



Corporate layoffs during the COVID-19 pandemic: the moderating role of social responsibility and governance

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Abstract

In this paper, I examine the effects of a firm's past corporate social responsibility (CSR) on the involuntary turnover of its employees during the first year of the COVID-19 pandemic. Specifically, for 3,011 publicly traded US firms over the period 2013–2020, I determine differences in announced layoffs across firms with a history of above and below par social performance. CSR comprises several metrics of employee treatment and well-being, which bespeaks a corporate culture that attracts talented workers, and improves productivity for labor and recruitment costs. This would suggest that employees in socially responsible companies are less likely to be considered replaceable. On the other hand, downsizing may be more accessible to high-CSR firms because they have superior managerial agility and organizational capabilities. Consistent with the latter theory, the findings of this paper suggest that past corporate social performance is significantly and positively related to layoffs during the COVID-19 pandemic, which adds important evidence to the contextualization of CSR's strategic capabilities for recruitment and management.

Keywords Economic crisis · Layoffs · Employee turnover · Corporate social responsibility · Corporate governance

JEL classification D22 · G01 · G30 · J28 · J63 · M14 · M50

1 Introduction

More than 20 million jobs were lost in the U.S. in the two months following the outbreak of the COVID-19 pandemic, accounting for nearly one seventh of the labor force according to the U.S. Bureau of Labor Statistics (2022). Corporate bids to

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restructure and minimize losses accounted for a significant portion of these layoffs. However, despite the challenges, major American companies reportedly turned profits during 2020.¹ Among various predictors, CSR was heavily studied for possibly mitigating the risks and exposures of corporations to the economic crisis caused by the pandemic (Albuquerque et al., 2020; Bae et al., 2021; Ding et al., 2021; Khanchel et al., 2023, etc.). However, an academic examination of how CSR may have affected layoffs as a corporate behavior symptomatic of distress in financial turmoil is found to be severely lacking in existing literature. In this paper, I determine whether a firm's reputation for social responsibility is significantly related to the severity of layoffs it conducted during the COVID-19 pandemic.

During an economic crisis, several factors determine the incidence and scope of corporate downsizing. The decision needs to be properly motivated to justify the resulting loss in performance and share value (De Meuse, Vanderheiden, & Bergmann, 1997). According to Neinstedt (1989), employees may be laid off to cut operating costs, to reduce management levels, to eliminate obsolete positions after a merger, to endure competitive pressures, or as a response to a combination of the aforementioned factors. Layoffs may be presented as a proactive method to improve the overall organizational efficiency and to increase job security for the remaining employees (De Meuse et al., 1997). However, while downsizing has been shown to reduce operating costs (Fuchsberg, 1993), streamline business operations and improve global competitiveness (Lord, 1992; Fuchsberg, 1993), it has also been shown to decrease productivity, product quality and employee trust (Knox, 1992), increase stress and health care costs (Boroughs, 1992; Leana & Feldman, 1995; Noer, 1993) and decrease profitability and dividend growth (Gombola & Tsetsekos, 1992). Therefore, while workforce reductions can relieve financial pressure and provide greater flexibility during economic crises – such as the one triggered by the COVID-19 pandemic – they may also damage perceptions of job security among current and prospective employees, and deter future talent.

The COVID-19 pandemic inflicted an exogenous shock on the global economy, affecting certain industries and businesses particularly severely. In the U.S., workforce reductions were often announced publicly through press releases or disclosures, citing operational necessity in the wake of disruptions caused by the pandemic and the ensuing lockdowns. For investors, these announcements also served as signals of financial health and responsiveness, and were distinct from, and potentially in conflict with pre-existing signals derived from CSR disclosures and ratings. This raises important questions about whether firms with strong CSR records behaved differently in their employment practices during the crisis, and how these reputational commitments were upheld (or compromised) under pressure.

Prior literature has shown that concrete or measurable CSR can foster trust and goodwill among stakeholders (Valentini et al., 2024; Groening et al., 2022), suggest-

¹ This is represented across media, including the Federal Reserve Board: *The Fed – Corporate Profits in the aftermath of COVID-19*. Available online: The Fed - Corporate Profits in the aftermath of COVID-19; Financial Times: *Prospering in the Pandemic: the top 100 companies*. Available online: *Prospering in the pandemic: the top 100 companies*; The Washington Post: *America's biggest companies are flourishing during the pandemic and putting thousands of people out of work*. Available online: *The biggest American companies have turned profits, laid off workers during the pandemic - Washington Post*.

ing that firms with strong social and governance practices may be more inclined to protect employees in times of crisis. Under stakeholder theory (Freeman, 1984), such firms would be expected to consider the welfare of employees alongside financial imperatives, potentially avoiding or minimizing layoffs as part of a broader commitment to responsible business conduct. Yet the pandemic presented conditions where the tradeoff between financial survival and stakeholder commitments intensified. Studying the effects of past social performance on announced layoffs during the COVID-19 pandemic thus offers an opportunity to test whether CSR reflects genuine stakeholder orientation or is selectively deprioritized during periods of economic stress.

Furthermore, examining this link provides insight into the credibility and resilience of CSR as a signaling mechanism. While layoffs may communicate short-term financial prudence to capital markets, large-scale employment terminations by firms with strong CSR reputations may appear inconsistent or opportunistic, potentially eroding trust among employees, investors, and the public. Conversely, if CSR-aligned firms refrained from layoffs or implemented them more cautiously, it could reinforce the view of CSR as a durable strategic orientation rather than symbolic posturing. Understanding these dynamics contributes to broader debates on the authenticity of corporate purpose and the extent to which firms balance stakeholder and shareholder interests under financial stress.

This paper contributes to the literature on the response of firms with a history of good CSR practices to financial distress (e.g., Lauesen, 2013; Garcia-Benau et al., 2013; Al-Hadi, Chatterjee, Yaftian, Taylor, & Hasan, 2019; Lins et al., 2019; Boubaker et al., 2020). Given that CSR can be expected to aid in the management of human resources and the cultivation of stakeholder relationships, can it serve as a signal of job security and resilience? Alternatively, could higher CSR indicate a higher likelihood of workforce reduction, which would either reinforce the resource-based perspective of CSR, or indicate an inefficient allocation of resources to non-profit-maximizing activities? These questions remain largely overlooked in extant literature, and this study aims to address them.

In this study, I investigate differences in announced layoffs in the first year of the COVID-19 pandemic between firms that have maintained average ESG scores above the industry median, and those that have not. Additionally, performance in the Social and Governance pillars of ESG is also examined separately as a predictor of the likelihood of crisis-period layoffs. Separate analysis of the Environmental dimension of ESG is omitted because it is less directly related to the management of human capital than the Social dimension, which covers labor practices, employee treatment, and community impact, or the Governance dimension, which pertains to executive decision-making that may influence the implementation of workforce reductions.

I follow the interaction analysis methodology presented by Bae et al. (2021) to compare COVID-19 period CSR performance across two groups of firms. The dependent variable is announced layoffs scaled by total employees. The independent variable, the measure of a firm's past performance in CSR is constructed as the difference between its average ESG score, Social score and Corporate Governance score respectively, and the industry's median score over the period 2013–2019. The measurement period for CSR performance is selected to ensure adequate separation from

the 2008 global financial crisis, and concludes just before the onset of the economic disruptions triggered by the COVID-19 pandemic, in order to avoid capturing crisis-induced shifts in corporate sustainability efforts. Firms with relatively higher prior scores in ESG, the Social and the Governance categories are assigned to corresponding treatment groups, namely high-CSR, high-Social, and high-Governance. The interaction of these treatment dummies is then used in a fixed effects panel regression.

I find that firms with high CSR over the period 2013–2019 laid off significantly more employees during the first year of the COVID-19 pandemic. Similarly, past performance in the Social category is shown to be positively associated with COVID-period layoffs. In addition, slightly significant results point to a positive relationship between past Corporate Governance and layoffs during the pandemic. Overall, these findings indicate that employees of high CSR firms may be exposed to relatively higher risks of job loss during periods of economic uncertainty, and are consistent with the results reported by Collins et al. (2018). While some evidence suggests that CSR may have acted as a buffer against negative effects of the crisis (Poursoleyman, Mansourfar, Hassan & Hodayoun, 2024; Albuquerque et al., 2020), a closer analysis indicates that the moderating role of CSR was non-linear or contingent on the firm's institutional environment (Poursoleyman et al., 2024; Bae et al., 2021). Therefore, the higher incidence of layoffs amongst socially responsible firms during 2020 may be interpreted as financial adjustment within the more severely impacted institutions in response to the crisis.

The rest of this paper is organized as follows. Section II provides a detailed discussion of the data and methodology. Section III presents the findings of the empirical analysis, and Section IV describes the various robustness tests performed. Section V details the results of the propensity score matched (PSM) regressions. Finally, Section VI presents some concluding remarks.

2 Literature review and hypotheses development

CSR and its multitudinous effects on a firm's financial, operational and reputational status have been extensively studied. Higher levels of CSR are associated with higher firm value, profitability, stock returns and operational efficiency (Herremans et al., 1993; Brown, 1998; Graves & Waddock, 1999; Carter et al., 2000; Dowell et al., 2000; Schnietz & Epstein, 2005; Luo & Bhattacharya, 2006; Barnett & Salomon, 2006, etc.). Notably, CSR may have practical benefits that extend beyond the objective of placating discerning stakeholders. Moreover, Cho and Lee (2019) find that performance-boosting CSR increases and becomes more profitable in the presence of efficient managers. Therefore, there is a strong connection between a company's social performance and the strategic and human resources that give it a competitive advantage.

On the other hand, there is a noticeable dearth of literature on the effects of social responsibility or accumulated social capital, on corporate layoff activity, or the manner in which these decisions are communicated. To my knowledge, the only research closely related to the subject is a recent working paper by Collins, Fleishman and Sanchez (2018), which suggests that the relationship between CSR and layoffs may

be positive. They study a sample of S&P 500 firms over the period 1993–2014, and find that while high-CSR firms lay off more employees, they also tend to pay higher severances, and have better disclosures regarding their layoff practices. This evidence supports the theory that a firm's social capital may be leveraged to diminish the negative consequences of its restructuring decisions, affording the firm greater managerial and strategic agility. The resource-based perspective of CSR, which also serves as a reconciliation of sorts between the Friedman doctrine (1970) and Freeman's (1984) Stakeholder theory, provides further groundwork for the claim that CSR unlocks opportunities and resources that facilitate restructuring and downsizing.

CSR has traditionally been situated within two competing theoretical paradigms: Milton Friedman's (1970) shareholder theory, and Freeman's (1984) stakeholder theory. The shareholder theory, rooted in neoclassical economics, argues that a firm's primary responsibility is to maximize shareholder value, with any socially-oriented actions justifiable only insofar as they enhance long-term profitability. In contrast, the stakeholder perspective expands the firm's responsibility to a broader set of stakeholders, including employees, customers, communities, and the environment. From this perspective, CSR reflects a firm's moral and strategic commitment to balance the interests of multiple stakeholder groups, even when such actions do not yield immediate financial returns. These divergent views have often placed CSR at the center of a normative and practical debate over whether firms should prioritize profit or purpose.

Both these theories on CSR suggest that when subject to the same exogenous economic shock, a high-CSR firm might be more inclined to lay off workers than its low-CSR counterpart. Sustainability and building long-term value are the major drivers and focal points of CSR, which should also be reflected in the firm's human resource management and recruitment practices. The Social pillar of CSR comprises several metrics covering employee wellbeing and satisfaction, including health and safety, wages and benefits, diversity and inclusivity, and overtime hours and compensation, which are undoubtedly instrumental in helping firms attract and retain talented workers (Jones et al., 2009; Rodrigo & Arenas, 2008; Ghosh, 2018; Jones et al., 2014; Waples & Brachle, 2020). In turn, CSR is theoretically and empirically linked to employee engagement, productivity, loyalty, and innovativeness (Luo & Du, 2015; Sun & Yu, 2015; Sánchez & Benito-Hernández, 2015; Pérez & del Bosque, 2015; Chen, 2016; Hammon, Willis, & Icenogle, 2023). Moreover, these firms have a significantly lower voluntary turnover rate, especially for female employees (Bode et al., 2015; Leung et al., 2024). The evidence suggests that employees of high-CSR firms would be considered valuable, efficient, and costlier to replace by these firms.

Hypothesis 1 follows from the stakeholder-perspective, and predicts a negative relationship between a firm's past social performance and intensity of layoffs during the COVID-19 period. This hypothesis is mainly motivated by the theoretical arguments and literary evidence that socially responsible practices that promote employee wellbeing also lead to the recruitment and retention of talented workers who increase productive efficiency and would be costlier to replace.

H₁ Firms exhibiting higher ESG performance before the COVID-19 pandemic laid off significantly less employees during the pandemic.

H_{1A} Firms exhibiting higher performance in the Social pillar of ESG before the COVID-19 pandemic laid off significantly less employees during the pandemic.

However, an alternative perspective exists that reframes CSR not as a trade-off between social and financial performance, but as a resource that aligns stakeholder engagement with shareholder wealth. According to the resource-based view of CSR (Wernerfelt, 1984; Barney, 1991), firms achieve sustainable competitive advantage by investing in valuable, inimitable resources that enhance managerial agility, operational adaptability, and strategic flexibility. CSR can be conceptualized as such a resource, especially when it enhances firm reputation, employee commitment, stakeholder trust, and operational resilience (McWilliams & Siegel, 2001; Branco & Rodriguez, 2006). By framing CSR as a resource that contributes to firm-level competencies, the resource-based view serves as a conceptual bridge between shareholder and stakeholder theory. It provides a theoretical justification for firms to invest in socially responsible practices while remaining aligned with the goal of value maximization.

Drawing on the resource-based view of CSR, firms with high social capital possess characteristics that ease the process of conducting layoffs and lessen the financial and reputational impact of downsizing decisions. Managers in high CSR firms are afforded greater agility, allowing these firms to navigate complex problems with higher strategic sensitivity, commitment and resource fluidity (Ivory & Brooks, 2018). High CSR firms are also notably less exposed to financial and legal risk (Godfrey et al., 2009; Jo & Na, 2012; Harjoto & Jo, 2015). These firms have smaller tail risks (Ilhan et al., 2021), systematic risks (Albuquerque et al., 2019), and maintain high provisions for lawsuits despite their reduced likelihood of being sued (Barnett et al., 2018). In addition, the accumulation of social capital accelerates gains in reputation while also acting as a buffer against reputational losses (Godfrey, 2005; Godfrey et al., 2009; Minor & Morgan, 2011; Mocciano Li Destri & Minà, 2024; Cho et al., 2024). This is anecdotally evident in the example documented by Bergström and Diedrich (2011), wherein a company is able to reshape its definition of social responsibility to maintain its reputation after a downsizing event. In brief, the monetary and contingent resources at the disposal of high CSR firms may alleviate the problems associated with downsizing decisions.

The Social category of ESG, which measures commitment to the wellbeing of stakeholders and tracks human rights abuses, is justifiably instrumental in forming expectations regarding the involuntary turnover of employees. The intrinsic costs of employee welfare policies could be disadvantageous during times of economic uncertainty. According to Hong et al. (2012), good employee policies are a luxury afforded by firms with excess cash flow, but they do not significantly factor into the implementation of cash policies. These findings are supported by Ghaly et al. (2015), who report that labor-intensive industries that have greater cash holdings are more likely to enforce employee friendly practices. If the firm's sensitivity to cash flow volatility increases during a crisis (Song & Lee, 2012), investments in employee welfare would also suffer, supporting an increased likelihood or incidence of layoffs among high-CSR firms.

Moreover, because workforce reductions are the result of critical executive and managerial decision-making, it is worth analyzing the effects of a company's historical corporate governance on its layoff activity during the pandemic. For the purposes of this study, it is interesting to note that better corporate governance has been shown to mitigate the negative effects of weak ethical reputation (Cormier & Magnan, 2017), and changes to reputation caused by restructuring decisions. Larger and more independent boards reduce the negative impact of workforce reductions on post-acquisition operating performance (Malikov et al., 2021), and investor protections have been shown to reduce the effectiveness of union laws (Atanassov & Kim, 2009). Managerial entrenchment has also been demonstrably linked to better employee treatment (Cronqvist et al., 2007). Additionally, none of the corporate governance measures tracked by Refinitiv's Governance category score can be expected to act as deterrents for layoffs. In short, elements of good corporate governance can facilitate and incentivize restructuring decisions.

Based on these arguments, the set of competing hypotheses can be stated as follows:

- H₂** Firms exhibiting higher ESG performance before the COVID-19 pandemic laid off significantly more employees during the pandemic.
- H_{2A}** Firms exhibiting higher performance in the Social pillar of ESG before the COVID-19 pandemic laid off significantly more employees during the pandemic.
- H_{2B}** Firms exhibiting higher performance in the Governance pillar of ESG before the COVID-19 pandemic laid off significantly more employees during the pandemic.

3 Data and methodology

The data used in this study comprises publicly traded U.S. firms with total assets greater than \$1 million. All firm- and board-specific variables, as well as the variables related to ESG and employee turnover, are obtained from Thomson Reuter's Refinitiv database. Data for the variable *Announced layoffs* is supplemented with layoff disclosures from the WARN (Worker Adjustment and Retraining Notification) database, and media coverage of mass layoffs manually obtained via Bloomberg and EBSCO. Additionally, indicator variables tracking COVID-19 related policies are used to control for exogenous explanatory factors, and are provided by the Oxford Covid-19 Government Response Tracker.² The final sample consists of 3,011 firms over the period 2013–2020.

² The Oxford Covid-19 Government Response Tracker is part of the working paper *Variation in US states' responses to Covid-19* (Hallas et al. 2020), and the data and documentation for the project is available online at: <https://github.com/OxCGRT/USA-covid-policy>.

3.1 Announced layoffs

The dependent variable in this study is the natural logarithm of the number of layoffs announced by a firm in a given year scaled by total employees, and represents involuntary employee turnover. Since the data for corporate layoffs on Thompson Reuters is incomplete and not up to date, the baseline series is heavily supplemented by hand-collected data from the WARN (Worker Adjustment and Retraining Notification) database, which provides a record of recent mass layoffs disclosed in accordance with the federal law of the same name. However, since all layoff events may not meet the legal conditions for mandatory disclosures, the WARN database itself cannot be considered a complete record of corporate layoffs. Therefore, as a final step, I supplement the data using media coverage regarding mass layoffs obtained from Bloomberg. The resulting variable should sufficiently approximate the magnitude and variation in job losses of the population, and therefore, missing values that correspond to instances where no layoffs were reported are replaced with zero. As an alternate specification of the estimation, a dummy variable indicating non-zero or non-missing values is used to indicate the incidence of layoffs.

It is important to acknowledge that this approach does not fully address potential reporting bias arising from undisclosed layoffs in firms with lower levels of transparency. This limitation is further considered later in the study, in the third specification of the robustness tests in Chap. 5, where the sample is restricted to exclude firms with non-zero or missing values in announced layoffs.

3.2 Past CSR performance and the COVID-19 dummy

The independent variables in this study - the proxies for a firm's prior corporate social performance - are constructed using the overall ESG (Environmental, Social and Governance) score, the Social score, and the Corporate Governance score. The Thomson Reuter's overall ESG score captures firm-level ESG performance across 178 selected data points. The Social score is the aggregate of its category (Workforce, Human Rights, Community and Product Responsibility) scores, and the Governance score is the aggregate of its category (Management, Shareholders and CSR Strategy) scores. All three scores are time-varying and range from 0 to 100.

To measure past CSR, I create a dummy variable that indicates whether a firm's average ESG score has been higher than its industry median over the period 2013–2019. CSR activities and reporting during 2020 are not included in the construction of the treatment group due to evidence that firms may deviate from their standard levels of social responsibility and cut back on investment in social capital to reallocate finances, or alternatively, ramp up their social performance to rebuild trust in economic crises (Garcia-Benau et al., 2013). Similar dummy variables are used to indicate a relatively higher prior Social performance, and a relatively higher prior Corporate Governance performance. These dummy variables are *ESG Treated*, *Social Treated*, and *Governance Treated* respectively. Additionally, a dummy variable is used to indicate the year 2020. The products of this dummy, *COVID-19*, with each of the treatment groups produce the difference-in-difference interaction terms.

3.3 Control variables, descriptive statistics, and correlation coefficients

The choice of control variables is influenced by prior studies in human resource management and decision-making in related contexts (e.g., Fauver et al., 2018; Collins et al., 2018; Cao & Rees, 2020; Demers et al., 2021). These variables account for factors that may independently influence layoff decisions, and include firm-level characteristics, board-specific factors, industry characteristics, and regional COVID-19 response measures.

More specifically, firm-level control variables are selected as follows. Size may influence the likelihood or scale of layoffs, because larger firms possess greater resource buffers, diversified operations, and formalized HR structures (De Meulenaere, Winne & Vanormelingen, 2021; Hancock et al., 2013). Larger firms may also be more visible and subject to greater stakeholder scrutiny, potentially affecting the reputational costs of workforce reductions. Profitability serves as a proxy for financial health, with more profitable firms arguably facing less pressure to engage in cost-cutting through layoffs (Jensen, 1986). Leverage is included to account for financial constraints. Highly leveraged firms may have fewer options for absorbing external shocks and may be more likely to resort to reductions in workforce costs to preserve liquidity and meet debt obligations (Titman & Wessels, 1988). Sales growth captures expectations of future operating performance. Firms experiencing strong pre-crisis growth may be more inclined to retain employees due to optimistic demand forecasts or greater slack resources, whereas those with declining sales may face stronger pressures to downsize. Asset tangibility, or the ratio of fixed assets to total assets, reflects operational flexibility. Firms with more tangible assets may be in capital-intensive industries where labor is less variable, or may have lower labor intensity, influencing their response to shocks.

Board-specific controls include board size and board gender diversity. Board size is commonly associated with decision-making efficiency and oversight. Larger boards may experience coordination difficulties or slower crisis response, potentially impacting how layoff decisions are made (Yermack, 1996). Board gender diversity, which can affect firm sensitivity to stakeholder concerns including employee welfare (Arayakarnkul et al., 2022), may also moderate layoff decisions.

Industry exposure to COVID-19, captured through dummies for high-exposure and low-exposure sectors, controls for sector-specific variations in vulnerabilities to pandemic-related economic shocks.³ Lastly, the regressions include controls for state-level COVID-19 policies that could potentially affect work-life balance, commute, and consumption. These policies include the observed levels of state-wide enforcement of schools closing, workplaces closing, stay-at-home restrictions, and the policy of income support via monetary remunerations. Controls based on these policies are defined in Table 1. All continuous and discrete non-indicator variables are winsorized at the 1% and 99% levels.

³ According to S&P Global Market Intelligence, industries affected from a probability of default perspective include Airlines, Automobiles, Energy Equipment & Services, Hotels, Restaurants and Leisure, and Specialty Retail as the most adversely impacted industries, and Health Care Equipment & Supplies, REITs, Life Sciences Tools & Services, Pharmaceuticals and Communications Equipment as the least adversely impacted industries.

Table 1 US State-wide COVID-19 policy measures (Oxford Covid-19 Government Response Tracker Codebook, Hallas et al. (2021))

Variable Name	Description	Measurement	Coding
C1 - Schools Closing	Record closings of schools and universities	Ordinal scale	0 - no measures 1 - recommend closing or all schools open with alterations resulting in significant differences compared to non-Covid-19 operations 2 - require closing (only some levels or categories, e.g. just high school, or just public schools) 3 - require closing all levels Blank - no data
C2 - Workplace Closing	Record closings of workplaces	Ordinal scale	0 - no measures 1 - recommend closing (or recommend work from home) or all businesses open with alterations resulting in significant differences compared to non-Covid-19 operation 2 - require closing (or work from home) for some sectors or categories of workers 3 - require closing (or work from home) for all-but-essential workplaces (e.g. grocery stores, doctors) Blank - no data
C6 - Stay at home requirements	Record orders to “shelter-in-place” and otherwise confine to the home	Ordinal Scale	0 - no measures 1 - recommend not leaving house 2 - require not leaving house with exceptions for daily exercise, grocery shopping, and ‘essential’ trips 3 - require not leaving house with minimal exceptions (e.g. allowed to leave once a week, or only one person can leave at a time, etc.) Blank - no data
E1 - Income support	Record if the government is providing direct cash payments to people who lose their jobs or cannot work. Note: only includes payments to firms if explicitly linked to payroll/salaries	Ordinal scale	0 - no income support 1 - government is replacing less than 50% of lost salary (or if a flat sum, it is less than 50% median salary) 2 - government is replacing 50% or more of lost salary (or if a flat sum, it is greater than 50% median salary) Blank - no data

Table 2 displays the descriptive statistics for the variables employed in this study. The ESG measures of the firms in our sample are positively skewed. The average ESG score is only 38.04 out of 100, the average Social score is 40.69 and the average Corporate Governance score is 46.61. Missing values of *Announced layoffs* are replaced with 0, and most firm-years in this sample did not announce layoffs. The variable has a mean value of 52.03. Finally, the firms in the sample are relatively small (with median total assets around \$512 million), moderately profitable (with median ROA around 1%), have low leverage (with median debt to assets around 0.17), and are relatively young (with median firm age of 16 years, and mean age of

Table 2 Descriptive statistics

<i>Variables</i>	25th	Median	Mean	75th	St.Dev	No. of observations
<i>Measures of CSR</i>						
ESG Score	23.61	34.32	38.04	49.92	18.84	16,689
Social Score	25.01	37.39	40.69	53.88	20.45	16,689
Governance Score	28.34	46.69	46.61	64.75	22.53	16,689
<i>Measures of Employee Turnover</i>						
Announced layoffs	0.00	0.00	52.03	0.00	1038.68	55,434
<i>Control Variables</i>						
Size	50,300	512,000	5,980,000	2,680,000	20,000,000	42,991
Profitability	-0.14	0.01	-0.51	0.05	2.41	42,829
Leverage	0.01	0.17	0.37	0.39	0.91	42,691
Hi-Exposure	0.00	0.00	0.04	0.00	0.21	55,434
Low-Exposure	0.00	0.00	0.06	0.00	0.25	55,434
Sales growth	0.00	1.00	0.64	1.00	0.47	55,434
Age	7.00	16.00	21.23	28.00	21.81	51,976
Tangibility	0.19	0.38	0.45	0.73	0.31	36,748
Board size	8.00	9.00	9.34	11.00	2.57	16,663
Board diversity	11.11	16.66	17.61	25.00	11.52	16,663
Schools closing	2.26	2.33	2.38	2.41	0.32	51,671
Workplace closing	1.51	1.97	1.74	2.00	0.51	51,671
Stay-home requirements	1.00	1.05	1.04	1.22	0.41	51,671
Income support	0.41	1.00	1.01	2.01	0.76	51,671

This table reports the descriptive statistics for our dependent variables (measures of employee turnover), independent variables (ESG score and the Social and Governance category scores), and all control variables used in the analysis. The employee turnover measure, *Announced layoffs*, is represented here in its raw form and later scaled by total employees and log-transformed for the regressions. The ESG measures, *ESG score*, *Governance score* and *Social score* range from 0–100, and are obtained from Thomson Reuter's Refinitiv database. The control variables include *Size* (total assets in thousands), *Profitability* (the ratio of net income to total assets), *Leverage* (the ratio of total debt to total assets), *Hi-Industry* (a dummy variable for industries that were significantly exposed to the negative effects of the pandemic), *Low-Industry* (a dummy variable for industries least affected by the pandemic), *Sales growth* (a dummy variable for positive annual change in sales), *Tangibility* (the ratio of fixed assets to total assets), *Age* (the natural logarithm of firm age), *Tangibility* (the ratio of fixed assets to total assets), *Board size* (the number of board members), *Board diversity* (the percentage of female board members), *Schools closing* (an indicator of the policies of schools closing due to COVID-19), *Workplaces closing* (an indicator of the policies of workplaces closing due to COVID-19), *Stay home requirements* (an indicator of the restrictions on travelling outside the home due to COVID-19), and *Income support* (an indicator of the extent of income supplementation provided by the government due to COVID-19)

21.23 years). The sample contains large variations across all notable firm characteristics, and therefore likely provides a measure of mitigation against selection bias.

With respect to COVID-related state-wide policies, firms in the sample are situated in states that had moderate to high enforcement of the closure of schools and workplaces (with a mean score of 2.33 and 1.97 out of 3.00 respectively), but did not sufficiently enact stay-at-home requirements (with a mean score of 1.05 out of 3.00). Similarly, the provision of income support across these states is lower than the expected value (with a mean score of 1.00 out of 3.00).

Table 3 reports the pairwise correlation coefficients between ESG and all right-hand-side variables. ESG-related category scores, presenting similar coefficients to the ESG score, are excluded from this table to facilitate presentation. The ESG score,

Table 3 Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) ESG score	0.01											
(2) COVID-19	0.08*	0.10*										
(3) Announced layoffs	0.57*	0.06*	-0.04*									
(4) Size	0.17*	0.04*	-0.03*	0.48*								
(5) Profitability	0.07*	-0.03*	0.01	-0.32*	-0.60*							
(6) Leverage	-0.02*	-0.01	-0.01	0.01	0.02*	0.01*						
(7) Hi-Exposure	0.03*	0.01	0.01	0.16*	0.05*	-0.01	-0.06*					
(8) Low-Exposure	-0.07*	-0.01	-0.01	-0.10*	-0.06*	0.01	-0.15*	-0.01*				
(9) Sales growth	0.28	0.01	-0.02*	0.22*	0.10*	-0.06*	0.01	-0.00	-0.15*			
(10) Age	-0.16*	-0.12*	0.01	-0.22*	-0.18*	0.05*	-0.09*	-0.03*	0.33*	-0.34*		
(11) Tangibility	0.38*	-0.07*	0.01	0.58*	0.14*	-0.01	-0.04*	-0.05*	0.03*	0.28*	0.17*	
(12) Board size	0.37*	0.18*	0.06*	0.21*	0.06*	0.01	-0.04*	-0.01	0.01	0.08*	-0.04*	0.17*

This table presents the correlation coefficients for the dependent and independent variables used in the main analysis. For brevity, *ESG score* is the only measure of CSR whose coefficients are tabulated here. The dependent variable, *Announced layoffs* is the natural log of the ratio of layoffs to total employees. *Size* is the natural log of total assets, *Profitability* is the ratio of net income to total assets, *Leverage* is the ratio of total debt to total assets, *Hi-Exposure* is a dummy variable indicating whether the firm belongs to an industry that was significantly affected by the COVID-19 pandemic, and similarly, *Low-Exposure* is a dummy variable indicating whether the firm belongs to one of the industries least affected by the COVID-19 pandemic. *Sales growth* is a dummy variable indicating whether the annual percentage change in sales was positive. *Age* is the natural log of the number of years since the firm was founded. *Tangibility* is the natural log of the ratio of fixed assets to total assets. *Board size* is the number of members on the board of directors and *Board diversity* is the percentage of female members on the board of directors

the primary treatment variable in this study, is positively correlated with firm size, profitability, leverage, age, board size, and board diversity, an observation that is consistent with prior literature (Ho & Taylor, 2007; Gamerschlag et al., 2010; Michelon & Parbonetti, 2012). Interestingly, the ESG score is significantly and positively correlated with announced layoffs, suggesting that the contemporaneous relationship between these variables is consistent with hypothesis 2. With the exception of the coefficient of size, none of the correlations with the ESG score are particularly large in magnitude, and all predictor coefficients preclude concerns of multi-collinearity.

4 Empirical results

As a precursor to the multivariate analysis, I perform tests of equality for the means and medians of the dependent variable and all control variables across samples of firms with a high and low prior ESG rating. The firms are split into two subsamples based on their corporate social performance relative to that of their industries over the period 2013–2019. Firms with a higher average ESG score than their industry median are assigned to the “high-CSR” group, and the remaining firms are assigned to the “low-CSR” group. Finally, two sets of univariate analysis are performed, and the results of these tests are tabulated in Table 4.

Panel A of Table 4 reports the means, medians, and the differences in these statistics for the dependent and independent variables across groups of high- and low-CSR firms over the entire sample period. Announced layoffs are significantly higher for firms with a higher prior corporate social performance, once again indicating that employees may not be among the most salient groups of stakeholders in these companies. Unsurprisingly, the average high-CSR firm is larger than the average low-CSR firm, although the median of the former group is smaller, suggesting the prevalence of good CSR practices in growing businesses. High-CSR firms are also significantly more profitable, have higher tangibility, and larger and more diverse boards of directors in our sample.

Panel B of Table 4 reports the results of the same univariate analysis of the means and median of all variables for high-CSR firms against the remainder of the sample for the year 2020. Similar to the previous results, the average number of layoffs reported for high-CSR firms during the pandemic were significantly higher than the average number of layoffs reported for low-CSR firms. Furthermore, it is interesting to note that while high-CSR firms were less likely to experience a drop in sales during the economic crisis brought on by the pandemic, these firms were significantly less profitable on average in 2020. High-CSR firms were less likely to belong to an industry severely impacted by the economic effects of the pandemic, yet the drop in profitability suggests that they failed to strategize and adapt to the crisis. This indicates that profitability may not be the primary motive for the greater number of employee layoffs in high-CSR firms.

To empirically investigate the role of past CSR performance on employee layoffs during the COVID-19 pandemic, I employ a difference-in-difference methodology within fixed-effects panel regressions. The left-hand-side variables in two iterations of the same regression are the natural logarithm of announced layoffs scaled by total

Table 4 Univariate analysis

<i>PANEL A</i>	Mean-1	Median-1	Mean-0	Median-0	Difference in Means	Difference in Medians
<i>Dependent Variable</i>						
Announced layoffs	321.46	0.00	33.12	0.00	288.34*	0.00*
<i>Control Variables</i>						
Size	14,000,000	400,000	10,000,000	520,000	3,200,000	-120,000
Profitability	-0.29	-0.01	-0.53	0.01	0.23*	-0.02*
Leverage	0.31	0.16	0.37	0.17	-0.06*	0.00
Hi-Exposure	0.04	0.00	0.05	0.00	-0.01*	0.00*
Low-Exposure	0.06	0.00	0.06	0.00	-0.01	0.00
Sales growth	0.64	1.00	0.64	1.00	0.00	0.00
Age	21.39	15.00	21.22	16.00	0.17	-1.00
Tangibility	0.48	0.41	0.44	0.38	0.03*	0.04*
Board size	9.61	9.00	9.32	9.00	0.28*	0.00*
Board diversity	24.86	25.00	16.95	16.67	7.91*	8.33*
<i>PANEL B</i>	Mean-1	Median-1	Mean-0	Median-0	Difference in Means	Difference in Medians
<i>Dependent Variable</i>						
Announced layoffs	67.29	0.00	18.79	0.00	48.50	0.00*
<i>Control Variables</i>						
Size	13,000,000	330,000	7,100,000	800,000	5,500,000	-480,000*
Profitability	-0.71	0.01	-0.15	0.01	-0.56	0.00*
Leverage	0.43	0.18	0.26	0.14	0.16	0.03*
Hi-Exposure	0.04	0.00	0.05	0.00	-0.01	0.00*
Low-Exposure	0.06	0.00	0.06	0.00	-0.01	0.00
Sales growth	0.65	1.00	0.62	1.00	0.03	0.00*
Age	20.89	15.00	21.94	17.00	-1.04	-2.00*
Tangibility	0.47	0.40	0.41	0.34	0.06	0.06*
Board size	10.16	10.00	8.51	8.00	1.65	2.00*
Board diversity	20.29	20.00	14.84	14.28	5.45	5.71

This table reports the results of the univariate analysis for the dependent and control variables across samples of high- and low-ESG firms respectively. Panel A reports the full sample means, medians and differences in means and medians for firms that outperformed (Columns I & II) and underperformed (Columns III & IV) the industry in CSR over the period 2013–2019, while Panel B reports the same statistics across the same subsamples of firms for the year 2020. The dependent variable, *Announced layoffs*, is the number of layoffs announced by a firm in a given year. The control variables include *Size* (total assets in thousands), *Profitability* (the ratio of net income to total assets), *Leverage* (the ratio of total debt to total assets), *Hi-Industry* (a dummy variable for industries that were significantly exposed to the negative effects of the pandemic), *Low-Industry* (a dummy variable for industries least affected by the pandemic), *Sales growth* (a dummy variable for positive annual change in sales), *Tangibility* (the ratio of fixed assets to total assets), *Board size* (the number of board members), *Board diversity* (the percentage of female board members), *Schools closing* (an indicator of the policies of schools closing due to COVID-19), *Workplaces closing* (an indicator of the policies of workplaces closing due to COVID-19), *Stay home requirements* (an indicator of the restrictions on travelling outside the home due to COVID-19), and *Income support* (an indicator of the extent of income supplementation provided by the government due to COVID-19)

employees, and a dummy variable that indicates whether the layoffs for a given firm year were non-zero. The independent variables of interest include *High-[CSR measure]*, which includes *High-ESG*, the treatment group of firms with a high prior ESG ratings (constructed as a dummy variable that indicates whether the 2013–2019 firm-average ESG scores were higher than the industry median), *High-Social*, the treatment group of firms with a high prior Social category rating, *High-Governance*, the treatment group of firms with a high prior Corporate Governance category rating, a dummy variable for the year 2020 called *COVID-19*, and the interaction of the *High-[CSR measure]* and *COVID-19*. The empirical setup is defined by the following equation:

$$\begin{aligned} \text{Announced layoff } f s_{i,t} &= \alpha + \beta_1(\text{COVID} - 19)_{i,t} + \beta_2(\text{High} - [\text{CSR measure}]_{i,t} \\ &\quad + \beta_3(\text{COVID} - 19 \times \text{High} - [\text{CSR measure}]_{i,t} \\ &\quad + \beta_{4-12}(\text{Firm} - \text{specific controls})_{i,t} \\ &\quad + \beta_{13-16}(\text{State} - \text{specific COVID policies})_{i,t} \\ &\quad + \mu(\text{Industry fixed} - \text{effects})_i + \delta(\text{Year fixed} - \text{effects})_t + \varepsilon_{i,t}, \end{aligned} \quad (1)$$

where the dependent variable, *Announced layoffs*, is measured as either the natural logarithm of scaled layoffs, or a dummy variable indicating non-zero layoffs. When studying the effects of a firm's prior performance in the Social and Corporate Governance categories specifically, the variable *High-ESG* is replaced by *High-Social* and *High-Governance* respectively. The firm-specific controls include *Size*, the natural logarithm of total assets; *Profitability*, the ratio of net income to total assets; *Leverage*, the ratio of total debt to total assets; *High-Industry*, a dummy variable that indicates whether the industry was heavily impacted by the COVID-19 pandemic⁴; *Low-Industry*, a dummy variable that indicates whether the industry was among those least impacted by the COVID-19 pandemic³; *Sales growth*, a dummy variable indicating a positive annual change in sales; *ln(Age)*, the natural logarithm of firm age; *ln(Tangibility)*, the natural logarithm of the ratio of fixed assets to total assets; *Board size*, the number of members on the board of directors; and *Board diversity*, the percentage of female board members. The state-specific COVID-19 policies that are controlled for include the containment and closure policies of *Schools closing*, *Workplace closing*, and *Stay-home requirements*, all measured on a scale of 0–3 for increasing levels of strictness; and the economic policy *Income support*, measured on a scale of 0–2, where 0 is no support, and 2 is the supplementation of 50% or more lost salary by the government. μ & δ represents the inclusion of industry fixed-effects, defined by the first digit of the Standard Industrial Classification (SIC) codes, and year fixed-effects respectively. The results of this regression are displayed in Table 5.

⁴ The variables *High-Industry* and *Low-Industry* are based on credit risk rankings published by S&P Global Market Intelligence in the article "Industries Most and Least Impacted by COVID19 from a Probability of Default Perspective". The top five adversely impacted industries include Airlines, Leisure Facilities, Oil & Gas Drilling, Auto Parts & Equipment and Restaurants. The five least adversely impacted industries include Specialized REITs, Property & Casualty Insurance, Multi-line Insurance, Life & Health Insurance & Industrial REITs. These industries are matched to the nearest related SIC code in this sample.

Article available online: <https://www.spglobal.com/marketintelligence/en/news-insights/blog/industries-most-and-least-impacted-by-covid19-from-a-probability-of-default-perspective-september-2020-update>.

The results reported in Column I of Table 5 correspond to the first baseline regression as specified in Eq. (1) without year fixed-effects. The coefficients of *High-ESG* and the interaction variable *COVID-19 x High-ESG* are both positive and significant, indicating that firms with a high prior corporate social performance laid off significantly more employees than their peers overall and during the COVID-19 unemployment crisis. Specifically, high-CSR firms were on average 1.69 times more likely to lay off employees than low-CSR firms, and this multiplier dropped to 1.50 during 2020. Moreover, the regression results also illustrate the severity of job losses during the pandemic: the COVID-19 coefficient signifies that firms in the control group laid off 2.14 times more employees on average during 2020 than in any of the seven preceding years. Lastly, it is once again worth noting that the significant, negative coefficient of end-of-period profitability possibly belies the notion that layoffs successfully salvaged performance and appeased shareholders.

Column II of Table 5 reports the results of the regression specified by Eq. (1) with the addition of year fixed effects. The variable COVID-19 reports the coefficients of the dummy variable for the year 2020, the dummy for the year 2019 has been excluded from this regression, and the remaining dummy variables are left un-tabulated. This alternate specification further facilitates the interpretation of the *COVID-19* dummy, and increases the robustness of the estimation against the effects of undetermined time-varying factors. The coefficients for *High-ESG* and *COVID-19 x High-ESG* obtained from the fixed effects model are consistent with those reported in Column I, and together they predict that high-CSR layoffs were higher by a similar factor of 1.73. The inclusion of year fixed-effects only serves to increase the determined likelihood of layoffs in high-CSR firms relative to low-CSR firms.

Finally, the regression specified by Eq. (1) is repeated using a dummy in place of the dependent variable. The *Announced layoffs* (dummy) variable indicates whether a given firm year has observed non-zero layoffs. This alternate approach alleviates concerns arising from potential inaccuracies in the data and further eliminates variation due to the size of the firm, but increases vulnerability to erroneous missing values. The results of this estimation are consistent with the previous two regressions. The coefficients of *High-ESG* and *COVID-19 x High-ESG* together indicate that employees in high-CSR firms are 7% more likely to get laid off, and the coefficient of the interaction term alone suggests that these firms were 4.3% more likely to lay off employees during the first year of the pandemic. The coefficients of the remaining explanatory variables are also comparable to the coefficients of these variables in the first two regressions.

Furthering the analysis, I determine whether past performances in the “Social” and “Corporate Governance” dimensions of CSR both individually impacted employee turnover during the pandemic. Since attitudes toward employee welfare are most relevant to the Social category, it is worth investigating the extent to which it contributes to the results in Table 5. The dummy variable *High-Social* indicates whether a firm’s past average performance in the Social category of CSR over the period 2013–2019 has been higher than the industry median, and the product of *High-Social* and *COVID-19* is the interaction term in the second set of regressions. The remaining variables are identical to those of Eq. (1), and the specifications correspond to the models tested in Table 5. The results of these regressions are reported in Table 6.

Table 5 COVID-19 Layoffs in ESG-Treated firms

Variables	Announced layoffs		
	I	II	III
Constant	-6.870*** (-13.37)	-5.963*** (-12.32)	-0.999*** (-13.94)
COVID-19	0.764*** (14.70)	0.528*** (5.48)	0.145*** (15.96)
High-ESG	0.120*** (3.43)	0.037 (1.09)	0.027*** (4.90)
COVID-19 x High-ESG	0.406*** (4.51)	0.512*** (5.63)	0.043*** (2.93)
Size	0.292*** (13.96)	0.263*** (12.90)	0.043*** (14.33)
Profitability	-0.462*** (-4.16)	-0.448*** (-4.00)	-0.067*** (-4.16)
Leverage	-0.285*** (-3.61)	-0.214*** (-2.77)	-0.037*** (-2.89)
Hi-Industry	0.088 (0.97)	0.064 (0.69)	0.011 (0.78)
Low-Industry	-0.452*** (-7.69)	-0.474*** (-8.01)	-0.070*** (-7.60)
Sales growth	-0.145*** (-3.21)	-0.147*** (-3.24)	-0.022*** (-3.23)
Ln(Age)	0.092*** (2.92)	0.071** (2.26)	0.017*** (3.88)
Ln(Tangibility)	-0.027*** (-6.94)	-0.023*** (-5.91)	-0.004*** (-6.98)
Board size	0.015 (1.45)	0.013 (1.25)	0.002 (1.26)
Board diversity	0.001 (1.08)	0.005*** (3.41)	0.000 (0.47)
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	No	Yes	No
No. Of Observations	16,271	16,271	16,271
F-Statistic	48.66***	50.43***	59.53***
Adjusted R ²	0.189	0.231	0.189

This table reports the results of the difference-in-difference analysis of the layoff activity of low- and high-ESG firms. The dependent variable is the natural logarithm of the number of announced layoffs adjusted by total employees. The treatment group is determined by the difference in a firm's corporate social performance over the period 2013–2019 and the median corporate social performance of its industry. The treatment group is interacted with a dummy for the year 2020. Column I depicts the results of the regression specified by Eq. (1). The results reported in Column II are obtained by including year-fixed effects in the regression. Column III replaces the dependent variable with a dummy for non-zero layoffs. The control variables are as follows: *Size* is the natural logarithm of total assets, *Profitability* is the ratio of net income to total assets, *Leverage* is the ratio of total debt to total assets, *Hi-Industry* is a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, *Low-Industry* is a dummy variable for industries least affected by the pandemic, *Sales growth* is a dummy variable for positive annual change in sales, *Ln(Age)* is the natural logarithm of the firm's age, *Ln(Tangibility)* is the natural logarithm of the ratio of fixed assets to total assets, *Board size* is the number of members on the board of directors, and *Board diversity* is the percentage of female members on the board of directors. The t-statistics (in parenthesis) are based on robust standard errors adjusted for heteroscedasticity and clustered at the firm level. *, ** & *** denote statistical significance at the 10%, 5% and 1% levels respectively

Column I of Table 6 reports the results of the baseline regression testing the difference in COVID-19 layoffs across low- and high-Social firms. The coefficients of *High-Social* and *High-Social x COVID-19* are consistent with the original results, and the difference-in-difference variable is similarly positive and significant at 1%. The percentage of employees laid off in firms with a history of good Social performance is 1.61 times higher than in the control group, and is specifically 1.39 times higher during 2020. Columns II & III of Table 6 display the coefficient estimates for the regressions including year fixed effects and a dummy replacement for *Announced layoffs* respectively. Both sets of coefficients are consistent with those reported in Column I. Consistent with the hypothesis 2B, historical Social performance does not seem to be a deterrent to corporate layoffs. Moreover, the coefficients of the high-Social treatment group are only slightly smaller than the coefficients for the overall ESG treatment group, signifying that much of the difference in layoffs observed across high- and low-CSR firms can be attributed to the Social category of ESG.

Lastly, I reconstruct the treatment group to include firms whose Corporate Governance score is higher than the industry median over the period 2013–2019. The results of the regression using the *High-Governance* treatment are reported in Table 7. The coefficient estimates of *High-Governance* and *COVID-19 x High-Governance* are the lowest reported out of the three treatment groups, indicating that Corporate Governance has by far the weaker connection to layoffs. Firms with high Corporate Governance were only 1.26 times more likely to lay off employees than their peers, and this relationship is only significant at 10%. Moreover, this factor drops to 1.17 during the first year of the pandemic. As depicted in Column II, the inclusion of year fixed-effects renders this relationship insignificant. When estimating the effects on the absolute incidence of layoffs (i.e. the dummy replacement specification in Column III), the difference between the treatment and control groups is negligible in magnitude.

Additionally, the coefficient estimates of the control variables remain consistent across all regression specifications and further elucidate the relationship between the represented firm characteristics and layoffs. Firm size has a high, positive coefficient, which is likely evidence of a selection bias among layoff disclosures in media reports. On the other hand, the consistently negative, significant coefficients for profitability can be interpreted in a more straightforward manner. Layoffs likely coincide with periods of financial distress or a reduction in the scale of operations. Moreover, measures to cut the workforce are either not undertaken with the purposes of boosting benchmark levels of performance, or likely fail to do so. Finally, the contrast between the non-significant coefficients of *Hi-Industry* and the significantly negative coefficients of *Low-Industry* suggests that layoffs occurred indiscriminately across industries that were not, by their very nature and purpose, shielded from the effects of the pandemic.

5 Robustness tests

I perform several robustness tests to alleviate concerns regarding the validity of the results detailed in the previous section, and the coefficient estimates obtained for the interaction term COVID-19 x (ESG Measure) are reported in Table 12 of the [Appendix](#).

Table 6 COVID-19 Layoffs in Social-treated firms

Variables	Announced layoffs		
	I	II	III
Constant	-6.821*** (-13.39)	-5.963*** (-12.32)	-0.994*** (-13.91)
COVID-19	0.792*** (14.99)	0.638*** (6.27)	0.151*** (16.21)
High-Social	0.147*** (4.13)	0.086** (2.45)	0.031*** (5.38)
COVID-19 x High-Social	0.331*** (3.70)	0.415*** (4.59)	0.030*** (2.04)
Size	0.289*** (13.90)	0.259*** (12.80)	0.042*** (14.23)
Profitability	0.451*** (-4.17)	-0.438*** (-4.01)	-0.065*** (-4.17)
Leverage	-0.285*** (-3.64)	0.212*** (-2.75)	-0.037*** (-2.96)
Hi-Industry	0.080 (0.88)	0.058 (0.64)	0.009 (0.67)
Low-Industry	-0.455*** (-7.73)	-0.477*** (-8.05)	-0.070*** (-7.62)
Sales growth	-0.149*** (-3.30)	-0.148*** (-3.31)	-0.022*** (-3.33)
Ln(Age)	0.101*** (3.23)	0.077** (2.47)	0.018*** (4.27)
Ln(Tangibility)	-0.025*** (-6.44)	-0.021*** (-5.45)	-0.004*** (-6.45)
Board size	0.017 (1.62)	0.014 (1.34)	0.002 (1.50)
Board diversity	0.002 (1.36)	0.005*** (3.53)	0.001 (0.84)
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	No	Yes	No
No. Of Observations	16,271	16,271	16,271
F-Statistic	47.03***	49.77***	58.09***
Adjusted R ²	0.183	0.206	0.169

This table reports the results of the difference-in-difference analysis of the layoff activity of low- and high-Social firms. The dependent variable is the natural logarithm of the number of announced layoffs adjusted by total employees. The treatment group is determined by the difference in a firm's performance in the Social category of ESG over the period 2013–2019 and the median performance in the Social category for its industry. The treatment group is interacted with a dummy for the year 2020. Column I depicts the results of the regression specified by Eq. (1). The results reported in Column II are obtained by including year-fixed effects in the regression. Column III replaces the dependent variable with a dummy for non-zero layoffs. The control variables are as follows: *Size* is the natural logarithm of total assets, *Profitability* is the ratio of net income to total assets, *Leverage* is the ratio of total debt to total assets, *Hi-Industry* is a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, *Low-Industry* is a dummy variable for industries least affected by the pandemic, *Sales growth* is a dummy variable for positive annual change in sales, *Ln(Age)* is the natural logarithm of the firm's age, *Ln(Tangibility)* is the natural logarithm of the ratio of fixed assets to total assets, *Board size* is the number of members on the board of directors, and *Board diversity* is the percentage of female members on the board of directors. The t-stats (in parenthesis) are based on robust standard errors adjusted for heteroscedasticity and clustered at the firm level. *, ** & *** denote statistical significance at the 10%, 5% and 1% levels respectively

Firstly, I confirm that the coefficient estimates are not a product of the specific combination of the control variables used in Eq. (1). I therefore substitute the control variables size, ROA, leverage, sales growth and tangibility with new or alternatively calculated variables. When these variables are replaced with the natural log of the market value of equity, ROE, the natural log of the ratio of CAPEX and total assets, and the ratio of intangible assets and total assets respectively, the subsequent regression estimations are comparable to those reported in Tables 5, 6 and 7. Specifically, the coefficients of the interaction terms *COVID-19 x High-ESG*, *COVID-19 x High-Social* and *COVID-19 x High-Governance* are all positive and statistically significant. According to the results obtained via the alternate controls specification, the proportion of employees laid off during the pandemic is 1.52 times higher in high-CSR firms, 1.42 times higher in high-Social firms, and 1.22 times higher in high-Governance firms.

Secondly, it is worth noting that a company's past ESG performance is a backward looking variable – or one that is based on historical information. Since the contemporaneous ESG rating does not factor into the construction of the treatment variable, concerns about reverse causality between layoffs in 2020 and prior ESG ratings need not be entertained. Nevertheless, it is possible that the use of contemporaneous firm characteristics as control variables disguises the effect of an unobservable endogenous element. Therefore, the regressions specified by Eq. (1) are repeated using lagged control variables. For each of the three interaction terms, *COVID-19 x High-ESG*, *COVID-19 x High-Social* and *COVID-19 x High-Governance*, the coefficient estimates remain positive and statistically significant. Specifically, under the updated regression specifications, high-ESG firms were 1.74 times more likely to lay off employees in 2020. Meanwhile, high-Social firms were 1.58 times more likely, and high-Governance firms were 1.27 times more likely to lay off employees during the pandemic. Moreover, the relationship between observed layoffs and firm-specific characteristics remains consistent with the original results when these characteristics were lagged in the regressions.

Thirdly, there is a possibility that the observed positive coefficients are produced due to a reporting bias in the dependent variable, *Announced layoffs*. While layoff data has been collected from three separate sources to ensure the maximum possible completeness, this does not account for the difference in the propensity of various firms to disclose workforce reductions. To demonstrate that the reported results are not driven by this bias, the regressions are repeated on a subsample of firms with strictly non-zero layoffs. This restriction limits the number of observations per regression to 1,605 firm years. The resulting estimated coefficients for the interaction terms *COVID-19 x High-ESG* and *COVID-19 x High-Social* are both positive and statistically significant, while the coefficient for *COVID-19 x High-Governance* is insignificant. Within a sample of firms with strictly positive layoffs, high-ESG firms and high-Social firms were both significantly more likely to lay off employees during 2020 by a factor of 1.39. Additionally, the coefficient estimates of the control variables obtained from the restricted sample are comparable in magnitude and significance to the estimates reported in Tables 5, 6 and 7.

Fourthly, the regressions are run with alternately computed variations of the dependent variable, *Announced layoffs*. In addition to the dummy variable based on non-

Table 7 COVID-19 Layoffs in Governance-treated firms

Variables	Announced layoffs		
	I	II	III
Constant	-7.176*** (-14.06)	-6.155*** (-12.88)	-1.056*** (-14.75)
COVID-19	0.865*** (14.76)	0.636*** (6.32)	0.155*** (15.60)
High-Governance	0.071* (1.71)	0.031 (0.75)	0.014** (2.28)
COVID-19 x High-Governance	0.162* (1.85)	0.217** (2.44)	0.019 (1.33)
Size	0.303*** (14.44)	0.271 (13.36)	0.045*** (14.84)
Profitability	0.476*** (-4.15)	-0.458*** (-4.01)	-0.069*** (-4.13)
Leverage	-0.310*** (-3.91)	-0.231*** (-2.99)	-0.042*** (-3.22)
Hi-Industry	0.082 (0.89)	0.059 (0.64)	0.009 (0.69)
Low-Industry	-0.445*** (-7.61)	-0.469*** (-7.96)	-0.068*** (-7.48)
Sales growth	-0.142*** (-3.13)	0.144*** (-3.18)	-0.022*** (-3.14)
Ln(Age)	0.092*** (2.92)	0.070** (2.21)	0.017*** (3.95)
Ln(Tangibility)	-0.028*** (-7.50)	-0.024*** (-6.29)	-0.004*** (-7.63)
Board size	0.018* (1.69)	0.014 (1.39)	0.002 (1.57)
Board diversity	0.002 (1.41)	0.006*** (3.70)	0.000 (0.83)
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	No	Yes	No
No. Of Observations	16,271	16,271	16,271
F-Statistic	45.72***	51.36***	59.53***
Adjusted R ²	0.173	0.211	0.189

This table reports the results of the difference-in-difference analysis of the layoff activity of low- and high-Governance firms. The dependent variable is the natural logarithm of the number of announced layoffs adjusted by total employees. The treatment group is determined by the difference in a firm's performance in the Governance category of ESG over the period 2013–2019 and the median performance in the Governance category for its industry. The treatment group is interacted with COVID-19, which is a dummy for the year 2020. Column I depicts the results of the regression specified by Eq. (1). The results reported in Column II are obtained by including year-fixed effects in the regression. Column III replaces the dependent variable with a dummy for non-zero layoffs. The control variables are as follows: *Size* is the natural logarithm of total assets, *Profitability* is the ratio of net income to total assets, *Leverage* is the ratio of total debt to total assets, *Hi-Industry* is a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, *Low-Industry* is a dummy variable for industries least affected by the pandemic, *Sales growth* is a dummy variable for positive annual change in sales, *Ln(Age)* is the natural logarithm of the firm's age, *Ln(Tangibility)* is the natural logarithm of the ratio of fixed assets to total assets, *Board size* is the number of members on the board of directors, and *Board diversity* is the percentage of female members on the board of directors. The t-stats (in parenthesis) are based on robust standard errors adjusted for heteroscedasticity and clustered at the firm level. *, ** & *** denote statistical significance at the 10%, 5% and 1% levels respectively

zero layoffs, *Announced layoffs* is represented by the natural logarithm of reported layoffs scaled by total assets, and by the natural logarithm of unscaled reported layoffs respectively in two sets of consecutive regressions. In both cases, the coefficient estimates of the two interaction terms *COVID-19 x High-ESG* and *COVID-19 x High-Social* are positive and statistically significant, while the coefficient estimate of the interaction term *COVID-19 x High-Governance* is not statistically significant. Specifically, the regression results for unscaled layoffs as the dependent variable suggest that high-CSR firms laid off 1.73 times more employees than their peers during the pandemic, while high-Social firms laid off 1.62 times more employees. These results demonstrate the viability of the original findings for multiple alternate constructions of the dependent variable.

Next, to address concerns that all layoff announcements in 2020 may not be directly attributable to the economic disruptions caused by the COVID-19 pandemic, I restrict the sample to firms that reported layoffs exceeding the 75th percentile of the original variable *Announced layoffs*, corresponding to 1000 layoffs. This would help filter out routine or minor restructuring that is unrelated to the market shocks triggered by the pandemic. The coefficient estimates for the interactions terms *COVID-19 x High-ESG*, *COVID-19 x High-Social*, and *COVID-19 x High-Governance* from the resulting regressions are comparable in magnitude and in statistical significance to the coefficients reported in Tables 5, 6, and 7. In short, high-CSR firms were found to have 1.62 times higher layoffs, high-Social firms were found to have 1.23 times higher layoffs, and high-Governance firms were found to have 1.27 times higher layoffs than their counterparts.

Additionally, I account for arbitrariness in the construction of the independent variables and treatment groups *High-ESG*, *High-Social* and *High-Governance*. The proxy for CSR, the ESG Score, is itself an approximation of a company's social performance, and takes into consideration standard industry practices in its estimation. Therefore, comparing the firm's ESG score to its industry median as a benchmark for the treatment group may not produce new information. As an alternate benchmark, I compare each firm's average ESG score over the period 2013–2019 to the sample median ESG score to determine its inclusion in the treatment group *High-ESG*. Similarly, the treatment groups *High-Social* and *High-Governance* are constructed using the sample median Social and Governance scores as the benchmark. The coefficient estimates from the subsequent regressions are consistent with the ones reported in Tables 5, 6 and 7. The coefficients for each of the three interaction terms are positive and statistically significant. Specifically, high-CSR firms laid off 1.74 times as many employees, high-Social firms laid off 1.38 times as many employees, and high-Governance firms laid off 1.46 times as many employees during the pandemic as their peers. Overall, the coefficient estimates for both *High-ESG* and *High-Social* treatment groups have been demonstrably consistent across all robustness tests.

Finally, I replace the treatment groups *High-ESG*, *High-Social*, and *High-Governance* with continuous forms of the ESG score, the Social score and the Governance score respectively. This should allow an estimation of the effect of a per-unit change in CSR measures, on a scale from 0 to 100, on the magnitude and likelihood of

corporate layoffs. Running the regression specified by Eq. (1) for each set of independent variables produces results consistent with those reported in Tables 5, 6 and 7, and these results are displayed in Tables 9, 10 & 11 of the Appendix. A standard deviation increase in overall ESG is associated with approximately a 20.8% increase in *Announced layoffs* during the COVID-19 pandemic. Similarly, a standard deviation increase in the Social score is associated with an increase in *Announced layoffs* by approximately 22.5%, and a standard deviation increase in the Governance score is associated with an increase in *Announced layoffs* by approximately 17.6%. Moreover, the likelihood of COVID-19 period layoffs as described by the results of the regressions using the dummy form of *Announced layoffs* is likewise significantly higher as the firm's ESG, Social and Governance performance increases.

6 Propensity score matching

The results of the empirical analysis have been obtained after controlling thoroughly for relevant, identifiable characteristics, and are robust to additional and alternate control specifications. Nevertheless, the observed differences in layoffs across the samples of high- and low-ESG firms must be corroborated in samples that are otherwise identical. To this end, the regressions specified by Eq. (1) are repeated using propensity score matched (PSM) samples for each treatment group. In particular, for the first regression, companies in the top 75th percentile of the ESG Score are matched with the remaining sample on the basis of all characteristics included as controls in Eq. (1). For the second regression, companies in the top 75th percentile of the Social score and matched to the firms in the lower quartiles. Similarly, for the third regression, companies in the top 75th percentile of the Governance score are matched to the firms in the lower quartiles. The matched sample weights are then used to select observations for the regressions specified by Eq. (1). The results of the post-matching regressions are reported in Columns I, II and III of Panel A in Table 8.

The coefficient estimates obtained from the PSM sample regressions are consistent with those documented in Tables 5, 6 and 7. Specifically, both high-ESG and high-Social firms are shown to have laid off more employees during the pandemic, albeit with weaker statistical significance. Meanwhile, layoffs in high-Governance firms were not significantly different to their matched sample counterparts. Overall, these results provide further evidence to corroborate the main findings. In order to strengthen the reliability of the PSM tests, several diagnostic statistics are presented in Panel B of Table 8. The first four statistics provided facilitate a comparison of the pre- and post-matched regressions for the high-ESG treatment group. The post-matching LR chi-square (6.69) is no longer significant, and the post-matching R-Squared (0.011) has diminished considerably. The last four statistics represent the absolute standardized mean (0.00) and max differences (0.01) and the percentage mean (0.06) and max differences (1.95). Similarly, the PSM diagnostic statistics for the regressions using the high-Social and high-Governance treatment groups demonstrate the viability and success of the subsequent tests.

Table 8 Propensity score matching

Variables	Announced layoffs		
	I	II	III
PANEL A: Propensity Score Matching			
Constant	-11.322*** (-4.07)	-11.099*** (-3.99)	-11.446** (-4.11)
COVID-19	-2.441 (-0.94)	-2.333 (-0.90)	-2.104 (-0.81)
High-ESG	0.324* (1.82)		
COVID-19 x High-ESG	1.203*** (3.04)		
High-Social		0.386** (2.37)	
COVID-19 x High-Social		1.098*** (2.93)	
High-Governance			0.141 (1.11)
COVID-19 x High-Governance			0.638* (1.90)
Firm- and Board-specific controls	Yes	Yes	Yes
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes
No. of observations	3320	3320	3320
F-statistic	34.78***	35.01***	34.69***
Adjusted R^2	0.215	0.223	0.221
PANEL B: PSM Diagnostics			
Pre-Matching pseudo R^2	0.386	0.280	0.156
Pre-Matching LR χ^2	5226.15***	3693.28***	2467.85***
Post-Matching pseudo R^2	0.011	0.007	0.001
Post-Matching LR χ^2	6.69	7.10	2.41
Mean difference	0.000	0.000	0.000
Max difference	0.019	0.017	0.014
Mean percentage difference	0.069	0.049	0.022
Max percentage difference	1.953	1.945	1.776

This table reports the results of the propensity score matched regressions for each of the three treatment groups, *High-ESG*, *High-Social* and *High-Governance*. Panel A reports the results of the regressions for the propensity score matched samples, while Panel B reports some PSM diagnostics. The dependent variable *Announced layoffs* is the natural logarithm of layoffs scaled by employees. Columns I, II and III report the results of the regressions for the *High-ESG*, *High-Social* and *High-Governance* treatment groups respectively. The control variables (untabulated) include *Size*, the natural logarithm of total assets, *Profitability*, the ratio of net income to total assets, *Leverage*, the ratio of total debt to total assets, *Hi-Industry*, a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, *Low-Industry*, a dummy variable for industries least affected by the pandemic, *Sales growth*, a dummy variable for positive annual change in sales, *Ln(Age)*, the natural logarithm of the firm's age, *Ln(Tangibility)*, the natural logarithm of the ratio of fixed assets to total assets, *Board size*, the number of members on the board of directors, and *Board diversity*, the percentage of female members on the board of directors. The t-statistics, reported in parenthesis, are based on robust standard errors adjusted for heteroscedasticity. *, ** & *** denotes statistical significance at the 10%, 5% and 1% levels respectively

7 Limitations

The chosen sample period precludes several confounding factors, such as the effects of the 2007 financial crisis, as well as shifts in labor demand from low- to high-skilled workers attributed to artificial intelligence (AI) technologies post 2020 (Salari et al., 2025). However, it also imposes limitations. Industries suffered and consequently responded at varying rates to the COVID-19 pandemic, and the layoffs captured in 2020 likely largely represent effects within groups that were particularly strongly affected, such as the retail and hospitality sectors. It is also possible that several significant changes to employment structures after December 2020, the latest date that layoffs were recorded for the studied sample, can be attributed to the effects of the pandemic.

Additionally, it is worth noting that while the results of the study are theoretically supported by the resource-based view, which suggests that larger firms would be both higher ESG performers and have greater flexibility in human resource management, this assumption is not infallible. The resource-based view does not account for environmental complexities such as economic and regulatory factors (Aragón-Corraea & Sharma, 2003), and it may not fully explain the positive link between ESG and layoffs during the COVID-19 pandemic, an exogenous economic and labor demand shock. Future research would do well to explore alternative theories or interactive applications of the resource-based view for a more comprehensive understanding of exogenous pressures on employment structures.

8 Conclusion and discussion

This study compares layoffs during the first year of the COVID-19 pandemic between firms with a history of high and low corporate social responsibility. While employee welfare is congruous with good corporate social performance, there is no empirical evidence to suggest that employees of high-CSR firms enjoy better job security. In addition, firms may revise their priorities during times of high economic uncertainty. Since the global pandemic heralded a widespread unemployment crisis in 2020, it is worth investigating the role a company's past CSR played in its decision to lay off employees. Friedman's (1970) shareholder theory, and Freeman's (1984) stakeholder perspective both suggest that stakeholder-oriented firms would be more inclined to protect the welfare of their employees over short-term shareholder appeasement, and lay off less employees than firms with a lower track record of social responsibility. Meanwhile, the resource-based view of CSR, which is not necessarily incongruous with the former theories, proposes that the accrued social capital and managerial flexibility of high-CSR firms can be leveraged to downsize more intensively and signal adaptability and responsiveness.

To determine differences in layoff activity during the pandemic, 3,011 publicly traded US firms are studied over the period 2013–2020. Past CSR performance is measured as the difference between the firm's average ESG score and the industry median over the years 2013–2019, and firms with positive differences are assigned to the treatment group. Treatment groups based on the company's past performance in the Social and Governance categories are constructed in a similar manner. The variable Announced layoffs consists of data compiled from Thomson Reuters' Refinitiv,

the WARN database, and layoff-related news articles, and is calculated as the natural logarithm of total layoffs scaled by employees.

The role of past CSR performance in layoff activity during the unemployment crisis is investigated using a difference-in-difference methodology within a panel fixed-effects estimation, wherein the interaction of the treatment group (firms with high past ESG, Social and Governance scores respectively) with a dummy for the year 2020 is the independent variable of interest. The results indicate that firms with a high prior CSR announced significantly more layoffs (by 1.5 times) than their peers during the pandemic. Moreover, high-Social firms were similarly significantly more likely to announce layoffs than low-Social firms. On the other hand, Corporate Governance did not significantly impact layoff decisions during the event period. These results are robust to several tests including alternate specifications, variations of the dependent and independent variables, and propensity score matched sample regressions. Overall, the findings indicate that employees in firms with high past CSR were less likely to lose their job during the COVID-19 crisis.

The findings of this study raise several interesting implications. From a managerial perspective, the results highlight both opportunities and challenges. Arguably, downsizing during an economic crisis can be a financially prudent move, freeing up resources to maintain shareholder wealth, and signaling responsiveness and adaptability (Cheema-Fox, LaPerla, Serafeim & Wang, 2021; Cascio, 2002). Socially responsible firms are shown to be more effective at implementing these measures, highlighting the importance of building reputation and goodwill by prioritizing stakeholder interests, and maintaining good governance mechanisms for increased managerial agility (Eccles et al., 2012; Lins et al., 2019). On the other hand, layoffs may signal a decrease in stakeholder orientation in response to the crisis, and alter or appear at odds with existing investor perceptions of firm reputation and resilience. In this context, and in line with a growing body of evidence (Rodrigue et al., 2013; Li et al., 2019; Lara et al., 2025; Schiehl et al., 2025, etc.), the results also suggest that firms may be engaging in CSR practices that are more symbolic than substantive for the purposes of signaling sustainability and boosting their reputation, and that they should instead focus on a commitment to long-term, efficient stakeholder management that can offer enduring value.

For employees, the findings of this study indicate a disconnect between pre-crisis corporate social performance, and actual corporate behavior during times of uncertainty, raising questions about the consistency of commitments to stakeholders. Socially responsible companies may offer better working environments and more perks, as well as higher severance benefits (Collins et al., 2018), but these resource-intensive practices can make jobs more vulnerable when heightened uncertainty amplifies the stakes in the shareholder-stakeholder trade-off. When positioning these results in existing literature, a complex view emerges. Employees clearly gain from higher levels of CSR in terms of engagement, productivity, welfare, and workplace culture (Onlika & Sarna, 2022; Hur et al., 2018; Luo & Du, 2015, etc.). Nevertheless, a small fraction of previous studies also explores and corroborates undesirable employee outcomes of CSR (Yassin & Beckmann, 2025). Altogether, the findings underscore the importance of adopting a strategic, long-term perspective in CSR investments, given their potential to improve human resource efficiency and mitigate both employer and employee exposure to adverse economic shocks.

Appendix

Table 9 The ESG score and COVID-19 layoffs

Variables	Announced layoffs		
	I	II	III
Constant	-5.633*** (-10.80)	-0.871 (-1.52)	-0.848*** (-11.14)
COVID-19	0.121 (1.10)	3.615*** (9.44)	0.066*** (3.58)
ESG Score	0.008*** (4.86)	0.009*** (5.34)	0.001*** (4.91)
COVID-19 x ESG Score	0.019*** (6.07)	0.021** (6.70)	0.002*** (4.48)
Size	0.253*** (12.52)	0.206*** (10.47)	0.038*** (12.98)
Profitability	-0.377*** (-3.80)	-0.349*** (-3.62)	-0.056*** (-3.79)
Leverage	-0.155* (-1.78)	-0.077 (-0.90)	-0.021 (-1.60)
Hi-Industry	0.233 (1.89)	0.208* (1.68)	0.030* (1.65)
Low-Industry	-0.189** (-2.44)	-0.251*** (-3.22)	-0.025** (-2.07)
Sales growth	-0.099** (-2.05)	-0.098** (-2.04)	-0.016** (-2.23)
Ln(Age)	0.028 (0.74)	0.005 (-0.13)	0.008* (1.69)
Ln(Tangibility)	-0.007 (-1.65)	-0.004 (-0.86)	-0.001 (-1.48)
Board size	0.018 (1.62)	0.014 (1.36)	0.002 (1.46)
Board diversity	0.003** (1.99)	-0.003 (-0.16)	-0.001** (-2.13)
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	No	Yes	No
No. Of Observations	12,881	12,881	12,881
F-Statistic	27.43***	51.36***	34.60***
Adjusted R ²	0.169	0.183	0.154

This table reports the results of the interaction analysis of the sample firms' ESG scores and their layoffs during the COVID-19 pandemic. The dependent variable is the natural logarithm of the number of announced layoffs adjusted by total employees. The independent variable is the firm's ESG score, which is interacted with COVID-19, a dummy for the year 2020. Column I depicts the results of the regression specified by Eq. (1). The results reported in Column II are obtained by including year-fixed effects in the regression. Column III replaces the dependent variable with a dummy for non-zero layoffs. The control variables are as follows: Size is the natural logarithm of total assets, Profitability is the ratio of net income to total assets, Leverage is the ratio of total debt to total assets, Hi-Industry is a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, Low-Industry is a dummy variable for industries least affected by the pandemic, Sales growth is a dummy variable for positive annual change in sales, Ln(Age) is the natural logarithm of the firm's age, Ln(Tangibility) is the natural logarithm of the ratio of fixed assets to total assets, Board size is the number of members on the board of directors, and Board diversity is the percentage of female members on the board of directors. The t-stats (in parenthesis) are based on robust standard errors adjusted for heteroscedasticity and clustered at the firm level. *, ** & *** denote statistical significance at the 10%, 5% and 1% levels respectively

Table 10 The social score and COVID-19 layoffs

Variables	Announced layoffs		
	I	II	III
Constant	-6.037*** (-11.31)	-1.336*** (-2.32)	-0.909*** (-11.76)
COVID-19	0.311*** (2.94)	3.375*** (8.21)	0.091*** (5.03)
Social Score	0.006*** (2.94)	0.006*** (4.21)	0.001*** (3.73)
COVID-19 x Social Score	0.012*** (4.70)	0.014*** (5.16)	0.001*** (3.30)
Size	0.272*** (13.00)	0.225*** (11.25)	0.041*** (13.61)
Profitability	-0.372*** (-3.86)	-0.344*** (-3.69)	-0.055*** (-3.85)
Leverage	-0.154* (-1.77)	-0.077 (-0.90)	-0.021 (-1.61)
Hi-Industry	0.224* (1.81)	0.198 (1.60)	0.028 (1.57)
Low-Industry	-0.166** (-2.13)	-0.225*** (-2.86)	-0.022* (-1.79)
Sales growth	-0.113** (-2.31)	-0.144** (-2.33)	-0.018** (-2.48)
Ln(Age)	0.054 (1.47)	0.025 (0.69)	0.012** (2.46)
Ln(Tangibility)	-0.006 (-1.27)	-0.002 (-0.48)	-0.001 (-1.15)
Board size	0.020* (1.82)	0.017 (1.60)	0.003* (1.67)
Board diversity	-0.001 (-0.66)	0.002 (1.22)	-0.000 (-0.87)
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	No	Yes	No
No. Of Observations	12,881	12,881	12,881
F-Statistic	26.69***	50.12***	33.77***
Adjusted R ²	0.164	0.162	0.151

This table reports the results of the interaction analysis of the sample firms' scores in the Social category of ESG and their layoffs during the COVID-19 pandemic. The dependent variable is the natural logarithm of the number of announced layoffs adjusted by total employees. The independent variable is the firm's Social category score, which is interacted with COVID-19, a dummy for the year 2020. Column I depicts the results of the regression specified by Eq. (1). The results reported in Column II are obtained by including year-fixed effects in the regression. Column III replaces the dependent variable with a dummy for non-zero layoffs. The control variables are as follows: Size is the natural logarithm of total assets, Profitability is the ratio of net income to total assets, Leverage is the ratio of total debt to total assets, Hi-Industry is a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, Low-Industry is a dummy variable for industries least affected by the pandemic, Sales growth is a dummy variable for positive annual change in sales, Ln(Age) is the natural logarithm of the firm's age, Ln(Tangibility) is the natural logarithm of the ratio of fixed assets to total assets, Board size is the number of members on the board of directors, and Board diversity is the percentage of female members on the board of directors. The t-stats (in parenthesis) are based on robust standard errors adjusted for heteroscedasticity and clustered at the firm level. *, ** & *** denote statistical significance at the 10%, 5% and 1% levels respectively

Table 11 The governance score and COVID-19 layoffs

Variables	Announced layoffs		
	I	II	III
Constant	-7.068*** (-12.90)	-2.617*** (-4.36)	-1.057*** (-13.46)
COVID-19	0.491*** (4.66)	3.143*** (7.74)	0.110*** (6.11)
Governance Score	-0.001 (-1.04)	-0.001 (-0.52)	-0.000 (-0.85)
COVID-19 x Governance Score	0.008*** (3.68)	0.008*** (3.85)	0.001** (2.50)
Size	0.315*** (14.15)	0.279*** (13.13)	0.047*** (14.87)
Profitability	0.406*** (-3.81)	-0.385*** (-3.67)	-0.060*** (-3.81)
Leverage	-0.196** (-2.25)	-0.130 (-1.51)	-0.027** (-2.05)
Hi-Industry	0.241* (1.91)	0.222 (1.75)	0.031* (1.67)
Low-Industry	-0.138* (-1.71)	-0.191** (-2.36)	-0.018 (-1.43)
Sales growth	-0.101** (-2.06)	-0.100** (-2.03)	-0.017** (-2.24)
Ln(Age)	0.061 (1.58)	0.034 (0.87)	0.013** (2.56)
Ln(Tangibility)	-0.012*** (-2.60)	-0.009** (-2.02)	-0.001** (-2.35)
Board size	0.025** (2.18)	0.022 (2.03)	0.003** (2.00)
Board diversity	0.001 (0.42)	0.004** (2.01)	0.000 (0.17)
Covid Policy Variables	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	No	Yes	No
No. Of Observations	12,881	12,881	12,881
F-Statistic	25.78***	47.54***	32.88***
Adjusted R ²	0.157	0.171	0.146

This table reports the results of the interaction analysis of the sample firms' scores in the Governance category of ESG and their layoffs during the COVID-19 pandemic. The dependent variable is the natural logarithm of the number of announced layoffs adjusted by total employees. The independent variable is the firm's Governance category score, which is interacted with COVID-19, a dummy for the year 2020. Column I depicts the results of the regression specified by Eq. (1). The results reported in Column II are obtained by including year-fixed effects in the regression. Column III replaces the dependent variable with a dummy for non-zero layoffs. The control variables are as follows: Size is the natural logarithm of total assets, Profitability is the ratio of net income to total assets, Leverage is the ratio of total debt to total assets, Hi-Industry is a dummy variable for industries that were significantly exposed to the negative effects of the pandemic, Low-Industry is a dummy variable for industries least affected by the pandemic, Sales growth is a dummy variable for positive annual change in sales, Ln(Age) is the natural logarithm of the firm's age, Ln(Tangibility) is the natural logarithm of the ratio of fixed assets to total assets, Board size is the number of members on the board of directors, and Board diversity is the percentage of female members on the board of directors. The t-stats (in parenthesis) are based on robust standard errors adjusted for heteroscedasticity and clustered at the firm level. *, ** & *** denote statistical significance at the 10%, 5% and 1% levels respectively

Table 12 Robustness tests

Specification	COVID-19 x ESG Score	COVID-19 x Social Score	COVID- 19 x Gov- ernance Score
S0. The baseline results from Tables 5, 6 and 7	0.512***	0.415***	0.217***
S1. Alternative control variables	0.576***	0.470***	0.276***
S2. Lagged control variables	0.664***	0.551***	0.295***
S3. Sample restricted to firms with non-zero layoffs	0.412**	0.323**	0.110
S4. Unscaled layoffs	0.659***	0.569***	0.101
S5. Layoffs scaled by total assets	0.503***	0.410***	0.211**
S6. Layoffs restricted to greater than 75th percentile	0.346***	0.245***	0.151**
S7. Treatment groups constructed using sample mean	0.488***	0.407***	0.203**

The table reports the coefficient estimates for the interaction variables COVID-19 x ESG Score, COVID-19 x Social Score, and COVID-19 x Governance Score for adjustments to the specifications of Eq. (1) as described by the robustness tests detailed in Sect. 4. The baseline results correspond to Column II of Tables 5, 6 and 7, and each subsequent specification includes both industry and year fixed-effects. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively

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Declarations

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References

- Al-Hadi, A., Chatterjee, B., Yafian, A., Taylor, G., & Hasan, M. (2019). Corporate social responsibility performance, financial distress and firm life cycle: Evidence from Australia. *Accounting & Finance*, 59(2), 961–989.
- Albuquerque, R., Koskinen, Y., & Zhang, C. (2019). Corporate social responsibility and firm risk: Theory and empirical evidence. *Management Science*, 65(10), 4451–4469.
- Albuquerque, R., Koskinen, Y., Yang, S., & Zhang, C. (2020). Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. *The Review of Corporate Finance Studies*, 9(3), 593–621.
- Aragón-Correa, J. A., & Sharma, S. (2003). A contingent resource-based view of proactive corporate environmental strategy. *Academy of Management Review*, 28(1), 71–88.
- Arayakarnkul, P., Chatjuthamard, P., & Treepongkaruna, S. (2022). Board gender diversity, corporate social commitment and sustainability. *Corporate Social Responsibility and Environmental Management*, 29(5), 1706–1721.
- Atanassov, J., & Kim, E. H. (2009). Labor and corporate governance: International evidence from restructuring decisions. *The Journal of Finance*, 64, 341–374.
- Bae, K. H., El Ghoul, S., Gong, Z. J., & Guedhami, O. (2021). Does CSR matter in times of crisis? Evidence from the COVID-19 pandemic. *Journal of Corporate Finance*, 67, Article 101876.
- Barnett, M. L., & Salomon, R. M. (2006). Beyond dichotomy: The curvilinear relationship between social responsibility and financial performance. *Strategic Management Journal*, 27(11), 1101–1156.
- Barnett, M. L., Hartmann, J., & Salomon, R. M. (2018). Have you been served? Extending the relationship between Corporate Social Responsibility and lawsuits. *Academy of Management Discoveries*, 4(2), 109–126.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bergström, O., & Diedrich, A. (2011). Exercising social responsibility in downsizing: Enrolling and mobilizing actors at a Swedish high-tech company. *Organization Studies*, 32(7), 897–919.
- Bode, C., Singh, J., & Rogan, M. (2015). Corporate social initiatives and employee retention. *Organization Science*, 26(6), 1553–1804.
- Boroughs, D. L. (1992). Amputating assets. *US News & World Report*, 112, 50–52.
- Boubaker, S., Cellier, A., Manita, R., & Saeed, A. (2020). Does corporate social responsibility reduce financial distress risk? *Economic Modelling*, 91, 835–851.
- Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69(2), 111–132.
- Brown, B. (1998). Do stock market investors reward companies with reputations for social performance? *Corporate Reputation Review*, 1(3), 271–280.
- Cao, Z., & Rees, W. (2020). Do employee-friendly firms invest more efficiently? Evidence from labor investment efficiency. *Journal of Corporate Finance*, 65, 101744.
- Carter, C. R., Kale, R., & Grimm, C. M. (2000). Environmental purchasing and firm performance: An empirical investigation. *Transportation Research Part E: Logistics and Transportation Review*, 36(3), 219–228.
- Cascio, W. F. (2002). Strategies for responsible restructuring. *Academy of Management Perspectives*, 16(3), 80–91.
- Cheema-Fox, A., LaPerla, B. R., Wang, H., & Serafeim, G. (2021). Corporate resilience and response to COVID-19. *Journal of Applied Corporate Finance*, 33(2), 24–40.
- Chen, J., Leung, W. S., & Evans, K. P. (2016). Are employee-friendly workplaces conducive to innovation? *Journal of Corporate Finance*, 40, 61–79.
- Cho, S. Y., & Lee, C. (2019). Managerial efficiency, corporate social performance, and corporate financial performance. *Journal of Business Ethics*, 158, 467–486.
- Cho, C. H., Fabrizi, M., Pilonato, S., & Ricceri, F. (2024). Not all bad news is harmful to a good reputation: Evidence from the most visible companies in the US. *Journal of Management and Governance*, 28(1), 9–36.
- Collins, D., Fleischman, G., & Sanchez, D. (2018). The impact of corporate social responsibility on employee layoffs, severance payments and layoff disclosure. *Working paper*. Available online at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3265483

- Cormier, D., & Magnan, M. (2017). Does a firm's exposure to ethical failures matter to financial markets? A governance perspective. *Journal of Management and Governance*, 21, 267–289.
- Cronqvist, H., Low, A., & Nilsson, M. (2007). Does corporate culture matter for investment and financial policies? Working paper. Ohio State University, Columbus, OH.
- De Meulenaere, K., De Winne, S., Marescaux, E., & Vanormelingen, S. (2021). The role of firm size and knowledge intensity in the performance effects of collective turnover. *Journal of Management*, 47(4), 993–1023.
- De Meuse, K. P., Bergmann, T.J., & Vanderheiden, P. A. (1997). Corporate downsizing: Separating myth from fact. *Journal of Management Inquiry*, 6(2), 168–176.
- Demers, E., Hendrikse, J., Joos, P., & Lev, B. (2021). ESG did not immunize stocks during the COVID-19 crisis, but investments in intangible assets did. *Journal of Business Finance and Accounting*, 48(3–4), 433–462.
- Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. *Journal of Financial Economics*, 141(2), 802–830.
- Dowell, G., Hart, S., & Yeung, B. (2000). Do corporate global environment standards create or destroy market value? *Management Science*, 46(8), 1059–1074.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2012). *The impact of a corporate culture of sustainability on corporate behavior and performance* (Vol. 17950, pp. 2835–2857). National Bureau of Economic Research. 1.
- Fauver, L., McDonald, M. B., & Taboada, A. G. (2018). Does it pay to treat employees well? International evidence on the value of employee-friendly culture. *Journal of Corporate Finance*, 50, 84–108.
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman.
- Fuchsberg, G. (1993). Why shakeups work for some, not for others. *The Wall Street Journal*, October 1, B1.
- Gamerschlag, R., Möller, K., & Verbeeten, F. (2010). Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Review of Managerial Science*, 5(2–3), 233–262.
- García-Benau, M. A., Sierra-García, L., & Zorio, A. (2013). Financial crisis impact on sustainability reporting. *Management Decision*, 51(7), 1528–1542.
- Ghaly, M., Dang, V. A., & Stathopoulos, K. (2015). Cash holdings and employee welfare. *Journal of Corporate Finance*, 33, 53–70.
- Ghosh, K. (2018). How and when do employees identify with their organization? Perceived CSR, first-party (in)justice, and organizational (mis)trust at workplace. *Personnel Review*, 47(5), 1152–1171.
- Godfrey, P. C. (2005). The relationship between corporate philanthropy and shareholder wealth: A risk management perspective. *Academy of Management Review*, 30(4), 777–798.
- Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, 30(4), 425–445.
- Gombola, M. J., & Tsetsekos, G. P. (1992). The information content of plant closing announcements: Evidence from financial profiles and the stock price reaction. *Financial Management*, 21, 31–40.
- Graves, S. B., & Waddock, S. A. (1999). A look at the financial-social performance nexus when quality of management is held constant. *International Journal of Value-Based Management*, 12(1), 87–99.
- Groening, C., Ngoh, C. L., & Luchs, R. (2022). The impact of a firm's corporate social responsibility on firm-supplier relationships: The effect of secondary stakeholder CSR on inventory days. *Corporate Social Responsibility and Environmental Management*, 29(5), 1689–1705.
- Hallas, L., Hatibie, A., Majumdar, S., Pyarali, M., & Hale, T. (2021). Variation in US states' responses to COVID-19. *University of Oxford*.
- Hammon, S. D., Gillis, W. E., & Icenogle, M. L. (2023). From social responsibility to employee engagement: Evidence from the public sector. *Journal of Management and Governance*, 27(4), 1223–1247.
- Hancock, J. I., Allen, D. G., Bosco, F. A., McDaniel, K. R., & Pierce, C. A. (2013). Meta-analytic review of employee turnover as a predictor of firm performance. *Journal of Management*, 39(3), 573–603.
- Harjoto, M. A., & 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, 1–20.
- Herremans, I. M., Akathaporn, P., & McInnes, M. (1993). An investigation of corporate social responsibility reputation and economic performance. *Accounting, Organizations and Society*, 18(7/8), 587–604.
- Ho, L.-C. J., & Taylor, M. E. (2007). An empirical analysis of triple-bottom-line reporting and its determinants: Evidence from the United States and Japan. *Journal of International Financial Management & Accounting*, 18(2), 123–150.

- Hong, H., Kubik, J. D., & Scheinkman, J. A. (2012). Financial constraints on corporate goodness Working Paper (No. w18476). National Bureau of Economic Research.
- Hur, W. M., Moon, T. W., & Ko, S. H. (2018). How employees' perceptions of CSR increase employee creativity: Mediating mechanisms of compassion at work and intrinsic motivation. *Journal of Business Ethics*, 153(3), 629–644.
- Ilhan, E., Sautner, Z., & Vilkov, G. (2021). Carbon tail risk. *The Review of Financial Studies*, 34(3), 1540–1571.
- Ivory, S. B., & Brooks, S. B. (2018). Managing corporate sustainability with a paradoxical lens: Lessons from strategic agility. *Journal of Business Ethics*, 148, 347–361.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76(2), 323–329.
- Jo, H., & Na, H. (2012). Does CSR reduce firm risk? Evidence from controversial industry sectors. *Journal of Business Ethics*, 110, 441–456.
- Jones, D. A., Willness, C. R., & Madey, S. (2014). Why are job seekers attracted by corporate social performance? Experimental and field tests of three signal-based mechanisms. *Academy of Management Journal*, 57(2), 383–404.
- Jones, M. K., Jones, R. J., Latreille, P. L., & Sloane, P. J. (2009). Training, job satisfaction, and workplace performance in Britain: Evidence from WERS 2004. *Labour*, 23, 139–175.
- Khanchel, I., Lassoued, N., & Gargoury, R. (2023). Csr and firm value: Is CSR valuable during the COVID 19 crisis in the French market? *Journal of Management and Governance*, 27(2), 575–601.
- Knox, A. (1992). By downsizing, do firms axe themselves in the foot? *The Philadelphia Inquirer February*, 17, A1.
- Lara, J. M. G., Osmá, B. G., Gazizova, I., & Khalilov, A. (2025). Demand-driven corporate social responsibility: Symbolic versus substantive change after environmental disasters. *Journal of Corporate Finance*, 94, Article 102816.
- Lauesen, L. M. (2013). Csr in the aftermath of the financial crisis. *Social Responsibility Journal*, 9(4), 641–663.
- Leana, C. R., & Feldman, D. C. (1995). Finding new jobs after a plant closing: Antecedents and outcomes of the occurrence and quality of reemployment. *Human Relations*, 48(12), 1381–1401.
- Leung, M., Liang, C., Lourie, B., & Zhu, C. (2024). Voting with their feet: Employee responses to ESG news. Available at SSRN 4937880.
- Li, J., Haider, Z. A., Jin, X., & Yuan, W. (2019). Corporate controversy, social responsibility and market performance: International evidence. *Journal of International Financial Markets, Institutions and Money*, 60, 1–18.
- Lins, K. V., Servaes, H., & Tamayo, A. (2019). Social capital, trust, and corporate performance: How CSR helped companies during the financial crisis (and why it can keep helping them). *Journal of Applied Corporate Finance*, 31(2), 59–71.
- Lord, L. (1992). Jobs and dreams, drip-dropping away. *US News & World Report*, (8)
- Luo, X., & Bhattacharya, C. B. (2006). Corporate Social Responsibility, customer satisfaction, and market value. *Journal of Marketing*, 70(1), 1–18.
- Luo, X., & Du, S. (2015). Exploring the relationship between Corporate Social Responsibility and firm innovation. *Marketing Letters*, 26, 703–714.
- Malikov, K., Demirbag, M., Kuvandikov, A., & Manson, S. (2021). Workforce reductions and post-merger operating performance: The role of corporate governance. *Journal of Business Research*, 122, 109–120.
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117–127.
- Michelon, G., & Parbonetti, A. (2012). The effect of corporate governance on sustainability disclosure. *Journal of Management & Governance*, 16(3), 477–509.
- Minor, D., & Morgan, J. (2011). CSR as reputation insurance: Primum non nocere. *California Management Review*, 53(3), 40–59.
- Mocciaro Li Destri, A., Minà, A., & Picone, P. M. (2024). Corporate social irresponsibility and stakeholders' support: Evidence from a case study. *Journal of Management and Governance*, 28(1), 37–62.
- Neinstedt, P. R. (1989). Effectively downsizing management structures. *Human Resource Planning*, 12, 155–164.
- Noer, D. M. (1993). *Healing the wounds: Overcoming the trauma of layoffs and revitalizing downsized organizations*. Jossey-Bass.

- Onkila, T., & Sarna, B. (2022). A systematic literature review on employee relations with CSR: State of art and future research agenda. *Corporate Social Responsibility and Environmental Management*, 29(2), 435–447.
- Pérez, A., & del Bosque, I. R. (2015). An integrative framework to understand how CSR affects customer loyalty through identification, emotions and satisfaction. *Journal of Business Ethics*, 129, 571–584.
- Poursoleyman, E., Mansourfar, G., Hassan, M. K., & Homayoun, S. (2024). Did Corporate Social Responsibility Vaccinate Corporations Against COVID-19? *Journal of Business Ethics*, 189(3), 525–551.
- Rodrigo, P., & Arenas, D. (2008). Do employees care about CSR programs? A typology of employees according to their attitudes. *Journal of Business Ethics*, 83, 265–283.
- Rodrigue, M., Magnan, M., & Cho, C. H. (2013). Is environmental governance substantive or symbolic? An empirical investigation. *Journal of Business Ethics*, 114, 107–129.
- Salari, N., Beirumvand, M., Hosseinian-Far, A., Habibi, J., Babajani, F., & Mohammadi, M. (2025). Impacts of generative artificial intelligence on the future of labor market: A systematic review. *Computers in Human Behavior Reports*, 18, Article 100652.
- Sánchez, P. E., & Benito-Hernández, S. (2015). CSR policies: Effects on labor productivity in Spanish micro and small manufacturing companies. *Journal of Business Ethics*, 128, 705–724.
- Schiehl, E., Martins, H. C., & Lewellyn, K. B. (2025). Symbolic or substantive? How shareholder heterogeneity shapes the purpose of the corporation. *Long Range Planning*, 58(6), Article 102582.
- Schnietz, K. E., & Epstein, M. J. (2005). Exploring financial value of a reputation for corporate social responsibility during a crisis. *Corporate Reputation Review*, 7(4), 327–345.
- Song, K. R., & Lee, Y. (2012). Long-term effects of a financial crisis: Evidence from cash holdings of East Asian firms. *Journal of Financial and Quantitative Analysis*, 47(3), 617–641.
- Sun, L., & Yu, R. T. (2015). The impact of Corporate Social Responsibility on employee performance and cost. *Review of Accounting and Finance*, 14(3), Article 1475–7702.
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 43(1), 1–19.
- U.S. Bureau of Labor Statistics. (2022). *Labor market dynamics during the COVID-19 pandemic*. <https://www.bls.gov/blog/2022/labor-market-dynamics-during-the-covid-19-pandemic.htm>. Accessed on: 03 April, 2026.
- Valentini, C., Munnukka, J., & Zhao, H. (2024). Stakeholder satisfaction with corporate conflict engagement actions: Exploring the effects of goodwill, trust, and value alignment. *Business Horizons*, 67(6), 797–813.
- Waples, C. J., & Brachle, B. J. (2020). Recruiting millennials: Exploring the impact of CSR involvement and pay signaling on organizational attractiveness. *Corporate Social Responsibility and Environmental Management*, 27(2), 870–880.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Yassin, Y., & Beckmann, M. (2025). CSR and employee outcomes: A systematic literature review. *Management Review Quarterly*, 75, 595–641.
- Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185–211.

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