge the assumption that these perspectives are polar opposites, suggesting that a combination of elements from both shared leadership and the unity of command structures can be effective, particularly when the coordination is crucial, such as

under the presence competing demands of family and nonfamily stakeholders. Second, we contribute to the research on family business ethics (Dielman and Koning, 2020; Van Gils et al., 2014; Vazquez, 2018) by examining the co-CEO leadership structure as a mechanism that shapes the distinct ethical choices made by family firms. While it is widely acknowledged that family involvement influences ethical decisions, such as the firm's engagement in ESG issues, our understanding of the drivers behind this influence is limited (Vazquez, 2018). Our study furthers this understanding by drawing attention to co-CEO leadership constellations as a tool for families to pursue their SEW objectives, resulting in significant implications for firms' ethical choices. Lastly, our study contributes to the development of the SEW perspective (cf. Davila et al., 2022; Swab et al., 2020) by identifying how family-induced cognitive diversity can constrain the firm's ability to meet the needs of its stakeholders and ultimately hinder ESG performance. This provides insights into the boundary conditions that shape the SEW–ESG relationship, addressing the call for additional research in this area (Meier and Schier, 2021). Beyond these theoretical contributions, our study provides important insights for family owners and family firm stakeholders by specifying under which conditions a co-CEO structure in a family firm enhances ESG performance and under which conditions it reduces it.

THEORETICAL FRAMEWORK AND HYPOTHESES

Shared leadership theory maintains that co-CEO structures can bring about tangible benefits to the organization (Pearce and Conger, 2002). As firms are becoming increasingly complex, they require their leaders to possess a more diverse set of skills to make complex decisions in an increasingly dynamic environment (O'Toole et al., 2002). Multiple co-CEOs may hence enrich a firm's cognitive resources by bringing different sets of complementary skills and competencies that cannot be easily held by a single individual (Arena et al., 2011; Arnone and Stumpf, 2010). This can in turn reduce the exploration–exploitation role conflict and, in doing so, provide a fertile ground for innovative and creating thinking (Hunter et al., 2017; 2018). Furthermore, having multiple leaders

at the helm of the organization, with each of them focusing on a particular aspect of the business, allows firms to broaden the scope of roles undertaken by the top executives (Feigen et al., 2022), ultimately enabling them to better address the competing demands of multiple stakeholders (Pfeffer and Salancik, 2003). Another potential advantage of co-CEO leadership comes from the mutual monitoring among the co-CEOs (Banham, 2012). Co-CEO leadership implies shared responsibility and reduces the discretion of the individual co-CEOs by limiting their ability to pursue their self-interest at the expense of the minority shareholders and the other stakeholders (Choi et al., 2018; Lee et al., 2019; Yoo et al., 2021).

The shared leadership theory is in sharp contrast with the traditional view of executive leadership grounded in the unity of command principle (Finkelstein et al., 2009). This dominant view in management research conceptualizes executive leadership as a solo act and implies vertical top-down interaction between the leader and the subordinates. According to this view, executive leadership is most effective when decision making is concentrated in the hands of a single individual (Fayol, 1949; Weber, 1958). In contrast, the presence of multiple leaders may give rise to coordination costs stemming from mutual mistrust, clashes between strong egos, interpersonal rivalry and conflicts, and political maneuvering among the co-CEOs (Arnone and Stumpf, 2010; O'Toole et al., 2002). The negative interpersonal climate within the co-CEO constellation may in turn extend to the organization, damaging leadership attribution and morale among the employees (Reid and Karambayya, 2009). Even if the co-CEOs collaborate effectively, having multiple leaders may still lead to loyalty dispersion among the employees, duplicated reporting, and diffusion of responsibility (Alvarez and Svejenova, 2005). Overall, this line of reasoning suggests that, due to the increased costs of coordination, co-CEO leadership is less effective than leadership by a single CEO.

The trade-offs between the benefits and costs of a shared leadership structure have been empirically examined by previous studies, generating mixed evidence. Some studies provide support for the shared leadership perspective (Arena et al., 2011; 2022; Hong and Kim, 2022; Dennis et al., 2009),

whereas others find support for the unity of command principle, suggesting that the benefits of the co-CEO leadership structure are most pronounced when there is a power gap among the co-CEOs (Krause et al., 2015). However, if the power differences become too large, the effect of co-CEO leadership on firm outcomes turns negative (Krause et al., 2015; Matozza and D'Amico, 2020). Nonetheless, the focus of extant empirical studies has been largely limited to financial performance outcomes, which could be problematic as financial performance may be affected by many factors outside the executives' control. Furthermore, the leadership structure may have implications on a wider range of outcomes, including noneconomic ones (Chrisman et al., 2003). Against this backdrop, scholars have encouraged shifting the focus onto outcomes on which the CEO has a greater influence (Wernicke et al., 2022). Thus, the analysis of the "small numbers" at the top (Alvarez and Svejenova, 2005) is critical for shaping family firms' ethical orientation in general (Long and Mathews, 2011) and the pursuit of ESG goals in particular.

What little evidence exists indicates that shared leadership has a positive effect on ESG performance, suggesting that the benefits of a co-CEO structure may outweigh its costs in this performance domain. Firms achieve high ESG performance when they are able to address the needs of multiple stakeholders, whereas CSP tends to be low when the firm meets the needs of a more limited number of stakeholders and/or when the interests of one stakeholder group are given priority over those of the others (Wong et al., 2011). The enhanced information-processing capacity of co-CEO constellations allows them to cover a wider range of roles and attain social issues in an ambidextrous manner, which in turn leads to enhanced ESG performance (Hasija et al., 2017). Furthermore, sharing authority among multiple leaders creates a system of checks and balances that leads to more responsible decisions and minimizes irresponsible behavior toward stakeholders (Pearce et al., 2008; Pearce and Manz, 2011). In support, Hasija et al. (2017) provide evidence that firms led by co-CEOs are associated with higher levels of ESG but lower levels of corporate social irresponsibility. Furthermore, studies on shared leadership provide some indirect empirical evidence of a positive link between co-CEO leadership and ESG performance by indicating that such

leadership leads to a reduction in corruption and anti-citizenship behavior (Pearce, 1997). Taken together, there is some empirical support for a positive link between co-CEO leadership and firm ESG outcomes.

The co-CEO structure and ESG performance in family versus nonfamily firms

An issue that has not yet received sufficient attention in the literature is the role of the ownership context in shaping the functioning of the co-leadership structure and its impact on firm ESG outcomes. This is the case despite ownership being crucial as executive leadership is embedded in the context in which it occurs (Fletcher and Käufer, 2003). Indeed, owners exercise significant influence over firms' strategic goals (Cyert and March, 1963) and the discretion given to the executives (Hambrick and Finkelstein, 1988). Hence, the firm's ownership structure may have significant implications for the dynamics and effectiveness of the co-CEO structure, including firm ESG performance. In line with this reasoning, recent studies have noted the paucity of knowledge in this domain and called for studies to examine co-CEO leadership within the ownership context, particularly stressing the need for understanding how this leadership arrangement functions in family firms (Campopiano et al., 2020; Hasija et al., 2017; Krause et al., 2015). To fill this gap, in this section we explain in detail how co-CEO structures influence firm ESG outcomes in family but also nonfamily firms.

Family owners fundamentally differ from other types of owners due to the unique overlap between the family, the ownership, and the firm (Berrone et al., 2012; Tagiuri and Davis, 1996). The influence on and the involvement of the family in the firm gives significance to SEW concerns, which encompass "… nonfinancial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía et al., 2007, p. 106). SEW is a multidimensional concept that generates two differentiated and potentially contradictory priorities for a family firm: extended SEW and restricted SEW (Davila et al., 2022; Miller and Le Breton-Miller, 2014). Extended SEW includes priorities benefitting a broader range of stakeholders, such as assuring the firm's long-term growth and

longevity and preserving its social image and reputation. In contrast, restricted SEW relates to priorities exclusively benefitting the family shareholders, such as familial altruism, nepotism, and the preservation of control, as well as the avoidance of risks associated with business renewal and innovation. These priorities tend to be narrow and short-term, potentially clashing with the interests of the nonfamily stakeholders.

The coexistence of extended and restricted SEW shapes the distinct ethical orientation of family firms, leading to simultaneously socially responsible and irresponsible behaviors (Davila et al., 2022; Cruz et al., 2014). More specifically, whereas the pursuit of extended SEW priorities may align with the ESG objectives (Berrone et al., 2010; Cennamo et al., 2012; Miroshnychenko et al., 2021), the pursuit of restricted SEW priorities may clash with these goals and pose challenges for co-CEOs to implement them. For example, ESG initiatives aimed at equal treatment of employees and implementing more independent corporate governance structures may run counter to the nepotistic orientation of family firms and threaten the family's control over the business (Chua et al., 2009; Lubatkin et al., 2005; Campopiano and De Massis, 2015; Federo et al., 2020; Ponomareva and Ahlberg, 2016).

Furthermore, the salience of SEW concerns makes shared CEO leadership potentially more problematic in family firms compared to their nonfamily counterparts (D'Angelo et al., 2022). When confronted with the competing demands of family and nonfamily stakeholders, the "family comes first" principle is likely to prevail, prioritizing family interests over the interests of other stakeholders (Kellermanns et al., 2012). Being aware that some of the ESG initiatives may limit the pursuit of restricted SEW, co-CEOs – who, irrespective of their family affiliation, are likely to side with the family (Davis et al., 2010) – may be hesitant to allocate their attention and resources to such projects, fearing negative consequences, including potential dismissal. Consequently, the salience of restricted SEW contains the ability of the co-CEOs to meet the interests of the nonfamily stakeholders or even urges them to fulfil the interests of the family at the expense of the interests of the nonfamily stakeholders, which is ultimately reflected in reduced ESG outcomes.

Moreover, the presence of multiple and potentially conflicting objectives increases the complexity of decision making, requiring the co-CEOs to allocate time and attention to reconcile the different stakeholder demands and the search for consensus (Gómez-Mejía et al., 2011; Diaz-Moriana et al., 2022). The need to engage in such time-consuming interaction may in turn slow down the pace of decision making and shift the focus of co-CEO interactions onto the resolution of disputes rather than cooperation (Alvarez and Svejenova, 2005). Since co-CEO time is a finite resource, increasing the time spent on conflict resolution reduces the time dedicated to other domains of CEO activity, such as the needs of the nonfamily stakeholders, potentially relegating ESG initiatives to the secondary league.

In addition to the increased costs associated with a co-CEO structure, family firms may face limitations in reaping the benefits of such a leadership arrangement, particularly in relation to ESG engagement. While the adoption of a shared CEO leadership structure in nonfamily firms is often driven by strategic reasons, such as mergers or the presence of co-founders (Krause et al., 2015), in family firms the motivation is more likely to be rooted in the family's needs, such as the preservation of family control and continuity (Campopiano et al., 2020). In such a context, the primary purpose of the shared leadership structure and the main reference point for the co-CEOs may thus be the preservation of the family's SEW rather than enhancing the quality of decision-making (Alvarez and Svejenova, 2005). The strong mandate to pursue family interests may overshadow the interests of the nonfamily stakeholders, restricting the range of perspectives considered and limiting the simultaneous pursuit of multiple goals. As a result, the potential benefits of shared leadership may be diminished. Taken together, family firms may experience additional costs associated with the presence of co-CEO leadership structures, whereas their ability to fully capitalize on the advantages of such structures, particularly in terms of ESG engagement, may be constrained by the strong focus on preserving the family's SEW.

In contrast, co-CEO leadership arrangements are less problematic in nonfamily firms (D'Angelo et al., 2022). SEW is less likely to exist in nonfamily firms, and even if it were to exist, co-CEOs in

such firms are unlikely to give preference to SEW objectives (Millet et al., 2014), thereby reducing the complexity of the objectives pursued by the executives and thus simplifying and expediting the decision-making process. In this context, the executives need to allocate less time and attention to the family's objectives and as a result have more time to address the needs of a wider range of stakeholders. Furthermore, since the primary mandate for appointing the co-CEOs in nonfamily firms is to manage organizational complexity and enhance decision making, executives in this context will be more motivated to extend the range of their roles and, in doing so, enhance the firm's ESG performance. Taken together, nonfamily firms may derive greater benefits from improved information processing achieved through shared CEO leadership, thereby extending the range of roles fulfilled by the co-CEOs and ultimately enhancing ESG outcomes. Based on these arguments we propose the following hypotheses:

H1a. Family firms led by co-CEOs are associated with lower ESG performance than those led by single CEOs.

H1b. Nonfamily firms led by co-CEOs are associated with higher ESG performance than those led by single CEOs.

Co-CEO constellations and family firm ESG outcomes: The moderating role of co-CEO family affiliation

Previous studies have challenged the assumption of homogeneity among family firms, suggesting that "the variations in the behavior and performance among family firms may be as large as, if not larger than, the variations between family and nonfamily forms of organization" (Chua et al., 2012, pp. 1103–1104). In line with the rapid development of research on family firm heterogeneity (Dibrell and Memili, 2019; Miroshnychenko et al., 2021), recent studies have focused on the nature of the family's involvement in the firm as being an important predictor of family firms' engagement in ESG (Meier and Schier, 2021). Given that a co-CEO constellation provides a valuable tool for family owners to exercise control over and manage their firm (Miller et al., 2014), understanding the nature of the relationships between the co-CEOs and the controlling family – including their

implications for the interpersonal dynamics within the CEO leadership constellation – can shed light on the influence that co-CEOs may exert on ESG in family firms. In this section, we focus on the most salient attribute of co-CEOs in family firms, i.e., their potential affiliation with the controlling family (Binacci et al., 2016; Guidice et al., 2013). We argue that family-induced cognitive diversity, stemming from the involvement of both family and nonfamily members in the co-CEO constellations, may induce negative interpersonal dynamics within the co-CEO constellation, ultimately exacerbating the negative consequences of such a structure for family firm ESG outcomes.

Co-CEOs operate in a challenging environment, characterized by uncertainty, ambiguity, and information overload (Finkelstein et al., 2009). Consequently, they face immense pressure when undertaking strategic decisions. To function effectively in such a context, interdependent shared leadership structures must establish shared norms, foster effective communication, and embrace constructive disagreement (Alvarez and Svejenova, 2005; Cox et al., 2003). When differentiating between family and nonfamily co-CEOs, there may be considerable variation in mandates, objectives (Meier and Schier, 2021), and power (Miller et al., 2014). Family executives undergo a long period of common socialization and are likely to have common backgrounds, experiences, and identification (Uhlaner et al., 2015), which provide a building block for developing a common set of values and objectives that revolve around the pursuit of SEW objectives (Dieleman and Koning, 2020). In contrast, nonfamily co-CEOs, who do not have the same affective endowment in the firm, may identify less with the family and thus may be less likely to prioritize the SEW objectives than their family counterparts (Miller et al., 2014). Hence, mixed co-CEO dyads are likely to be more heterogeneous in their objectives than co-CEO dyads involving only family members (Miller et al., 2014).

In addition to divergent objectives, family and nonfamily co-CEOs are likely to differ in the power they hold in their organization. Whereas the power of family co-CEOs emanates from both the business and family, nonfamily co-CEOs have “power in the business but not in the family”

(Signori and Fassin, 2021, p. 197). Studies (e.g., Gómez-Mejía et al., 2010) suggest that family owners tend to discourage the delegation of authority to nonfamily members as this may undermine the family's control over the decision making, which in turn may lead to SEW loss. Thus, sharing power with the family co-CEOs may significantly restrict the discretion of the nonfamily co-CEOs and lead to a power imbalance within the shared leadership constellation (Miller et al., 2014). Furthermore, the nature of the interpersonal relationships may differ among co-CEO constellations involving family co-CEOs only and those comprising both family and nonfamily co-CEOs, which also creates differences in their willingness to overcome differences and reconcile conflicts. Personal relationships among family co-CEOs are developed before professional relationships, and the former tend to exceed the latter in importance (Alvarez and Svejenova, 2005). Spending both work and social time together allows family executives to know each other and to develop strong bonds, characterized by affection, frequent communication, and trust (Long and Mathews, 2011). In contrast, relationships between the family and nonfamily co-CEOs are likely to be limited to the professional domain. Furthermore, as work-related conflicts may extend to family relationships, thereby damaging the latter, family co-CEOs are likely to occur losses not only in the professional but also in the personal domain. Hence, the presence and importance attributed to family relationships will motivate family executives to be more committed to their relationships and more willing to reconcile their differences and overcome disagreements than co-CEO dyads involving both family and nonfamily co-CEOs.

Given the differences in objectives, power, and the interpersonal relationships between family and nonfamily co-CEOs, mixed co-CEO constellations are more likely to face cognitive diversity to a greater degree. Research on top-management teams suggests that increased heterogeneity among executives will negatively influence team processes such as cooperation, cohesion, and coordination among the team members (Ndofor et al., 2015). Applying these insights to mixed co-CEO leadership teams provides rationale for theorizing that family-induced cognitive diversity within the leadership constellation may increase the costs of coordination, decrease cohesion, and lead to

interpersonal conflicts. Given the nature of the interpersonal relationships, the family co-CEOs will be less likely to reconcile conflicts with the nonfamily co-CEOs, making it more challenging to ensure effective communication and information exchange. Furthermore, as the discretion of the nonfamily co-CEOs is reduced, they may be less motivated to participate in the decision making process (Patel and Cooper, 2014), further decreasing the ability of the co-CEO constellation to benefit from the integration of differences in knowledge and perspectives. This tension will reduce the information-processing capacity of the co-CEO constellation, making it more challenging for its members to dedicate time and attention to balancing the needs of the different stakeholders, ultimately inhibiting ESG outcomes.

In contrast, more homogeneous co-CEO constellations consisting solely of family co-CEOs may not face the same challenges stemming from family-induced cognitive diversity. Given greater homogeneity, poor decision making on behalf of one co-CEO may hurt the interests of the other co-CEOs, making them more willing to collaborate. In such a context, team processes are likely to function more effectively while incurring lower coordination costs than those of mixed co-CEO constellations. Therefore, we expect a negative effect on family firm ESG performance for mixed co-CEO arrangements. We thus formulate the following hypothesis:

H2. The negative effect of co-CEO constellations on ESG performance in family firms is driven by mixed co-CEO constellations, i.e., constellations with both family and nonfamily co-CEOs.

Family co-CEO constellations and ESG outcomes: The moderating role of family generations

Still, family-only co-CEO constellations may not necessarily be homogeneous, as they vary in their composition. Previous studies suggest that generational differences are a salient characteristic distinguishing the various family executives involved in the firm (Pittino et al., 2020). Namely, a generational difference leads to increased differences in executives' objectives, attitudes, management approaches, and power aspirations (Sciascia et al., 2013). These differences may result in different reference frameworks, thus presenting an important source of family-induced cognitive diversity within family-only co-CEO constellations (Bauweraerts et al., 2022). Here we argue that

family-induced cognitive diversity stemming from intergenerational differences among family co-CEOs leads to negative interpersonal dynamics within the shared leadership constellation, thereby hindering effective decision making and ultimately resulting in a negative effect of the co-CEO leadership structure on family firm ESG performance.

Why would this be the case? Family co-CEOs may vary in their agendas and the importance they attribute to the SEW objectives (Amore et al., 2023). Later generations of the family tend to be more concerned about the financial objectives, whereas the SEW concerns are more important for earlier generations (Gómez-Mejía et al., 2011; Sciascia et al., 2014). In addition, the different generations of family managers are likely to differ in their leadership styles, where later generations tend to prefer a more professional leadership style to the paternalistic one preferred by the earlier generations (Dyer, 1988). Given these inherent differences, the presence of multiple generations within the co-CEO constellation is likely to increase cognitive diversity within the co-CEO constellation. Greater cognitive diversity within the leadership constellation may in turn augment conflicts and inhibit communication, while making it more difficult to reach a consensus among the co-CEOs (Cater and Schwab, 2008). Such negative interpersonal dynamics may ultimately increase the costs of the shared leadership structure, resulting in a negative effect on ESG initiatives.

Furthermore, previous studies highlight that the intergenerational transition is a complex process that requires significant cognitive resources from the family executives (Filser et al., 2013). Due to their relative newness in the executive position, the incoming generation of co-CEOs may not have sufficient knowledge, autonomy, and authority, leaving the ultimate control over the strategic decision-making process to the incumbent co-CEOs, who in turn may be reluctant to transfer control over the business to the next generation (Davila et al., 2022; Cater and Justis, 2010). Thus, the attention of the incoming generation of co-CEOs may be directed towards acquiring knowledge about the firm and the executives' roles, as well as gradually taking over the business from the older generation. Hence, the ability of the co-CEOs to reap the benefits of shared leadership via complementary roles will be significantly limited. Given the focus on intergenerational succession,

the co-CEO constellation is likely to limit the scope of issues addressed by the executives, ultimately reducing their ability to attend to the interests of the nonfamily stakeholders. Conversely, co-CEO constellations with executives from the same family generation will face less family-induced cognitive diversity, which will be reflected in smoother team processes. Hence, such constellations will be able to allocate their attention to a wider range of issues and, in doing so, will be able to attend to the demands of a wider range of stakeholders. Based on this discussion, we formulate the following hypothesis:

H3. The negative effect of co-CEO constellations on ESG levels in family firms is driven by co-CEO constellations with family co-CEOs from different generations.

Family co-CEO constellations and ESG outcomes: The moderating role of the power gap

Despite sharing the same formal title, the co-CEOs may vary widely in the power they hold in the organization, with one member of the shared leadership constellation possibly being "more equal than the other" (O'Toole et al., 2002, p. 75). Several studies have suggested the importance of considering power dynamics within co-CEO constellations (Hong and Kim, 2022; Krause et al., 2015; Matozza and D'Amico, 2020). However, the understanding of this phenomenon in the family firm context and its implications for the firm's ethical choices remain limited. One way of capturing the presence of a power gap among family co-CEOs is by accounting for whether one of the co-CEOs holds the title of chair of the board of directors (Krause et al., 2015). In this section, we argue that the presence of the board chair within the family co-CEO constellation serves as a coordination mechanism, thereby reducing the costs of the shared leadership structure while enabling its benefits for the ESG outcomes.

Why would this be the case? The presence of the board chair within the co-CEO structure introduces a formal power differentiation between the chair and non-chair co-CEOs. This hierarchy within the shared leadership arrangement improves coordination, facilitating a more centralized decision-making structure (Krause et al., 2015). It also helps to clarify the division of roles and responsibilities within the co-CEO constellation and to establish the line of communication for the

executives, reducing interpersonal rivalry and conflicts while enhancing decision-making efficiency by reducing the need for time-consuming consensus-seeking processes (Denis et al., 2001). As a result, such a constellation mitigates the costs associated with family-induced diversity. While integrating diverse information, the differences in perspectives and priorities become less burdensome, and the co-CEO constellation can leverage the enhanced information-processing capacity of multiple co-CEOs to more effective decision making (Matozza and D'Amico, 2020). Conversely, non-chair co-CEO constellations, characterized by a diffuse power structure where coordination by fiat is not possible, face challenges in achieving coordination and cooperation within the shared leadership structure (Denis et al., 2001). As coordination and cooperation are hindered within the co-CEO constellation, the potential benefits of CEO role complementarity are compromised, ultimately reducing the ability of co-CEOs to engage in ESG initiatives. Therefore, we posit that the presence of a power gap within the family co-CEO constellation mitigates the adverse impact of this arrangement on firm ESG outcomes while preserving its benefits, and ultimately results in a positive effect of the family co-CEO constellation on ESG outcomes.

H4. Family firms led by family co-CEO constellations that include the board chair have an overall positive effect on ESG performance.

METHOD

Sample

We test the validity of our hypotheses on a sample of Italian industrial firms listed on the Milan Stock Exchange for the period of 2003–2020. As firms may change their listing status, they may enter or drop out of our sample during this period. Thus, a firm is part of the sample only for the years it was listed on the stock exchange. We started with all listed Italian firms. We then excluded companies in the financial and insurance sectors. Next, we combined the ESG data with the financial control variables provided by Worldscope. Our study employs ESG data provided by Eikon Refinitiv (previously Thomson Reuters ASSET4), which is a database widely used in the

empirical literature (e.g., Reber et al., 2022; Shaukat et al., 2016; Arena et al., 2018). Despite Eikon Refinitiv having made ESG data available since 2002, only a few Italian listed companies have such data for the entire period, most of which are nonfamily companies belonging to the energy and utilities industries.

To identify a *family firm*, we followed Campopiano and De Massis (2015) in adopting the following criteria: The family shareholder must hold at least a 25% equity stake, and at least one member of the controlling family must sit on the board of directors (Nekhili et al., 2018; Cambrea et al., 2022). The 25% threshold was adopted due to the highly concentrated ownership of Italian firms (Amore et al., 2011). In contrast to other institutional contexts in which a firm may be controlled via a lower percentage of the share capital, in a concentrated financial market such as Italy, where a firm is typically owned by a limited number of shareholders, a 25% stake is required to obtain control over a firm (Minichilli et al., 2016; Miller et al., 2014).

Finally, we merged the ESG data and financial variables with a unique hand-collected dataset containing information on board members' demographic and personal characteristics. The data were collected manually from the annual reports on corporate governance of each firm, which were available on the official corporate websites and the website of the Milan Stock Exchange.

After this matching, the total number of firm-year observations was reduced to 501, corresponding to 47 unique family firms and 29 nonfamily firms. Table 1 presents the distribution across nine industries according to the industry classification of the Italian Stock Exchange. The limited number of firm-year observations is due to the availability of the ESG data, but the number is in line with similar previous empirical studies (Shaukat et al., 2016; Arena et al., 2018; Platonova et al., 2018).

Insert Table 1 about here

Variables

The regression analysis employs the ESG score as the dependent variable. The ESG score is an overall company score based on self-reported information on the environmental, social, and

corporate governance pillars (Reber et al., 2022). The score potentially ranges from 0 to 100, with a score above 75 indicating excellent ESG performance and a high degree of transparency in reporting material ESG data.

To test the validity of the hypotheses, the empirical regressions employ three independent variables: *co-CEOs, Family co-CEOs,* and *Mixed co-CEOs*, and two moderating variables: *Family co-CEOs different generations* and *Family co-CEOs & CEO-Chair*. *Co-CEOs* is a dummy variable that equals one if the firm has more than one CEO, and zero otherwise (Arena et al., 2011). Further, *Family co-CEOs* is a dummy variable that equals one if the firm has more than one CEO and all of them are family members, and zero otherwise. Additionally, *Mixed co-CEOs* is a dummy variable that equals one if the firm has more than one CEO and they are both family members and nonfamily members, and zero otherwise. Note that our sample does not include any family firms led exclusively by nonfamily members.

Finally, *Family co-CEOs different generations* is a dummy variable that equals one for firms led by family CEOs only and these being from different generations, and zero otherwise. We define a generational difference as an age difference of more than 20 years. *Family co-CEOs & CEO-Chair* is a dummy variable that equals one if the firm is led by family CEOs only and one of them is the chair of the board, and zero otherwise.

Following extant studies on the determinants of ESG performance (Shaukat et al., 2016; Homroy and Slechten, 2019; Beji et al., 2021), we use the following financial variables and board characteristics as control variables in all the regressions. *ROA* is computed as operating income divided by total assets. *Firm size* is the natural logarithm of total sales. *Debt* is long-term debt over total assets. *Cash holdings* is the ratio of cash and cash equivalents to total assets. *Capex* is computed as capital expenditures divided by total assets. *R&D* is the ratio of research and development expenditure to sales. If a firm did not report any R&D expenditure, this variable was set to zero. *Firm age* is the logarithm of the number of firm years, computed as the difference between the year of the observation and the firm's founding year. *Board size* is measured as the

number of members of the board of directors. *Independent directors* is computed as the ratio of independent directors on the board. *Female directors* is the ratio of women directors to board size.

Data

Table 2 presents descriptive statistics for the subsamples of family and nonfamily firm-year observations. Table 3 presents the correlations between the dependent and independent variables for the entire sample of firm-year observations including family and nonfamily firms.

Insert Tables 2-3 about here

The results show that 20.1% of all firms in our sample have a co-CEO constellation. Distinguishing between family and nonfamily firms, we find that 17.7% of family firms have a co-CEO structure, whereas only 2.4% of nonfamily firms have this structure. In line with previous studies (D'Angelo et al., 2022; Miller et al., 2014), our findings indicate a greater prevalence of the co-CEO structure among the family firms. Focusing on co-CEO structures in the family firms, 8.5% consist of family members only, while a mixed co-CEO structure is present in 9.2%. Finally, 6.8% of the family firms have different generations at the co-CEO level, and 2.4% have one of the CEOs who is also the chair of the board.

Empirical results

To examine the impact of co-CEOs on the ESG score, we employ ordinary least squares (OLS) regressions (Crifo et al., 2019; Amore et al., 2019). All independent variables are lagged by one year to avoid simultaneity problems and to mitigate potential endogeneity issues. To capture the heterogeneity across different industrial sectors and years, we include industry and year fixed effects in all the regressions.

Insert Table 4 about here

Regression 1 employs the variable *co-CEOs* to test the effect of co-CEO constellations on the ESG score for the whole sample of family and nonfamily firms. The results suggest that the presence of co-CEOs is negatively related to the ESG score. Specifically, the coefficient on *co-CEOs* is negative and statistically significant ($\beta = -0.047$, $p < 0.10$). At first glance, it looks like we observe the opposite of the positive link between the presence of a co-CEO structure and firm ESG performance, as found in prior research on nonfamily firms (Hasija et al., 2017). However, a closer look at our sample dominated by family firms reveals the need to distinguish between family and nonfamily firms. We thus re-run the regression on the respective subsamples. Regressions 2 and 3 suggest that for nonfamily firms, the coefficient on *co-CEOs* is positive and statistically significant ($\beta = 0.049$, $p < 0.10$), whereas the coefficient is negative and statistically significant ($\beta = -0.086$, $p < 0.01$) for the family firm subsample. Consequently, there is support for both H1a and H1b. In line with Hasija et al. (2017), the presence of co-CEOs is positively related to ESG performance for nonfamily firms. However, this relationship turns negative for family firms (see Regression 3). Importantly, Regression 4 suggests that our results are robust to the inclusion of the interaction between *co-CEOs* and the family firm dummy. A graphical representation of these findings (Figure 1) reveals that co-CEOs are associated with worse ESG performance in family firms when compared to nonfamily firms. These findings also suggest that the overall negative relationship between the co-CEO structure and ESG performance we observe for the whole sample (Regression 1) can be attributed to the dominance of family firms in our sample.

Insert Figure 1 about here

Regression 5 reports the effect of *Family co-CEOs* and *Mixed co-CEOs* on the ESG score. The presence of co-CEO constellations pertaining to executives who are all members of the controlling family has no effect on the ESG score. Specifically, the coefficient on *Family co-CEOs* is negative but not statistically significant ($\beta = -0.004$, $p > 0.1$). Thus, we do not find evidence that family-only co-CEO constellations are related to lower or higher levels of ESG performance when compared to

family firms led by a single CEO. Conversely, the coefficient on *Mixed co-CEOs* is negative and statistically significant (β = -0.162, $p < 0.01$). Consistent with H2, these findings indicate that the presence of family and nonfamily CEOs causes the relationship between a shared leadership structure and ESG performance to be negative. This finding corroborates Miller et al.'s (2014) thesis that mixed co-CEO constellations are problematic compared to family-only co-CEO structures when it comes to the domain of firm ethical decision making.

Regression 6 tests for the presence of the moderating effects of generational differences and a power gap on the relationship between a family co-CEO structure and ESG outcomes. The coefficient on *Family co-CEOs different generations* is negative and statistically significant (β = -0.090, $p < 0.01$), providing support for H3. This finding suggests that there is a negative relationship between the presence of a family co-CEO structure and ESG outcomes when the family co-CEOs belong to different generations compared to co-CEOs that pertain to the same generation. In line with Sciascia et al. (2013), our results suggest that the costs of intergenerational diversity within co-CEO leadership constellations outweigh the benefits.

In contrast, *Family co-CEOs & CEO-Chair* has a positive and statistically significant coefficient (β = 0.310, $p < 0.01$), indicating a positive effect on ESG outcomes of co-CEO structures where one of the executives is the chair of the board of directors. Hence, H4 is supported. Our results corroborate earlier findings by Krause et al. (2015) and Matozza and D'Amico (2020), indicating that shared leadership bears benefits when it is counterbalanced by a hierarchy among co-CEOs.

Robustness test

To ensure the robustness of our results, we re-estimated the regressions in Table 4 considering a different ESG performance measure. Precisely, Table 5 employs the Social Pillar Score as the dependent variable, which is an alternative measure of the firm's ESG outcomes, with focus on its commitment to socially responsible practices. It is a weighted score ranging between 0 and 100, computed for each firm based on the social information for the following four social categories: workforce, human rights, community, and product responsibility. The findings presented in Table 5

confirm our results, with the only difference being that the coefficient on *co-CEOs* is not statistically significant in the nonfamily firm subsample.

Insert Table 5 about here

DISCUSSION

We undertook a study to further our understanding of the role of family relationships in shaping the effects of shared CEO leadership on firms' ESG performance. Building on the socioemotional wealth (SEW) perspective (Gómez-Mejía et al., 2007), we argue that because of the salience of SEW concerns, a co-CEO leadership structure functions differently in family firms, creating unique interpersonal tensions that lead to inhibited ESG outcomes. Building on the Hasija et al. (2017) study, which reports a positive effect of co-CEO structures on firm ESG outcomes, we extend the understanding of shared leadership by considering the firm ownership context as an important contextual factor that shapes the costs and benefits of a shared leadership structure. Our empirical analysis corroborates Hasija et al.'s (2017) findings, indicating that the presence of co-CEOs is associated with higher ESG performance for nonfamily firms, and subsequently nuances it further, suggesting that this relationship is negative for family firms.

In line with research on heterogeneity among family firms (Daspit et al., 2021; Marques et al., 2014; Miroshnychenko et al., 2021), we further show that this negative relationship is not universal across co-CEO constellations but emerges with the presence of family-induced cognitive diversity. Such diversity can be manifested through: 1) the presence of family and nonfamily co-CEOs in the leadership structure, and 2) the involvement of different generations of family co-CEOs in co-CEO structures containing only family co-CEOs. These findings are in line with prior studies suggesting that mixed co-CEO structures are problematic in a family firm context (D'Angelo et al. 2022; Miller et al., 2014) and those that draw attention to the potential negative effects of intergenerational diversity among family executives (Sciascia et al., 2012). Importantly, our

findings corroborate and further extend earlier evidence based on nonfamily firms (Krause et al., 2015; Matozza and D'Amico, 2020), revealing that a family co-CEO structure can positively influence ESG outcomes, but only when it is counterbalanced by a power gap among the co-CEOs.

Theoretical implications

The theoretical contribution of our study is threefold. First, we contribute to the debate between proponents of the shared leadership perspective and those of the unity of command perspective (Krause et al., 2015) by examining the contextual determinants that shape the dynamics of co-CEO structures and exploring their effect on ESG performance. Whereas there is a considerable literature on the implications of a shared leadership structure for firm financial performance (cf. Krause et al., 2015; Arena et al., 2011), there is as yet little research on its effects on nonfinancial outcomes (Alvarez and Svejenova, 2005). To the best of our knowledge, there is only one study (Hasija et al., 2017) that has examined the impact of co-CEO structures on firm ESG outcomes. Our study supports Hasija et al. (2017), who report a significant, positive influence of co-CEO structures on firm ESG outcomes and show for the first time that this positive effect may be exclusive to nonfamily firms. Furthermore, in line with the emerging research on shared leadership in family firms (D'Angelo et al., 2022; Miller et al., 2014), we show that family firms face unique challenges when adopting a co-CEO leadership structure and, by doing so, highlight the role of ownership context as a critical boundary condition shaping the dynamics within the shared leadership and its effectiveness in the ESG performance domain.

Furthermore, our study responds to previous literature examining power gaps within the co-CEO structures, further evidencing their benefits for the functioning of the shared leadership structure. Whereas prior studies have interpreted the positive effect of power gaps among co-CEOs as support for the unity of command perspective vis-à-vis shared leadership, this dichotomous view falls short of explaining why the presence of extreme power gaps among co-CEOs eventually leads to inhibited decision-making and a negative effect on firm outcomes (Krause et al., 2015; Matozza and D'Amico, 2020). To reconcile these findings, we suggest an alternative perspective, arguing that the

unity of command and shared leadership structure may not be the opposite sides of the continuum – an assumption that has dominated the extant research on co-CEO structures – but in certain contexts are complementary solutions. Our findings suggest that, in the contexts characterized by a greater need for coordination among co-CEOs, combining the elements of each of the two arrangements – shared leadership and the unity of command – may constitute an effective strategy to improve firm ESG outcomes.

Second, our study extends the literature on family business ethics (Dielman and Koning, 2020; Van Gils et al., 2014; Vazquez, 2018) by further nuancing our understanding of the drivers of the distinct ethical choices of family firms. Namely, our study corroborates the notion of the dominance of family interests over the interests of nonfamily stakeholders and suggests that reconciling these conflicting interests can be potentially costly for a firm. Thus, if a family firm is aiming at improving its ESG engagement via the adoption of a co-CEO leadership structure, the governance arrangements and the presence of family-induced cognitive diversity need to be taken into consideration. Particularly, we spell out the importance of the power gap among the co-CEOs as a coordination mechanism and a tool for the conflict resolution that can bring about an overall positive effect on ESG performance.

Finally, our study contributes to the development of SEW perspective (Gómez-Mejía et al. 2011; Gómez-Mejía et al., 2019) by providing valuable insights into the influence of SEW concerns on firm outcomes, specifically focusing on ESG performance. We emphasize the role of SEW priorities as a key driver of family-induced cognitive diversity (Bauweraerts et al., 2022), highlighting its implications for firm ESG outcomes. By empirically examining the impact of family-induced cognitive diversity on the relationship between co-CEO leadership structure and firm ESG performance, our study sheds light on the costs stemming from the clash between SEW objectives and the objectives of nonfamily stakeholders. We demonstrate how this misalignment can hinder executive decision making and ultimately hinder family firms' ability to fully leverage the advantages of shared leadership structures. By recognizing the diverse socioemotional perspectives brought about

by different members within the co-CEO leadership structure, we advance the understanding of how SEW considerations intersect with firm-level ESG engagement, responding to the call for additional research on the boundary conditions that shape this relationship (Davila et al., 2022; Diaz-Moriana et al., 2022; Madison et al., 2016; Swab et al., 2020).

Implications for practice

Despite being rather frequent practice in family firms, the current research provides little guidance on how such structures best operate. Our study offers important insights for family owners and family firm stakeholders into how to design a co-CEO structure for family firms intent on pursuing ESG objectives. Specifically, our empirical analysis shows that the adoption of shared leadership can enhance ESG performance in nonfamily firms, whereas its adoption in family firms may pose challenges unless it is counterbalanced by the presence of a power gap among the co-CEOs. It is crucial for firms and investors to be aware of the presence of family-induced cognitive diversity within the co-CEO constellation and to address the tensions arising between the family and nonfamily executives as well as among family executives from different generations. Effective communication and a positive climate within the constellation are essential to ensure that the costs of coordination do not outweigh the benefits of shared leadership for firm ESG performance. Family firms should pay special attention to managing these dynamics to leverage the advantages of having multiple co-CEOs and achieve enhanced ESG performance. Introducing a power gap among co-CEOs, such as by having a board chair among the co-CEOs, can serve as a valuable tool for managing tensions and preventing destructive interpersonal dynamics within the shared leadership structure. This enables family firms to fully benefit from the presence of multiple co-CEOs and their potential contribution to enhancing ESG performance. By addressing the challenges associated with family-induced diversity and utilizing a power gap, family firms can effectively navigate the complexities of shared leadership and strive for superior ESG outcomes.

Limitations

Our study is not without limitations, and such limitations provide opportunities for future research. First, as we are unable to directly capture the interpersonal dynamics within the co-CEO constellation, the interpretation of our findings is based on the well-established assumption in the TMT diversity literature that the presence of cognitive diversity poses additional costs for executive decision making (Ponomareva et al., 2022). Similarly, SEW objectives is a latent construct that is measured indirectly by comparing family and nonfamily firms as well as the variations among family firms. While recent evidence suggests that archival measures could serve as plausible proxies for SEW objectives when survey data is difficult to obtain (Gómez-Mejía et al., 2022), direct measures of both SEW and team processes within the co-CEO constellation (cf. Simsek et al. 2005) could be useful to validate our results. Second, we do not take into account in our analysis the reasons behind the adoption of a co-CEO structure. Yet, firms may adopt such a structure for specific reasons, such as an intergenerational transition, professionalization, and expansion (Alvarez and Svejenova, 2005). The endogenous nature of shared leadership may cause a selection bias in our analysis, thus suggesting that our results need to be interpreted with caution. Future research should overcome this limitation by collecting data to understand the reasons driving the decision to adopt a shared leadership structure by family firms. Furthermore, other diversity characteristics, such as gender, culture, and tenure, may affect the relationship dynamics among co-CEOs one at a time but also jointly with other elements of demographic diversity, and thus they may have implications for the dynamics within the co-CEO constellation. Future research could extend our study by including the demographic attributes of the members of co-CEO constellations and estimating their joint influence on the interactions within co-CEO structures.

Conclusion

Despite being a natural environment for co-CEO constellations, the presence of such a structure in family firms does not automatically ensure its success, particularly regarding ESG performance. Our study thus highlights the need to consider carefully the trade-offs involved when family firms

adopt shared leadership structures. By shedding light on the relationship dynamics among co-CEOs and their implications for ESG outcomes, we contribute to advancing our understanding of family firms and their functioning. Still, this is only a first step towards understanding the practice of shared leadership – specifically co-CEO structures – in the unique context of family firms. While our findings provide valuable insights into the role of family relationships and socioemotional wealth considerations in shaping the effects of co-CEO leadership on firms' ESG performance, there is much more to uncover. We acknowledge that the phenomenon of co-CEO structures in family firms is both present and widespread, highlighting the need for further research in this area. There are still many unanswered questions regarding the dynamics, challenges, and outcomes associated with co-CEO arrangements within family firms. Future studies can delve deeper into these aspects and provide a more comprehensive understanding of the practice of shared leadership in the family firm context.

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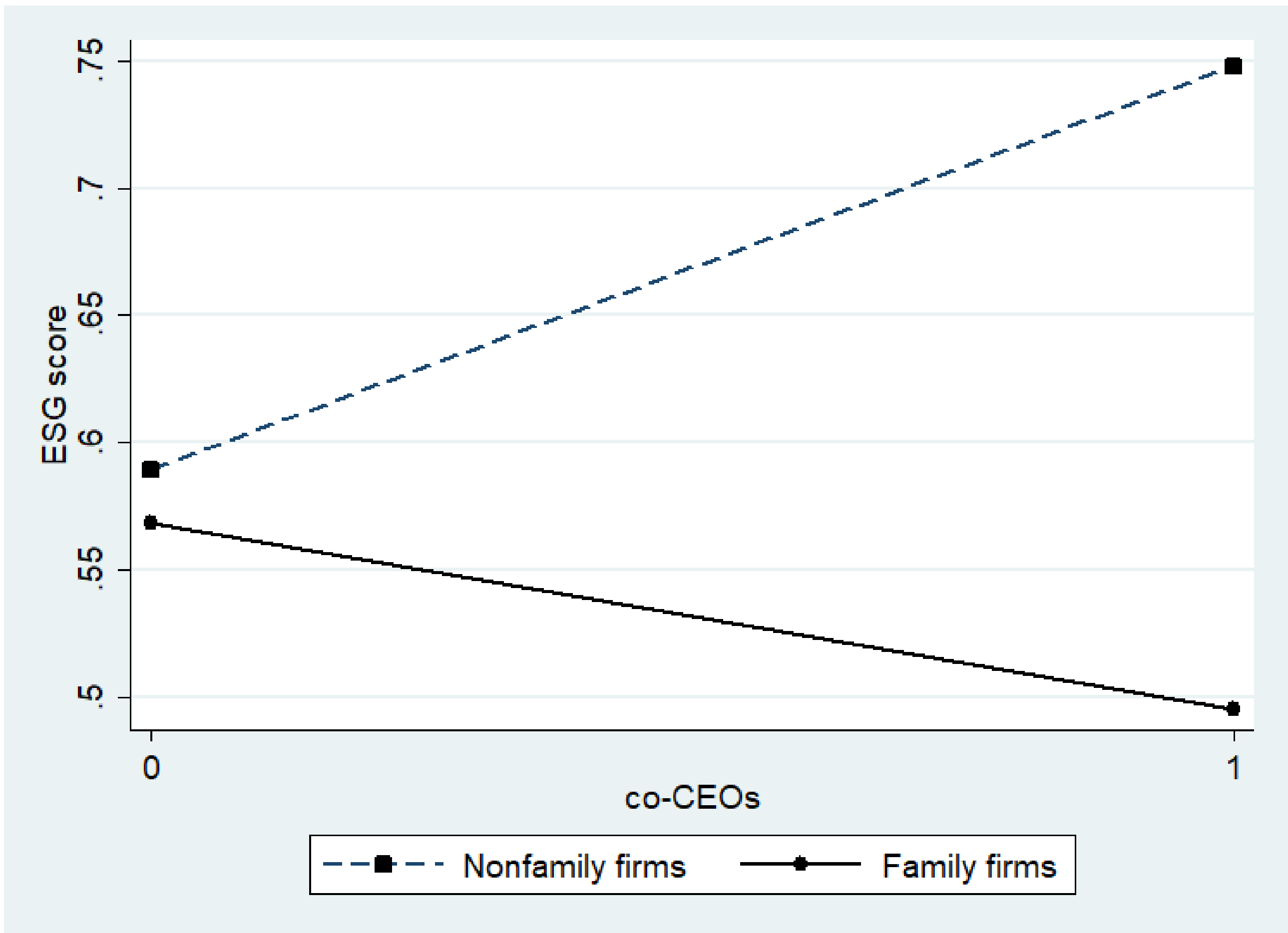

Figure 1: Co-CEOs and ESG scores in nonfamily firms and family firms

Table 1: Sample distribution across Borsa Italiana Industry Classification

Industry description	**Family Firm observations**	**Percentage (%)**	**Nonfamily Firm observations**	**Percentage (%)**
Oil & gas	16	3.19%	35	6.99%
Chemicals & basic materials	2	0.40%	0	0.00%
Industrial	68	13.57%	51	10.18%
Consumer services	73	14.57%	12	2.40%
Health care	11	2.20%	3	0.60%
Consumer goods	57	11.38%	18	3.59%
Telecommunications	0	0.00%	22	4.39%
Utilities	7	1.40%	99	19.76%
Technology	15	2.99%	12	2.40%
Total	**249**	**49.70%**	**252**	**50.30%**

Table 2: Descriptive statistics for the subsamples of family and nonfamily firm-year observations

	Family firms		Nonfamily firms			
Variables	**Mean**	**SD**	**Mean**	**SD**	**Difference**	***t*-statistic**
ESG score	0.507	0.172	0.641	0.186	-0.133	-8.33
Social pillar score	0.563	0.209	0.673	0.202	-0.110	-5.98
Co-CEOs	0.177	0.382	0.024	0.153	0.153	5.89
Family Co-CEOs	0.085	0.272	0.000	0.000	0.085	4.68
Mixed Co-CEOs	0.092	0.290	0.000	0.000	0.092	5.05
Family Co-CEOs different generations	0.068	0.253	0.000	0.000	0.068	4.29
Family Co-CEOs & CEO-Chair	0.024	0.154	0.000	0.000	0.024	2.49
ROA	0.049	0.063	0.045	0.149	0.004	0.40
Firm size	21.267	0.990	22.250	1.702	-0.983	-7.89
Debt	0.237	0.151	0.295	0.154	-0.058	-4.21
Cash holdings	0.139	0.081	0.085	0.053	0.054	8.82
Capex	4.035	3.178	4.348	3.352	-0.313	-1.07
R&D	0.614	1.744	1.455	3.499	-0.841	-3.40
Firm age	36.337	26.671	35.071	36.753	1.266	0.44
Board size	11.863	2.964	10.655	2.899	1.208	4.61
Independent directors	0.439	0.130	0.599	0.163	-0.160	-12.11
Female directors	0.247	0.144	0.213	0.179	0.034	2.36
Firm-year observations	249		252			

Table 2: Correlation matrix

	Variable	1	2	3	4	5	6	7	8	9
1	ESG score	1								
2	Social pillar score	0.907***	1							
3	Co-CEOs	-0.136**	-0.100*	1						
4	Family Co-CEOs	-0.0662	-0.0499	0.612***	1					
5	Mixed Co-CEOs	-0.208***	-0.156***	0.659***	-0.0447	1				
6	Family Co-CEOs different generations	-0.0885*	-0.0803	0.563***	0.919***	-0.0411	1			
7	Family Co-CEOs & CEO-Chair	0.0243	0.00837	0.331***	0.540***	-0.0242	0.283***	1		
8	ROA	-0.0546	-0.00707	0.0277	0.0177	0.0244	0.0163	0.0304	1	
9	Firm size	0.494***	0.315***	-0.117**	-0.0440	-0.169***	-0.0178	-0.0830	-0.0895*	1
10	Debt	0.195***	0.126**	-0.223***	-0.106*	-0.193***	-0.0885*	-0.114*	-0.152***	0.0408
11	Cash holdings	-0.0841	-0.0152	0.150***	0.0405	0.201***	0.0331	0.0706	0.116**	-0.148***
12	Capex	0.212***	0.217***	-0.0473	-0.0286	-0.0554	-0.0216	-0.0457	0.0211	0.00728
13	R&D	0.0287	0.0148	-0.108*	-0.0756	-0.0622	-0.0695	-0.0408	-0.00128	0.173***
14	Firm age	0.146**	0.140**	0.128**	0.0718	0.0795	0.0536	0.0351	-0.0794	0.221***
15	Board size	0.110*	0.0723	-0.00173	0.0167	0.0259	0.0430	-0.0831	-0.0205	0.166***
16	Independent directors	0.470***	0.369***	-0.202***	-0.124**	-0.169***	-0.105*	-0.110*	0.0544	0.401***
17	Female directors	0.183***	0.292***	0.0290	0.0173	0.0706	-0.00978	0.0824	0.0432	-0.344***

		10	11	12	13	14	15	16	17
1	ESG score								
2	Social pillar score								
3	Co-CEOs								
4	Family Co-CEOs								
5	Mixed Co-CEOs								
6	Family Co-CEOs different generations								
7	Family Co-CEOs & CEO-Chair								
8	ROA								
9	Firm size								
10	Debt	1							
11	Cash holdings	-0.333***	1						
12	Capex	0.338***	-0.235***	1					
13	R&D	-0.159***	0.0261	-0.0678	1				
14	Firm age	-0.299***	0.187***	-0.172***	0.467***	1			
15	Board size	0.0848	0.00170	-0.0861	0.115*	0.323***	1		
16	Independent directors	0.0350	-0.205***	0.105*	0.178***	0.0886*	0.0211	1	
17	Female directors	-0.118**	0.284***	-0.138**	-0.0213	0.110*	-0.121**	0.101*	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
n = 501

Table 4: Relationship between co-CEOs and ESG score

VARIABLES	(1) Whole sample	(2) Nonfamily firms	(3) Family firms	(4) Whole sample	(5) Family firms	(6) Family firms
Co-CEOs	-0.047*	0.049*	-0.086***	0.159***		
	(0.069)	(0.086)	(0.005)	(0.000)		
Family firms				-0.021		
				(0.185)		
Co-CEOs*Family firms				-0.232***		
				(0.000)		
Family Co-CEOs					-0.004	
					(0.906)	
Mixed Co-CEOs					-0.162***	
					(0.000)	
Family Co-CEOs same generations						-0.110
						(0.268)
Family Co-CEOs different generations						-0.090***
						(0.002)
Family Co-CEOs & CEO-Chair						0.310***
						(0.001)
ROA	-0.016	-0.034	-0.060	-0.027	-0.121	0.152
	(0.567)	(0.314)	(0.725)	(0.343)	(0.422)	(0.254)
Firm size	0.053***	0.044***	0.047***	0.054***	0.038***	0.054***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)
Debt	0.183***	0.097	0.154**	0.158***	0.159**	0.080
	(0.000)	(0.197)	(0.030)	(0.000)	(0.026)	(0.301)
Cash holdings	-0.056	-0.466***	0.025	-0.006	0.085	-0.167
	(0.563)	(0.003)	(0.853)	(0.954)	(0.515)	(0.274)
Capex	0.006***	0.003	0.006	0.006***	0.006*	0.004
	(0.006)	(0.280)	(0.102)	(0.007)	(0.074)	(0.242)
R&D	-0.001	-0.008**	-0.003	-0.003	-0.004	0.003
	(0.622)	(0.032)	(0.693)	(0.332)	(0.631)	(0.721)
Firm age	0.005	0.042***	-0.015	0.007	-0.019	-0.025*
	(0.541)	(0.002)	(0.290)	(0.470)	(0.150)	(0.062)
Board size	0.005**	-0.000	0.015***	0.005**	0.016***	0.015***
	(0.039)	(0.979)	(0.000)	(0.017)	(0.000)	(0.000)
Independent directors	0.100**	-0.006	0.027	0.069*	-0.001	0.136*
	(0.013)	(0.911)	(0.684)	(0.091)	(0.987)	(0.072)
Female directors	0.149*	0.145	0.087	0.113	-0.013	0.083
	(0.052)	(0.156)	(0.522)	(0.136)	(0.927)	(0.546)
Constant	-0.891***	-0.577***	-0.896***	-0.925***	-0.678**	-0.874***
	(0.000)	(0.003)	(0.001)	(0.000)	(0.012)	(0.002)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.633	0.748	0.551	0.649	0.580	0.546
Observations	501	252	249	501	249	249

Robust *p*-values in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5: Relationship between co-CEOs and social pillar score

VARIABLES	(1) Whole sample	(2) Nonfamily firms	(3) Family firms	(4) Whole sample	(5) Family firms	(6) Family firms
Co-CEOs	-0.064**	0.021	-0.120***	0.137***		
	(0.030)	(0.641)	(0.001)	(0.004)		
Family firms				-0.029		
				(0.149)		
Co-CEOs*Family firms				-0.226***		
				(0.000)		
Family Co-CEOs					-0.033	
					(0.402)	
Mixed Co-CEOS					-0.200***	
					(0.000)	
Family Co-CEOs same generations						0.089
						(0.391)
Family Co-CEOs different generations						-0.081**
						(0.032)
Family Co-CEOs & CEO-Chair						0.161*
						(0.087)
ROA	0.026	-0.025	-0.030	0.013	-0.093	-0.093
	(0.415)	(0.603)	(0.871)	(0.692)	(0.577)	(0.593)
Firm size	0.042***	0.036***	0.027*	0.043***	0.017	0.030**
	(0.000)	(0.000)	(0.057)	(0.000)	(0.219)	(0.032)
Debt	0.176***	0.109	0.075	0.135***	0.078	0.131
	(0.001)	(0.216)	(0.370)	(0.009)	(0.355)	(0.122)
Cash holdings	-0.121	-0.741***	-0.009	-0.049	0.057	0.076
	(0.306)	(0.000)	(0.951)	(0.683)	(0.706)	(0.642)
Capex	0.009***	0.004	0.010**	0.009***	0.010***	0.008**
	(0.000)	(0.205)	(0.014)	(0.001)	(0.008)	(0.039)
R&D	-0.002	-0.010***	-0.000	-0.004	-0.001	0.007
	(0.509)	(0.007)	(0.991)	(0.279)	(0.944)	(0.528)
Firm age	0.009	0.049***	-0.010	0.009	-0.015	-0.022
	(0.393)	(0.001)	(0.585)	(0.421)	(0.391)	(0.241)
Board size	0.000	-0.010***	0.018***	0.002	0.019***	0.019***
	(0.917)	(0.009)	(0.000)	(0.589)	(0.000)	(0.000)
Independent directors	0.057	-0.018	-0.006	0.020	-0.035	0.124
	(0.287)	(0.789)	(0.942)	(0.720)	(0.718)	(0.139)
Female directors	0.106	0.032	0.071	0.077	-0.039	0.140
	(0.277)	(0.805)	(0.670)	(0.432)	(0.821)	(0.407)
Constant	-0.625***	-0.364*	-0.493	-0.653***	-0.267	-0.560*
	(0.000)	(0.069)	(0.107)	(0.000)	(0.382)	(0.070)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.542	0.676	0.587	0.563	0.608	0.576
Observations	509	252	249	501	249	249

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