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Examining the relationship between CEO power and modern slavery disclosures: The moderating role of board gender diversity in UK companies

Amir Allam¹ | Tantawy Moussa² | Mahmoud Elmarzouky³
¹Aston Business School, Aston University, Birmingham, UK

²Westminster Business School, University of Westminster, London, UK

³University of St Andrews Business School, University of St Andrews, St Andrews, UK

Correspondence

Tantawy Moussa, PhD., University of Westminster, Westminster Business School, 35 Marylebone Road, London NW1 5LS, UK.
Email: t.moussa@westminster.ac.uk

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Abstract

Drawing on agency and gender socialisation theories, this study examines the effect of Chief Executive Officer (CEO) power on corporate modern slavery disclosures (MSD) and investigates whether board gender diversity might influence this relationship. Based on a sample comprising the Financial Times Stock Exchange (FTSE) 100 companies from 2016 to 2020, the findings indicate that, although there has been progress in corporate transparency concerning modern slavery, a significant gap persists in the reporting on the measurement and monitoring of the effectiveness of their policies. This may stem from powerful CEOs' desires to maintain a positive corporate image, leading to minimal disclosure of potentially damaging information. The fixed effects panel regression analysis reveals a negative relationship between CEO power (CEOP) and the extent of modern slavery disclosures (MSD), with a significant moderating effect observed when female board representation is substantial. This evidence suggests that female board members may challenge groupthink and introduce diverse perspectives that can alter the board's dynamics, potentially mitigating the negative impact of CEOP on issues like modern slavery disclosure by encouraging more ethical and collective decision-making. This research underscores the need for greater transparency and accountability in addressing modern slavery and promoting more responsible business practices.

KEYWORDS

board gender diversity, CEO power, modern slavery disclosures, sustainable development goals, UK

1 | INTRODUCTION

Modern slavery constitutes a breach of human rights, influencing the lives of millions around the world and is widespread in the global

supply chains (FRC, 2022; Szablewska & Kubacki, 2023). It is regarded as an intense manifestation of labour manipulation that involves using force, deception, or coercion to exploit individuals for labour or commercial sex (International Labour Organization, 2017). However,

ABBREVIATIONS: BLAU, Blau's index of diversity; BGD, board gender diversity; CEOP, CEO power; FTSE, Financial Times Stock Exchange; GST, gender socialisation theory; ILO, International Labour Organization; KPIs, key performance indicators; MSA, Modern Slavery Act; MSD, modern slavery disclosure.

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despite its criminalisation, modern slavery remains a pervasive issue in shadow economies (Smith & Johns, 2020). It is also claimed to thrive in global supply chains as multinational businesses aim to relocate their labour-intensive operations to poorer countries due to higher labour costs in their home countries and stringent human rights laws (Christ & Helliard, 2021; Gold et al., 2015).

To combat this unethical phenomenon, the UK introduced the Modern Slavery Act (MSA) in 2015, under which all companies with a turnover exceeding £36 million are required to provide an annual modern slavery statement. The MSA requires companies to report their actions to combat modern slavery and labour exploitation within their operations and supply chains (Modern Slavery Act, 2015). Accordingly, a growing but limited body of literature examined modern slavery disclosures (MSD) by UK companies in response to this regulatory requirement (e.g. Flynn, 2020; Rogerson et al., 2020).

However, the literature remains scant, and some calls have emerged to better understand the phenomenon (e.g. Christ et al., 2023; Smith & Johns, 2020). More specifically, a report commissioned by the UK's Financial Reporting Council (FRC, 2022, p. 3) calls for examining 'company-specific aspects' that can shape corporate MSD and highlights the role of corporate leadership and culture. Noting that company size is not necessarily a significant factor in determining the extent of MSD, the report concludes that the findings are unexpected and indicate that factors other than public oversight and internal capabilities might influence the reporting of modern slavery (FRC, 2022). Indeed, prior empirical evidence suggests that women directors care more about ethical matters (Cumming et al., 2015; Muttakin et al., 2022) and are likely to influence board decisions on such matters. Several studies report a positive association between board gender diversity and corporate biodiversity disclosure (Haque & Jones, 2020), environmental, social and governance disclosure (Husted & de Sousa-Filho, 2019), MSD (Moussa et al., 2023), and the readability of annual reports (Nadeem, 2022).

Conversely, we know from the literature that other corporate leadership features may potentially have a negative association with corporate disclosure, specifically, Chief Executive Officer (CEO) power. CEOs are known to be the most powerful characters on corporate boards and can significantly influence various crucial decisions (Daily & Johnson, 1997). Dominant CEOs may focus on serving their interests (Byun & Al-Shammari, 2021; Sun et al., 2022) and can limit the monitoring capabilities of the board (Boyd, 1994; Dalton & Kesner, 1987; Muttakin et al., 2018). Thus, powerful CEOs may tend to limit corporate disclosures to minimise their exposure to public scrutiny. Indeed, this notion is supported by empirical evidence (e.g. Al-Shaer et al., 2022; Li et al., 2018; Muttakin et al., 2018; Velte, 2020), with the majority reporting a negative association.

Thus, there seem to be conflicting forces within corporate boards with different impacts on corporate disclosure, and, to the best of our knowledge, the interplay between these forces has not been examined in the literature. There is evidence that board gender diversity (BGD) can be an effective monitoring mechanism that limits CEO power (Ting & Huang, 2018). Accordingly, a potential confrontation may arise between powerful CEOs and women sitting on the board of

directors. Female board members may challenge groupthink and introduce diverse perspectives that can alter the board's dynamics, potentially mitigating the negative impacts of CEO power (CEOP) on issues like MSD by encouraging more ethical and collective decision-making. An empirical investigation is thus warranted to identify whether BGD can limit the negative influence of CEOP on corporate MSD.

Based on a sample comprising the Financial Times Stock Exchange (FTSE) 100 companies over the period 2016–2020, this research examines how these two key aspects of corporate boards interact and collectively influence MSD. Understanding board dynamics is crucial as it significantly affects a company's strategic direction, risk management and overall governance quality. In the context of MSD, the dynamics of the board play a vital role in determining the seriousness and effectiveness with which these issues are addressed. Thus, this paper aims to address this gap by investigating the interplay between board dynamics, particularly board diversity and CEOP, and its association with corporate disclosures regarding modern slavery in UK companies. Accordingly, this research not only contributes to a deeper understanding of corporate governance dynamics but also sheds light on the mechanisms that shape corporate transparency and ethical reporting in the context of modern slavery, a critical issue in contemporary business ethics and corporate social responsibility.

This study substantiates both theoretical and practical implications by supporting agency and gender socialisation theories. We demonstrate that female board members, likely due to higher ethical sensitivities, advocate for enhanced transparency in MSD. Our findings highlight the inadequacy of the current UK MSA provisions in motivating sufficient corporate disclosure, which hinders effective stakeholder evaluation. We recommend more stringent policies for improved disclosure practices and increased penalties for non-compliance. Additionally, our research supports increasing female board representation to enhance corporate governance and promote broader societal goals aligned with the United Nations' Sustainable Development Goals. The presence of women on the board also plays a critical role in moderating the negative impacts of CEOP, fostering a more balanced and transparent governance environment and thus ensuring that executive decisions align with ethical standards and stakeholder interests.

Building on these findings, our study contributes several new insights to the literature. First, it represents one of the first efforts to investigate how corporate leadership affects a company's MSD, responding to calls from the FRC for more evidence-based research on board leadership's impact on companies' disclosure practices (FRC, 2022). Second, by focussing on the role of women directors in moderating CEOP, our study enriches the gender-specific CSR research (e.g. Haque, 2017; Haque & Jones, 2020; Liao et al., 2015; Moussa et al., 2020). We explore the potential of female board members to enhance board monitoring functions and limit the dominance of powerful CEOs, thereby influencing the company's MSD. Third, we are among the first to analyse the extent to which UK companies have reported on modern slavery practices over an extended period.

The remainder of this paper is organised as follows. In the following section, we review the literature on modern slavery, highlighting

its definitions and the findings of recent studies. We then discuss the study's theoretical framework leading to hypotheses development. Section 4 covers the research design. Section 5 provides a discussion of the empirical results. We conclude the paper with some concluding remarks and suggestions for future research.

2 | MODERN SLAVERY: A BACKGROUND

Modern slavery can be seen as a scenario wherein an individual is unable to reject or escape exploitation due to abuse of power (Christ & Helliari, 2021; International Labour Organization, 2017). In other words, modern slavery is a form of exploitation in which individuals or entities utilise human beings for personal or commercial gain through unethical and illegitimate means (Anti-Slavery International, 2022). In a business context, it takes place in the form of cheap or forced labour (Crane, 2013). Forced labour exploitation can manifest in various forms, including using threats, restricting the victims' freedom of movement, or forcing the victims to work under inhumane conditions.

The severity of the problem is highlighted by its inclusion in the United Nations' Sustainable Development Goals, calling for 'immediate and effective measures to eradicate forced labour, and end modern slavery' (UNDP, 2015, p. Goal 8). Due to modern slavery prevalence in the operations and supply chains of big companies, legislators require some transparency of corporate efforts to fight it. Thus, corporate disclosure of modern slavery is critically distinct from other types of social impact reporting due to its specific focus on legal compliance, ethical and human rights concerns and supply chain transparency. Mandated by laws like the UK MSA, these disclosures require companies to detail their efforts in identifying, mitigating and eliminating modern slavery within their operations and supply chains, addressing severe human rights violations such as forced labour and human trafficking. This type of reporting is not only essential for managing legal and reputational risks but also responds to growing consumer and investor demands for ethical transparency. Unlike broader social impact reports, MSD also emphasises remediation efforts, showcasing the steps companies are taking to rectify issues and improve practices, making them a crucial aspect of corporate accountability and ethical business operations.

The UK was the first nation to introduce legislation to fight modern slavery in 2015 followed by Australia in 2018. However, the first legislation was the 2010 California Transparency in the Supply Chains Act (CTSCA) in the United States. Examining the impact of the CTSCA, Birkey et al. (2018), p. 827) report high compliance with the CTSCA, but they note that the disclosure is 'more symbolic than substantive in nature.' In Australia, Christ et al. (2019) report a low volume and quality of MSD by ASX 100 companies and stress the need for legislation.¹ In addition, after the introduction of the Australian Act, Rao et al. (2022) report improvements in MSD by the

ASX 100 but note that regulation is not enough to enhance disclosure quality. Furthermore, they note that financial penalties are not likely to enhance disclosures. Furthermore, similar results are reported by Pham et al. (2021) for ASX 300 companies.

The UK MSA mandates all companies with an annual turnover exceeding £36 million to produce a modern slavery statement each year. This statement requires companies to report on the measures they have implemented to address and prevent modern slavery and labour exploitation within their operations and supply chains. Specifically, the statement should detail the organisation's structure, its policies on slavery and human trafficking, and the due diligence processes in place. It should also evaluate the effectiveness of these measures and outline the training provided to employees. To ensure accountability and transparency, the MSA stipulates that the statement must be approved by the board of directors and signed by a director. Furthermore, it mandates that the statement be prominently displayed on the company's website, making it accessible to the public and stakeholders.

A few studies examined companies' compliance with the requirements of the UK Act, and the findings were condemning due to low compliance levels (for example, Mai et al., 2023; Pinnington et al., 2023; Rogerson et al., 2020; Stevenson & Cole, 2018; Voss et al., 2019). The disclosures were characterised as deficient in detail, exhibiting a lack of variation, and have resulted in minimal substantive measures to address modern slavery (Rogerson et al., 2020). Islam and Van Staden (2022) raise concerns about the lack of external verification of the statements' contents and the Act's effectiveness. Mai et al. (2023) report high compliance with the Act's minimum requirements and improvements in the extent of disclosures post the introduction of the Act; nevertheless, they find low quality and focus on symbolic disclosure. Although Flynn (2020) reports firm size as a determinant of MSD by UK companies, a recent FRC report (FRC, 2022, p. 3) reveals this is not necessarily the case and suggests that other factors can shape corporate MSD and highlights corporate leadership (such as CEOP) as a possible factor.

3 | LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

3.1 | CEO power

CEOs are regarded as the most powerful characters within organisations with significant influence on various business activities (Daily & Johnson, 1997). Powerful CEOs can manipulate corporate board decisions with negative consequences on the board's effectiveness (Boyd, 1994; Dalton & Kesner, 1987). CEO power (CEOP) may lead to decision-making biases (Li & Tang, 2010; Malhotra et al., 2022). When CEOs have high levels of power, they may prioritise their own interests over those of shareholders. This behaviour can be explained through the lens of Jensen and Meckling's (1976) agency theory, which posits that managers, as agents of shareholders, have a fiduciary duty to act in the best interests of shareholders and maximise

¹Although the study was published in 2019, it is based on data that precedes the introduction of the Australian Modern Slavery Act of 2018.

shareholder wealth. However, when the interests of managers conflict with those of the shareholders, an agency problem emerges. Furthermore, from a managerial opportunism perspective (Eisenhardt, 1989), a subset of the agency theory, powerful CEOs may have a strong personal incentive to maintain a positive corporate image, which may conflict with disclosing modern slavery information that can damage their image and lead to negative publicity and consumer backlash (Brahma & Economou, 2024). They may resist disclosing information about modern slavery in their supply chains, as it may threaten their authority and control over the organisation. Empirical evidence suggests a negative association between CEOP and social-related disclosures (Muttakin et al., 2018). Furthermore, considering information asymmetry, powerful CEOs are likely to have the most comprehensive understanding of modern slavery risks within the supply chain. This asymmetry creates an opportunity to withhold this information from shareholders, allowing them to maintain a positive public image (Healy & Palepu, 2001). Therefore, under managerial opportunism theory, powerful CEOs might downplay or even conceal modern slavery risks to protect their own reputation and power, even if it conflicts with ethical business practices and transparency.

The effect of CEOP is well documented in prior research. For example, there is a significant association between CEOP and various factors such as remuneration (Abernethy et al., 2015; Choe et al., 2014; Luo, 2015), capital structure (Chao et al., 2017; Luo, 2015), corporate bonds ratings and yields (Liu & Jiraporn, 2010), corporate risk-taking (Pathan, 2009), dividends payout (Onali et al., 2016; Sheikh, 2022) and innovation (Sariol & Abebe, 2017). These associations can be seen as manifestations of the agency problem where CEOs, acting as agents, may pursue personal benefits at the expense of shareholders, the principals. In addition, a few studies find a negative impact of CEOP on social and environmental disclosure and performance, whereas other studies report a positive impact. In addition, a few studies have found a negative impact of CEOP on social and environmental disclosure and performance (Al-Shaer et al., 2022; Kwon et al., 2023; Muttakin et al., 2018), whereas other studies report a positive impact (Li et al., 2018; Velte, 2020).

As corporate boards focus more on mandatory than voluntary disclosures (McWilliams et al., 2006), less attention could be directed to social disclosures (McWilliams et al., 2006; McWilliams & Siegel, 2001), such as MSD. From an agency theory perspective, the centralisation of power in the CEO's hands could result in agency conflicts where the interests of the shareholders and other stakeholders are compromised. Powerful CEOs may prioritise their personal gains over broader ethical and social responsibilities, thus impeding transparency and accountability in corporate practices. It is argued that the power held by CEOs shields them from various control mechanisms such as board directors and other market mechanisms (Fama & Jensen, 1983; Muttakin et al., 2018). In other words, the board's monitoring capability can be diminished by CEOP, which in turn may influence corporate disclosures (Muttakin et al., 2018), thus paving the way for powerful CEOs to limit social disclosures, including modern slavery. It is also argued that powerful CEOs may lack the motivation to direct resources towards social practices, particularly

if such investments do not contribute to their self-interests (McWilliams et al., 2006). Accordingly, we formulate our first hypothesis as follows:

H1. : CEO power is significantly and negatively associated with the extent of MSD.

3.2 | The moderating role of board gender diversity

Gender socialisation theory (GST) posits that females are more inclined towards ethical conduct in decision-making processes compared to males (Cumming et al., 2015). This divergence is attributed to the distinct gender roles and values instilled during childhood, leading to differentiated moral perspectives and behaviours between the genders (Carter, 2014; Dawson, 1997). Men are inclined towards emphasising individual achievements, whereas women place a greater emphasis on communal values, which contributes to the enhancement of interpersonal relationships (Carlson, 1972; Eagly et al., 2007). The competitiveness among men urges them to be more susceptible to rule-breaking under pressure (Eagly et al., 2007; Radtke, 2000). The focus on communal values throughout the growing-up phase of women is a key factor behind their moral stance when making decisions (Carter, 2014; Radtke, 2000).

Recent literature on the effect of BGD gives support to the GST predictions. For example, higher BGD is associated with less managerial obfuscation through complex annual reports (Nadeem, 2022). Higher representation of women on corporate boards is positively associated with the quality of corporate social responsibility disclosures (Cabeza-García et al., 2018) and intellectual capital disclosures (Nadeem, 2020). Moreover, BGD is reported to be a significant moderator for the frequency of fraud (Cumming et al., 2015) and is negatively associated with related-party transactions (Nekhili et al., 2022). Furthermore, higher proportions of women on boards can lead to less irresponsible CSR behaviour (Jain & Zaman, 2020; Muttakin et al., 2022). Nevertheless, Gregory-Smith and Main (2023) assert that women frequently occupy positions on company boards for symbolic rather than substantive reasons.

The agency theory suggests that the negative association between CEOP and corporate disclosure may be exacerbated by weak corporate governance mechanisms, such as a lack of independent directors or an ineffective board of directors (Jensen & Meckling, 1976). The lack of strong corporate governance mechanisms facilitates CEOs' endeavours to serve their interests, further exacerbating agency problems. It can be argued that BGD can mitigate agency problems by providing diverse perspectives, which may lead to more effective monitoring of the CEO's actions and decisions. Diverse boards introduce a variety of viewpoints and ethical standards, which disrupt established power dynamics and promote thorough deliberations. This diversity leads to more balanced decision-making and reduces the influence of dominant personalities, such as the CEO, ensuring that decisions reflect a broader range of stakeholder interests and comply with higher ethical standards.

Consequently, this can lead to more effective monitoring of the CEO's actions and decisions. Evidence from prior research supports this prediction. For example, female directors positively impact the board's monitoring role (Adams & Ferreira, 2009). Moreover, a recent study suggests that gender-diverse boards effectively limit the positive impact of CEO on perks (Ting & Huang, 2018). This suggests that BGD can moderate the negative association between CEO and MSD. Thus, we articulate our second and third hypotheses as follows:

H2. : Gender diversity on the board of directors is significantly and positively associated with the extent of MSD.

H3. : Gender diversity on the board of directors moderates the relationship between CEO power and the extent of MSD.

4 | RESEARCH DESIGN

4.1 | Data and sample

Our investigation comprises MSD from UK FTSE 100 companies over the period from 2016 to 2020, subsequent to the MSA of 2015's enactment. The focus on FTSE 100 companies is grounded in their significant scale and potential to affect a wide demographic vulnerable to modern slavery practices (Christ et al., 2019; Gold et al., 2015). These companies are characterised by their extensive international operations, positioning them in locations where modern slavery practices are particularly prevalent. Initially, the sample comprised

500 modern slavery statements, which was narrowed down by 58 due to missing MSD and further by 25 owing to the lack of financial and governance data, ending the final sample in a total of 417 company-year observations. Table 1 displays the sample selection and industry distribution by year. The modern slavery statements were directly retrieved from the official websites of the companies. Moreover, comprehensive data pertaining to CEO, BGD indicators, and other specific financial and governance metrics were compiled from robust databases such as Eikon and Bloomberg.

4.2 | Dependent variable: MSD

The dependent variable in this study measures the level of disclosures in UK companies' modern slavery statements. Our firm-level MSD measurement is based on the methodology developed by Moussa et al. (2023), guided by prior CSR-related studies (e.g. Benamraoui et al., 2023; Dobler et al., 2015; Moussa et al., 2022). We employed a content analysis to assess the extent of MSD by UK companies. The Modern Slavery Disclosure Index (MSDI) is based on the framework of the Modern Slavery Act (2015), alongside established guidelines from the Global Reporting Initiative (Global Reporting Initiative, 2022) and insights from the literature (e.g. Christ et al., 2019; Flynn, 2020). The index includes 46 items divided into seven categories: (i) organisational structure (four items), (ii) policies (five items), (iii) due diligence processes (13 items), (iv) risk assessment and management (six items), (v) effectiveness and key performance indicators (six items), (vi) training (seven items), and (vii) additional features (five items). To minimise subjective bias, each item within these categories is assigned an equal weight. The presence of an item in a company's disclosure is

TABLE 1 Sample selection and year-wise industry distribution.

	2016	2017	2018	2019	2020	Number of Obs.
<i>Sample selection</i>						
Initial sample - FTSE 100	100	100	100	100	100	500
(-) Obs. with missing modern slavery data	19	15	10	8	6	58
(-) Obs. with missing financial and governance data	8	8	4	3	2	25
= final sample	73	77	86	89	92	417
<i>Year-wise industry sample distribution</i>						
Oil and gas	2	2	2	2	2	10 (2.4%)
Basic materials	10	10	11	11	10	52 (12.5%)
Industrials	14	15	16	16	17	78 (18.7%)
Consumer discretionary	14	14	16	17	17	78 (18.7%)
Health care	3	3	4	4	4	18 (4.3%)
Consumer staples	7	9	10	10	10	46 (11%)
Telecommunications	2	2	2	2	3	11 (2.6%)
Utilities	4	4	4	4	5	21 (5.0%)
Financials	14	15	16	17	18	80 (19.2%)
Technology	3	3	5	6	6	23 (5.5%)
Total						417 (100%)

scored as 1, while its absence is scored as 0. The score for each category is also expressed as a percentage of the total possible score for that category. This approach ensures that all categories are comparable and weighted equally, with each representing a fraction that contributes equally to the overall 100%.

To ensure the reliability of our index, we carried out the following steps. First, a pilot study was initially conducted across a sample of 10 annual modern slavery statements. The statements were subsequently coded against the index by members of the team and double-checked by other members to diminish the risks of subjectivity. This preliminary phase facilitated the refinement of the index, ensuring its comprehensive alignment with the varied dimensions of MSD. Subsequently, an independent coder, having undergone comprehensive training, undertook the primary data collection following stringent guidelines to ensure consistent application in coding across the study (Krippendorff, 2018; Marston & Shrivs, 1991). Second, to validate the coding's consistency and reliability, we re-analysed a sample of statements at a later stage, which revealed no significant variances with the initial coding, with a high agreement coefficient (0.93), thus affirming the replicability of the results (Krippendorff, 2018). Finally, the internal consistency of the index was rigorously assessed through

Cronbach's alpha test, which produced a score of 86%, exceeding the acceptable level for Cronbach's alpha and affirming the MSDI's reliability. This multi-stage verification process, encompassing pilot testing, consistency checks, and reliability assessments, confirms the MSDI as a reliable measure for assessing MSD within UK companies.

4.3 | Independent variables

Our independent variable, CEOP, is measured using a composite index that combines two distinct proxies (e.g. García-Sánchez et al., 2020; Velte, 2020). The first dimension, CEO duality, assigns a score of 1 where the CEO simultaneously holds the position of board chair, reflecting a consolidated formal authority over the board, and 0 otherwise (Fernando et al., 2020; Walls & Berrone, 2017). The second dimension quantifies the influence exerted by the CEO on the board through the presence of executive directors, employing a dummy variable that receives a score of 1 when the quantity of executive directors exceeds the median within the sample, and 0 otherwise (Al-Shaer et al., 2022; García-Sánchez et al., 2020). These proxies are aggregated to develop a CEOP index, capturing the extent of CEO influence.

TABLE 2 Variable definitions.

Variable	Symbol	Description
Modern slavery disclosure index	MSDI	Comprises 46 items across seven categories outlined in the UK Modern Slavery Act 2015: (1) Organisation Structure; (2) Policies; (3) Due Diligence Processes; (4) Risk Assessment and Management; (5) Effectiveness and KPIs; (6) Training; (7) Additional Features. Each item is scored between 0 and 1, with a total possible score ranging from 0% to 100%.
CEO duality	DUALITY	A binary variable: 1 if the CEO is also the chairman, 0 otherwise.
Executives on board	EXEC	A binary variable: 1 if the proportion of executives on the board is above the median, 0 otherwise.
CEO power index	CEOP	Combines the DUALITY and EXEC variables to represent CEO power.
Board gender diversity	BGD	The percentage of female directors on the board.
Blau's index of diversity	BLAU	Blau's index for BGD is calculated as: $1 - \sum_{i=1}^n P_i^2$, where n is the number of categories (i.e. male and female), and P_i is the proportion of board members in each category. The index ranges from 0 to 0.5, with higher scores indicating greater gender diversity.
Female director ≤10%	FD1	A binary variable: 1 if the percentage of female directors on the board is ≤10%, 0 otherwise.
Female directors 10%–20%	FD2	A binary variable: 1 if the percentage of female directors on the board ranges between 10% and 20%, 0 otherwise.
Female directors 20%–30%	FD3	A binary variable: 1 if the percentage of female directors on the board ranges between 20% and 30%, 0 otherwise.
Female directors >30%	FD4	A binary variable: 1 if the percentage of female directors on the board is greater than 30%, 0 otherwise.
Company size	FSIZE	The natural logarithm of the company's total assets.
Profitability	ROA	The ratio of net income to total assets (return on assets).
Leverage	LEV	The ratio of total debt to total assets.
Board size	BSIZE	The number of directors on the board.
Board independence	BINDE	The percentage of independent directors on the company's board.
Growth opportunities	MTBV	The ratio of market value to book value of equity.
CSR Committee	CSRCOM	A binary variable: 1 if the company has a CSR committee, 0 otherwise.
Industry	INDUSTRY	Dummy variables representing 10 industries based on the industry classification benchmark, to control for industry effects.
Year	YEAR	Dummy variables to control for year effects.

Board gender diversity is assessed using two different measures to capture female representation on corporate boards (e.g. Kassinis et al., 2016; Nadeem, 2022). The first measure, BGD, is defined as the percentage of female directors on the board, reflecting gender composition at the board level. In addition, we use Blau's (1977) heterogeneity index as an alternative measure of BGD. This index ranges from 0 (indicating complete homogeneity) to 0.5 (equal gender representation), with higher values showing greater female representation on the board. Furthermore, our analysis extends to assess the impact of a critical mass of female directors on the interplay between CEOP and MSDI (e.g. Nadeem, 2022; Yarram & Adapa, 2021). We incorporate four dummy variables: FD1, FD2, FD3, and FD4 to represent different levels of female representation in the boardroom. Specifically, FD1 indicates that the percentage of female directors on the board is $\leq 10\%$, FD2 denotes that the percentage ranges between 10% and 20%, FD3 indicates a range of 20% to 30%, and FD4 represents a percentage greater than 30%. By using these four dummy variables, we aim to illuminate the impact of varying levels of female board representation on corporate transparency and governance outcomes.

4.4 | Control variables

Following previous literature (e.g. Eliwa et al., 2021; Karim et al., 2021; Moussa et al., 2023; Tantawy & Moussa, 2023), this study incorporates a comprehensive set of control variables designed to adjust for both governance and firm-specific elements that could potentially affect a company's disclosure practices. These variables are categorised into two main groups: (a) company characteristics, which encompass company size, profitability, leverage, and firm value, and (b) governance characteristics, which include board size, board independence, and the presence of a CSR sustainability committee. Additionally, this study controls for temporal and industry-specific effects to ensure a robust analysis of the determinants influencing

companies' transparency regarding modern slavery issues. Table 2 provides definitions for all the variables used in this study.

4.5 | Empirical models

To assess the direct effects of CEOP and BGD on firms' MSD, as well as the moderating effect of BGD on the CEOP–MSD relationship, we employ fixed effects panel regression analysis. This method effectively controls for unobserved heterogeneity across industries and over time, thereby enhancing the robustness of our results (Hsiao, 2022). We performed a Hausman test, which confirmed that a fixed effects model was more appropriate for our data than a random effects model. The fixed effects regression model is beneficial as it provides greater consistency and efficiency in estimations, offering more accurate inferences by controlling for omitted variable bias and addressing the unobserved heterogeneity among the sampled firms over time (Wooldridge, 2010). The fixed effects regression models are specified as follows:

$$MSDI_{it} = \alpha_0 + \beta_1 CEOP_{it} + \beta_2 BGD_{it} + \sum_{i=1}^n \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (1)$$

$$MSDI_{it} = \alpha_0 + \beta_1 CEOP_{it} + \beta_2 BGD_{it} + \beta_3 CEOP_{it} * BGD_{it} + \sum_{i=1}^n \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (2)$$

where *MSDI* indicates the extent of a company's MSD, *CEOP* is a composite index that reflects the CEO's influence on the board, and *BGD* is a proxy of the board's gender diversity. *CONTROLS* denotes a set of control variables at the company level. Continuous variables are winsorised at the 1st and 99th percentiles to mitigate the influence of outliers.

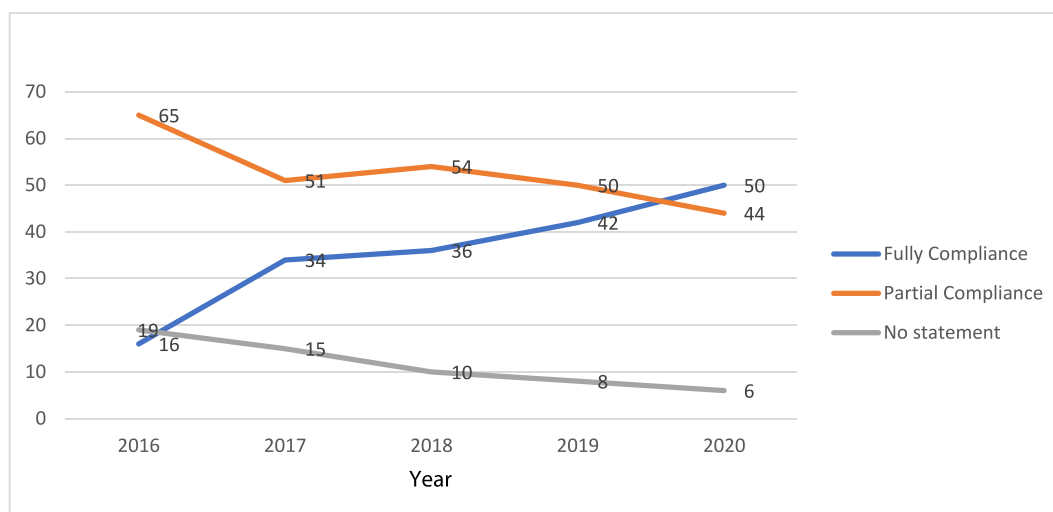


FIGURE 1 Extent of MSD under the 2015 UK Modern Slavery Act. MSD, modern slavery disclosures.

**TABLE 3** Summary statistics for MSDI and its categories.

	All	2016	2017	2018	2019	2020
Panel A: Dependent variable: MSDI (%)						
Mean	0.34	0.28	0.31	0.36	0.38	0.38
SD	0.11	0.10	0.11	0.11	0.10	0.10
p25	0.26	0.22	0.24	0.28	0.30	0.30
Median	0.33	0.28	0.30	0.37	0.37	0.37
p75	0.43	0.35	0.39	0.43	0.46	0.45
Panel B: Categories of MSDI (%)						
1. Organisation structure						
Mean	0.63	0.58	0.60	0.67	0.67	0.65
SD	0.23	0.22	0.22	0.25	0.24	0.22
p25	0.50	0.50	0.50	0.50	0.50	0.50
Median	0.75	0.50	0.50	0.75	0.75	0.75
p75	0.75	0.75	0.75	0.75	0.75	0.75
2. Policies						
Mean	0.56	0.51	0.52	0.57	0.59	0.63
SD	0.24	0.23	0.23	0.25	0.23	0.22
p25	0.40	0.40	0.40	0.40	0.40	0.40
Median	0.60	0.60	0.60	0.60	0.60	0.60
p75	0.80	0.60	0.60	0.80	0.80	0.80
3. Due diligence						
Mean	0.22	0.18	0.20	0.24	0.25	0.25
SD	0.12	0.11	0.11	0.12	0.13	0.10
p25	0.15	0.08	0.15	0.15	0.15	0.15
Median	0.23	0.15	0.23	0.23	0.23	0.23
p75	0.31	0.23	0.31	0.31	0.31	0.31
4. Risk Assessment and Management						
Mean	0.29	0.22	0.26	0.31	0.33	0.30
SD	0.18	0.18	0.16	0.20	0.18	0.14
p25	0.17	0.17	0.17	0.17	0.17	0.17
Median	0.33	0.17	0.17	0.33	0.33	0.33
p75	0.33	0.33	0.33	0.50	0.42	0.33
5. Effectiveness/KPIs						
Mean	0.15	0.07	0.14	0.16	0.18	0.19
SD	0.22	0.16	0.19	0.23	0.23	0.24
p25	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.17
p75	0.33	0.00	0.33	0.33	0.33	0.33
6. Training						
Mean	0.31	0.26	0.27	0.32	0.34	0.33
SD	0.18	0.18	0.18	0.18	0.18	0.17
p25	0.14	0.14	0.14	0.14	0.29	0.29
Median	0.29	0.29	0.29	0.29	0.29	0.29
p75	0.43	0.29	0.43	0.43	0.43	0.43
7. Additional features						
Mean	0.55	0.45	0.50	0.56	0.60	0.61
SD	0.20	0.19	0.21	0.19	0.18	0.19
p25	0.40	0.40	0.40	0.40	0.40	0.40
Median	0.60	0.40	0.40	0.60	0.60	0.60
p75	0.80	0.60	0.60	0.80	0.80	0.80

5 | EMPIRICAL ANALYSIS AND RESULTS

5.1 | Descriptive statistics

Figure 1 displays compliance trends with the disclosure requirements of the MSA from 2016 to 2020. The findings indicate an increase in the number of companies addressing modern slavery in their operations, with 94% issuing a statement in 2020, up from 81% in 2016. Specifically, in 2020, half of the companies met all the minimum requirements of the MSA, 44% met some requirements, and a mere 6% did not issue any statement regarding modern slavery. This upward trend underscores a growing corporate commitment to transparency in disclosing efforts aimed at combating modern slavery.

In the same vein, Table 3 (Panel A) shows the year-wise progression of the MSDI. The results highlight a steady improvement in the overall extent of MSD, with the mean MSDI score increasing from 28% in 2016 to 38% in 2020. This positive trend indicates growing corporate transparency concerning modern slavery, likely due to regulatory pressure and increasing stakeholder awareness (e.g. Christ et al., 2019; Rao et al., 2022). The rising mean scores across the years imply that companies are becoming more attentive to the issue of modern slavery and are striving to enhance their disclosure practices. This increase is further supported by the rising median scores, which reflect that even the typical company is improving its reporting standards.

In addition, Table 3 (Panel B) provides a breakdown of MSD across seven categories, highlighting areas of strength and opportunities for improvement. The analysis of disclosed modern slavery measures indicates that while there is progress in the disclosure of policies and organisational structures to combat slavery, a significant gap remains in their effective implementation and monitoring. Specifically, the low average percentages for due diligence (22%) and effectiveness/KPIs (15%) underscore the necessity for enhanced operational execution and outcome assessment. This discrepancy between policy disclosure and effective implementation underscores the need for a more integrated approach. Companies must ensure that anti-slavery policies are translated into practice through robust due diligence processes and that the outcomes are rigorously measured and reported.

Table 4 presents the descriptive statistics for all independent and control variables. For CEOP, the mean is 0.586, with a median of 1.00, indicating a moderate and variable level of CEOP across firms, as shown by the standard deviation of 0.561. The mean value of CEO duality (DUALITY) is 0.043, reflecting that only 4.3% of firms have the CEO also serving as the chairman. The mean value of executives on the board (EXEC) is 0.562, indicating that just over half of the firms have a higher proportion of executives on their boards. There are 183 firm-year observations below the median, and 234 above the median.

In terms of BGD, the average percentage of female directors is 29.84%, with nearly 30% of board seats occupied by women, indicating a moderate level of gender diversity. This is further supported by Blau's Index of Diversity (BLAU) with a mean of 0.402 and a median

TABLE 4 Summary statistics.

Variables	Mean	SD	p25	Median	p75
CEOP	0.586	0.561	0.00	1.00	1.00
DUALITY	0.043	0.202	0.00	0.00	0.00
EXEC	0.562	0.497	0.00	1.00	1.00
BGD	29.84	8.837	25.00	30.00	36.36
BLAU	0.402	0.078	0.38	0.42	0.46
FD1	6.40	0.245	0.00	0.00	0.00
FD2	22.80	0.420	0.00	0.00	0.00
FD3	33.00	0.457	0.00	0.00	1.00
FD4	37.80	0.480	0.00	0.00	1.00
FSIZE	16.581	1.956	15.42	16.33	17.80
ROA	7.294	6.592	2.37	6.23	10.81
LEV	25.709	16.668	13.61	26.54	36.50
BSIZE	10.338	2.053	9.00	10.00	12.00
BINDE	66.112	11.142	58.33	66.67	75.00
MTBV	5.152	68.925	1.23	2.38	5.15
CSRCOM	0.881	0.324	1.00	1.00	1.00

Note: Detailed definitions of all variables are available in Table 2.

of 0.42, paired with a low standard deviation, which suggests a consistent level of female representation across the boards. For detailed female director representation: FD1 ($\leq 10\%$) indicates only a small fraction of boards meet this criterion, FD2 (10%–20%) shows about 22.8% of firms are in this range, FD3 (20%–30%) suggests that a third of firms fall into this category, while FD4 ($> 30\%$) shows that a significant portion, with a mean of 37.80%, have more substantial female representation.

Turning to the control variables, the average firm's total assets (FSIZE) are 16.581, with a median of 16.33. The mean return on assets (ROA) is 7.29%, with a median of 6.23%. The relatively high standard deviation of 6.592% points to significant variability in profitability across firms. The mean leverage ratio (LEV) is 25.71%, with a median of 26.54%. The mean board size (BSIZE) is 10.338 directors, with a median of 10.00. The average percentage of independent directors on the board (BINDE) is 66.11%, with a median of 66.67%, implying that most boards have a significant proportion of independent directors. The mean market-to-book ratio (MTBV) is 5.152 but exhibits a high variability, pointing to diverse growth opportunities among the sampled firms. Finally, the mean value of the CSR sustainability committee (CSRCOM) is 0.881, with a median of 1.00, indicating that most firms have a CSR sustainability committee.

Table 5 presents the Pearson correlations between the dependent, independent and control variables. The results reveal a significant negative relationship between CEOP and MSDI, indicating that higher CEOP is associated with lower MSDI. Conversely, BGD is found to be positively related to MSDI, suggesting that greater gender diversity on boards is associated with higher MSD. In addition, the low correlation coefficients among the independent and

TABLE 5 Pairwise correlations.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) MSDI	1.000													
(2) CEOP	-.219 (.000)	1.000												
(3) BGD	.213 (.000)	-.097 (.048)	1.000											
(4) FD1	-.084 (.115)	.006 (.910)	-.488 (.000)	1.000										
(5) FD2	-.163 (.051)	.200 (.000)	-.214 (.000)	-.262 (.000)	1.000									
(6) FD3	-.024 (.618)	-.013 (.785)	.209 (.000)	-.264 (.000)	-.405 (.000)	1.000								
(7) FD4	.180 (.000)	-.159 (.001)	.645 (.000)	-.228 (.000)	-.349 (.000)	-.382 (.000)	1.000							
(8) FSIZE	.177 (.000)	-.295 (.000)	.159 (.000)	-.218 (.000)	-.087 (.008)	.148 (.000)	.163 (.000)	1.000						
(9) ROA	-.104 (.036)	.143 (.004)	.041 (.225)	.092 (.006)	-.016 (.639)	-.062 (.060)	-.025 (.443)	-.506 (.000)	1.000					
(10) LEV	.117 (.018)	-.042 (.397)	.078 (.020)	-.016 (.629)	-.032 (.337)	.018 (.577)	.031 (.344)	-.023 (.488)	.009 (.783)	1.000				
(11) BSIZE	.074 (.131)	-.206 (.000)	.066 (.045)	-.202 (.000)	-.142 (.000)	.114 (.001)	.321 (.000)	.553 (.000)	-.262 (.000)	-.039 (.244)	1.000			
(12) BINDE	.186 (.000)	-.315 (.000)	.328 (.000)	-.267 (.000)	-.078 (.018)	.135 (.000)	.246 (.000)	.368 (.000)	-.216 (.000)	.110 (.001)	.220 (.000)	1.000		
(13) MTBV	-.039 (.425)	.027 (.584)	.035 (.293)	.001 (.975)	.011 (.735)	.014 (.678)	-.020 (.557)	-.192 (.000)	.214 (.000)	-.057 (.090)	-.080 (.017)	-.041 (.226)	1.000	
(14) CSRCOM	.154 (.002)	-.147 (.003)	.044 (.341)	-.200 (.000)	-.020 (.672)	.067 (.146)	.076 (.098)	.391 (.000)	-.219 (.000)	.022 (.636)	.269 (.000)	.114 (.013)	-.174 (.000)	1.000

Note: Detailed definitions of all variables are available in Table 2.

control variables suggest minimal risk of multicollinearity, which is further supported by variance inflation factor (VIF) calculations. These VIF values, (not reported), all fall below the threshold of 2, confirming the absence of significant multicollinearity concerns in our analysis.

5.2 | Multivariate results and discussion

Table 6 shows the impact of CEOP and BGD on the extent of MSD. The results from Models 1 and 3 reveal that the influence of CEOP is inversely significant at the 5% level, indicating that an increase in CEOP correlates with a decrease in MSD. This suggests that higher CEOP is associated with decreased MSD. This result supports our Hypothesis 1. Companies with more concentrated power in the hands of their CEOs may be less likely to disclose information about modern slavery risks. This finding aligns with previous research indicating that CEOP negatively impacts CSR reporting and the adoption of

integrated reporting practices (e.g. Byun & Al-Shammari, 2021; Kwon et al., 2023; Rashid et al., 2020). CEOs with greater power are less likely to prioritise ethical decision-making and practices, which may reduce public scrutiny and lower reporting costs associated with MSD (Muttakin et al., 2018). This evidence also supports the agency theory, suggesting that influential CEOs may be less inclined to allocate resources towards CSR practices, particularly if such investments do not align with their interests. Hence, they are less motivated to make decisions related to modern slavery, which may conflict with stakeholders' interests.

In addition, Models 2 and 3 of Table 6 reveal that BGD significantly correlates with MSDI, indicating that boards with greater gender diversity are more inclined towards transparent MSD. These results confirm Hypothesis 2, which posits a positive association between the presence of female directors on the board and the disclosure of modern slavery. This evidence aligns with prior research (e.g. Muttakin et al., 2022; Nadeem, 2022; Nekhili et al., 2017) that suggests gender-diverse boards positively influence corporate

TABLE 6 Fixed-effect regression results of association among CEO power, BGD and MSDI.

	MSDI (1)	MSDI (2)	MSDI (3)
CEOP	−3.278* (−1.965)		−3.390** (−2.079)
BGD		0.275*** (4.293)	0.277*** (4.343)
FSIZE	1.246*** (2.879)	1.262*** (2.971)	1.240*** (2.931)
ROA	0.037 (.367)	−0.033 (−.330)	−0.02a4 (−.241)
LEV	0.084** (2.510)	0.084** (2.581)	0.085*** (2.611)
BSIZE	−0.278 (−.865)	−0.310 (−.982)	−0.291 (−.927)
BINDE	−0.007 (−.075)	0.088* (1.672)	−0.053 (−.613)
MTBV	0.002 (.162)	0.002 (.293)	0.003 (.317)
CSRCOM	2.744 (1.416)	3.422* (1.807)	3.027 (1.597)
INDUSTRY	Yes	Yes	Yes
YEAR	Yes	Yes	Yes
Constant	14.37 (1.566)	−2.314 (−.326)	9.432 (1.043)
No. of observations	417	417	417
Adj. R ²	0.281	0.288	0.317

Note: Detailed definitions of all variables are available in Table 2.

t-statistics are provided in parentheses.

* $p < .10$. ** $p < .05$. *** $p < .01$.

transparency and ethical practices. For example, studies by Cumming et al. (2015) and Wahid (2019) suggest that higher representation of females on corporate boards leads to lower unethical practices such as financial misconduct and environmental violations, supporting the notion that female directors, driven by communal values and ethical considerations, play a pivotal role in advocating against such malpractices. This evidence also supports gender socialisation theory, suggesting women board members, driven by communal values and ethics, are proactive against unethical practices, promoting greater transparency, especially concerning modern slavery issues (Gull et al., 2018).

For a more detailed analysis, Table 7 segments the overall MSD score into seven specific sub-indices that comprise our MSDI. The results from Models 2 to 5 indicate a significant and negative impact of CEO authority on several disclosure dimensions, including policies ($\beta = -0.101$, $p < .01$), due diligence ($\beta = -0.040$, $p < .05$), risk assessment and management ($\beta = -0.052$, $p < .10$) and KPIs ($\beta = -0.056$, $p < .10$). For example, due diligence is most negatively affected by CEOP, indicating that greater CEOP could impede the disclosure of the development and implementation of due diligence processes. The findings indicate that CEO influence on MSD varies, reflecting the complex impact of leadership on the transparency of efforts to address modern slavery in corporate practices. This highlights the significance of executive leadership in influencing corporate practices related to reporting and managing initiatives against slavery. Nevertheless, BGD exhibits a positive relationship with all categories of MSD except the disclosure of organisation structure as detailed in Table 7 across Models 2–7. We find that the strongest relationship with BGD is observed in the disclosure of KPIs category, highlighting the beneficial impact of enhancing female representation on corporate boards on the overall efficacy of MSD initiatives, especially in tracking and measuring effectiveness.

TABLE 7 Fixed-effect regression results of association among CEO power, BGD and individual categories of MSDI.

(Model) Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Organisation structure	Policies	Due diligence	Risk assessment and management	Effectiveness/ KPIs	Training	Additional features
CEOP	0.004 (0.111)	−0.101*** (−2.945)	−0.040** (−2.371)	−0.052* (−1.956)	−0.056* (−1.671)	−0.006 (−.197)	0.027 (.901)
BGD	0.002 (1.432)	0.004** (2.483)	0.003*** (4.048)	0.007** (2.513)	0.004*** (3.383)	0.002** (1.974)	0.002* (1.811)
CONTROLS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
INDUSTRY	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YEAR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.656*** (3.325)	0.334* (1.764)	0.0359 (.380)	−0.0586 (−.400)	−0.0635 (−.343)	0.0111 (.0709)	0.0464 (.280)
No. of observations	417	417	417	417	417	417	417
Adj. R ²	0.124	0.142	0.221	0.224	0.162	0.122	0.241

Note: Detailed definitions of all variables are available in Table 2. t-statistics are provided in parentheses.

* $p < .10$. ** $p < .05$. *** $p < .01$.

5.3 | Moderating effect of BGD

In this section, we investigate the moderating influence of BGD on the association between CEOP and the extent of MSD, as shown in Models 1–5 of Table 8. Model 1 shows that the coefficient for the interaction term (CEOP * BGD) is statistically significant and positive, suggesting that the effect of CEOP on MSD is more pronounced in boards with a higher proportion of female directors. This finding confirms Hypothesis 3, suggesting that the interaction between CEOP and BGD positively affects MSD. This evidence aligns with prior research (Adams & Ferreira, 2009; Ting & Huang, 2018) on the effectiveness of gender-diverse boards in monitoring performance and curbing CEO dominance, thus influencing corporate disclosure.

We further explore the moderating influence of different proportions of female directors on the board on the relationship between

CEOP and the extent of MSD, as shown in Models 2–5 of Table 8. This analysis incorporates four binary variables: FD1, FD2, FD3 and FD4 (see Table 2 for details) to gauge the critical mass effect. Model 2 reveals a negative and significant correlation (at the 1% level) between the interaction term (CEOP * FD1) and the extent of MSD, indicating that CEO dominance adversely affects MSD disclosures in scenarios where the percentage of female directors on the board is $\leq 10\%$. This suggests that the sole female director may have a symbolic rather than substantive influence, unable to effectively challenge CEO decisions about modern slavery. This finding aligns with tokenism theory (Kanter, 1977), which suggests that women or other underrepresented groups in leadership positions may be perceived as ‘tokens’ when their numbers are low. This leads to increased scrutiny and pressure, often preventing them from effectively challenging dominant group norms and influencing decision-making.

TABLE 8 The moderating effect of BGD on the relationship between CEO power and MSDI.

	MSDI (1)	MSDI (2)	MSDI (3)	MSDI (4)	MSDI (5)
CEOP	−8.256*** (−2.138)	−3.722** (−2.245)	−2.873 (−1.651)	−4.826** (−2.440)	−3.389* (−1.964)
BGD	0.172 (1.739)				
CEOP * BGD	0.160** (1.389)				
FD1		6.126* (1.426)			
CEOP * FD1		−16.27*** (−3.085)			
FD2			−2.302 (−1.048)		
CEOP * FD2			−1.090 (−.478)		
FD3				−3.190* (−1.923)	
CEOP * FD3				3.209 (1.555)	
FD4					4.006 (2.349)
CEOP * EFD4					1.572** (.758)
CONTROLS	Yes	Yes	Yes	Yes	Yes
INDUSTRY	Yes	Yes	Yes	Yes	Yes
YEAR	Yes	Yes	Yes	Yes	Yes
Constant	13.06 (1.389)	18.48** (2.004)	18.24* (1.957)	17.26* (1.844)	18.08** (1.995)
No. of observations	417	417	417	417	417
Adj. R ²	0.210	0.214	0.211	0.251	0.342

Note: Detailed definitions of all variables are available in Table 2. *t*-statistics are provided in parentheses.

p* < .10. *p* < .05. ****p* < .01.

In addition, the results presented in Model 3 do not show a significant impact of having 10%–20% female directors on the board on the CEOP–MSD relationship. This finding is consistent with Wahid (2019), suggesting that the presence of two female directors may exacerbate cognitive conflicts without enhancing board cohesion or effectiveness in challenging CEO decisions on modern slavery issues. Similarly, Model 4 does not show a significant impact of having 20–30% female directors on the CEOP–MSD relationship.

Nevertheless, Model 5 shows that a board composition with more than 30% of female directors (FD4) significantly enhances the CEOP–MSD relationship in a positive manner, thus supporting Hypothesis 3. While MSD generally decreases with an increase in CEOP, this relationship shifts positively with substantial female representation on the board. This finding corroborates prior research (e.g. Cabeza-García et al., 2018; Lucas-Pérez et al., 2015), which advocates for a critical threshold of female board representation to influence board deliberations effectively, including those pertaining to corporate disclosures. A substantial presence of women on the board presumably brings greater ethical sensitivity, thereby neutralizing CEO dominance and fostering more robust disclosure practices.

Overall, the results indicate that a critical mass of women (>30%) is necessary to moderate the relationship between CEOP and MSD effectively, consistent with the critical mass theory. These results are consistent with prior research indicating that the critical mass should be around 30–35% (Dobija et al., 2022; Joecks et al., 2013; Khatri, 2023; Kinatender et al., 2021). This finding emphasises that while token female directors may struggle to challenge CEO dominance, a significant presence of women on the board can neutralise CEO influence and encourage thorough disclosure practices.

5.4 | Additional analyses

In this section, we examine how the dynamics between CEOP and BGD influence MSD across industries with varying levels of modern slavery risk. Previous studies demonstrate that industry classification significantly influences MSD reporting (e.g. Cousins et al., 2020). Accordingly, we divide our sample into two sub-groups with high and low exposure to modern slavery risks and re-run our models accordingly.² This analysis yields a number of interesting findings (see Table 9): first, we find that in sectors characterised by high risks of modern slavery, CEOP exerts a significantly negative impact on the extent of disclosure; this relationship is not evident in sectors with low modern slavery risks. This result corroborates with Muttakin et al. (2018) who find that CEOP negatively affects CSR disclosures and lowers the impact of board capital on CSR practices. This aligns with prior research like Cousins et al. (2020), which indicates industry-specific pressures can shape disclosure practices significantly. In high-risk sectors, the temptation to obfuscate is likely higher due to the potential for significant negative effects if unethical practices are

revealed. Similarly, studies like those by Brahma and Economou (2024) discuss how CEOP can shape corporate strategies, including those related to disclosures and corporate social responsibility, often aligning with personal rather than stakeholder interests. Consistent with agency theory, this evidence implies that more CEOP might deprioritise MSD owing to perceived conflicts with their personal interests.

Second, we find a positive and significant relationship between BGD and the extent of MSD across both high-risk and low-risk industries. The influence of BGD on disclosure practices remains uniform across varying levels of industry-specific modern slavery risk, indicating the efficacy of gender-diverse boards in overseeing board functions and mitigating the influence of dominant CEOs. This finding aligns with our results in Table 6 and supports the results of previous studies. This result is supported by the findings of Adams and Ferreira (2009) and Ting and Huang (2018), who suggest that gender-diverse boards are more effective in monitoring management actions and curbing excessive executive power, thereby enhancing governance

TABLE 9 Comparison of industries with high risk of modern slavery and industries with low risk.

Variables (Model)	MSDI (1) Industries with low risk of modern slavery	MSDI (2) Industries with high risk of modern slavery
CEOP	0.425 (.171)	−5.132** (−2.446)
BGD	0.388*** (3.486)	0.306*** (4.069)
FSIZE	0.875 (1.209)	2.658*** (4.744)
ROA	−0.260 (−1.490)	−0.0430 (−.362)
LEV	0.156*** (3.374)	−0.007 (−.153)
BSIZE	0.171 (.378)	−0.532 (−1.270)
BINDE	−0.0115 (−.082)	−0.177 (−1.646)
MTBV	0.005 (.664)	−0.059 (−.334)
CSRCOM	−0.135 (−.049)	−1.162 (−.385)
YEAR	Yes	Yes
Constant	1.019 (.066)	6.173 (.530)
No. of observations	146	248
Adj. R ²	0.197	0.204

Note: Detailed definitions of all variables are available in Table 2. t-statistics are provided in parentheses.

* $p < .10$. ** $p < .05$. *** $p < .01$.

²Industries such as construction, retail, mining, fishing, brick-making, automotive, steel, and agriculture are considered high-risk sectors for modern slavery, whereas finance, insurance, and publishing are regarded as low-risk industries (Cousins et al., 2020).

outcomes. Furthermore, the study by Kwon et al. (2023) suggests that gender-diverse boards are less likely to support myopic management behaviours that sacrifice long-term company health for short-term gains, which often include neglecting corporate social responsibilities like MSD.

Overall, it is evident that industry-specific risks play a pivotal role in influencing the dynamics among CEOP, BGD and MSD. High-risk industries, where the consequences of ethical lapses can be severe (e.g. public backlash and legal costs), demonstrate a more pronounced impact of CEOP in suppressing disclosures. However, the stabilising influence of BGD appears to endure across various levels of industry risk, suggesting that enhancing board diversity could be a strategic

approach not only for ethical compliance but also for improving overall governance quality.

5.5 | Robustness tests

Table 10 presents several robustness checks undertaken to test the reliability of our empirical results. First, we re-ran the interaction model by incorporating an alternative measure for BGD, namely the BLAU index. The index ranges from 0 (no diversity) to 0.5 (maximum diversity), with higher scores indicating greater representation of women on the board (e.g. Blau, 1977; Martínez-García et al., 2022;

TABLE 10 Robustness checks.

Variables	Dependent variable: MSDI				
(Model)	(1)	(2)	(3)	(4)	(5)
	Alternative measure	2SLS	2SLS	GMM	GMM
Lagged MSDI				3.406*	8.913*
				(1.724)	(2.058)
CEOP	−14.52*** (−2.868)	−2.721** (−1.166)	−2.572* (−1.820)	−6.762** (−1.932)	−16.63*** (−2.148)
BLAU	3.583 (.328)				
CEOP * BLAU	28.690** (2.426)				
BGD		0.263** (.062)	3.314** (2.029)	0.277*** (4.320)	0.168 (1.687)
CEOP * BGD			4.321*** (1.457)		0.169** (1.428)
FSIZE	1.297*** (3.111)	1.375*** (3.270)	1.333*** (3.192)	1.241*** (2.911)	1.240*** (2.914)
ROA	0.019 (.221)	0.006 (.0730)	0.011 (.129)	−0.024 (−.240)	−0.021 (−.213)
LEV	−0.001 (−.033)	0.006 (.174)	0.003 (.099)	0.085** (2.578)	0.083** (2.522)
BSIZE	−0.148 (−.546)	−0.168 (−.616)	−0.135 (−.498)	−0.291 (−.925)	−0.260 (−.825)
BINDE	−0.057 (−.789)	−0.061 (−.794)	−0.085 (−1.094)	−0.053 (−.572)	−0.070 (−.748)
MTBV	−0.002 (−.266)	−0.002 (−.246)	−0.001 (−.221)	0.003 (.317)	0.002 (.330)
CSRCOM	0.0957 (.050)	0.485 (.252)	0.290 (.152)	3.026 (1.592)	2.933 (1.544)
INDUSTRY	Yes	Yes	Yes	Yes	Yes
YEAR	Yes	Yes	Yes	Yes	Yes
Constant	7.158 (.681)	0.439 (.0457)	8.447 (.841)	9.460 (1.020)	13.95 (1.427)
No. of observations	394	417	417	350	350
Adj. R ²	0.424	0.463	0.447		

Note: Detailed definitions of all variables are available in Table 2. t-statistics are provided in parentheses.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Moussa et al., 2023; Nadeem, 2022). The results from this analysis indicate that our findings are qualitatively similar to those reported in Table 8, reinforcing the robustness of our main findings to the inclusion of these alternative measures. This finding aligns with previous studies (e.g. Haque & Jones, 2020; Nadeem, 2022) that highlight female board members' ability to enhance transparency in corporate reporting and moderate the dynamic between CEOP and MSD.

Second, we re-ran our main models using an alternative measure for CEOP. Instead of using executive directors as a proxy, we incorporated board independence as the second dimension. Specifically, we assigned a value of 1 to the second dimension of the CEOP variable when board independence did not exceed 50%. The alternative composite index combines two distinct proxies: CEO duality and the proportion of board independence. The results of this analysis (un-tabulated) remain consistent with our main findings. In addition, rather than employing the median number of executive directors within the sample as a proxy, we utilised the median number of executive directors for each firm as a second dimension. Particularly, we assigned a value of 1 to the second dimension of the CEOP variable when the number of executive directors is above the firm-specific median, and 0 otherwise. We then re-ran our regression analyses using this alternative measure for CEOP. The results (un-tabulated) remain consistent with those reported in the main findings.

Third, to address concerns over potential endogeneity, we applied two statistical methodologies: the Generalised Method of Moments (GMM) and Two-Stage Least Squares (2SLS). We specifically employed the two-step system GMM approach, which effectively addresses potential endogeneity issues by utilising both level and first-differenced equations. This method reduces bias associated with fixed effects and enhances the robustness of our analysis due to its use of lagged variables as instruments, providing more efficient estimation, particularly in panels of smaller size (Blundell & Bond, 1998; Roodman, 2009; Wintoki et al., 2012). The application of the two-step system GMM in our study validates our findings by effectively capturing the dynamic relationships among CEOP, BGD and MSD while controlling for unobserved heterogeneity and endogeneity.

Finally, we employed 2SLS regressions to address potential reverse causality concerns. Following prior studies (Demerjian et al., 2020; Orazalin et al., 2024; Ye et al., 2019), we used the first lag and industry average values of the main independent variables as instruments. These are considered appropriate because they are unlikely to be correlated with the error term and do not directly affect the dependent variables. The results from both the 2SLS and GMM analyses (presented in Table 10) are consistent with those reported in Tables 6 and 8, affirming the robustness of our main findings against endogeneity issues.

6 | CONCLUSION

The study examines the extent of modern slavery disclosure among UK firms and conducts an empirical analysis of how CEOP influences MSD. It also examines the moderating role of BGD in this relationship.

The findings indicate a gradual enhancement in MSD as time progresses, albeit being remarkably low. The results reveal that CEOP adversely affects MSD levels, but increased representation of women on the board can moderate this negative impact. The results suggest that an increase in BGD limits the CEOs' dominance and the negative impact on MSD. In other words, the presence of a higher proportion of female directors enhances the board's oversight functions. This impact becomes notably pronounced when the board comprises more than 30% female directors, suggesting the importance of achieving a critical mass. To effectively moderate the relationship between CEOP and disclosures regarding modern slavery, it is essential to have a critical mass of women (>30%), aligning with the critical mass theory.

The findings carry implications for both theory and policy. Theoretically, the results lend support to agency and gender socialisation theories. The research adds to the growing body of knowledge on CEO influence and corporate narrative reporting. The results provide support for agency theory, as evidenced by the observed negative impact of CEOP on MSD. This aligns with the theory's premise that increased executive power can lead to agency conflicts, where self-interested CEOs may avoid transparency in areas that could expose detrimental practices or negatively impact their own standing.

Furthermore, our findings also support gender socialisation theory, which suggests that social behaviours are influenced by gender-based expectations and roles. The moderating role of BGD in the relationship between CEOP and MSD highlights how female board members, potentially due to higher ethical sensitivity and a greater propensity for advocacy on social issues, can counterbalance the concentration of power and foster greater transparency. This suggests that the socialisation experiences of women, which often emphasise communal values and ethical considerations, play a critical role in enhancing the board's oversight function. This research further underscores the significance of increasing female representation on boards to enhance their oversight function. The findings reinforce the critical mass theory, indicating that the presence of greater than 30% female directors on the board significantly influences the dynamic between CEOP and MSD. In brief, the study provides novel empirical evidence that supports a comprehensive understanding of how gender dynamics on corporate boards can significantly influence corporate disclosure practices, particularly in ethically sensitive areas.

In terms of practical implications, there is a pressing need for policymakers to encourage corporations to enhance the transparency and consistency of their disclosures. The outcomes of this investigation indicate that the extent of MSD is generally low and vary significantly across different corporations. This indicates that the current framework of the UK MSA might not be sufficient to motivate firms to better their disclosures related to modern slavery, thereby making it challenging for stakeholders to evaluate the efforts these firms are making towards combating modern slavery. As a result, it is imperative for policymakers to introduce additional regulations or guidelines focussed on modern slavery, especially concerning the specifics of the content and format of the sections in the modern slavery statements that deal with KPIs, risk assessments and due diligence processes.

Furthermore, clear repercussions for non-compliance, such as monetary fines, should be introduced as recommended in a recent report by the UK government (HM Government, 2021).

Furthermore, the findings indicate that to enhance gender diversity on corporate boards, policymakers should consider updating the existing guidelines within corporate governance codes. The evidence supports the Hampton-Alexander Review's recommendation for a minimum of 33% female representation on the boards of UK companies, as well as the more ambitious goal set by the FTSE Women Leaders Review, which aims for 40% female board representation by 2025. Additionally, the research encourages policymakers, businesses, and various stakeholders to support the United Nations' Sustainable Development Goals, as a step towards achieving a sustainable and equitable society.

This research presents certain limitations and opens doors for future inquiries. Initially, the analysis is confined to the disclosure practices at the company level regarding modern slavery. Hence, subsequent studies could delve into the combined effects of corporate and national governance structures on MSD. Moreover, while our investigation centred on the influence of CEOP, this paves the way for further exploration. Investigating additional CEO attributes, such as their tenure, expertise within the industry, competencies, cultural background and religious beliefs, could yield insights into their impact on enhancing disclosures related to modern slavery.

Future research could profitably explore the potential positive impacts of CEOP on corporate disclosures, particularly in scenarios where CEOs' personal values and ethical principles are closely aligned with socially desirable norms. This exploration could provide a more comprehensive understanding of how the personal characteristics of CEOs, such as their moral and ethical compass, interact with their level of power to influence corporate transparency in critical areas like modern slavery. Such studies could help delineate the conditions under which CEOP might serve as a catalyst for enhanced disclosure, rather than an impediment, thus offering insights into how corporate governance structures can be designed to harness the positive aspects of CEO influence while mitigating the risks. Additionally, assessing the influence of CEOs within various institutional frameworks and comparing companies across different regulatory environments could provide valuable perspectives. Lastly, our approach was quantitative, relying on secondary data. Future research might benefit from qualitative methods, such as interviews with key stakeholders to gather diverse perspectives on combating modern slavery. Despite these limitations, our study contributes significant new understandings of modern slavery practices and the pivotal roles played by corporate leaders and female board members in mitigating such unethical practices.

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CONFLICT OF INTEREST STATEMENT

None.

ORCID

Amir Allam  <https://orcid.org/0000-0001-5082-7936>

Tantawy Moussa  <https://orcid.org/0000-0001-5349-2764>

Mahmoud Elmarzouky  <https://orcid.org/0000-0001-9867-6057>

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