SafeWork NSW

Strengthening the priority of WHS for business leaders

Phase 1 Report

NSW GOVERNMENT

This report has been produced through research by Edith Cowan University, University of New South Wales, Southern Cross University and Massey University.

This report and the work it describes were funded through the Workers Compensation Operational Fund. Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and does not necessarily reflect SafeWork NSW policy.

Prepared by:

Professor Tim Bentley[1]
Associate Professor Ben Farr-Warton[1]
Dr Leigh-Ann Onnis[1]
Dr Pieter-Jan Bezemer[1]
Dr Esme Franken[1]
Dr Alexis Vassiley[1]
Dr Nicola Green[2]
Dr Rashid Zaman[1]
Professor Yvonne Brunetto[3]
Dr Lee Huuskes[4]
Associate Professor Sharron O'Neill[5]

June 2023

[1] ECU Centre for Work + Wellbeing, Edith Cowan University, Joondalup, WA, 6027
[2] Ergonomics Work and Health Ltd, New Zealand, 8082
[3] Southern Cross University, Bilinga, QLD, 4225
[4] Centre for WHS, NSW Government, Sydney, NSW, 2000
[5] University of New South Wales, Campbell, ACT, 2612

Executive summary

Background

Safe Work Australia's model code of practice notes that leaders bear significant responsibility for shaping a workplace environment conducive to work health and safety (WHS) (Safe Work Australia, February 2022). Beyond meeting legislative requirements, many leaders seek to make a genuine commitment towards putting employees first. This is often referred to as 'prosocial behaviour,' and it has strong resonance with related concepts such as *corporate social responsibility* (CSR)[1] and the *environmental, social and governance* (ESG)[2] movement.

This report details an exploratory, mixed-methods study examining the commercial and business drivers of WHS commitment, with a focus on Australia's corporate sector. This exploratory research contributes to the overarching project objective to develop a behavioural model that encapsulates the drivers for business leader WHS prioritisation. We conceptualise commercial drivers as the market and profit motives that are fundamental to for-profit business. Business drivers include the values, corporate governance characteristics and organisational designs that are adopted to pursue market and profit outcomes. Within this context, prosocial behaviour is a value which can be adopted by leaders, particularly board members and those in executive positions, which elevates the priority given to people's safety and wellbeing relative to the pursuit of profit.

Phase 1 research adopts a mixed methods approach, with three discrete study components.

Study One explores existing literature regarding commercial and business drivers, and seeks to explore how business leaders elevate WHS performance through prosocial behaviours focused on the prioritisation of WHS.

Study Two offers a quantitative analysis of different corporate governance characteristics, such as board size, CEO duality, and the measurable effects of these on WHS commitment, as well as safety and workforce outcomes, using panel data from a sample of ASX200 companies.

The final qualitative study, Study Three, examines prosocial signalling of WHS commitment within corporate annual reporting of ASX200 companies, along with drivers of such

[1] CSR describes activities carried out by an individual business to meet societal expectations, that go beyond their legal obligations

[2] ESG is as a "Social matter that may have a positive or negative impact of the financial performance or solvency of an entity" (Li et al., 2021, p.2)

commitment. This could include, for example, a CEO declaring their willingness to help the community.

Method

In Study One, a scoping literature review was conducted on international peer-reviewed scholarly literature (e.g. academic journal articles) and grey literature (e.g. industry reports) related to prosocial behaviour and WHS published in English between 2005 and 2022. A predetermined search strategy including key words was used and quality checks were undertaken on the grey literature.

In Study Two, an analysis of the top 200 Australian Stock Exchange listed companies (i.e. ASX200) for the period of 2009 – 2021 was conducted using two databases: (i) Refinitiv Eikon and (ii) Refinitiv Datastream. Regression analysis examined the role of corporate governance and leadership characteristics as antecedents of WHS commitment, safety and workforce outcomes.

Lastly, in Study Three, a documentary analysis, comprising a content analysis and thematic analysis of ASX200 companies' sustainability reports was undertaken to identify evidence of prosocial behaviours and WHS commitment.

Results

The literature review identified a number of commercial and business drivers of WHS commitment in corporate companies. It explored the role of leaders and other stakeholders in shaping behaviour and processes, finding that stakeholder relationships and the influences of the board motivate enhanced attention to WHS in corporate companies. However, much remains unknown regarding the role of market factors as a driver of prosocial behaviour in WHS.

The quantitative analysis of panel data from a sample of ASX200 companies identified particular corporate governance characteristics, indicative of prosocial behaviour, which was related to higher WHS commitment and safety outcomes in ASX200 firms. These include:

a) having a company board that has a CSR sub-committee;

b) having executive compensation that accounts for the WHS performance of the firm; and

c) having a higher proportion of independent directors on a company board (i.e. those who do not also hold management or substantial material relationship to the company, commonly referred to as 'board independence').

The documentary analysis, comprising a content analysis and thematic analysis of ASX200 companies' sustainability reports found that corporate companies pay scant attention to detailing the mechanisms by which they prioritise WHS. However, they do signal that prosocial orientation is becoming increasingly important.

Discussion

A heightened focus on organisational prosocial commitments in recent years has drawn increasing attention from companies and stakeholders. In this exploratory, first phase of a multi-phase research project, we examined the mechanisms by which commercial and business drivers motivate and encourage behaviour change among business leaders to prioritise WHS. In particular, we explored prosocial behaviours of business leaders associated with WHS commitment and the commercial factors that motivated such behaviours.

The findings suggest that stakeholder relationships mediated through reputation and business benefits (including collaboration, co-opetition, consumers, benchmarking, and stakeholder activism) are the external business drivers of WHS prioritisation. Despite the relatively large volume of literature that examined organisational prosocial behaviour as it relates to CSR/ESG, little is known about the motivations of companies and business leaders to engage or improve prosocial behaviours to enhance WHS commitment, beyond the mandated regulatory requirements.

The evidence for commercial drivers of prosocial behaviour identified through our analysis of the international literature and company reports was limited, and where identified it was usually linked to governance practices and board attention to WHS. For example, previous research implied a likely association between the number of women on the board and prosocial behaviour (Oino & Liu, 2022). This is consistent with the findings from the financial database analysis which found that several leadership and governance characteristics were observed as antecedents of WHS commitment. Of note, the presence of characteristics such as a CSR committee or executive compensation tied to ESG performance were found to be antecedents of WHS commitment in the analysis of ASX200 company financial and ESG databases.

Evidence of WHS commitment is predominantly found in documents reporting business performance, and is frequently associated with the influences of the board in relation to WHS.

As a result, our findings suggested that board competencies, in terms of WHS knowledge and experience, have a critical influence on attention to WHS, and that when incentives are offered to improve WHS outcomes (e.g. financial incentives for KPIs) they need to be carefully designed to align with long-term company goals. Finally, limited evidence of drivers of prosocial motivations was found through this exploratory study, most notably customer ethical expectations and employee expectations. However, the reports were relatively silent on how companies respond to stakeholder expectations, investor and shareholder pressure, and reputational concerns.

Conclusion and implications

Summarising the triangulated findings from this exploratory research and their implications for the project's primary objective to develop a behavioural model that encapsulates the drivers of business leader WHS prioritisation, we found evidence that board influence is an important driver of WHS commitments in an organisation by acting between the external drivers and organisational strategy, thus aligning external commercial and ethical drivers with business strategic drivers. However, numerous research gaps have been identified through this study, such as limited understanding about what motivates WHS commitments of business leaders and why, and to what extent WHS commitments respond to stakeholder expectations. These gaps in our knowledge about what motivates prosocial behaviours for business leaders will be addressed in Phase Two of this project, in which board members and business leaders from corporate Australia will be interviewed to better understand the role of external and internal drivers of WHS commitment.

Table of Contents

Introduction **4**

Background 4

Project aim 5

Study one: literature review **6**

Scoping 6

Scoping literature review findings 10

Summary and identification of gaps in the evidence base 31

Study two: financial database analysis **33**

Abstract 33

Introduction 33

Primary research question: examining the drivers of WHS commitment 35

Secondary research question: drivers of WHS performance and outcomes 36

Method 37

Findings 42

Discussion 51

Limitations 52

Study three: documentary analysis **54**

Introduction 54

Method 54

Findings 61

Conclusions and implications for phase 2 research **79**

Discussion and conclusions 79

Key research gaps 80

References **82**

Appendix **91**

List of Tables

Table 1: Key terms used as part of search strategy. 7
Table 2: Exclusion criteria. 8
Table 3: Literature search results. 8
Table 4: AACODS Checklist used for quality assessment of grey literature (Tyndall, 2010). 10
Table 5: Board of Directors responsibilities regulated by corporate laws (Ebbevi et al., 2021; Lornudd et al., 2020) 21
Table 6: Gaps identified in the literature review related to WHS. 32
Table 7: Variables and scales used in analysis. 38
Table 8: Antecedents of Workplace Health and Safety (WHS) Commitment and component items. 42
Table 9: Governance and Leadership Characteristics and Lost Time Injury Rate Total. 45
Table 10: Governance and Leadership Characteristics and Accidents to Total Employees. 46
Table 11: Governance and Leadership Characteristics and Employee Turnover. 48
Table 12: Governance and Leadership Characteristics and Employee Satisfaction. 50
Table 13: Description of the reports selected for second-level coding. 60
Table 14: Number of reports in each category of commitment to WHS used for second level coding and thematic analysis. 61

List of Figures

Figure 1: Number of published articles retained from the search in each year 9
Figure 2: WHS stakeholders 14
Figure 3: Best Practice Framework for WHS Governance 22
Figure 4: Drivers of a board's WHS engagement 25
Figure 5: The research framework used for this study 55
Figure 6: Distrubtion of ASX200 companies with Sustainability/ESG reports 58
Figure 7: Documentary analysis process 58
Figure 8: Level of WHS Commitment by signatory of introductory letter 63
Figure 9: Signalled level of WHS Commitment by industry in introductory letter 64
Figure 10: Exploring the connection between level of WHS commitment and WHS strategy in reports 65
Figure 11: Summary of findings regarding the commercial drivers for business leaders' commitment to WHS 80

Introduction

Background

Leaders hold significant responsibility for shaping a workplace environment conducive to work health and safety (WHS) according to Safe Work Australia's model code of practice (Safe Work Australia, February 2022). In September 2021, Australian business leader, Andrew Forrest, stood in front of employees at Fortescue Metals Group's (FMG) Solomon Hub iron ore mine site. He was lamenting and publicly grieving over the recent death of an employee that occurred as a result of a workplace accident under Forrest's directorship. Forrest's empathy and concern were palpable, but it wasn't the first time a worker had not returned home from one of FMG's mine sites. Such incidents are not unique to FMG nor the mining sector; negative physical and psychological health outcomes are experienced by Australian workers across all industries. Against this backdrop, this research seeks to identify ways of elevating WHS performance through prosocial behaviours focused on the prioritisation of WHS.

Prosocial behaviours differ from commercial behaviours as they are based on fundamental ethical principles and focus on improving WHS for its own sake, rather than for instrumental reasons such as increased profits. For example, the right of every worker to return home safely from work is a basic principle underlying prosocial commitment to WHS. It is now common for businesses to incorporate ethical or prosocial practices into their strategies. Indeed, reporting on these practices (for example through Environmental, Social, and Governance (ESG) reporting) has become increasingly important for maintaining a reputation as a responsible and profitable business.

With the growth in such reporting, most prosocial priorities are generally focused on environmental sustainability and ethical labour, with considerably less attention directed towards workplace health and safety (WHS) (Ebbevi et al., 2020). Current research calls for boards and executives to be proactive in demonstrating their commitment to prosocial practices (e.g. Ebbevi et al., 2020; Lornudd et al., 2021) if WHS is to be genuinely prioritised. Yet, little is known about how to drive action and change to improve WHS outcomes at the executive and board levels. There is, however, an emerging view that stronger WHS commitment beyond compliance, or protecting the reputation of the company is necessary to maximise workplace safety (Ebbevi et al., 2020; Ferguson, 2015; Lornudd et al., 2020).

The present study will contribute to an improved understanding of the influence that business leaders' commitment has on WHS and enhance the theoretical and practical understanding of

business leaders' roles in improving WHS outcomes. Moreover, the research responds to the need for a better understanding of how commercial drivers influence the prioritisation of WHS, which is fundamentally important to driving WHS improvements (Irastorza et al., 2016; NSW Government, May 2021). Therefore, the overall project seeks to not only contribute to an area lacking in empirical evidence, but also to create a model for behavioural change in how executives prioritise WHS. As a result, this first phase of the project will make a significant contribution to existing knowledge about the extent and nature of executive commitment and action towards improving WHS practices and outcomes in corporate Australian workplaces.

Project aim

The overarching aim of this multi-phase project is to build and test a behavioural model that encapsulates the drivers for elevating the importance of WHS for senior business leaders. The key research question for the project is: *How do commercial and business drivers motivate or encourage behaviour change among senior business leaders to prioritise WHS?*

In support of the overarching project aim and associated research question, this exploratory phase of the project seeks to understand:

- the nature of WHS commitment as a form of organisational prosocial behaviour; and
- the extent and nature of evidence for commercial and business drivers of prosocial behaviour and WHS prioritisation.

The scoping *literature review* (Study One) explored the extent and nature of evidence for the relationship between commercial and business drivers and organisational prosocial behaviours within the international literature. The findings of the review produced some evidence for commercial drivers of prosocial behaviour, although this was largely linked to governance practices and the influence of the board. For example, previous research implied a likely association between the number of women on the board and prosocial behaviour (Oino & Liu, 2022). The *financial database analysis* undertaken in Study Two, therefore, aimed to identify the governance practices and leadership characteristics of a business that reflects WHS commitment and performance in ASX200 companies.

Finally, the *documentary analysis* undertaken in Study Three aimed to examine the nature of senior business leaders' prosocial behaviours related to WHS commitment and evidence for commercial and business drivers of prosocial behaviour in ASX200 companies.

Study one: literature review

Scoping

This scoping literature review sought to explore the extent and nature of the evidence in the scholarly and grey literature regarding the relationship between commercial and business drivers and organisational prosocial behaviours. The review focused on WHS prioritisation as an organisational prosocial behaviour, but also sought to examine commercial drivers of other prosocial behaviours that could be relevant or related to WHS. The focus of the review was at the higher levels of organisational structures, namely those which drive the behaviour of boards, C-suite executives, and those external to the organisation. The literature shows that boards of directors influence organisational outcomes including prosocial commitments such as ESG (de Villiers et al., 2011), and that most large companies direct WHS at the board level (Lornudd et al., 2020). While there are empirical studies that show *what* boards do when they engage in WHS (e.g. support WHS initiatives, set targets, and conduct 'safety walk arounds') (Lornudd et al., 2021), it is not clear *why* they do this and what drives them to engage with WHS.

Scoping review aims

Relatively little is known about the extent to which business leaders are motivated to behave prosocially with regards to WHS, nor the factors that drive or influence such prosocial motivations. These gaps in knowledge guided the direction of the scoping review, which explored the following question: What is the evidence for commercial and business drivers of organisational prosocial behaviours within the international literature?

Scoping review method

This scoping review examined the international peer-reviewed and grey literature. Literature that was published in English between 2005 and 2022 was included in the review scope. The rationale for this period was to capture empirical studies and literature that have emerged since the HSE Research Report, 'Promoting health and safety as a key goal of the Corporate Social Responsibility agenda' (Sowden & Sinha, 2005). The review considered all industry contexts and was not limited to high-risk industries. Fields of research included WHS and safety science, corporate social responsibility, business ethics, and corporate governance and boards.

Scholarly literature search

The search of the literature followed a systematic process and searched the databases of Scopus, Web of Science, PsychINFO, and ProQuest Business. The search was augmented with

literature provided by research team members and from examining the reference lists in articles to identify any additional relevant items.

Search terms

The searches used the appropriate Boolean operators to string together combinations of the key terms identified by the project team and shown in Table 1. The search was limited to published articles or review articles in English. The search strings used in the exploration are detailed in Appendix I and were conducted between August and September 2022. Corporate Social Responsibility (CSR) and ESG represented a significant focus of the search, as evidence of prosocial behaviours and WHS commitments is likely to be found in companies' CSR/ESG reports (Mavroulidis et al., 2022; van Aaken, 2013).

Table 1: Key terms used as part of search strategy.

Key concept terms		
Commercial/Business drivers	*Prosocial behaviour*	*Business leaders*
Business/commercial motivations /drivers Business/commercial incentives/rewards	Prosocial behaviours Organisational prosocial behaviours Corporate social sustainability Corporate social responsibility Occupational health and safety Wellbeing Work health safety WHS commitment WHS prioritisation Sustainability Sustainable development goals/SDGs Environmental, social, governance/ESG Ethical behaviours Common good human resource management Common good HRM	Leaders Business leaders Executives Board members Leadership CEOs C-suite

Screening process

The first search results were screened online to exclude articles that were clearly out of scope. For example, those that considered food consumers or tourist behaviour rather than commercial

drivers. The remaining potentially relevant references were exported to EndNote for more thorough screening of the abstracts for items of interest related to the research questions. Retained articles were moved into separate folders as the process continued and separate folders were created for emerging themes of articles which potentially explored the research questions. The search and first screening process resulted in 209 articles of interest. Using the exclusion criteria (see Table 2), the second screening resulted in 111 articles for full review. The main reasons for excluding at the second screening were that the focus was on individual leader characteristics at lower levels of the organisation or that there was a lack of focus on business drivers or prosocial behaviours.

Table 2: Exclusion criteria.

Exclusion reasons	*Examples*
Not macro	e.g. customer citizen behaviour, individual behaviours
Not commercial driver	e.g. ecotourism, marketing
Not prosocial behaviour	e.g. construction, hotels, crime
Not evidence	e.g. theoretical papers

Scholarly literature search results

The results of the initial search process are shown in Table 3.

Table 3: Literature search results.

Database	*Identified*	*Duplicates*	*Excluded first screen*	*Retained*
Scopus - search 1	204	0	165	39
Scopus - search 2	672	13	561	98
Web of Science	847	344	468	35
PsychINFO	331	26	281	24
ProQuest Business	379	59	307	13

Figure 1 shows the publication trend of the retained articles, indicating a significant increase in interest amongst scholars in the last four years (2019-2022).

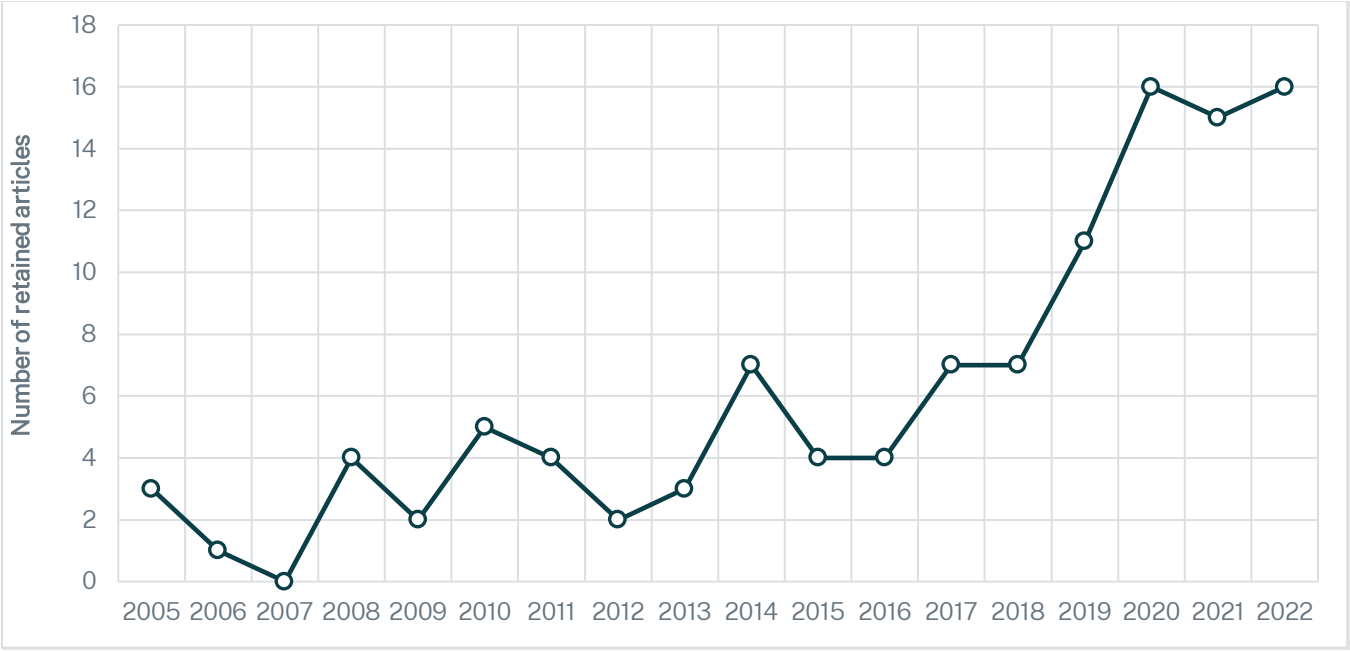


Figure 1: Number of published articles retained from the search in each year.

The retained articles from the scholarly literature fell into the broad themes of: stakeholder relationships, benchmarking, board characteristics or governance approach, reporting or disclosure, regulatory or legislative, or a combination of drivers. However, very few of these articles were specific to WHS, with initially only around 10% (n=11) mentioning WHS. The resultant search literature was augmented by checking reference lists on reading full papers to identify other relevant articles not captured in the initial search process (n=19) and from research team members' own collections not identified in the search (n=11).

Grey literature search

An extensive search was conducted using the Google search engine, drawing from the search terms used for the scholarly databases (see Table 1). In addition, a number of items of grey literature were suggested by the wider research team. After screening, a total of 19 grey literature documents were reviewed.

Quality checks

Due to the nature of grey literature, which is typically not peer-reviewed, quality was assessed using the AACODS (Authority, Accuracy, Coverage, Objectivity, Date, Significance) checklist (Tyndall, 2010). The grey literature documents were given a rating out of six based on answers ('yes', 'no', or 'unknown') to the questions from the AACODS checklist shown in Table 4. The vast majority of documents achieved a rating of 5 out of 6 or 6 out of 6. Documents were only included in the review if they had a rating of at least 3 out of 6.

Table 4: AACODS Checklist used for quality assessment of grey literature (Tyndall, 2010).

Quality measure	*Question*
1) Authority	Is the organisation reputable?
2) Accuracy	Does the item have a clearly stated aim or brief?
3) Coverage	Are any limits clearly stated?
4) Objectivity	Does the work seem to be balanced in presentation?
5) Date	Does the item have a clearly stated date related to content?
6) Significance	Does it add context?

Scoping literature review findings

The findings from the scholarly and grey literature relevant to the scoping review aims are discussed in the next sections. We have structured these findings in the following order:

1. Defining prosocial behaviour, CSR and ESG
2. CSR/ESG as a WHS strategy
3. WHS as prosocial organisational behaviour
4. Commercial drivers of business leader WHS prioritisation
5. Collaboration
6. Co-opetition
7. Consumers
8. Benchmarking
9. Stakeholder activism
10. CSR/ESG and prosocial behaviours of business leaders related to WHS
11. Reporting
12. Influence of the Board of Directors
13. Directors' WHS competencies
14. Board composition and roles
15. Drivers of board attention to WHS
16. Incentives for executives
17. Stewardship
18. Business drivers of prosocial behaviours related to other employee outcomes

Defining prosocial behaviour, CSR and ESG

Unsurprisingly, given the multi-disciplinary nature of the research and practice in these fields, there are many definitions used to describe organisational prosocial behaviours and related concepts (Bautista-Bernal et al., 2021). Brief and Motowidlo (1986) suggest that positive social acts such as helping, sharing, donating, and volunteering are prosocial behaviours done to produce and maintain the wellbeing of others. They define prosocial organisational behaviour as:

> *"[A] behaviour which is performed by a member of an organisation, (b) directed toward an individual, group, or organisation with whom he or she interacts while carrying out his or her organisational role, and (c) performed with the intention of promoting the welfare of the individual, group, or organisation toward which it is directed." (Brief & Motowidlo, 1986, p. 711).*

Organisational prosocial behaviours have drawn increasing attention from companies and stakeholders and have been framed within the scope of CSR and ESG (Griffin & Youm, 2018). CSR has been defined as:

> *"A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis." (Commission of the European Communities, 2001, p. 4).*

Alternatively, the World Business Council for Sustainable Development defines it as:

> *"The continuing commitment by businesses to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large." (Bautista-Bernal et al., 2021, p. 1).*

CSR is generally considered to be one strategic tool that improves the relationship between organisations and stakeholders (Habel et al., 2016; Luo & Bhattacharya, 2006).

The term ESG is thought to have first appeared in 2004 in a report by twenty financial institutions recommending how to better integrate ESG issues into their business models (Gillan et al., 2021). While the terms are related and often used interchangeably, ESG includes governance explicitly, whereas CSR tends to include governance issues indirectly as they relate to environmental and social considerations (Gillan et al., 2021).

Other commentators differentiate between the terms suggesting that while CSR refers to 'softer', qualitative issues that provide organisational accountability, ESG refers to more quantitative metrics relevant to business objectives. CSR and ESG both contribute to the concept of sustainable development which includes economic, social, and environmental dimensions (Bautista-Bernal et al., 2021). Importantly for the present project, it is posited that drivers for

these related movements could motivate other prosocial behaviours including WHS (Montero et al., 2009; Sowden & Sinha, 2005).

CSR/ESG as a WHS strategy

In the early 2000s, there was an increase in the development of initiatives aimed to promote CSR from regulatory bodies (e.g. European Commission and HSE). The potential of CSR as a stimulating agent for WHS was recognised with the seminal HSE report, which introduced promoting WHS as a key goal of the CSR agenda (Sowden & Sinha, 2005). The HSE report (Sowden & Sinha, 2005) outlined a strategy for regulators to improve the WHS behaviour of companies by using support for CSR. CSR, the report argued, is based on an understanding that businesses have a broader responsibility to society, not just to their shareholders. A loss of trust among wider stakeholders can result in consumer boycotts, loss of shareholder value, or in rare cases, the closure of a company (Sowden & Sinha, 2005). Companies, therefore, have a material interest in working towards CSR goals; yet the drivers are not widely discussed. Of note, one potential barrier is that corporations while not complying with WHS regulations is highly visible, going above and beyond may not be noticed and, therefore, not generate any social capital with consumers (Gahan et al., 2014).

WHS as prosocial organisational behaviour

Following Sowden and Sinha's HSE research report (2005), WHS as a prosocial organizational behaviour gained the attention of several scholars. In one of the first published journal articles identified, Montero et al. (2009, p.1440) stated:

> *"There is little doubt that the search for a good occupational health and safety environment and the promotion of a culture of risk prevention are two of the firm's main social responsibilities, and hence an integral part of CSR."*

Similarly, Górny (2014) suggested that as the importance of CSR increases within organisations, there will be a concurrent increase in the importance of safety culture as an indicator of the company's employee-orientation (e.g. relationships between employees and managers, relationships with local communities, and recognising the influence of the natural environment on working conditions).

However, it is acknowledged that developing WHS through CSR would require a stronger presence of WHS issues across CSR stakeholder forums and the development of new approaches for organisations (Montero et al., 2009). One approach is to include WHS as part of CSR reporting, with the goal of helping to internally embed the CSR work of organisations and/or

to serve as a communication tool for external stakeholders to report on performance (Koskela, 2014). The research in this area has used reporting as a proxy to assess the degree of company attention or commitment towards WHS as a prosocial organisational behaviour. For example, Kawashita et al. (2005) found that while 52% of companies with CSR-related reports in Japan included WHS, less than 2% of the content was WHS related compared to environmental and other social activities. While the trend for WHS reporting as part of CSR disclosure is increasing (Nagata et al., 2017), WHS content in CSR reports is generally low, especially when the amount and quality of content is considered (Alves and da Conceição Ramos, 2022; Evangelinos et al., 2018; Koskela, 2014; Larrieta-Rubín de Celis et al., 2017; O'Neill et al., 2016; Tsalis et al., 2018). In addition, researchers have found variations in reporting across countries partly depending on local legislation, expectations, and sector (Alves and da Conceição Ramos, 2022; Newson & Deegan, 2002; O'Neill et al., 2016; Tsalis et al., 2018; Xiao et al., 2005).

The limited early literature in this area asserts that, as a prosocial organisational behaviour, WHS should form part of an organisation's CSR/ESG agenda and that there are several theoretical, strategic, innovation and operational benefits for its inclusion. However, the evidence from sustainability reporting suggests that WHS is not a strong priority for many organisations, particularly when compared to environmental activities. The 2022 KPMG survey of sustainability reports stated that social elements of ESG (including community engagement, safety, and labour issues) were reported on by 67% of Australian N100 companies, ahead of the global rate of 43% (KPMG, 2022). However, KPMG (2022) noted that increased awareness is needed in understanding these issues, as well as improvements in the quality of reporting tools and mechanisms.

Overall, research in the nexus between WHS and CSR/ESG is limited, particularly in terms of evidence to explain what motivates organisational leaders to pay attention to WHS. This leads to the question: "What are the commercial drivers for business leaders to prioritise WHS?" An examination of the literature evidence addressing this is included in the next section.

Commercial drivers of business leader WHS prioritisation

The literature review uncovered research relevant to business drivers that motivate organisational leaders to prioritise WHS. Of particular interest is a model developed by Montero (2009) that proposed that business drivers are focused around WHS stakeholders. Potential drivers elicited from this literature review, together with Montero's proposed drivers, are shown in Figure 2.

Figure 2: WHS stakeholders (adapted from Montero, 2009, p.1443).

As shown in Figure 2, WHS stakeholders including regulators, supply chain, industry bodies, unions, competitors, investors, customers and the wider society exert influence on organisations. The business benefits of successfully managing these relationships are primarily through the mechanisms of reputation and legitimacy. WHS performance may generate positive or negative effects on a company's long-term value creation through damage to its reputation brought about by poor outcomes or enhanced reputation and legitimacy from good performance.

Reputation has been reported to be the top strategic business risk linked to financial performance and customer loyalty (Galbreath, 2010; Latapí Agudelo et al., 2020; Martinez Garcia de Leaniz & Rodriguez del Bosque Rodríguez, 2016; Vig et al., 2017). Moreover, reputation is considered to be a primary strategic driver of WHS within the supply chain (Tanner et al., 2019) and in interactions with other stakeholders (Lornudd et al., 2020).

Following their review of WHS in CSR management instruments, Montero et al. (2009) suggested that the increasing importance of stakeholder management in CSR could position WHS in a context centered on the social impacts for stakeholders rather than on the demands made of a company. The authors identified multiple advantages of collaboration with stakeholders, including strategic (e.g. attention to processes, not just WHS outcomes) and social and economic value (e.g. reputation, legitimacy, point of difference). However, Montero et al. (2009)

acknowledged that whether WHS is present or prioritised in CSR is not clear, meaning that these benefits were largely theoretical. The evidence of the influence of collaboration, co-opetition (i.e. collaboration with the competing companies), consumer pressures, benchmarking, and stakeholder activism is discussed in the next sections.

Collaboration

Cooperation and partnership with other organisations are common strategies in CSR-related environmental and community social initiatives (Brekke & Pekovic, 2018; Eid & Sabella, 2014) and may, therefore, contribute to WHS prioritisation by executive leaders. Tanner et al. (2019) suggested that this mechanism of networking could be used for WHS, including psychosocial risk management (Jain et al., 2011). The motivations for this stem from the exchange of information, experience and support on WHS in the workplace, co-partnering projects, and adjusting work processes for mutual benefit. In their interviews with enterprise and industry representatives, Tanner et al. (2019) found that there were distinct advantages for cooperation and relationships for information exchange and collaborative development of WHS. However, this was contested by some participants in their study, reportedly due to conflict about the organisation's cost and productivity focus. As a result, Tanner et al. (2019, p. 226) concluded that "the relevance of WHS in terms of collaborative relationships between organisations is advantageous; however, for WHS, the relationship between organisations and CSR is not yet (fully) realized."

Co-opetition

Moving beyond cooperation, co-opetition (i.e. collaboration with the competing companies) on CSR is a growing trend. For example, the Global e-Sustainability Initiative (GeSI) in the telecom sector and the Electronic Industry Citizenship Coalition (EICC) in electronics aim to drive ESG standards and practices. Kumar et al. (2021) explored what the drivers and critical success factors might be for this approach in Australian companies across several sectors. While tending to focus on environmental issues, safety was included in discussions of social issues. Collaboration to achieve a common social-environmental goal and the integration of sustainability goals were identified as drivers for co-opetition in ESG/CSR. External influences that promote collaboration with competing firms were found to be interdependencies in relationship networks that mandated collaboration. For example, government, customers, public policy, regulation, or achieving the SDGs. Kumar et al. (2021) concluded that, "a clear message is 'turn your competitors into partners' to drive CSR and sustainability…" (p.1224). However, there

may be a 'sweet spot' of market forces needed to make this viable, as Zoeteman (2013) pointed out that in environments with too much or too little competition, companies are less likely to pursue a CSR strategy.

Consumers

The literature points to a strong engagement by consumers with prosocial behaviours. For example, a 2022 survey of 16,000 nationally representative UK grocery consumers found that most consumers expect brands to behave responsibly and approximately 25% of consumers surveyed said that they "switched brands recently based on sustainability perceptions." (Glow, 2022, p. 6). This is consistent with the scholarly literature, which also found that prosocial behaviours signal a 'good' organisation, improving reputation and influencing the purchasing intent of consumers (Ben-Amar et al., 2021; Galbreath, 2010). Indeed, Haddock-Fraser and Tourelle (2010) asserted that when the key value proposition is reputation and legitimacy, the key organisational stakeholders shift from shareholders to consumers or potential consumers. Ramirez (2013) found that consumers evaluate the sustainability efforts of companies by considering media depiction, environmental considerations in products, visible operating procedures, and social networks.

While the scholarly literature did not contain specific discussions about the relationship between the influence of consumers and WHS prioritisation, Gahan et al. (2014, pp. 15-16) noted that, "Initial research testing the 'ergo-brand[3]' proposition has found some support for the suggestion that consumers prefer goods made by organisations committed to good working conditions" but Neumann et al. (2014) also report that this preference for 'ergo-brands' does not necessarily serve to overcome consumer considerations of quality and cost in their purchasing decisions. This lack of attention in the literature suggests an area for future research to explore whether consumers can act as a driver for WHS prioritisation, given their views and behaviours are influenced by other prosocial behaviours.

Benchmarking

Robson et al. (2016) studied companies that had made large improvements in their WHS performance over a decade to identify the important factors in this transformation. In terms of external drivers for initiation of WHS improvement, they identified three main areas that spurred

[3] 'Ergo-brands' describes products made under good working conditions (Neumann et al., 2014, p.1113).

leaders to action as ‘carrots, sermons, and sticks’. First, industry standing and relationship factors are important, such as knowledge that similar companies were failing audits or that companies within the industry that have “a good safety program or a good safety culture” and the companies that they prefer (Robson et al., p.218). Second, the level of awareness business leaders have about potential social and financial consequences of WHS are critical for their businesses to respond to events occurring within their sector (e.g. injuries in similar businesses) or broader societal events (e.g. the #Metoo movement) (Lornudd et al., 2020). Third, the awareness of government inspectorates that issued or identified deficiencies. For example, Larrieta-Rubín de Celis et al. (2017) found that compliance with the law and external certifications (e.g. Family-Responsible Company certification and ‘equality in the workplace’) seemed to drive practices in managing WHS specific to women through enhanced reputation, loyalty, and recruitment. Villela et al. (2021) specifically studied organisations with B Corporation certification over time. The B Corporation system is a US-based certification which covers a company’s operations and measures its policies, practices and outcomes in ESG, including WHS. The certification aims to drive firms to apply the same level of attention to their social and environmental impact as their financial returns, with the slogan ‘best *for* the world’ compared to the traditional ‘best *in* the world’. While Villela et al. (2021) found that achieving the certificate helps with reputation, legitimacy and networking, there was often no clear integration of social values into the business. Thus, certification as an effective driver for WHS appears to depend on how company leaders relate to and build on the certification, including the commitment of resources (Tanner et al., 2019; Villela et al., 2021).

Stakeholder activism

Institutional investors (e.g. credit unions, banks, mutual funds) as shareholders can influence a wide variety of company governance and strategies as well as operational performance and CSR/ESG (Barko et al., 2021; Del Guercio et al., 2008). Hooijberg and Roi (2021) argue that an important catalyst for the increase in ESG/CSR performance schemes is pressure from institutional investors. However, Shi et al. (2021) argues that with respect to WHS, this is not always positive.

Shi et al. (2021) investigated the association between institutional investor activism[4] and WHS, through a difference-in-differences (DID) analysis on a matched sample of 352 US companies who were targeted and not-targeted by institutional investor activism using a database of company information and WHS data (e.g. number of work-related injuries by hours worked). Institutional investor activism describes entities (e.g. pension funds, hedge funds, superannuation funds) that undertake activist-type activities to influence particular outcomes usually for financial gain. For example, they may engage in public or social media campaigns, communicate with management demanding action on a particular issue, instigate lawsuits, or commence takeover bids (Shi et al, 2021).

CSR/ESG and prosocial behaviours of business leaders related to WHS

The notion that CSR/ESG can be harnessed to prioritise WHS as a prosocial behaviour, as part of strategy, and for which there is a business case, was discussed in sections 2.2.2 and 2.2.3. The literature evidence of the commercial drivers for prioritisation of WHS in terms of stakeholders was discussed in the previous section (2.6.8). Next, the review turned to the literature that discusses the role that prosocial behaviours of business leaders play, or could play, in WHS. The review search strategy (Table 1) focussed on high-level leaders (i.e. C-suite and boards) as a focus on external drivers of WHS. The following section first examines sustainability reporting, and then explores the role that the board plays in WHS prioritisation, covering competencies, composition and roles, attention to WHS, and executive incentives. The section is completed with a discussion of WHS stewardship.

Reporting

Including WHS as part of sustainability reporting is the most visible aspect of WHS being included as the 'S' in CSR/ESG strategy. However, as previously discussed (see section 2.2.3), the literature suggests that the quantity and quality of this reporting is a limitation, and it is not clear that reporting signals WHS as a strong priority in this agenda. The literature, with particular reference to Australia, concurs with these findings.

With respect to safety reporting, the 2020 report by Australian Council of Superannuation Investors (ACSI) '*Safety in Numbers: Safety reporting by ASX200 companies*' sets out a

[4] Institutional investor activism describes entities (e.g. pension funds, hedge funds, superannuation funds) that undertake activist-type activities to influence particular outcomes usually for financial gain. For example, they may engage in public or social media campaigns, communicate with management demanding action on a particular issue, instigate law suits, or commence takeover bids (Shi et al, 2021).

problematic picture. Challenges that make useful analysis difficult, include companies reporting no safety data, reporting data of limited value, and not reporting safety data for contractors. Of the companies examined, 23 did not report safety data in sectors where 'safety issues are likely to be material' (ACSI, 2020). The report took a 'name and shame' approach to these companies by listing them on page six of the report. Also of concern is that most of the 130 companies that do report use productivity-focused indicators. Such indicators provide limited insight into material safety risk exposure (ACSI, 2020). Of those companies reporting at the extreme end of WHS incidents (i.e. fatalities), some gave no details as to the nature of such events. ACSI (2020, p. 8) states:

> *"In our view, this is unacceptable as investors need to know the circumstances around these events so they can assess whether these incidents are the result of systemic failings in the workplace health and safety management."*

While almost half of the ASX200 (94 companies) disclosed no fatalities, the report notes:

> *"In these cases, it was unclear whether the companies had zero fatalities or simply did not report them. Concerningly, ACSI has seen the latter happen in previous years." (ACSI, 2020, p. 8).*

The report recommends separately disclosing the safety performance of the contractor workforce, something that only eleven of the companies do (ACSI 2020). It appears that engaging third party providers is a way that companies put themselves at arm's length from the actions taken by contractors, even though they essentially act on the company's behalf and effect its bottom line. Many companies link executive pay to safety performance (discussed further in section 2.6.15), but some of these provide no metrics (ACSI, 2020). Despite the concerns over the quality of safety reporting and the fact that the ASX200 accounts for only a small portion of the Australian workforce, the visibility of the ACSI reporting does suggest a way in which CSR/ESG could drive WHS. Additionally, the academic literature notes that presenting to a standard or obtaining a certification increases the level of reporting and the quality of WHS information (Alves & da Conceição Ramos, 2022; Tsalis et al., 2018).

In terms of ESG reporting more generally, ACSI compiles an annual report assessing the reporting trends in the ASX200. The ASCI annual reports contain the results of a desktop analysis of publicly available material related to 'leaders and laggards' with respect to ESG reporting (ACSI, 2022, p.6). Importantly, the report is not about the companies' ESG performance, but rather their reporting of it. Consequently, companies may report well on ESG without necessarily performing well. Companies are categorised into five levels: 'No reporting', 'Basic',

'Moderate', 'Detailed', and 'Comprehensive'. A listing in the 'Comprehensive' category means that a company:

> *"...Provides comprehensive reporting of its material ESG risks and mitigation strategies. It demonstrates performance against a substantive number of material risks areas and discloses the process for identifying and explaining why the ESG risks are important for its business. To be 'Comprehensive', we must see reporting of targets and performance data across a range of different risk areas, with a discussion of the materiality of those issues and how they are incorporated into the company's overall strategy." (ACSI, 2022, p.7).*

At the time of writing, a slight majority (104) of ASX200 companies are listed as 'Comprehensive' reporters. This represents a substantial growth since 2008, when that proportion was only 10% (ACSI, 2022). ESG is now seen as a mainstream investment strategy, with only 5% of companies recorded as carrying out 'No reporting' (ACSI, 2022). Additionally, ACSI (2022) notes a rapid increase in reporting of risk against the Sustainable Development Goals (SDGs)[5], from 10% to 64% in the last 5 years. In terms of the SDGs, 'Climate Action' is reported as the top priority, while 'Decent Work and Economic Growth' is second. WHS can be considered a facet of this goal.

With sustainability/ESG reporting, as with other aspects of CSR/ESG, workplace safety does not feature prominently. For example, a 2021 report on ESG reporting by the global management consultancy firm, PwC, fails to mention safety (PwC, 2021). PwC (2021) noted that while there is now a greater amount of reporting, much of this is not aligned to specific (environmental) targets, stating:

> *"74% [of the ASX200] don't set targets or KPIs and without such clarity, an organisation's ESG policies can be seen as 'greenwashing' or ESG washing." (p. 4).*

The report noted a large increase in the number of shareholder ESG resolutions, suggesting that the COVID-19 pandemic and more environmental awareness are driving this increase (p. 5). Moreover, there is a lack of external verification with sustainability reporting compared to financial reporting, suggesting that boards do not treat CSR/ESG with the same level of seriousness as other aspects of running a company. For example, organisations are encouraged to submit their Reconciliation Action Plans to an independent third party (Reconciliation Action Australia) to endorse and manage. There is evidence that external assurance of reports increases quality of WHS disclosures (Alves & da Conceição Ramos, 2022). This suggests that this model

[5] The United Nations' Sustainable Development Goals are an urgent call for global partnership in action towards ending poverty and other deprivations while at the same time implementing strategies that improve health, education and spur economic growth (www.sdgs.un.org/goals)

could potentially be applied to WHS, with organisations submitting WHS plans to an independent body for examination.

A recent article in *The Economist* (2022) scathingly described the growing ESG trend as "well meaning" but "deeply flawed" and filled with "hype and controversy". In addition, the article highlighted that "whistle-blowers accuse the industry of 'greenwashing' by deceiving its clients." The assumption underlying CSR/ESG is that its many objectives are harmonious. The article argues that in reality, objectives can conflict and there is no guide to making trade-offs. For example, while closing a coalmine is good for the environment, it has a negative social impact through the resultant job losses. The article was sceptical about the link between "virtue and financial performance", asserting that the industry is:

> *"…Not being straight about incentives. It claims that good behaviour is more lucrative for firms and investors. In fact, if you can stand the stigma, it is often very profitable for a business to externalise costs, such as pollution, onto society rather than bear them directly." (para 5)*

Finally, it notes that measuring ESG is problematic as:

> *"…The various scoring systems have gaping inconsistencies and are easily gamed. Credit ratings have a 99% correlation across rating agencies. By contrast, ESG ratings tally little more than half the time." (para 5)*

Influence of the Board of Directors

The Board of Directors' (the board) responsibilities are regulated by corporate laws and include those outlined in Table 5. Boards have ultimate responsibility for legal compliance and the long-term creation of value. Through its duties of strategic leadership and governance, the board has significant influence over a range of organisational processes and outcomes, including WHS (Ebbevi et al., 2021; Lornudd et al., 2020).

Table 5: Board of Directors responsibilities regulated by corporate laws (Ebbevi et al., 2021; Lornudd et al., 2020).

Establishing a strategic direction
Defining boundaries for operative management
Setting standards and values for operations
Holding management accountable
Overseeing internal controls
Accounting for owners' and other stakeholders' interests

Lo (2012) highlighted the importance of organisations integrating WHS into their corporate governance structure to improve WHS accountability, resourcing of initiatives, and performance.

Drawing on an HSE report (Boardman and Lyon, 2006), the fundamental principles of WHS governance (see Figure 3) should integrate with WHS legislation and include:

- director competence;
- roles and responsibilities;
- culture, standards, and values;
- strategic implications; performance management; and
- internal controls.

Aspects of these principles found in the literature search are discussed next with respect to WHS.

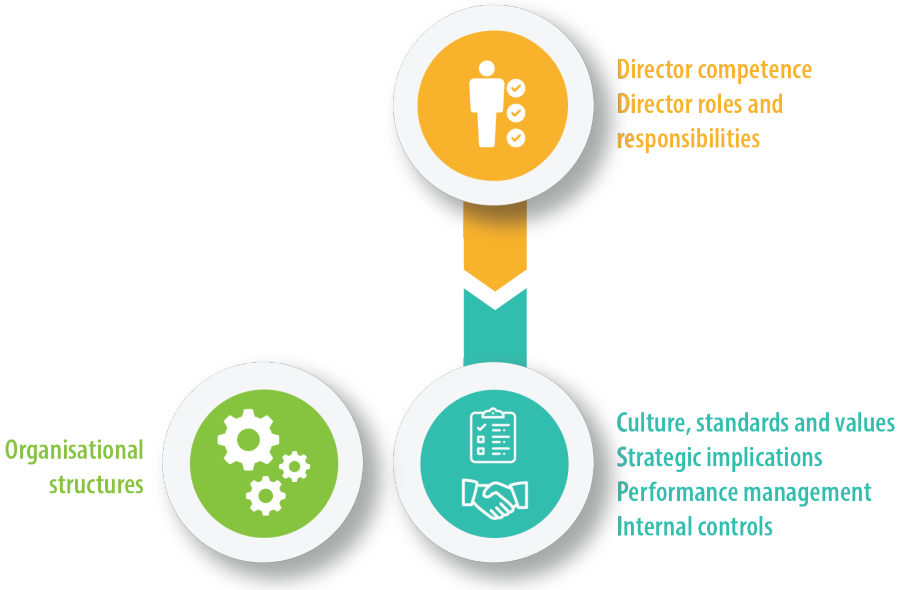


Figure 3: Best Practice Framework for WHS Governance (re-drawn from Boardman and Lyon, 2006, p.2).

Director WHS competencies

According to Lo (2012), there is a link between the competencies of the board and the effectiveness of the board. It can, therefore, be inferred that knowledge of WHS will be key to drive business performance and meet due diligence requirements (Lo, 2012). This notion is supported by the research of Lornudd et al. (2020), who found board representatives' WHS competence to be an influencing factor in WHS prioritisation. Lornudd et al. (2020) suggested that a board's WHS competence can have a positive impact on long-term profitability by way of increasing the prominence and importance of WHS on the company's agenda which sends signals of its importance, helps to structure work, and increases pro-active WHS strategy. However, other research has found no evidence that members of WHS committees have formal

WHS education or qualifications, which seems unlikely to be accepted in other areas of the company, such as a finance subcommittee (Murphy, 2016). Though not specific to WHS, the abilities of CEOs have been linked to company CSR performance, in combination with governance mechanisms such as board independence, sustainability committees, and incentives (García-Sánchez et al., 2019), where attention is now turned.

Board composition and roles

The most frequently mentioned literature included in the review was research reporting on the relationship between board characteristics and their impact on CSR/ESG performance of companies (n=32 retained articles). The literature reported on board characteristics such as director independence (Aksoy et al., 2020; Alipour et al., 2019; de Villiers et al., 2011; Elsayih et al., 2018; Karn et al., 2022); larger boards (Aksoy et al., 2020; de Villiers et al., 2011; Karn et al., 2022); active CEOs or duality (Bunget et al., 2020; de Villiers et al., 2011; Shahab & Ye, 2018); legal experts on the board (de Villiers et al., 2011); gender and diversity (Birindelli et al., 2019; Briano-Turrent, 2022; Bunget et al., 2020; Elsayih et al., 2018; Jiang & Akbar, 2018; Ludwig & Sassen, 2022; McGuinness et al., 2017; Rehman et al., 2020); and ownership structures (Aksoy et al., 2020; McGuinness et al., 2017; Shahab & Ye, 2018; Shu & Chiang, 2020). However, the research on this is largely equivocal (Karn et al., 2022), not specific to WHS, and generally does not address the question of *why* these characteristics may drive prosocial behaviours. Lornudd et al.'s (2020) WHS-specific research identified the agenda of the company owners or founders as an influencing factor on the prioritisation of WHS by the board. The rationale for positively influencing WHS was framed as 'being good citizens' and 'role models' and supported by long-term ownership.

With more attention given to sustainability, CSR, and ESG, the appointment of specific board roles and committees associated with these areas has gained popularity (e.g. Corporate Sustainability Executives (CSE), Corporate Sustainability Officers (CSO)) and environmental committees) (Karn et al., 2022). Though the research in this area is limited, positive associations have been found between CSE appointment announcements, stock market reactions, and subsequent improvements in operating performance (Arora et al., 2020). Moreover, there is some evidence that environmental/CSR board committees and CSO support investment, reporting, and performance in this area (Bhuiyan et al., 2021; Kanashiro, 2020; Velte & Stawinoga, 2020). However, there is varying evidence of the impact that a dedicated WHS role on the board has in achieving WHS outcomes (Ebbevi et al., 2021). Supporting evidence includes strong signaling of the prioritisation of WHS, while the counter is that it increases the likelihood of a scapegoat for

failures or power struggles between board members (Ebbevi et al., 2021). One Canadian doctoral thesis suggested that WHS sub-committee assessments can be an important driver for executives to engage in WHS (Murphy, 2016).

Drivers of board attention to WHS

Ebbevi and colleagues' (2021) review of the literature on the role of the board argued that the motivations to become involved with WHS stemmed from power and control, legislation mandates, and a need for corporate governance. These findings were sourced from UK-based surveys with no further explanations of motivation offered. Additionally, the review found no research that addressed the impact of board activity on WHS outcomes and little empirical evidence on what drives boards to prioritise WHS. Further, Ebbevi et al. (2021) noted that the emphasis of current studies relating to boards and WHS has a focus on safety (to avoid obvious risk), whereas there is even less known about how board activities impact on mental health, psychosocial factors or chronic musculoskeletal disorders. The authors identified large gaps in the extant research and suggest that more work needs be done to examine the mechanisms of how and why boards influence WHS outcomes.

Only one article identified in this review specifically addressed what drives WHS engagement of executives and boards. In their research of board members and CEOs of large Swedish companies in trade, construction, manufacturing, and health care sectors, Lornudd et al. (2020) found five drivers: legal compliance, untoward events, external expectations and requirements, WHS is good for business, and moral values. They represented their findings with a pie analogy (see Figure 4), where the radius shows the drivers with the most basic and reactive (legal compliance) at the center and the most advanced and strategic at the outer layer (moral values). They explain that the factors influencing the level of engagement are owners' agendas, directors' competence, and competing needs (illustrated with the arrows on the outside of the pie in Figure 4). These factors influence all drivers and determine how much attention is given to WHS by the board (i.e. the size of the WHS piece of the pie).

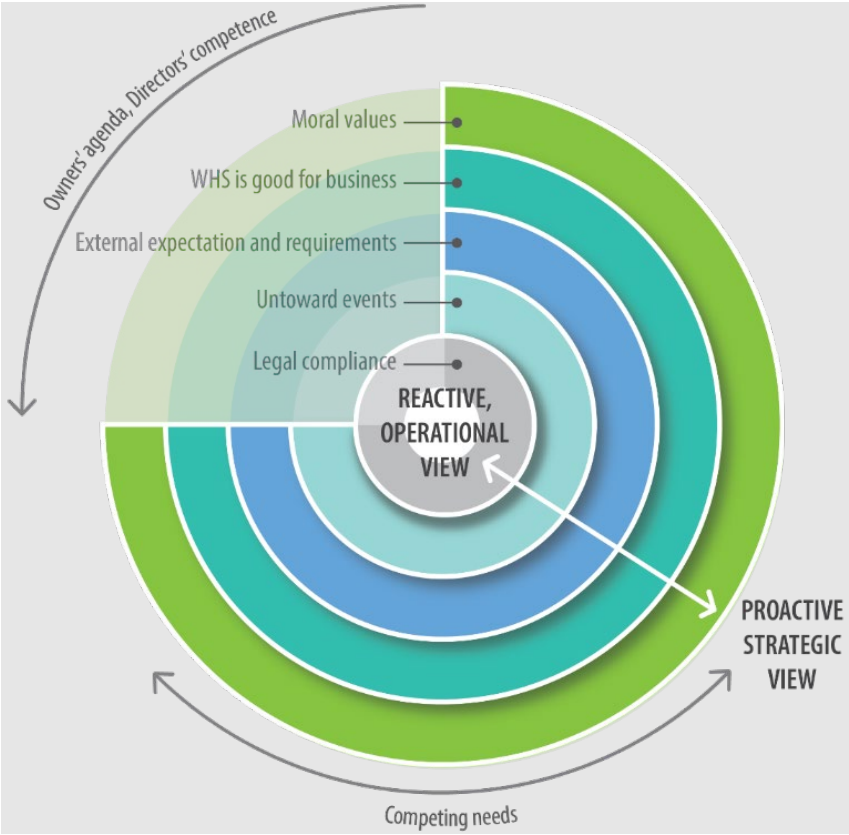


Figure 4: Drivers of a board's WHS engagement (re-drawn from Lornudd et al., 2020, p391).

Robson et al. (2016) also noted a potential 'bottom-up' driver of attention to WHS. This was through development of WHS measures that gained support of senior managers and then were reported to the board, increasing their interest and consequently financial support in WHS initiatives. This may suggest that increased awareness, communication, and cohesion between operations and governance is an important driver for business leader prioritization of WHS. Therefore, while Lornudd et al., (2021) suggested that the influence of WHS actions starts in the boardroom and flows down like a champagne tower, it appears that WHS action can be influence from both directions-bottom up and top down. However, how boards and executive leaders influence WHS is still not well understood. It is for this reason that Ebbevi et al. (2021) suggested that further research is necessary to examine:

> *"…How leadership styles of boards influence [WHS], which factors balance governance and leadership and what processes boards use to develop leadership behaviour." (p. 81)*

Incentives for executives

Incentive plans for senior executives are a mechanism that boards can use to emphasise the key strategic priorities of the organisation (McDermott et al., 2018). Incentive plans and senior executive decisions are linked to organisational performance, part of which is WHS performance (Ebbevi et al., 2021; Eccles et al., 2014; McDermott et al., 2018). There is an increasing trend for corporations to include environmental or social metrics in executive performance bonuses.

Globally, the number of companies awarding such bonuses doubled between 2018 to 2021 (Hooijberg & Roi, 2021). The management grey literature is positive towards such executive bonuses. Writing for the Institute for Management Development (IMD), a self-described independent academic institution with Swiss roots and global reach, Hooijberg and Roi (2021) issued a call to arms in stating that:

> *"We believe the time is ripe for a fundamental rethinking of the variables that should be included in compensation plans, anchored around longer-term incentives linked to the underlying performance of the organization, along with the inclusion of non-financial metrics such as social and environmental targets." (para 14)*
>
> *"This is not corporate altruism; helping society is in executives' long-term self-interest. A growing body of research has linked higher value creation with better ESG performance through top-line growth, cost reductions, productivity gains, asset optimization and deregulation. Investors know this, and they are taking action." (para 15)*

A recent Canadian PhD thesis (Keddie, 2020) provided insights as to who drives the use of CSR performance-based incentives for executives, and why organisations adopt such schemes. The author used quantitative data for S&P 500 firms for the fiscal year 2014 and conducted interviews with corporate leaders in 2018. Keddie (2020) found a divide between short-term institutional investors, such as hedge funds, that influence firms not to adopt CSR performance-based incentives, while long-term view institutional investors advocate for these incentives. For example, one investment director for a large company responsible for multiple pension funds reported that when they tried to include WHS measures in the executive compensation packages in a prominent transportation company, the hedge fund would not do so. When the hedge fund left, the board agreed to include the WHS measures (Keddie, 2020, p. 31). This aligns with the notion that benefits to companies from CSR practices are only likely to be felt in the longer-term. These institutional shareholders are in turn "finding that their constituents, their investor base is very interested in being socially responsible" and acting accordingly (Keddie, 2020, p. 33). As an Investment Director for a major pension fund interviewed by Keddie 2020, p. 33) stated:

> *"We are moving away from more of a pure CSR type of approach to an integrated… these are the issues that drive our business and create shareholder value and therefore they belong in the compensation plan. They're not just…a nice to have corporate philanthropy program."*
>
> *"I think it's expectations of investors and also other stakeholders…[and] it does illustrate to an outsider how seriously you take it… [I]f all of your annual reports… are talking about how safety is the most important thing but yet it's not reflected in the compensation, there's a bit of a disconnect there. So, I think it does show credibility. If you're talking about these things, saying they're important to your business strategy, it kind of has to go in the compensation so there is that kind of accountability piece."*

Keddie's (2020) study suggested that factors such as government policy and pressure from NGOs were influential; however, quantitative results did not significantly differentiate long-term view institutional shareholders from those with a short-term view, and neither were more or less likely to use CSR-performance based incentives. While comments from participants in their study did give anecdotal support for this notion, Keddie (2020) called for more research in this area. The quantitative results supported the hypotheses that:

> *"Long-term institutional owners who require formal incentives to promote long-term financial performance will be more likely to support the use of CSR performance-based incentives, and that the use of these incentives will be contingent upon the long-term institutional owner having and exerting sufficient power to influence the executive compensation process." (Keddie, 2020, p.76)*

Where such incentives are used, however, it is not guaranteed to be positive because,

> *"When top management teams have power, there is a risk that CSR performance-based incentives may be used to obtain excess compensation…The notion of excess compensation is inconsistent with the pursuit of CSR and yet, we see here, that this is exactly what it is happening. Through the use of CSR performance-based incentives, management teams with power are able to obtain addition individual compensation of over $180,000." (Keddie, 2020, p.76)*

This suggests that a cautious approach should be taken to the use of such schemes. The industry is relevant to the type of incentive offered, with mining, oil, and utility companies more likely to award incentives related to WHS and the environment, whereas other industries may focus more on corporate culture or ethics (Larson, 2021). Objective metrics were superior to more qualitative, less specific goals (Larson, 2021). Indeed, specific to Australian construction companies and WHS, McDermott et al. (2018) investigated long-term incentives plans (LTIPs) and found that despite a stated commitment to safety by Australian construction companies, LTIPS were only associated with financial measures and not indicators related to the organisation's strategic objectives of WHS. Safety indicators included in reporting were only included in short-term incentives, which have been criticised as a disincentive for executives to develop and commit to a long-term, strategic approach to WHS (Filatotchev & Nakajima, 2014; Lornudd et al., 2021; McDermott, 2018). McDermott et al. (2018) suggested that more meaningful WHS measures should be developed and used in LTIPs. Doing so would align incentives to WHS indicators and motivate executives to pay more attention to WHS.

The debate regarding such schemes centres around whether they are in place to drive better governance and prosocial behaviour, or are simply another way for senior executives to gain extra compensation (Larson, 2020). This critical view seems to have some backing. The *PwC*

Annual CEO survey (2022) noted that many CEOs continue to be most interested in short-term profit over ESG. The report argued that discussions centring around CEO incentives for ESG may have examined the issue the backwards, because pay follows strategy—it doesn't drive it. The report also recommended that, "ESG metrics need to be part of a company's strategic priorities, which are then reinforced by incentives" (*PwC Annual CEO survey*, 2022, p. 9). Associated with this is a possible lack of cohesion and communication between the safety governance and remuneration committees of boards regarding LTIPs. Ebbevi et al. (2021) identified a lack of research on the impact of board activities on WHS and the mechanisms of these processes. However, in the only identified study addressing this, Lornudd (2021) found that key performance indicators (KPI) are strong antecedents for executive directors' activities when they are pushed by the board and there is a flow-on effect to other organisational levels, showing a behavioural view of corporate WHS governance.

Future research could explore whether performance-based incentives lead to better CSR performance, along with the relationship between the relevant committees and the impact of this on executive incentive plans and WHS performance (McDermott et al., 2018).

Stewardship

The previous section highlighted the opportunities for WHS to be part of strong corporate governance and CSR/ESG strategy (Lo, 2012), primarily from an instrumental (agency) perspective, as a strong business case or a way of gaining or maintaining a competitive advantage. A sustainability strategy can also be implemented with a stewardship orientation, taking a normative and long-term perspective (Chevrollier et al., 2020). Stewardship can be considered:

> *"…An outcome of leadership behaviours that promote a sense of personal responsibilities in followers for the long-term well-being of the organisation and society." (Hernandez, 2008, p.121)*

Chevrollier et al. (2020) argued that with a stewardship approach a company engages in sustainability development because it is 'the right thing to do' to benefit current and future stakeholders. An example to illustrate the stewardship approach is evident through the focus of the company: "company is central" (instrumental strategic orientation); and "connection with issues in society is central" (stewardship strategic orientation) (Nijhof & Jeurissen 2012 in Chevrollier 2020, p. 125). The key differences between instrumental and stewardship strategies are captured through the company's focus, motivation, commitment, support, and communication strategies (Chevrollier, 2020); strategies relevant to prosocial commitments (e.g., CSR/ESG).

The importance of intrinsic or ethical motives in prosocial behaviour of executives was highlighted in the literature. For example, Graafland and Mazereeuw-Van der Duijn Schouten (2012) explored Dutch executives' motives for CSR. The study included labour conditions (i.e. employee safety, employee training, preventing abuses, and equal opportunities for immigrants and women) and found that intrinsic and extrinsic (financial) motivations were equally important. Interestingly, they found that director-owners were more financially motivated in this area while CEOs and other senior executives were more intrinsically motivated. Graafland and Mazereeuw-Van der Duijn Schouten (2012, p.392) summarise their findings saying:

> *"These findings may indicate policy makers should be careful with providing extrinsic incentives to stimulate CSR, because empirical research into other social-economic phenomena has shown that extrinsic motives can crowd out intrinsic motives."*

This warning was echoed by Looser and Wehrmeyer (2016), who similarly investigated extrinsic and intrinsic motivations of prosocial commitments, in the Swiss context. Looser and Wehrmeyer (2016) found that owner-managers of small and medium enterprises (SMEs) are driven by intrinsic motives with an ethical approach that values networks, while CEOs of multinational enterprises (MNEs) are more extrinsically motivated. Moreover, labour manifestations of CSR/ESG were around 15% greater in SMEs than MNEs.

Ramirez (2013) found that organisational values as perceived by mid and senior-level managers were a driver for adopting an environmentally sustainable approach, along with business benefits and regulation. These values were attributed to 'a higher calling', 'a sense of core values', and fitting with moral duties. A recent meta-analysis of academic surveys that asked about motivations for CSR found that overall normative motivations perform better than instrumental motivations (Lim & Pope, 2022). The highest-ranking motivation was 'company reputation' (instrumental) closely followed by 'moral thing to do'.

Moreover, 'improve environment/sustainability'; 'express company/leaders' values'; 'ethical reasons'; 'support employee welfare'; and 'improve the community/society' were all ranked in the top eight motivations. These findings support those of Lornudd et al., (2020; 2021) situating ethical and moral values and behaviours as key strategic drivers of WHS. Lornudd et al. (2021) also considered characteristics of stewardship and agency governance in actions of the board and suggested that best practice in WHS governance combines aspects of both of these approaches.

Business drivers of prosocial behaviours related to other employee outcomes

The review has thus far focused on business drivers of WHS for organisations from a largely external stakeholder and direct business benefit perspective. This section briefly examines the evidence for indirect business-related outcomes that can motivate organisational leaders to behave prosocially through employee mechanisms. This is framed through the related concepts of job satisfaction, wellbeing, recruitment, and retention.

Prosocial commitments that employees view as important – both within and external to the organisation can increase their support for the organisation and improve job satisfaction (Tamm et al., 2010). Indeed, Tamm et al. (2010) found that the key factors underlying job satisfaction were supervision, remuneration, and working conditions (reflecting WHS). As job satisfaction is an important dimension of wellbeing at work, implementing CSR/ESG is then another mechanism to improve WHS, as well as a driver for recruitment, retention, and organisational success (Dežmar-Krainz, 2015; Garel & Petit-Romec, 2021). Specific to an Australian context, Galbreath (2010), found that CSR/ESG reduced employee turnover through the mechanism of perceptions of justice. That is, employees gauge how fairly they will be treated based on the company's demonstration of CSR/ESG. Conversely, there is evidence of a negative association between WHS and employee turnover intentions, and a poor WHS reputation can negatively influence recruitment (Shi et al., 2021).

Lornudd et al.'s (2020) Swedish study found that there are two strategic and proactive sub-drivers related to wellbeing, recruitment, and retention that form a part of the driver, 'WHS is good for business'. They are: '*wellbeing as a pre-requisite for productivity'* and being seen as an '*attractive employer'* (Figure 4). Lornudd et al. (2020) noted a drive to engage in WHS as a recognition of the impacts of employees staying healthy, including both the costs of ill-health or injury and the impacts on productivity. Being an *attractive employer* was found to be a driver of WHS as a mechanism to increase the desirability of the company (i.e. Employer of Choice) to attract quality staff who then remain engaged with the company to act as ambassadors for future recruits. Similarly, Granerud (2011) found that CSR/ESG initiatives in Danish SMEs focused on employees' health and wellbeing and were primarily motivated by ethics and creating an attractive place to work to retain employees.

Importantly, in an area that has not been thoroughly addressed in the literature, Jain et al. (2011) found that there was potential for psychosocial risk management (psychological health) to be promoted through a lens of CSR/ESG. The authors' European-based survey and interview study of regulatory and guidance organisations, employers' associations, and trade unions, found that

linking CSR/ESG and psychosocial risk management had numerous advantages such as reduced sickness absence, reduced turnover, and increased job satisfaction. Jain et al. (2011) also asserted that companies cannot be socially responsible externally without being socially responsible internally.

Summary and identification of gaps in the evidence base

The vast majority of the literature identified discusses WHS commitments in the context of CSR/ESG, and very little specifically addresses WHS as a general focus of prosocial commitment. Given the extent of the CSR/ESG literature, little is known about the motivations of companies and business leaders to engage or improve CSR/ESG beyond regulatory requirements (Karn et al., 2022), while even less is known in the WHS space. Where WHS is considered, there is a strong focus on workplace safety, with very little attention given to psychosocial factors or general health and wellbeing. However, it is widely acknowledged that WHS is a prosocial organisational behaviour that should be included in CSR/ESG as part of organisational strategy, and that this offers a potential vehicle with which to promote WHS.

Overall, the findings suggest that stakeholder relationships mediated through reputation and business benefits (including collaboration, co-opetition, consumers, benchmarking, and stakeholder activism) are the external business drivers of WHS prioritisation.

Additionally, CSR/ESG and prosocial behaviours of business leaders appear to be limited to reporting on specific WHS statistics rather than strategically planning and implementing actions designed to achieve specific CSR/ESG and prosocial outcomes. There is evidence that board competencies have a critical influence on attention to WHS and that incentives for WHS need to be carefully designed to be aligned with long-term goals. Moreover, there are opportunities to investigate how leadership styles of boards and executive leaders influence WHS and the processes used to develop these behaviours (Ebbevi et al., 2021).

Recent literature suggests that intrinsic (ethical and moral values) are key strategic drivers of WHS (Chevrollier et al., 2020; Lim & Pope, 2022; Lornudd et al., 2020; Lornudd et al., 2021) and that combining stewardship and agency governance may be best practice in WHS. This means that WHS commitment is probably most effectively achieved by a combination of strategies that promotes individual corporate stewardship, supplemented by a governance role played by government. Aligned with the stewardship approach, attention to CSR/ESG in terms of employee-related outcomes such as wellbeing, job satisfaction, and being an attractive place to work has

potential to drive prioritisation of WHS, especially in the neglected area of psychological health. Much of the literature found in this review is European-based, and although the Australian literature cited found parallels with other evidence, the influence of the Australian context remains unclear.

Several other gaps in the current evidence base were identified in this review, particularly in an Australian context. These are included in Table 6 and provide direction for future research.

Table 6: Gaps identified in the literature review related to WHS.

Insufficient and poor-quality attention to WHS in CSR/ESG reporting
The role of consumers as drivers for WHS
The influence of company leaders' behaviour in effective development of CSR/ESG external certification (e.g. resource commitment)
The use of independent third parties for WHS plan endorsement as used in other aspects of CSR/ESG
The role and mechanism of co-opetition in prioritising WHS
The impact of developing board competencies in WHS on engagement in WHS
The role of WHS sub-committee assessments in driving executive engagement in WHS
The influence of the long or short-term view of institutional shareholders' on WHS prioritisation
The role of performance-based incentives in CSR/ESG performance specific to WHS
The drivers for executives to prioritise psychosocial factors and general health and wellbeing aspects of WHS
The positive and negative consequences for employees' WHS from CSR/ESG strategies
How and why boards influence WHS outcomes
The relationship between the relevant board committees, the role of remuneration consultants and the impact of this on executive incentive plans and WHS performance
How leadership styles of boards influence WHS
The processes boards use to develop leadership behaviours related to WHS

Study two: financial database analysis

Abstract

This study analysed data from ASX200 companies over a 12-year period (2009-2021) to identify the corporate governance and leadership characteristics indicative of prosocial behaviour, that can enhance WHS commitment, safety, and workforce outcomes. The analysis identified several corporate governance and leadership characteristics as key antecedents of WHS commitment; chief amongst them was whether the company had a CSR committee, and whether executive compensation was tied to ESG performance. WHS commitment was also higher in companies with a stronger financial performance, and those in high-risk industries (see 4.2.6 for the list of industries). The implication of the research is that ASX200 firms can benefit from improving corporate governance and leadership routines (e.g., having a CSR committee), strengthening their prosocial orientation, to enhance WHS commitment. In so doing, firms can also improve safety and other workforce outcomes.

Introduction

ESG, as described earlier in this report, is positioned as an aspirational priority which aims to positively impact and improve the world, its people, and business practices. Yet, evidence regarding the drivers of ESG practices by corporate companies is scant. A notable exception is the review article by Bhagat (2022), who found that companies that incorporated ESG into their business strategy fell into two broad categories, those that either:

- prioritised long-term financial performance (and thus governed their companies to ensure that environmental and social risks were mitigated in future planning and operations); or
- had been exposed in the media for violating one or more ESG pillars, and were thus seeking to remedy the public's perception.

Under the ESG Banner, considerations such as WHS commitment, safety, and workforce outcomes are categorised under the 'S' – 'social' pillar (London Stock Exchange Group, 2022). While there is a paucity of research examining the corporate drivers of ESG; the dearth of research is even more pronounced for studies that look at the corporate drivers of WHS commitment, safety, and workforce outcomes more specifically. Against this backdrop, the study herein examined the interrelationships between:

1) corporate governance and leadership characteristics; and
2) WHS commitment, safety, and workforce outcomes.

Corporate governance and leadership characteristics capture the structural arrangements underpinning senior corporate leadership within corporate firms. Senior corporate leadership represent those directors who occupy positions on governing company boards, which typically have oversight of the decisions made by the top management team (i.e. chief executive officers, and other senior managers). Research has identified that the corporate governance and leadership characteristics of corporate boards can greatly influence firm outcomes (Mansour et al. 2023; Creek, Kuhn & Sahaym, 2019; Mullins & Holmes, 2018; Patro, Zhang & Zhao, 2018).

Specific and salient corporate governance and leadership characteristics include the makeup of the firm's corporate governing board, for example the gender diversity, size, and level of experience (tenure) of board members. Additional factors that can impact firm outcomes include how many voting members on the board versus non-voting members (board independence); how often the board meets (frequency); and, whether the chairman of the board previously held a CEO position (CEO duality).

Other drivers which have been found to shape the senior-level decision making of corporate boards and top management teams include whether the board has a Corporate Social Responsibility (CSR) committee, and whether extra renumeration is provided to board directors and the top management team, on the basis of ESG performance (referred to in the literature as ESG compensation).

The study herein focused on companies listed within the ASX200 (Australia's benchmark for equity performance). The safety and workforce outcomes examined in this analysis included:

a) accidents to total employees;
b) lost time injury rate;
c) employee satisfaction; and
d) employee turnover.

The study was guided by the following primary and secondary research questions, respectively:

1. Primary Research Question: To what extent do corporate governance and leadership characteristics (including having a CSR Committee, board independence, diversity, frequency, size and tenure, CEO duality and ESG compensation) influence WHS commitment in ASX200 firms?'

2. Secondary Research Question: To what extent does WHS commitment mediate the relationship between corporate governance and leadership characteristics and, safety and workforce outcomes for ASX200 companies?

Mediation analysis was used to explore the secondary research question. Mediation analysis examines whether the impacts of an independent variable on a dependent variable operate through an intervening 'mediating' variable. In the case of the analysis deployed in this study, CSR committee is used as an independent variable to represent the broader category of corporate governance and leadership characteristics. This is explained further in the following section. Our analytical models used a range of control variables to factor in industry and financial performance differences across the sample.

Primary research question: examining the drivers of WHS commitment

The primary research question sought to examine the impact of corporate governance and leadership characteristics on WHS commitment. The specific corporate governance and leadership variables, and a justification for deploying them in this analysis, are explored sequentially below.

Board governance and leadership characteristics: CSR committee, gender diversity, board size, independence, frequency, tenure, ESG compensation, CEO duality and corporate governance.

Specific characteristics of corporate boards appear to be related to firm outcomes and are considered to be indicative of good governance (Sonnenfeld, 2002). These characteristics include: a well-structured board that comprises a large group with independent directors; board members with longer tenure; a higher proportion of female directors; and regular board meeting attendance. These corporate governance characteristics may influence organisational policies, and firm performance (as per the research of Creek, Kuhn & Sahaym, 2019; Mullins & Holmes, 2018; Patro, Zhang & Zhao, 2018). Radu, Smaili and Constantinescu (2022), for example, identified that board independence is a key driver of firm performance. Hence, these board characteristics are included in our analysis as independent variables.

Radu and Smaili (2021) examined the performance of a large number of Canadian organisations between 2014 and 2018 and found that those with a CSR committee had a better corporate social responsibility performance overall. At the same time, other research has shown mixed results with regards to the impact of CSR committees on corporate outcomes, with Chams & Garcia-Blandon (2019) study showing minimal, symbolic outcomes, rather than real impact.

Notwithstanding, Baraibar-Diez and Odriozla (2019) found a positive association between companies' CSR governance policies and processes within the board of directors and their CSR performance. Previous research has identified a link between CSR performance and firm performance (Mansour et al. 2023). Building on this, we tested whether CSR committees had an impact on WHS commitment, as well as safety and workforce outcomes for corporate firms.

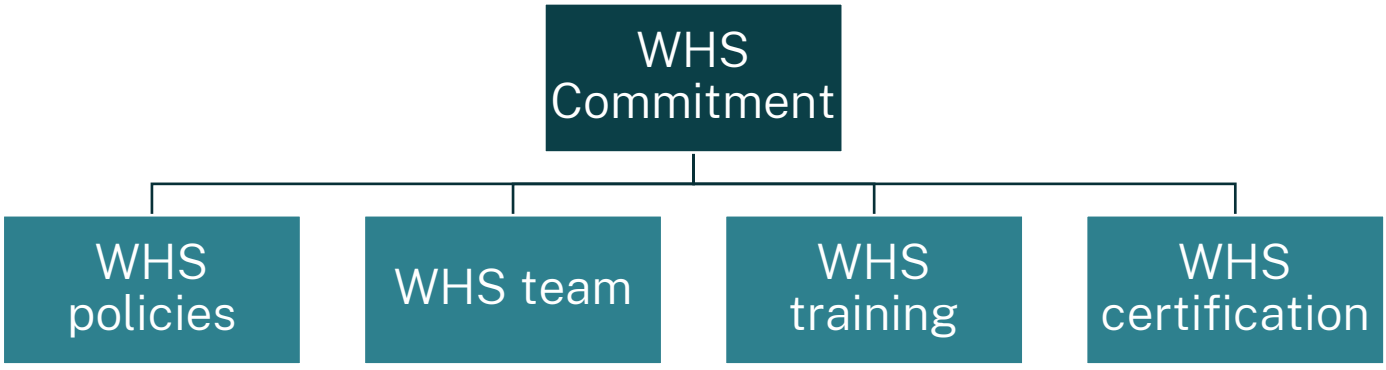
Our analysis examined whether executive compensation that is linked with sustainability goals (ESG compensation) influenced WHS commitment, because executive compensation incentives are designed to drive companies' ESG performance (Salazar, 2023). Furthermore, prior literature suggests that powerful CEOs affect safety outcomes within their firms (Wiggenhorn, Pissaris & Gleason, 2016). Therefore, our study also examined the role of CEO duality (where the CEO has previous experience on the board of directors) as an antecedent to WHS commitment.

Measuring WHS commitment

We developed an aggregate measure of WHS commitment, comprising the strength of following indicators across the sample companies:

- WHS policies
- WHS team
- WHS training
- WHS certification (OHSAS18001)

In our first analytical model, we initially examined these four components as individual dependent variables. These four variables are all indicators of WHS commitment and therefore the next step involved aggregating them to form the 'higher-order' variable (representing WHS commitment). This is discussed further in the data analysis section.



Secondary Research Question: Drivers of WHS performance and outcomes

The secondary research question examined the mediating role that WHS commitment plays between (1) corporate governance and leadership characteristics, and (2) safety and workforce outcomes. Safety outcomes are comprised of two dependent variables, lost time injury rate and accidents to total employees. The two workforce performance outcomes comprised employee turnover and employee satisfaction.

Controlling for company size, financial performance and industry

To control for inherent company differences present across the ASX200 sample, our analysis incorporated several control variables in line with previous research. In particular, Becker and Gerhard (1996) and Tregaskis et al. (2013) indicated that as large-sized companies can have fewer financial constraints (i.e. better financial performance and lower debt-to-equity ratio), they tend to have greater organisational capacity to devote to building employee capabilities, and consequently the employee experience, such as employee satisfaction, tends to be higher. As such, we controlled for company size and financial performance variables: return on assets, market to book, and leverage (debt structure).

Companies operating in industries with higher numbers of workers' compensation claims are likely to, over time, adopt a higher standard of safety practice to mitigate harm, often in line with legislative requirements and/or government recommendations. WorkSafe Queensland (14 September 2020) reports that high-risk industries include agriculture, forestry and fishing, mining, manufacturing, construction, transport and storage, and health and community services. Accordingly, our analysis controlled for whether companies operate in these high-risk industries.

Method

We employed two databases, (i) Refinitiv Eikon and (ii) Refinitiv Datastream, to extract the top 200 Australian Stock Exchange listed companies (i.e. ASX200) for the period of 2009 - 2021. Data within the Refinitiv Eikon and Refinitive Datastream are drawn from company reports, which is collected and cleaned by the London Stock Exchange. Our data commenced in 2009 when most data points related to WHS outcomes were available for ASX200 listed companies in Refinitiv and ended in 2021.

We first extracted the WHS commitment, safety and workforce outcomes, and the corporate governance and leadership characteristics data (including those related to the board of directors) from Refinitiv Eikon for the sample period. We then obtained the accounting information (company financial characteristics) from Refinitiv Datastream and merged these two datasets

using the International Securities Identification Number (ISIN) of each company as a unique identifier.

Table 7 details the variables, their corresponding definitions, and the measurement scales used to reflect each. It is important to note that scales deployed across the analysis are not equal, and accordingly, the regression analysis produced unstandardised results. In the main, data used in this analysis utilised one of four types of measurement scales.

Table 7: Variables and scales used in analysis.

Variable Name	Definition	Measurement Scale
Safety and workforce outcomes		
Accidents to total employees	Number of injuries and fatalities to total number of employees, reported by employees and contractors while working for the company.	Percentage / score between 0 and 1
Employee satisfaction	The percentage of employee satisfaction as reported by the company.	Percentile / score out of 100
Employee turnover	Percentage of employee turnover.	Percentile / score out of 100
Lost time injury rate total	Total number of injuries that caused the employees and contractors to lose at least a working day relative to one million hours worked.	Numeric continuous
WHS commitment and items		
Overall WHS commitment	Overall WHS Commitment: Average score of WHS policy, WHS team, WHS training and WHS certification (see below)	Numeric continuous, aggregated from the four variables below.
WHS policy	If the company has a policy to improve employee health & safety, ranked against competitors in the same industry.	Percentile rank / score out of 100
WHS team	If the company has a health and safety team, ranked against competitors in the same industry.	Percentile rank / score out of 100
WHS training	If the company trains its executives or key employees on health & safety.	Percentile rank / score out of 100
WHS certification	If the company has health and safety management systems in place like the OHSAS 18001 (Occupational Health & Safety Management System), ranked against competitors in the same industry.	Percentile rank / score out of 100
Governance and Leadership Characteristics		
Board frequency	Board meeting attendance: The average overall attendance percentage of board meetings as reported by the company	Percentile / score out of 100
Board gender diversity	Board gender diversity: Percentage of female directors to total board	Percentile / score out of 100
Board independence	Board independence: Percentage of independent directors to total board	Percentile / score out of 100

Board size	Board size: Percentage of independent directors to total board	Numeric continuous
Board tenure	Board tenure: Average number of years each board member has been on the board	Numeric continuous
Corporate governance score	Governance Pillar Score: The corporate governance pillar measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances to generate long term shareholder value. The score ranks companies with competitors in their respective industries.	Percentile rank category score / score out of 100
CSR committee	CSR committee (TMT committee): Indicator variable with value 1 if the company have incorporated a CSR committee otherwise 0.	Boolean (0 or 1)
CEO duality	Has the chairman held the CEO position in the company prior to becoming the chairman?	Boolean (0 or 1)
ESG compensation	Policy Executive Compensation ESG Performance Does the company have a financial performance-oriented compensation policy? The compensation policy includes remuneration for the CEO, executive directors, non-board executives, and other management bodies based on ESG or sustainability factors	Boolean (0 or 1)
Control Variables		
Firm Size	Natural Logarithm of total asset of a company.	Numeric continuous / log values
Leverage	Total debt divided by total asset.	Numeric continuous / Ratio
Market to book value	MTB: Market to book value of a company.	Numeric continuous / Ratio
Return on assets	Return on Assets: Net income divided by total assets.	Numeric continuous / Ratio

The most common measurement scale was the percentile (score out of 100), such as employee satisfaction, turnover, and board gender diversity. The second most common measurement scale was the percentile rank, which includes WHS policy and the Corporate Governance Pillar score. Percentile rank calculations provide a score of each company based on their performance against all other companies in their industry group. The percentile rank score is used by the Refinitiv database to provide an objective measurement of firm-specific performance against competitors (London Stock Exchange Group, 2022). Numeric continuous measurement scales are also used in the analysis, for example in the case of the lost time injury rate, and WHS

commitment. These measurement scales are underpinned by a specific calculation (detailed in table 7). Finally, some datapoints utilise Boolean measurement scales (0 or 1), for example, whether the company has a CSR committee or not.

As the measurement scales of the variables used in this analysis produce unstandardised results, care must be taken in interpreting the relationship *between* variables. To interpret the relationship between the respective independent variables (IVs) and the dependent variable(s) (DVs), the significance levels (p-values) should first be examined. Of those IVs which were significant, the relationship between the IV and DV must be interpreted relative to the scale used in each case. For example, the relationship between ESG compensation and WHS commitment, as shown in table 8, is B = 4.678, p<.001. As ESG compensation is measured on a Boolean scale of '0' (no compensation) or '1' (compensation), and WHS commitment is a numeric continuous variable, this demonstrates ESG compensation significantly and positively affects WHS commitment. The weight of the unstandardised relationship, relative to that of other variables, is not possible to accurately discern in this type of analysis.

Data analysis

To examine the corporate governance and leadership characteristics that shape WHS commitment, safety and workforce outcomes for ASX200 firms, we employed multiple ordinary least squares regression analysis using the STATA software package, and ran five series of models. Multiple ordinary least squares regression analysis is a statistical method used for examining the relationships between two or more variables. The purpose is to examine how the independent variables influence or predict the value of the outcome variable. In this case, we examine the extent to which corporate governance and leadership characteristics predicted WHS commitment (Table 8), safety (Table 9 and 10) and workforce outcomes (Table 11 and 12).

The following regression equation summarises the common approach across these models:

$$\mathrm{Outcome}_{i,t+1} = \beta_0 + \beta_{1j}\mathrm{Drivers}_{ij,t} + \beta_2(\mathrm{Controls})_{i,t} + \beta_3(\mathrm{Industry\ FE})_{i,t} + \beta_4(\mathrm{Year\ FE})_{i,t} + \varepsilon_{it} \quad (1)$$

Where, $\mathrm{Outcome}_{i,t+1}$, reflects WHS commitment (Table 8), and firm safety and workforce outcomes (Tables 9-12 below) at year t+1. Drivers represent consideration of all the independent variables specified in sections 3.3 and 3.4. Controls represents all the control variables specified in the previous section. We have incorporated industry and year fixed effect (FE) in all regressions unless specified otherwise.

As noted, the regression analyses (Tables 9-12) also include additional tests to determine the extent to which WHS commitment mediates the relationship between the tested outcomes and CSR committee (representative of the broader category of corporate governance and leadership characteristics). The mediation tests adopted were the Sobel test, the Goodman test, and the Aroian test. In combination, the three tests provide the most robust way to account for mediation within a model.

We limited our mediation modelling to circumstances where the mediating variable (WHS commitment) and dependent variable had a significant relationship (as this is a pre-condition of mediation testing). Our analysis highlights several possible corporate governance and leadership variables that could be modelled as independent variables in a mediation analysis. To keep our analysis concise we modelled CSR committee as the (sole) independent variable in our mediation tests. CSR committee possessed robust correlations with other corporate governance and leadership characteristics, however, alternate modelling is possible (and noted in the limitations section of this study). In Tables 9-12 (below), Panel A reports Baron and Kenny's (1986) causal four-step regression results (direct approach). Panel B presents the mediation significance results for indirect path testing using three approaches.

While industry-fixed effects consider heterogeneity in the tested variables across different sectors, year-fixed effects are included to control for time trends. For example, firms operating in the financial services sector might possess a markedly different WHS commitment profile when compared with those in mining and construction. Our analysis considers these industry-fixed effects. Year-fixed effects are those that might shape the outcome of a firm over time, which are driven by temporal (yearly) changes.

Notably, we employed robust standard error to account for heteroskedasticity in a model's unexplained variation. Heteroskedasticity means that the variance of the errors is not constant across observations, which impacts the accuracy and reliability of the model. For example, high heteroskedasticity could mean that the regression model can only accurately predict low WHS commitment, and not high commitment. To avoid such biases in the data we used robust standard error, consistent with similar research examining workplace safety analysis, see for example Dai, Tong & Wang (2022), and Cioni & Sacioli (2016).

We present descriptive statistics for each of the variables used in analysis, alongside correlations in Appendix II. Based on an assessment of the Pearson correlation results we conclude that, as the coefficients of all explanatory variables are less than the threshold of 0.80 (with the highest

relationship being .57*** between Corporate Governance Score and Board Independence), multicollinearity is not an issue with the current study (as per Wooldridge, 2010).

Due to a lack of reported WHS commitment, as well as safety and workforce outcome data for ASX200 listed companies (i.e. missing data for some companies within the twelve year period), we analysed different company-year observations across our study variables.[6]

To eliminate the effects of outliers, all continuous variables were winsorised at the first and 99th percentiles, which is the accepted procedure (see for example Amim et al, 2021; Dai, Tong & Wang, 2022; Wu, Li and Yu, 2023). In winsorising, the smallest and largest values of a variable are replaced with the observation closest to them, though still within the range of normal distribution (Field, 2013). This reduces the effect of spurious outliers influencing the result.

Findings

The primary research question proposed by this study sought to examine the corporate governance and leadership drivers of WHS commitment in ASX200 companies.

Drivers of WHS commitment

Table 8 shows the regression results linking WHS commitment, and the items that comprise this variable, with corporate governance and leadership characteristics. The first four models presented examine the relationships linking corporate governance and leadership variables with the component items of WHS Commitment (columns 1-4); with the fifth model highlighting the relationship linking the aggregate WHS Commitment variable with corporate governance and leadership characteristics (column 5).

Table 8: Antecedents of Workplace Health and Safety (WHS) Commitment and component items.

	Item 1 WHS Policies	*Item 2* WHS Team	*Item 3* WHS Training	*Item 4* WHS Certification	*Higher-order composite:* WHS Commitment
	(model 1)	(model 2)	(model 3)	(model 4)	(model 5)
Gov. & leader. characteristics					

[6] When analysing performance data for a company across twelve years, ideally, there are twelve reports (one report for each year). On occasion, for a range of reasons, a company may only have eleven reports across the twelve-year period. As a result, using this scenario as an example, analysis was conducted with the eleven company-year observations for that company instead of twelve.

CSR committee	5.072***	14.306***	3.319***	16.199***	9.857***
	(3.64)	(6.20)	(3.12)	(7.29)	(8.80)
Board independence	0.109***	0.233***	0.054*	0.067	0.112***
	(2.63)	(3.86)	(1.84)	(1.15)	(3.65)
Board gender diversity	-0.060	-0.006	0.015	0.071	0.003
	(-0.94)	(-0.06)	(0.33)	(0.77)	(0.06)
Board size	0.854**	2.686***	0.612***	2.058***	1.547***
	(2.52)	(4.78)	(2.64)	(3.63)	(5.62)
Board tenure	0.616***	0.215	-0.265*	-0.894***	-0.084
	(2.92)	(0.63)	(-1.78)	(-2.59)	(-0.48)
Board frequency	0.291	0.364	0.197*	0.354	0.294**
	(1.54)	(1.47)	(1.92)	(1.48)	(2.02)
Corporate gov. score	0.148***	0.115*	0.055*	0.299***	0.158***
	(3.29)	(1.73)	(1.77)	(4.53)	(4.67)
ESG compensation	0.837	9.013***	2.445**	7.009***	4.678***
	(0.50)	(3.75)	(2.10)	(2.99)	(3.66)
CEO duality	-3.646*	2.488	1.501	11.629***	2.773*
	(-1.79)	(0.75)	(1.14)	(3.75)	(1.74)
Controls					
Return on assets	-0.073**	-0.226***	-0.086***	-0.023	-0.104***
	(-2.44)	(-4.54)	(-4.53)	(-0.47)	(-4.30)
Market to book value	0.022	0.806***	0.340***	-0.190	0.245**
	(0.15)	(3.61)	(3.98)	(-0.90)	(2.30)
Leverage	0.304	12.977***	-1.120	7.053	4.229*
	(0.10)	(2.64)	(-0.50)	(1.47)	(1.75)
Company size	1.094***	1.532***	0.893***	0.112	0.944***
	(3.23)	(2.66)	(3.28)	(0.19)	(3.30)
High-risk industry	1.504	8.428***	-0.070	12.481***	5.656***
	(1.36)	(4.16)	(-0.08)	(6.14)	(5.71)
Year FE	Included	Included	Included	Included	Included
Observations	1,309	1,309	1,306	1,297	1,309
Adjusted R-squared	0.114	0.215	0.076	0.229	0.318

*Regression weights are unstandardised. t-statistics are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.*

The results of the regression analysis identified a number of significant relationships linking corporate governance and leadership characteristics with WHS commitment (as a higher-order variable), as well as the individual items that comprise it.

In relation to the drivers of WHS commitment, the analysis identified that ASX200 companies with high WHS commitment had:

a. CSR committees;

b. stronger board independence;

c. a larger board size;

d. more frequent board meetings;

e. ESG compensation;

f. stronger corporate governance; and

g. CEO duality.

Additionally, the control variables (derived from previous research), namely,

a. return on assets,

b. market-to-book value,

c. leverage,

d. company size, and

e. whether the company operated in a high-risk industry, were also significantly related to WHS commitment.

There is a small contradiction in the control variable findings that warrants further elaboration. The analysis indicates that market to book value (i.e. an indicator of investors' confidence) was positively associated with WHS commitment. Whereas, return on assets (an indication of how profitable the firm is) was negatively associated with WHS commitment. A possible explanation is that a tension exists between the pursuit of longer-term strategic aims, in line with a higher market to book value, which may encourage WHS commitment, and shorter-term profit goals (vis-à-vis return on assets) which may discourage the prioritisation WHS commitment. It is possible for the competing tensions to co-exist, driving WHS commitment in different directions (albeit slight in effect).

There are some recommendations that emerged from this initial analysis. Based on these results, it is apparent that specific company-based routines such as having a CSR committee and linking CEO compensation to ESG performance, are practical actions that companies can put in place to drive high WHS commitment. Corporate governance characteristics such as board independence, having a larger board (size), more frequent board meetings and CEO duality, also play a role (and are indicative of good governance, as discussed above). It is also clear that commitment is higher in companies that operate in high-risk environments, which suggests the impact of a legislative impetus and/or a risk management approach. Also, companies with stronger financial performance (leverage and market to book value) had higher commitment, which might suggest that the provision of resources is an important consideration for increasing WHS commitment.

Drivers of firm safety and workforce outcomes

The secondary research question examined whether WHS commitment mediated the relationship between governance and leadership characteristics (represented by CSR committee), and safety and workforce outcomes (dependent variables).

Drivers of Lost Time Injury Rate

Table 9 reports the regression results linking lost time injury rate with WHS commitment and corporate governance and leadership characteristics.

Table 9: Governance and Leadership Characteristics and Lost Time Injury Rate Total.

Panel A1: Baron and Kenny's (1986) causal step regression				
	Gov. and Leader. Characteristics → Injury Rate		WHS Commitment → Lost Time	
Dependent variables	Lost Time Injury Rate Total	WHS Commitment	Lost Time Injury Rate Total	Lost Time Injury Rate Total
	(model 1)	(model 2)	(model 3)	(model 4)
WHS Commitment			-0.028***(-3.67)	-0.026*** (-3.25)
Governance & Leadership Characteristics				
CSR Committee	-0.681** (-2.19)	9.857*** (8.80)		-0.444 (-1.39)
Board independence	-0.017** (-2.05)	0.112 *** (3.65)	-0.011 (-1.41)	-0.014* (-1.72)
Board gender div.	0.017 (1.28)	0.003 (0.06)	0.016 (1.18)	0.017 (1.27)
Board size	0.031 (0.46)	1.547*** (5.62)	0.040 (0.58)	0.048 (0.70)
Board tenure	0.087 (1.42)	-0.084(-0.48)	0.093 (1.50)	0.091 (1.47)
Board frequency	0.013 (0.44)	0.294** (2.02)	0.004 (0.14)	0.006 (0.19)
Corp. gov. score	0.005 (0.62)	0.158*** (4.67)	0.006 (0.73)	0.008 (1.00)
ESG compensation	-1.269*** (-3.16)	4.678*** (3.66)	-1.164*** (-2.91)	-1.089*** (-2.71)

CEO duality	0.250 (0.59)	2.773* (1.74)	0.484 (1.17)	0.388 (0.95)
Controls				
Return on assets	0.007 (1.39)	-0.104***(-4.30)	0.003 (0.58)	0.003 (0.61)
Market to book	0.011 (0.39)	0.245** (2.30)	0.017 (0.64)	0.017 (0.61)
Leverage	0.098 (0.16)	4.229** (1.75)	0.287 (0.46)	0.244 (0.39)
Company size	-0.132* (-1.87)	0.944** (3.30)	-0.125* (-1.77)	-0.124* (-1.75)
High-risk industry	-0.971*** (-3.34)	5.656*** (5.71)	-0.926*** (-3.22)	-0.909*** (-3.19)
Year FE	Included	Included	Included	Included
Observations	680	1,309	680	680
Adjusted R-squared	0.069	0.318	0.083	0.085

Panel B1: Indirect Path Effects: CSR Committee → WHS Commitment → Emp Lost Time Injury Rate Total	
Sobel test p-value	0.001
Goodman test p-value	0.001
Aroian test p-value	0.000

*Regression weights are unstandardised. t-statistics are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Due to multiple governance and leadership relationships with WHS commitment and turnover, CSR committee is modelled as the independent variable in the mediation analysis[7].*

At a high level, the results indicate that lost time injury rate was significantly and negatively related to WHS commitment (B=-.026, p<.001), board independence (B=-.014, p<.1), and ESG compensation (B=-1.098, p<.001). The rate was also lower for larger companies, and for those companies operating who didn't operate in a high-risk industry. The mediation analysis found support for the mediating role linking CSR committee with WHS commitment, onto lost time injury rate. However, the R^2 value of the final model was very low (0.085) meaning the variables did not explain a meaningful proportion of the lost time injury rate.

Drivers of accidents to total employees

Table 10 reports the regression results linking accidents to total employees with WHS commitment, and corporate governance and leadership characteristics.

Table 10: Governance and Leadership Characteristics and Accidents to Total Employees.

Panel A1: Baron and Kenny's (1986) causal step regression

[7] Many other mediation relationships are possible to model, however, to keep the results concise, this variable was selected (noting that it has meaningful correlations with other governance and leadership variables).

	Gov. and Leader. Characteristics → WHS Commitment → Accidents to Total Emps			
Dependent variables	Accidents to total employees	WHS Commitment	Accidents to total employees	Accidents to total employees
	(1)	(2)	(3)	(4)
WHS Commitment			-0.001 (-0.91)	-0.000 (-0.64)
Governance & Leadership Characteristics				
CSR Committee	-0.056 (-0.97)	9.857*** (8.80)		-0.047 (-0.78)
Board independence	-0.001 (-0.31)	0.112 *** (3.65)	-0.000 (-0.10)	-0.000 (-0.25)
Board gender div.	0.004** (2.00)	0.003 (0.06)	0.004** (2.00)	0.004** (2.00)
Board size	0.029** (2.18)	1.547*** (5.62)	0.029** (2.11)	0.030** (2.23)
Board tenure	-0.052*** (-3.53)	-0.084(-0.48)	-0.051*** (-3.55)	-0.051*** (-3.51)
Board frequency	-0.005 (-0.97)	0.294** (2.02)	-0.005 (-1.05)	-0.005 (-1.01)
Corp. gov. score	0.005*** (2.92)	0.158*** (4.67)	0.004*** (2.95)	0.005*** (2.92)
ESG compensation	-0.102** (-2.16)	4.678*** (3.66)	--0.107** (-2.07)	-0.098** (-2.02)
CEO duality	0.200** (2.00)	2.773** (1.74)	0.215* (1.95)	0.205** (2.01)
Controls		-0.104***(-4.30)		
Return on assets	-0.001 (-0.36)	0.245** (2.30)	-0.000 (-0.28)	-0.001 (-0.40)
Market to book	-0.008 (-1.29)	4.229** (1.75)	-0.008 (-1.31)	-0.008 (-1.31)
Leverage	-0.021 (-0.15)	0.944** (3.30)	0.012 (0.09)	-0.003 (-0.02)
Company size	-0.063*** (-3.00)	5.656*** (5.71)	-0.067*** (-3.20)	-0.065*** (-3.05)
High-risk industry	-0.072 (-1.51)		-0.078 (-1.60)	-0.076 (-1.58)
Year FE	Included	Included	Included	Included
Observations	262	1,309	262	262
Adjusted R-squared	0.256	0.318	0.255	0.254
		9.857*** (8.80)		

*Regression weights are unstandardised. t-statistics are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.*

Importantly, as can be noted in the fourth model, WHS commitment had no impact on accidents to total employees. As such, no evidence of a mediation pathway was found.

The significant drivers of reduced accidents to total employees were board tenure (B=-.051, p<.001), company size (B=-.065, p>.001), and ESG compensation (B=-.098, p<.01). Interestingly, several variables had a positive association with accidents to total employees, including board gender diversity (B=.004, p>.01), board size (B=.030, p>.01), CEO duality (B=.205, p>.01), and the company's corporate governance score (B=.005, p>.001). Well established in the literature, the reporting of accidents can (counterintuitively) be a positive sign that an organisation is improving

its strong safety culture. As such, the value of accidents to total employees as performance measure needs to be weighed-up against other measures. The adjusted R^2 value at .254, indicates that the fourth model explains a low to moderate degree of the variance of accidents to total employees.

Drivers of employee turnover

Table 11 reports the regression results linking employee turnover with WHS commitment, and corporate governance and leadership characteristics.

The corporate governance and leadership drivers of reduced employee turnover included board gender diversity (B=-.139, p>.001), board size (B=-1.188, p>.001), ESG compensation (B=-2.099, p>.01), and smaller companies had reduced turnover (B=-.364, p>.05). Firms identified as operating in high-risk industries also had lower turnover (B=-5.263, p>.001) – a result that may be indicative of labour supply and wage considerations (i.e., high wages associated with mining, and low (and uncompetitive) wages in relation to health and community services, means that the former is more effective in retaining employees). The R^2 value for the final model was .165, indicating that the modelled variables explained a low level of variance in the employee turnover.

The results indicate that WHS commitment was associated with higher employee turnover (B=.061, p>.001), and that it mediated the relationship between CSR committee and employee turnover. While on the surface this may seem counter-intuitive, a possible explanation is that companies who adopt measures that boost WHS commitment may be more inclined to implement high-performance work practices and/or terminate employees who are not performing or acting safely. Additional indicators for this proposition are that the companies with higher levels of financial performance – leverage and market-to-book values, and a higher corporate governance score, also had higher turnover.

Table 11: Governance and Leadership Characteristics and Employee Turnover.

Panel A1: Baron and Kenny's (1986) causal step regression				
Dependent variables	Gov. and Leader. Characteristics → WHS Commitment → Employee Turnover			
	Employee Turnover	WHS Commitment	Employee Turnover	Employee Turnover
	(1)	(2)	(3)	(4)
WHS Commitment			0.067****** (3.47)	0.061****** (3.22)

Governance & Leadership Characteristics				
CSR Committee	1.842** (2.03)	9.857*** (8.80)		1.312 (1.45)
Board independence	-0.028 (-1.52)	0.112 *** (3.65)	-0.038** (-216)	-0.032* (-1.83)
Board gender div.	-0.130***(-3.03)	0.003 (0.06)	-0.141*** (-3.25)	-0.139*** (-3.26)
Board size	-1.108*** (-4.89)	1.547*** (5.62)	-1.177*** (-5.09)	-1.188*** (-5.19)
Board tenure	0.038 (0.31)	-0.084 (-0.48)	0.019 (0.16)	0.046 (0.38)
Board frequency	0.096 (1.40)	0.294** (2.02)	0.100 (1.46)	0.097 (1.41)
Corp. gov. score	0.070*** (2.78)	0.158*** (4.67)	0.073*** (3.00)	0.065** (2.63)
ESG compensation	-1.912*(-1.84)	4.678*** (3.66)	-1.954* (-1.88)	-2.099** (-1.98)
CEO duality	-0.992 (-0.87)	2.773** (1.74)	-1.343 (-1.22)	-1.153 (-1.04)
Controls				
Return on assets	0.011 (0.60)	-0.104***(-4.30)	0.013 (0.73)	0.013 (0.70)
Market to book	0.258** (2.31)	0.245** (2.30)	0.217** (2.06)	0.240** (2.25)
Leverage	4.637** (2.47)	4.229** (1.75)	4.264**(2.35)	4.311** (2.38)
Company size	-0.364* (-1.78)	0.944** (3.30)	-0.379* (-1.88)	-0.364* (-1.82)
High-risk industry	-5.175*** (-7.93)	5.656*** (5.71)	-5.290*** (-8.17)	-5.263*** (-8.14)
Year FE	Included	Included	Included	Included
Observations	573	1,309	573	573
Adjusted R-squared	0.151	0.318	0.163	0.165

Panel B: Indirect Path Effect: CSR Committee → WHS Commitment → Employee Turnover	
Sobel test p-value	0.001
Goodman test p-value	0.001
Aroian test p-value	0.001

*Regression weights are unstandardised. t-statistics are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Due to multiple governance and leadership relationships with WHS commitment and turnover, CSR committee is modelled as the independent variable in the mediation analysis.*

Drivers of employee satisfaction

Table 12 reports the regression results linking employee satisfaction with WHS commitment, and of corporate governance and leadership characteristics. WHS commitment was positively associated with employee satisfaction (B=.127, p>.001), and this variable mediated the relationship between CSR committee and employee satisfaction. Therefore, having a CSR committee leads to higher WHS commitment, which in turn improves employee satisfaction. Leverage was also strongly associated with employee satisfaction (B= 5.290, p>.05), suggesting that companies with stronger financial performance have higher satisfaction amongst staff. The R^2 value for the final model was .151, indicating that the modelled variables explained a modest level of variance in the employee satisfaction.

However, ESG compensation and CEO duality were associated with lower employee satisfaction. A possible reason for this is that experienced CEOs (with mature renumeration packages including ESG compensation) may be appointed to resolve workforce concerns present in the company. Such changes take time, and there may be a residual negative association with staff satisfaction and such leadership circumstances.

Table 12: Governance and Leadership Characteristics and Employee Satisfaction.

Panel A1: Baron and Kenny's (1986) causal step regression				
Dependent variables	Gov. and Leader. Characteristics → WHS Commitment → Employee Satisfaction			
	Employee Satisfaction	WHS Commitment	Employee Satisfaction	Employee Satisfaction
	(1)	(2)	(3)	(4)
WHS Commitment			0.135*** (4.49)	0.127*** (4.26)
Governance & Leadership Characteristics				
CSR Committee	2.743** (2.03)	9.857*** (8.80)		1.596 (1.19)
Board independence	-0.026 (-0.58)	0.112 *** (3.65)	-0.077* (-1.78)	-0.061 (-1.38)
Board gender div.	0.154** (2.43)	0.003 (0.06)	0.161** (2.47)	0.155** (2.40)
Board size	-0.160 (-0.46)	1.547*** (5.62)	-0.326 (-0.94)	-0.345 (-1.00)
Board tenure	0.090 (0.34)	-0.084(-0.48)	0.191 (0.72)	0.155 (0.59)
Board frequency	-0.259 (-1.27)	0.294** (2.02)	--0.302 (-1.55)	-0.299 (-1.52)
Corp. gov. score	-0.125*** (-2.89)	0.158*** (4.67)	-0.116*** (-2.88)	-0.128*** (-3.01)
ESG compensation	-2.433 (-1.57)	4.678*** (3.66)	-3.361** (-2.12)	-3.767** (-2.34)
CEO duality	-3.761*(-1.72)	2.773** (1.74)	-4.283** (-2.13)	-3.643* (-1.84)
Controls				
Return on assets	0.004 (0.08)	-0.104***(-4.30)	0.018 (0.39)	0.014 (0.32)
Market to book	-0.040 (-0.19)	0.245** (2.30)	-0.032 (-0.17)	-0.019 (-0.10)
Leverage	6.842** (2.12)	4.229** (1.75)	5.555* (1.76)	5.290* (1.67)
Company size	-0.616 (-1.58)	0.944** (3.30)	-0.387 (-0.98)	-0.342 (-0.85)
High-risk industry	-0.238 (-0.16)	5.656*** (5.71)	-0.997 (-0.67)	-0.854 (-0.57)
Year FE	Included	Included	Included	Included
Observations	298	1,295	298	298
Adjusted R-squared	0.116	0.322	0.150	0.151
Panel B: Indirect Path Effect: CSR Committee → WHS Commitment → Employee Satisfaction				
Sobel test p-value				0.000
Goodman test p-value				0.000
Aroian test p-value				0.000

*Regression weights are unstandardised. t-statistics are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. CSR committee is modelled as the independent variable in the mediation analysis.*

Discussion

This study analysed corporate governance and leadership characteristics, WHS commitment and safety and workforce outcomes data from ASX200 companies over a 12-year period (2009-2021). The primary and secondary research aims driving the analysis were to identify the corporate governance and leadership drivers of WHS commitment, safety, and workforce outcomes in ASX200 companies. The findings indicate that the strongest impact of WHS commitment in ASX200 companies is from the presence of a CSR committee. Other significant predictors were whether the company operated within a high-risk injury sector and company-specific behaviour such as whether the executives' compensation was tied to ESG performance.

Previous research found the following factors predicted a higher quality of corporate governance. They were (1) the existence of a well-structured board with independent directors, (2) especially those with longer tenure and (3) higher female representation, and (4) who regularly attended board meetings (Creek et al., 2019; Mullins & Holmes, 2018; Patro et al., 2018). In the main, many of these characteristics were also significantly associated with WHS commitment, and specifically – board independence, board size, board frequency and the corporate governance score, as well as financial performance metrics – leverage, market to book value and firm size.

From a behavioural perspective, a key implication resulting from enquiry into the primary research question is that CSR committees and ESG-linked compensation for executives improves WHS commitment. Firms seeking to enhance their WHS commitment can begin by establishing robust governance and leadership routines, and ensuring that they are afforded sufficient prioritisation and resourcing.

The secondary focus of this study was to establish whether there was a flow-on effect from WHS commitment on safety and workforce outcomes; in a sense, building a business case for increasing WHS commitment. Results to this line of inquiry were mixed. Certainly, the presence of a ESG compensation was consistently associated with lower accidents and Lost Time to Injury Rate. While having a CSR committee was associated with both higher WHS commitment and lower Lost Time to Injury Rate, WHS commitment was not associated with lower accidents. This result, while (perhaps) unfavourable, is in line with previous research that has found WHS commitment to be an appropriate end to itself, and indeed, increasing WHS commitment may not necessarily be related to WHS outcomes, or even positively associated (i.e. more commitment may correspond with more reporting of accidents, as per Probust & Estrada (2010)).

Equally, while WHS commitment was associated with higher employee satisfaction, it was also associated with higher staff turnover. While these findings may point to a likelihood of companies with higher WHS commitment being ones that more readily adopt a high-performance work culture (and hence have mechanisms to manage-out underperforming staff and those who may be behaving in an unsafe manner), further research is necessary to confirm this finding. Moreover, in ASX200 companies, high employee satisfaction is arguably more important than having high turnover, as attrition likely occurs as a result of workplace agility and dynamism in response to changing internal and external conditions. At a higher level, the association between WHS commitment and employee satisfaction is important from the perspective of workplace psychosocial safety, as investment into enhancing WHS routines, policies and practices strengthens employees' perceptions of their organisation.

In summary, the research has identified key antecedents of WHS commitment in ASX200 firms, and chief among these are having a CSR committee, and tying executive compensation to ESG performance. A key benefit of WHS commitment (in combination with these antecedents) is lower lost time to injury rate and high employee satisfaction. However, simply having higher WHS commitment does not stave off accidents to total employees, and it is also associated with higher turnover (however, the potential advantages of this latter point have been explained). Taken on balance, strengthening WHS commitment presents as a noble and beneficial action that ASX200 firms can do to enhance their operations, and is in line with a prosocial business orientation.

Limitations

Although the design of this study was carefully conceptualised and implemented, there are some limitations. Firstly, the study relied on published data and documentary evidence, which are generally self-reported/provided by the corporate companies. Therefore, we cannot fully mitigate under-reporting biases in our results. Hence, our results need to be read with caution. Secondly, to account for potential time effects, the analysis included in all regressions, the standard practices for controlling constant variables across companies using 'one-year lag' outcomes data and minimising the impact of outliers. This ensures that the changes over time did not affect our results and addresses potential limitations with the data collected over the 12-year period.

In relation to the analysis, it is important to note that the financial performance of a firm has been modelled as a control variable (in equations that account for a one-year lag effect in the dependent variable). Other analysis in the future, may seek to explore firm financial performance

as a dependent variable, following on from WHS commitment (i.e. exploring the research questions, 'what is the financial gain for firms that adopt a stronger WHS commitment?'). Financial performance has been controlled for in our study as the primary purpose is to ascertain the key drivers of WHS commitment, and as the analysis has shown, past financial performance has some significant relationships to WHS commitment and safety and workforce outcomes.

As noted, the mediation analysis modelled CSR committee (exclusively) as the independent variable, onto WHS commitment and the outcomes under examination. Other mediation pathways were possible to analyse, however, this variable was selected for conciseness, as it had meaningful correlations with the other corporate governance and leadership characteristics.

Finally, the corporate governance literature notes the significance of the role played by activist institutional investors and social movements in dictating corporate policies (see Zaman et al., 2022). We do not consider these players in our models, and we urge future research to explore these crucial interactions.

Study three: documentary analysis

Introduction

In this section of the exploratory phase report, we present findings from the documentary analysis which explored publicly available ASX200 company reports to examine senior business leaders' prosocial behaviour related to WHS commitments, and evidence for commercial and business drivers or motivators of prosocial behaviour in ASX200 companies. This approach is consistent with the notion that, for WHS to have a stronger presence in company reporting (see the literature scan in section 2 of this report), there needs to be a sound argument for including WHS as part of regular reporting mechanisms where it serves to provide performance communication to stakeholders (Koskela, 2014; Montero et al., 2009; O'Neill et al. 2016). The findings gathered through this method complement the quantitative database analysis by allowing us to obtain rich qualitative insights from company reporting, which focus not just on what is reported or disclosed.

Documentary analysis explained

Documentary analysis is a qualitative research method that can comprise both content analysis and thematic analysis (Mackieson et al., 2018). For the exploratory phase of this project, documentary analysis strengthens the research design through a systematic process of reviewing documents and synthesising data contained in multiple documents (Bowen, 2009; Mackieson et al., 2018). Documentary analysis uses an iterative process which starts with superficial examination of documents (skimming), then a more thorough examination to collect data, followed by an analysis and interpretation of the findings. This approach is well-suited to this study, which investigates how organisations communicate their prioritisation of, and commitment to, WHS.

Our documentary analysis involved examining the key public documents of ASX200 companies, namely Sustainability Reports and ESG Reports, to explore how ASX200 companies discuss and disclose their prioritisation of WHS in key public documents. More specifically, this involved developing a thorough understanding of what industries and companies are already doing in terms of WHS and what arguments—if any—AXS200 companies publicly use to explain their position regarding WHS.

Method

Research framework for investigating the prioritising of WHS

Several studies from the CSR field informed the development of the research framework for investigating the prioritising of WHS, primarily because CSR has become a central driver of prosocial practices in business. Campopiano et al. (2012) used a model that categorised CSR motivations as either economic or ethical. Conversely, Lornudd et al. (2020), in a study with board members and CEOs, found that drivers were organised along a continuum from legal compliance to moral values. A third approach, Carroll's Pyramid of CSR, incorporated a framework which considered the expectations about WHS commitments from the stakeholder perspective. Our literature review suggested that this framework needed more nuance than Campopiano et al.'s (2012) two categories, so the drivers offered in the Lornudd et al.'s (2020) continuum were considered along with the levels in Carroll's pyramid (1979) to develop the research framework for this study (see Figure 5)

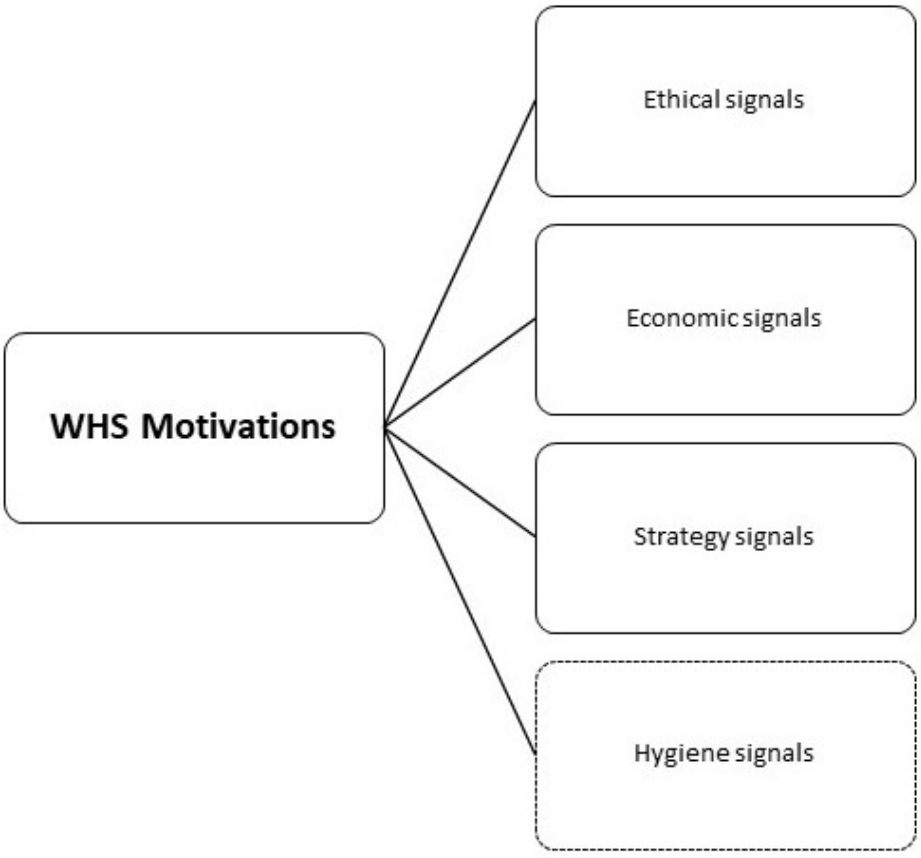


Figure 5: The research framework used for this study.

**As hygiene signals (e.g. zero harm) were present in almost all of the reports and represent the minimum standard of WHS in Australia, the focus in this document analysis will be on those motivations and related signals that go beyond legal compliance.*

Further, in selecting the documents to be included in the documentary analysis, the research team considered the target audience for the different document types (e.g. annual reports, sustainability reports), and identified the sections of the reports most likely to be representative

of the message that the board and/or CEO was communicating to society. Given this approach, Carroll's (1979, p.500) proposition that, "Corporate social responsibility encompasses the economic, legal, ethical and discretionary (philanthropic) expectations that society has of organisations at a given point in time", appeared to be congruent with our research objectives. Carroll's (1979) categories are also compatible with the drivers on the continuum described by Lornudd et al (2020). According to Carroll (1979; 2016), the responsibilities provide a frame within which to distinguish the types of expectations that stakeholders have of businesses towards the societies in which they operate. In addition, Carroll (1979, 2016) provides a frame within which to consider the interrelatedness of the drivers, thus helping to develop an understanding of how organisations distinguish business responsibilities from the economic and legal responsibilities that are required by society's laws, as well as the ethical responsibilities expected by society (i.e. responsible businesses).

Finally, the research team determined that the reporting of WHS commitments in the documents represented *signals* of commitment to WHS by the ASX200 companies, rather than concrete or enacted commitments. Therefore, in this section, we focus on the signals communicated in the reports by board chairs and CEOs. These signals, along with more concrete commitments, will be explored further in the Discovery Phase of the project with senior business leaders.

Data collection

A selection of publicly available documents from company websites were informally reviewed by the research team to determine the appropriate documents to consider in the analysis. As a result, sustainability, and ESG reports (or similar) were included in the documentary analysis. These provided a clear indication of the nature of WHS commitments and extent to which organisations signal their commitment to WHS.

As there was considerable variance in the reporting styles and formats used by companies, the research team discussed and agreed on the following inclusion criteria for a consistent method of data collection:

- The most recently published downloadable report was included (most commonly, 2021);
- The report must be accessible and available for public access and download;
- The report must contain a company logo;

- The report may be a sustainability report or an ESG report. Where the report has a different title, it must contain an index and contain information comparable to a sustainability report or an ESG report; and
- Where the report is a section of another report, (e.g. sustainability reports may be within a company's annual report), the report is included if there is a clearly defined sustainability section (i.e. section heading consistent with other main headings) and the section is listed in the contents section at the front of the report including the page numbers

Screening

A list of the 2021 ASX200 companies was obtained from https://www.asx200list.com/ in September 2022. One researcher (LO) reviewed the websites and downloaded reports matching the inclusion criteria. Some of the ASX200 companies were parent companies of other ASX200 companies on the list, which meant that there was one website for both the parent and child companies. As a result, 190 company websites were searched for sustainability and ESG Reports. Where there were missing reports, a second researcher (NG) checked the websites to search for any additional reports not found in the first review.

The Global Industry Classification Standards (GICS) for ASX200 were used to categorise the companies by industry. Figure 6 shows how many ASX200 companies had sustainability or ESG reports (Reporting). The ASX200 listed companies without sustainability or ESG reports (Non-reporting) were excluded from the study.

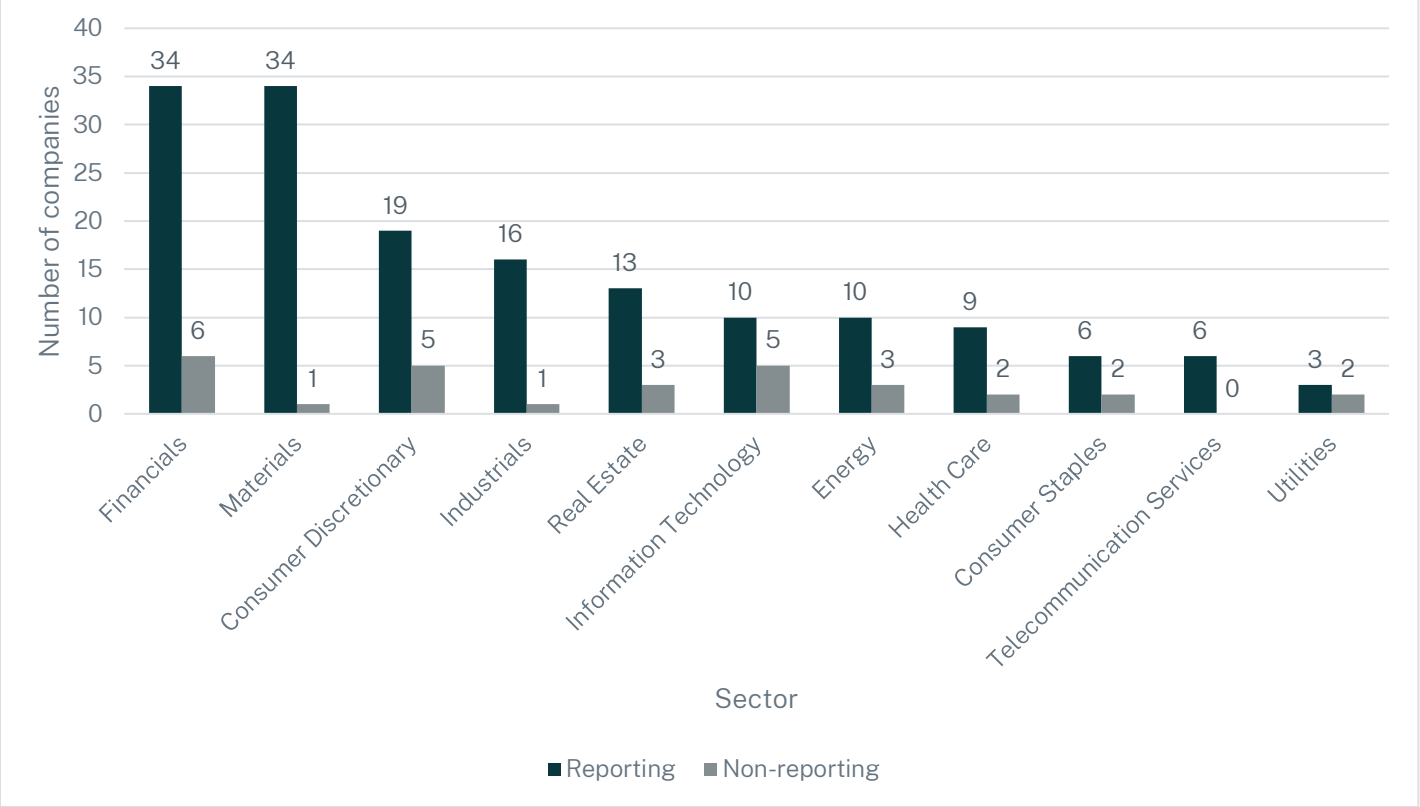


Figure 6: Distribution of ASX200 companies with Sustainability/ESG reports.

The inclusion criteria guided the screening process of those selected as *Reporting* and any anomalies were discussed by three researchers (NG, LO and PB) and consensus was reached. Three researchers (NG, LO and PB) agreed that the final 153 reports were eligible for inclusion in this study.

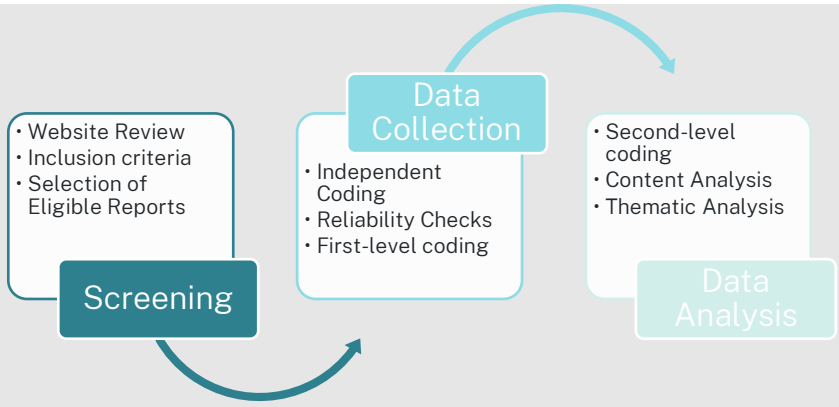


Figure 7: Documentary analysis process.

First-level coding and reliability checks

Two researchers (LO and NG) independently reviewed and coded the data for 45 reports (approximately 30% of the total). Coding included what type of report it was (sustainability or

ESG); the signatory on the introductory letter; the level of WHS commitment signalled in the letter (none, low, medium or high) and to what degree WHS was linked to overall strategy (none, low, medium or high). The details of this are included in the coding book (see Appendix V) which was also used to improve consistency). One researcher (PB) independently reviewed the data collected for interrater agreement and noted that a further refinement of some of the codes was required. Three researchers (NG, LO and PB) discussed the discrepancies in coding and resolved those, the coding book was updated, and the remaining reports were coded accordingly. All three researchers agreed on the final coding used for analysis. First level coding was conducted on 153 reports.

Data analysis

Content analysis

The research team met to discuss the codes and emerging themes. The data in the content analysis spreadsheet were analysed with SPSS to provide a descriptive overview of company characteristics that emerged from the initial analysis. This included exploring the patterns related to WHS commitment across industries using the metrics the research team identified in the coding book (Appendix V). While the term most frequently used was 'safety', other common terms included, but were not limited to: health and safety WHS, Occupational Health and Safety (OHS), wellbeing, mental health, injuries, risks and hazards, accidents, and safety culture. This high-level snapshot of trends provided a contextual backdrop upon which deeper, second-level coding could occur.

Second-level coding

A second level of coding was conducted on a subset of 35 reports (Table 13) from the original dataset to better understand the rationales for prioritising WHS, the drivers for prioritising WHS mentioned in company reports, and the WHS outcomes reported by companies resulting from prosocial behaviours. The reports were selected based on content analysis of the presence of information about WHS in the letter, usually placed in the first few pages, that introduces the report and is traditionally signed by the CEO, Board Chair, or both (hereafter called the 'Introductory Letter').

The research team deliberately focused on those companies that signalled a higher level of WHS commitment. That is, those reports that contained a significant amount of WHS content in the introductory letter and their sustainability report (please see Appendix 5 for detailed coding

information). The literature review revealed that the aspects of WHS reported in CSR/ESG reports was generally low (Alves, 2022; Kawashita et al., 2005; Koskela, 2014), which means that including reports for the ASX200 companies that were identified as having a higher level of WHS content was not only within the bounds of an acceptable sample, it means that this group of reports were the highest quality in terms of WHS inclusion, selected from Australia's 200 highest performing companies. Of note, almost half (46%) of the subgroup of reports selected for second-level coding were companies from the materials industry, followed by the industrials industry (20%). The second-level coding was conducted using NVivo Release 1 (QSR Software).

Table 13: Description of the reports selected for second-level coding.

Industry	Number of reports	Percentage (%)
Materials	16	45.71%
Industrials[8]	7	20.00%
Healthcare	2	5.71%
Consumer staples	3	8.57%
Real estate	2	5.71%
Financials	1	2.86%
Information technology	1	2.86%
Energy	3	8.57%

The ten reports coded as 'High' for 'Level of WHS commitment in the Introductory Letter' and 'High' for 'WHS linked to the overall strategy of the organisation' (hereafter, 'high-high') in the first-level coding were coded using free coding techniques by researcher (NG) using NVivo (see Appendix 5 for coding descriptions). The emerging themes were then reviewed by researcher (LO), and categorised into higher order themes and discussed by the research team (NG, LO, PB, EF). Subsequently, a research framework for investigating the prioritising of WHS was developed (Figure 5), which draws on the work of Campopiano, De Massis, and Cassia (2012), Carroll (1979), and Lornudd et al. (2020).

The research framework was tested by two researchers (NG, LO) prior to being used for the second-level coding and thematic analysis. All 35 reports were analysed in NVivo and the number of reports in each category of first-level coding of WHS commitment (i.e. high-high, high-medium, and medium-high) is shown in Table 14.

[8] Industrials includes manufacturers and distributors of capital goods, building products, electrical equipment and machinery, and companies that offer construction and engineering services.

Table 14: Number of reports in each category of commitment to WHS used for second level coding and thematic analysis.

Level of WHS commitment in introductory letter	WHS linked to overall strategy of organisation	
	High	Medium
High	10	1
Medium	24	0

Thematic Analysis

A review of the second-level coding by one researcher (LO) found that there was a discrepancy of less than one percent (0.82%) in coding agreement. Next, a thematic analysis was conducted using an inductive data-driven approach in NVivo to identify the subthemes within each of the categories of signals for prioritising WHS: ethical, economic, strategy, and hygiene. An inductive approach is when researchers start with no subthemes within each category and develop the coding as the themes are identified through reading the documents. With two researchers independently identifying the coding, the resulting subthemes were discussed by two researchers (LO and NG), who reached consensus on the discrepancies, and both agreed that the subthemes used in the findings were consistent with their observations during the coding process.

Findings

The findings are presented in two sections. First, the findings from the content analysis are presented to provide a broad overview of how ASX200 companies signal their prioritisation of WHS in public documents. For the content analysis, any mention of WHS was regarded as signalling commitment to WHS. Next, the thematic analysis is presented, which includes a deeper examination of the themes, and a focus on identifying evidence of the commercial drivers for prioritising WHS. The findings section concludes by summarising potential drivers for prosocial behaviour and prioritising WHS.

Content analysis results

This analysis first focuses on the degree to which business leaders signal their commitment to WHS (in general) in their letters introducing the reports. There was an assumption that the letter was more likely to be written by the signatory, or at least reviewed prior to signing. Based on this assumption, an analysis was conducted to examine the weight given to WHS in the content of the letter for the different types of business leaders (e.g. Board Chairs and CEOs). The analysis then examined the extent to which WHS is integrated in the strategy of ASX200 companies, as

indicated by the level of comprehensiveness by which WHS is connected to strategic targets. In both cases, the analysis looked at general trends as well as industry-specific trends for WHS.

Letters as a signal of commitment to WHS

One of the aims of this phase was to investigate whether organisations communicate or signal their commitment to WHS via company introductory letters. One proxy measure was through the analysis of whether business leaders signalled a commitment to WHS in their introductory letter[9]. Extant research has attached significant value to the introductory letter, as it is a written symbol that signals the thinking and attitudes of business leaders (Costa et al., 2013; De-Miguel-Molina et al., 2019). By signing the letter, a business leader takes responsibility for its content, although they might not have necessarily written the words themselves (Shin & You, 2019). A value of high, medium, low, or no commitment was assigned to each letter, determined by the degree to which the signatories (e.g. Board Chairs, CEOS) emphasised their commitment to WHS, determined by the amount of content dedicated to WHS in the letter (see Appendix V). While the amount of WHS content does not directly speak to the nature of any WHS commitment, it does indicate whether WHS is considered a salient topic for business leaders, particularly as the length of introductory letters is often limited (see Brennan & Conroy, 2013; Unerman, 2000).

The content analysis found that almost two-thirds of letters had 'low' or no mention of WHS. The general distribution of commitment levels in the letters was categorised as: 'high' (9.6%, n=11), 'medium' (25.4%, n=29), 'low' (22.8%, n=26), with the remaining reports (none, 42.1%, n=48) not containing any mention of WHS in the introduction letters.

The analysis indicated that the strongest commitment to WHS was evident in introductory letters that were signed by at least one member of the management team[10] (Figure 8). In those cases, about 37 percent of the letters signalled a high to medium WHS commitment. When only a member of the board signed the letter, a similar level of WHS commitment was present in the letters in only about 22% of the cases. This signals that communicating commitment to WHS may be a higher priority at the management level than the board level.

[9] An introductory letter describes the letter at the start of a corporate report that introduces the report, and/or welcomes the reader. The introductory letter is usually signed by the Chair of the Board, the CEO or a similar C-suite Executive.

[10] In the large majority of these cases the CEO signed this letter, but in rare cases other members of the management team signed the letter e.g. Chair of the Sustainability Committee.

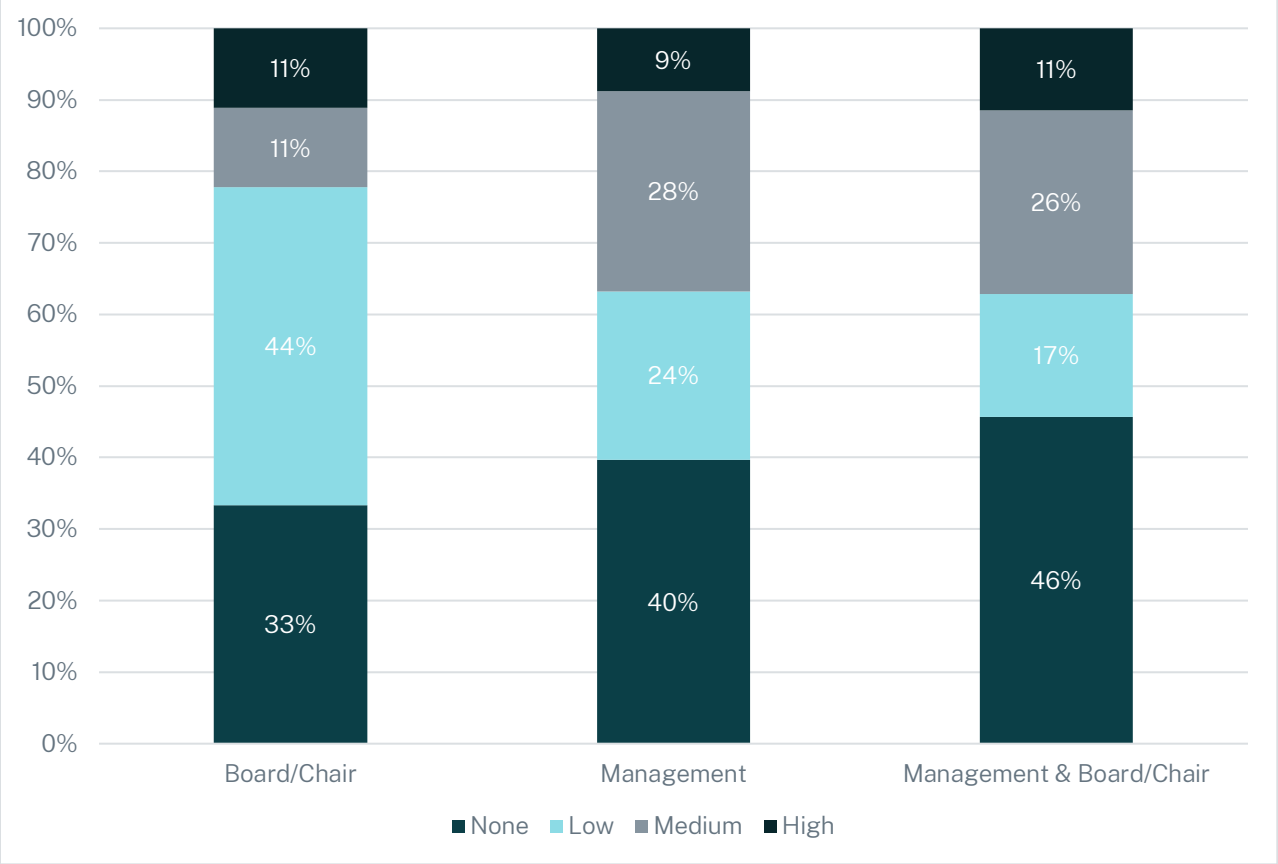


Figure 7: Level of WHS Commitment by signatory of introductory letter[11].

Industries

A content analysis conducted on the available reports found that commitment to WHS was more evident in introductory letters from particular industries. Figure 9 shows that business leaders' overall signalling of WHS commitment as defined by the number of letters categorised as medium to high commitment, was strongest in Industrials (60%, n=9) and Materials (59%, n=27). The sectors comprise high-risk industries known to have high rates of injuries and fatalities. According to SafeWork (2021), 64% of worker fatalities in 2021 occurred in three industries. Of these top three industries, two are categorised as industrials: transport, postal and warehousing fatalities (31% 52 fatalities), and Construction (14%; 24 fatalities). For serious injuries, construction (12%), manufacturing (11%), and transport, postal and warehousing (7%) were in the top five Australian industries for serious claims (SafeWork Australia, 2021).

In fact, the industrials sector contains three industries considered to be hazardous by nature, in the top four priority industries for high numbers and rates of fatalities and/or injuries (SafeWork

[11] The percentages displayed in the graphs in this report have been rounded to the nearest whole number. They may not add to 100%

Australia, 2021). The higher proportion of content in the introductory letters for these industries may be signals that the company is aware of the industry's reputation for WHS, and as such, providing a narrative for WHS at their company.

In contrast, all business leaders in Telecommunication Services, Consumer Discretionary, and Utilities signalled a low level or no commitment, and Financials (85%, n=11) and Real Estate (73%, n=8) signalled limited WHS commitment in their letters. These may be related to the low number of injuries within these industries.

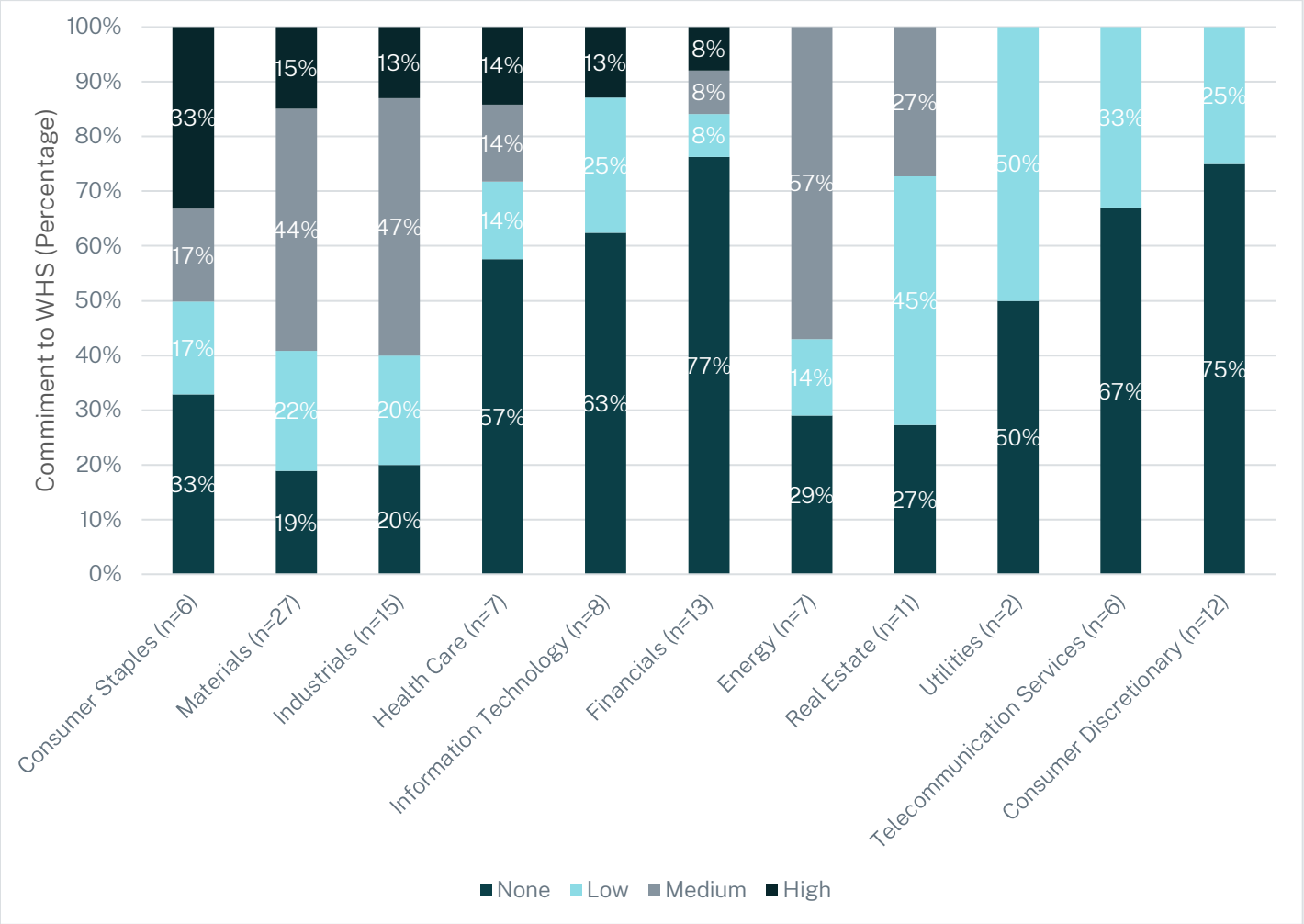


Figure 9: Signalled level of WHS Commitment by industry in introductory letter.

Investigating a link between WHS and strategy in the full reports

A review of the full reports was conducted to identify WHS reporting that was linked to the overarching business strategy of a corporation (i.e., its long-term direction and goals), as a visible indicator of the level of comprehensiveness by which WHS is connected to the strategic targets of a specific company. The analysis found that most companies (95%, n=146) signalled at least a low (weak) link to strategy when reporting on WHS. For these companies that did signal a link,

there was a relatively even spread between low (32%, n=49), medium (31%, n=48), and high (32%, n=49) links to strategy.

We looked at these strategy links across the industries to identify any potential patterns and differences between them. The Materials industry appeared to show the most comprehensive linkages between WHS and strategy targets, whilst Consumer Discretionary, Financials, and Telecommunications Services industries seemed to have comparatively low strategy links, with many having no links to strategy in their report (Figure 10). This suggests that important industry-differences exist in the extent to which WHS is embedded in the strategy frameworks of corporations, that is, higher-risk industries may be more likely to dedicate space in their company reports than low-risk industries. In this exploratory phase, this finding highlights that differences between industries need to be considered during the next phase of the project.

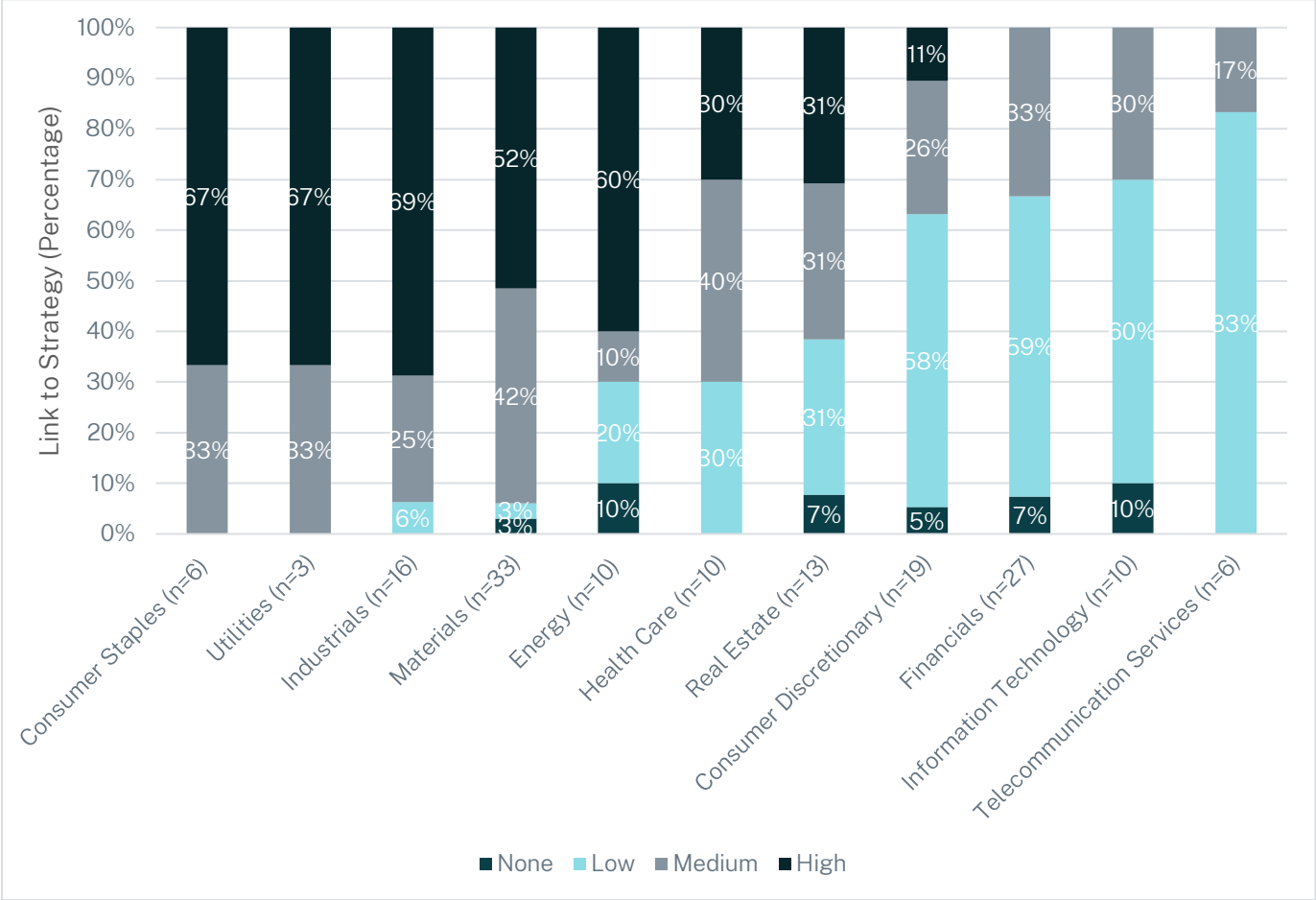


Figure 10: Exploring the connection between level of WHS commitment and WHS strategy in reports.

Overall, the content analysis revealed the presence of signals linking WHS to business strategy in some of the selected reports from ASX200 companies. For example, one report included an ESG framework with safety in their 'S' pillar; however, there was an absence of content in the

report about implemented WHS strategies. The thematic analysis analysed the narrative within the reports to provide more information about the links to WHS strategy. Commitment to WHS being present in the introductory letters was less visible, but more likely when at least one of the signatories was a manager. The analysis showed that (i) WHS is reasonably integrated strategically, but (ii) its importance loses some significance the higher you get into the corporation. This suggests a slight disconnect between operational-level considerations and strategic ones at the executive and particularly non-executive level.

Thematic analysis results

In this section, we present the findings from the thematic analysis of the 35 reports categorised as *high-high*, *medium-high*, and *high-medium* through the content analysis. That is, the reports coded as having more than one paragraph in the introductory letter about the WHS (i.e. high or medium for 'Level of WHS commitment in the Introductory Letter') and at the minimum a mention of WHS targets in the report reviewed for this study (i.e. medium or high for 'WHS linked to the overall strategy of the organisation') (see section 4.2.4, Table 14, or Appendix V for more information about the content analysis coding). Using the research framework for investigating the prioritisation of WHS (Figure 6) to structure this section, we identified potential motivators for prioritising WHS through our analysis of the ethical signals, economic signals, strategy signals, and hygiene signals found in the selected reports. This exploration of key signals of WHS commitment builds on the more general signalling results, in relation to WHS commitment and the link to strategy, in the initial coding phase above.

As mentioned previously, the *hygiene* theme which signals that the companies were doing what was expected for WHS as part of usual business practices (e.g. reporting lost time injuries, Employee Assistance Programs) is out of scope for this study. The findings are not presented in this section because we are interested in commitments that go beyond WHS compliance and legislative requirements.

Ethical signals

The reports contained signals that the companies may be motivated by ethical concerns. The theme, ethical signals, was categorised by the sub-themes, '*expected'* or '*required'*, to distinguish the mandatory ethical requirements to conduct business with actions more aligned to the ethical practices expected by society (i.e. responsible business). As described earlier (see section 4.1.2) organisations engaged in *responsible business* are identifiable by their businesses practices

which extend beyond their economic and legal requirements to engage in practices that demonstrate their commitment to ethical responsibilities as well. Hence, the subtheme 'required' describes WHS practices that meet ethical standards within the spirit of the law. In contrast, 'expected' is when organisations engage in businesses practices that extend beyond what is required, to meet the higher ethical expectations of their customers, or society more generally. While the 'expected' ethical businesses practices are not mandated, many customers will look at the organisation more favourably in light of their ethical stance. We commence by examining the expected ethical signals contained in the reports.

Ethical signals - Expected

Beyond what is required for businesses to operate ethically, there is a growing body of evidence of increasing stakeholder expectations about responsible and ethical business practices (Barko et al., 2021; Haddock-Fraser and Tourelle, 2010; Raithel and Schwaiger, 2015). These consumer, supply chain, investor, community, or societal expectations may motivate some businesses to develop strategies that go some way towards meeting stakeholder expectations even if they are beyond the scope of what they are legally required to do. The data contained indications that some companies are motivated by societal expectations, through general statements, such as:

> *"In today's world, our social and environmental performance is as important to our brand equity as the quality of our products." (ANN)*

> *"Stakeholders expect us to operate responsibly, so we strengthen Adbri's social licence by prioritising our efforts." (ABC)*

> *"We aim to provide a great place to work, we operate with integrity to influence our supply chains and support our local communities through economic participation, partnership and caring for the environment." (BSL)*

> *"Downer recognised that mental health was a growing societal issue, and created a multitiered strategy to help Downer employees and their families manage their health and wellbeing." (DOW)*

Some companies reported that they do more than what is legally required, mentioning duty, environmental preservation, and reputation:

> *"Beyond simply a legal duty to comply with all laws, including those relating to workers' rights, we have an ethical duty to do our best to protect workers, both in our operations and in our supply chain." (ANN)*

> *"Our primary focus is the health and safety of our employees and contractors. Failure to operate safely may cause injuries, fatalities, environmental damage and reputational harm." (BPT)*

One company was quite specific, describing how after a negative WHS event, they plan to interact with a community group near one of their facilities. The company signalled its motivation to meet community expectations regarding safety improvements, stating:

"We will provide the relevant updates to the Blackwater Community Reference Group." (AZJ)

The company may also be signalling a motivation to minimise reputational damage arising from an incident. Some companies linked an expectation for ethical practice to their company culture and values:

"As a purpose-led organisation with strong, embedded values and a culture of caring for our people and our stakeholders, we believe business integrity is more than just compliance – it is about doing business right and in accordance with our values." (IGO)

More commonly, the reports contained aspirational statements that were future-focused and did not align closely to any reported activities or business outcomes in the report. The statements suggest that the companies are signalling ethical behaviour, however, it is difficult to know the driving motivation for these types of aspirational statements:

"We believe in doing business responsibly, keeping our people and communities safe." (ABC)

"We care about the impact we have on customers, partners, communities and each other today and in the future." (BLD)

"Be Better Together. We empower, support and respect each other. We act safely and with care, to the strengths of our people." (IGO)

"We are committed to operating a best-in-class business that is grounded in responsible and ethical business practices and in providing an inclusive work environment where our employees can thrive." (SGM)

We aim to be the world's safest and most responsible recycling and recovery company." (SGM)

Ethical signals - Required

For the sub-theme '*required*', the companies signalled that they were meeting the ethical aspects of business required by the law and/or normal business conduct regarding WHS (e.g. legislation, codes, standards). The rationale behind these signals appeared to be associated with reputation.

One company reported having:

"…sound governance practices and policies that protect our market reputation by mitigating ethical and financial risks and ensuring we comply with relevant laws and regulations." (ABC)

While others signalled motivations associated with workers' rights:

"Respecting and protecting the rights of workers is an ethical obligation." (ANN)

"Providing a safe workplace is a fundamental principle of health and safety and human rights." (DOW)

One organisation linked their requirement to provide a safe workplace to being a responsible corporate citizen:

"As a responsible corporate citizen, Abacus recognises the fundamental right of all workers and those affected by our undertaking to a safe and healthy environment. We work to provide, so far as reasonably practicable, a safe and healthy working environment for all our employees, contractors, customers and visitors. This is reinforced through the view that safety is not discretionary, but that it is fundamentally important to our people and that it is only with a conscious recognition of health and safety that we will achieve and maintain our aim." (APB)

Often, companies appeared to be signalling that that their motivation to meet their ethical requirements was associated with a duty to protect and care for their employees:

"We work honestly, ethically and fairly. We abide by all BINGO policies and procedures to protect our safety and the safety of others in our workplace." (BIN)

"In our most recent employee engagement survey on this topic, 86% of responders reported that they feel EBOS is committed to employee safety and 79% said that management cares about their wellbeing." (EBO)

Some reports contained responses to negative events, where the company signalled a motivation to use an incident to improve WHS practices:

"Given the importance of safety across our team, these incidents made us stop and reflect on what more we needed to do to ensure every one of our team goes home safely every day." (TWE)

Further, the way in which negative WHS events, such as fatalities were communicated in the mining industry was not common in reports from other industries. The reporting typically started with a statement about what happened, followed by a tribute including the name(s) of the worker(s) involved, condolences offered to the family, and concluded with a sentence about how the company is responding. These sections read as opportunities to create a positive image from the negative event for their company, and to communicate that the company values safety despite the event:

"At the heart of our sustainability strategy – and our business – are our people and their safety. This year, we remember Francis[12], Muzi and Daniel – our colleagues who went to work last year but did not return home. Like all of us at Rio Tinto, I am deeply saddened by their tragic deaths and the irreplaceable loss this has caused their families, friends and colleagues. We must do better on safety." (RIO)

"The most important commitment we make at South32 is that everyone goes home safe and well every day and it is devastating that we did not achieve that this year. We all feel the loss of one of our colleagues, Mr Mienies13, a contractor who was fatally injured while undertaking electrical work at our Wessels Mine [...] Our deepest sympathies are with Mr Mienies' family, friends and his immediate team, who we supported following the tragic incident. To understand and learn from what happened, we undertook a detailed investigation and discussed the learnings in 'stop for safety' conversations across our business." (S32)

The analysis found that some companies reported that they do more than what is legally required mentioning duty, environmental preservation and reputation:

"Beyond simply a legal duty to comply with all laws, including those relating to workers' rights, we have an ethical duty to do our best to protect workers, both in our operations and in our supply chain." (ANN)

"Our primary focus is the health and safety of our employees and contractors. Failure to operate safely may cause injuries, fatalities, environmental damage and reputational harm." (BPT)

Economic Signals

In the selected reports, companies communicated that the economic success of their business, and being an environmentally and socially responsible business, were interconnected:

"It is increasingly recognised that environmental, social and governance issues cannot be separated from overall Company performance. Rather, active management of ESG issues can enhance financial performance, minimise regulatory and legal interventions, improve employee productivity and help companies focus their investment and capital expenditures more effectively." (IPL)

Economic signals contained four subthemes: operational, awards and recognition, employee engagement, and wellbeing.

Operational

[12] Identifying details were removed for this research report out of respect for the families, the full names were contained in the ASX200 company report
[13] Identifying details were removed for this research report out of respect for the families, the full names were contained in the ASX200 company report

Regarding business operations, the data analysis revealed a connection between safety and business performance, with many companies discussing the relationship as being core to their business continuity:

> *"Running a safe, responsible and profitable business is the foundation of our sustainability approach. Staying safe, keeping others safe, and being responsible are core to who we are as a company." (RIO)*

Others reported adapting practices and improving safety performance as priorities:

> *"We are continually looking for ways to improve our safety performance and management. Providing the safest possible environments throughout our business is a key priority and a prevalent factor when assessing our overall success." (NSR)*

> *"we adapted our practices to ensure the health and safety of our people while maintaining operations." (FMG)*

While the direction of the motivation was not clear, improved business performance, safety, and business continuity were frequently mentioned:

> *"we must continue to deliver on financial improvement targets and deploy technologies and other innovations to mine more safely, efficiently and productively." (IGO)*

Awards and recognition

Several companies mentioned receiving awards, signalling that external recognition may be valued, especially when it can be publicly reported:

> *"Safety Step Change program won the South Australian Cement, Concrete and Aggregates Australia (CCAA) Health and Safety Innovation Award and the South Australian Premier's Award in Energy and Mining for Health and Safety in the Resources Sector. The Cockburn Cement Kwinana team won the Health and Safety Innovation Award at the Western Australia CCAA awards for their mobile plant alert system." (ABC)*

As well as external recognition, incentives were used to encourage safety performance:

> *"Driving significant progress in achieving a "zero harm" workplace' is one of the conditions of our Executive level Short-Term Incentives, while employees who have not completed safety training are typically precluded from receiving any work-related financial bonuses." (ELD)*

> *"we have assigned a shared responsibility for safety to all leaders while integrating it into key performance indicators, like financial performance." (ANN)*

In some companies, safety performance was linked to executive remuneration, signalling that financial incentives are used to drive desired safety behaviour:

"The Board has discretion to adjust executive remuneration outcomes if there is evidence of a breakdown in management oversight and processes leading to poor outcomes, including safety performance." (BLD)

"Safety KPIs for leaders were again in place in 2021, with 96 per cent of our people leaders completing four safety leadership walks or talks with their teams during the year, again exceeding our target of 95 per cent." (SYD)

This supports the findings of the ACSI report (2020), where such links between executive pay were reported (see section 2.6.10).

Employee engagement

The key operational component of this subtheme was an engaged workforce. That is, having sufficient and capable workers to support workplace safety:

"Through our 'People First' Strategy we aim to be a globally recognised and respected safety leader, with the best people in the right roles." (IPL)

The data analysis found that some reports suggested the relationship between employee engagement and safety culture was important for business success:

"We are continually looking for ways to improve our safety performance and management. Providing the safest possible environments throughout our business is a key priority and a prevalent factor when assessing our overall success." (NSR)

Wellbeing

The data analysis suggests that communicating employee wellbeing as a priority was largely based on the notion that a well worker is a productive worker:

"Good wellbeing sets us up for success." (QUB)

"By investing in mental health and wellbeing programs, we aim to improve health, safety, and business outcomes." (EVN)

Only a few companies reported actions that extended beyond the workplace. These more inclusive wellbeing programs (including family and community) may signal that for some companies, prioritising wellbeing is not only an economic motivation, but also an acknowledgment of societal ethical expectations:

"We recognise that the wellbeing, health and wealth of the whole person enables our people to contribute fully to outcomes both at work and to the communities in which they operate." (ALD)

Strategy Signals

The strategy theme comprises the signals that the company has communicated about strategies specific to safety in the selected report. The strategy theme contains three subthemes: benchmarking, leadership, and partnerships.

Benchmarking

Analysis of the data revealed that benchmarking and comparisons were common among the ASX200 companies at the organisational level:

> *"Newcrest's safety performance compares well with our ICMM member companies, performing above the combined member average of 2.92 per million hours worked." (NCM)*

And, also, on specific WHS indicators:

> *"Our LTIFR is now the lowest it has been for many years and below the Western Australian gold industry average as published by WA Department of Mines, Industry Regulation and Safety for 2019/20" (RRL)*

This theme is consistent with the findings from the literature review (see section 2.6.7), where benchmarking was seen as an external driver that motivated leaders into action (Larrieta-Rubín de Celis et al., 2017)

Leadership

Some CEOs appeared to be personally motivated to improve safety:

> *"As BINGO's CEO, I have made it my personal mission to ensure that Zero Harm is embedded as the yardstick by which every business decision at BINGO is made, and the focus of every team member, no matter their role." (BIN)*

However, leadership in safety was more commonly described as a desire for the company to be industry leaders in safety:

> *"Led by our new Group HSE Zero Harm Council, we established a refreshed health, safety and environment (HSE) strategy to enable us to deliver industry-leading HSE excellence." (BLD)*
>
> *"Objective: To be global leaders in safety." (FMG)*

Others signalled leadership in safety through aspects of organisational culture commensurate with inclusive and safe workplaces:

> *"We are committed to operating as a best-in-class business by continuously improving our safety performance and employee engagement, building a diverse and inclusive workplace culture, and upholding responsible and ethical business practices." (SGM)*

"To get the best from its people, AWAC needs to offer an inclusive and empowering culture, provide appropriate training and development, and prioritise the health and safety of its workforce." (AWC)

Partnerships

Several companies were partnering and/or joining alliances or member organisations that were jointly addressing the 'big issues' in safety. These partnerships were in some ways examples of co-opetition, as described earlier (see section 2.6.5):

"Continuing our quest to improve our awareness and support for mental health TWE joined the Corporate Mental Health Alliance Australia (CMHAA). We are collaborating with several major Australian companies to improve understanding, best practice prevention and support for mental health in the workplace." (TWE)

"Beach is a member of Safer Together, a not-for-profit, member-led organisation of oil and gas exploration and production industry operating companies and contract partner companies committed to creating a consistent safety culture in the industry." (BPT)

In summary, the reports contained signals that strategy motivators to prioritise WHS may be associated with business performance or reputation (i.e. the internal and external faces of benchmarking) and leadership (personal and organisational level). While partnerships were also a sub-theme, further investigation is needed to understand whether partnerships are created due to a motivation to prioritise WHS, or whether they have another role (e.g. reputation, minimising risk, enhancing business opportunities). Further investigation is also needed to investigate the extent to which these partnerships may be viewed as co-opetition.

Signals of drivers for prioritising WHS by Industry

The reports contained signals that motivators for business leaders to prioritise WHS may be associated with a desire to act or be perceived as acting ethically through their work-related behaviours. Further, the reports signalled that economic motivators to prioritise WHS may be associated with business continuity, external recognition (which may be related to reputation), and financial incentives (incentivised or withheld). Of note, the directionality of the potential motivators was not clear in the analysis of the reports. The Materials, Industrials, Energy, and Consumer Discretionary industries more frequently communicated economic signals in the selected reports. Finally, the Materials, Industrials, and Energy industries more frequently communicated strategy signals in the selected reports. Of note, the Consumer Discretionary, Telecommunication Services, and Utilities industries did not have any reports included in the thematic analysis sample. Thus, these industries were not assessed in the content analysis as having high-high, medium-high, or high-medium links between WHS commitment in the introductory letter and WHS strategy throughout the reports.

Rationale for prioritising WHS

The selected reports were further examined to determine whether companies provided a rationale for prioritising WHS. The analysis found that while most companies claimed that safety was a priority, seldom did they explicitly provide into detail about why this was the case. Of those that did, the data analysis found that when communicating the rationale for prioritising WHS, it was typically associated with improving company performance, ESG, or the response to a real (or perceived) increase in stakeholder expectations.

> *"Our intrinsic motivation (the "why") revolves around providing a safe, welcoming and rewarding environment where our employees find true purpose and meaning, are proud of our company and its practices, and are able to be their "true selves" at work." (NSR)*

> *"We believe in the authenticity of our environmental, social and safety aspirations and recognise that companies demonstrating superior performance in these areas outperform others in traditional business measures, through a more motivated workforce, efficient operations, aligned and supportive stakeholders and hence a more predictable and profitable organisation." (NST)*

One company report explicitly described ESG (including safety) as being part of the future profitability of their company:

> *"The developments of FY22 have highlighted the importance of adopting a rigorous and robust ESG approach. We believe in this not only because it is the right thing to do, but to accelerate our competitive advantages." (NXT)*

There were a few reports where it was explicitly stated that WHS was a priority; however, the reports did not provide clear insights into *why* or *how* the company prioritised WHS:

> *"A healthy and safe workplace will always be our first priority." (TWE)*

> *"Our focus on safety and zero harm continues to be our top priority." (QUB)*

> *"We make a commitment to achieving Zero Harm and getting everyone Home Safe, each and every day." (BIN)*

> *"Our first and foremost priority is the health and safety of our people, and all those whom we interact with through our operations. We want everyone to go home healthy and safe every day." (BLD)*

Finally, there were signals that prioritising safety was associated with business performance as well as external stakeholders:

> *"Our priority is to ensure the safety and wellbeing of our employees, customers and communities, whilst minimising disruption to our business." (BGA)*

> *"The health, safety and wellbeing of our people and of the communities in which we operate will always be our highest priority." (GXY)*

WHS outcomes reported by companies

Finally, the data were analysed to identify evidence of outcomes associated with prioritising WHS. WHS outcomes were observed for ethical signals (e.g. non-compliance penalties), economic signals (e.g. awards, employee engagement survey results), and strategy signals (e.g. benchmarking performance).

Overall, the reported WHS outcomes were consistent with the ethical, economic, strategic, and hygiene signals contained in the reports. However, they fell short in reporting safety outcomes for more ambitious targets such as being 'the world's safest', 'industry leaders in safety', and showing how WHS and wellbeing programs are linked to improved business performance.

Documentary analysis discussion

The documentary analysis was conducted to identify evidence of commercial and business drivers of prosocial behaviour to better understand the commitment that senior business leaders have towards prioritising WHS. Overall, the reports provided very little information about the commercial drivers of WHS commitment. However, the analysis found some evidence of CSR and ESG-related motivations, such as customer ethical expectations and employee expectations. Further, the reports were relatively silent on how companies respond to stakeholder expectations, investor and shareholder pressure, and reputational concerns. The analysis found that for some companies, strategy was linked to safety commitment, but the links were not directly relevant (though perhaps indirectly related) to commercial drivers and motivations.

In the case of those companies signalling that safety was a priority, analysis of the reports did not provide insight into their motivations nor identify evidence of positive outcomes arising from commitments associated with prosocial behaviour. As with many such public documents, some reports were characterised by a sense of symbolism and public relations rhetoric. Overall, this conveyed the impression that there further investigation would be needed to locate evidence supporting the bold statements. The next phase of this study will provide opportunities to explore the symbolism and interrogate the narrative to understand more about how executives and boards respond to stakeholder expectations.

The documentary analysis revealed some evidence that stakeholder influences (e.g. customer expectations, society's expectations, employee expectations, and shareholder expectations) impacted the type of WHS commitment signals contained in the reports. Our analysis also showed that strategic intent, together with these stakeholder expectations, influence the WHS commitment signals contained in the introductory letters and the full reports. However, this

analysis found communication about the executive, board, and organisational motivations to prioritise WHS to be lacking. This absence of information about the companies' motivations is consistent with the findings from our literature review (see section 2.6.14). Similarly, there was a lack of information about how businesses respond to stakeholder influences and evidence of the outcomes arising from their commitment to prioritise WHS beyond those required through regulation and standard WHS practices (e.g. risk management).

Key insights from the Documentary Analysis to inform future research

The findings suggest that leadership and aspects of leadership appear to play a role in prioritising WHS (e.g. leadership programs developed to drive WHS performance and communicating a personal commitment to safety). However, the presence of superficial reporting (e.g. colourful images containing WHS in the 'Social' section of the ESG model without the word 'safety' being mentioned in the report) made it difficult to ascertain the level of actual leadership commitment. Given that CSR/ESG are considered strategic approaches for businesses to improve relationships with stakeholders (Habel, Schons, Alavi, & Wieseke, 2016; Luo & Bhattacharya, 2006), we anticipate that customer, employee, shareholder, and societal expectations will demand more than aspirational statements, and instead will seek evidence of real commitment to safety. Further, for the benefits of CSR to be realised, such stakeholders will seek evidence of WHS performance beyond legislative compliance (Alves & da Conceição Ramos, 2022; Granerud, 2011; Larrieta-Rubín de Celis et al., 2017). Moreover, with many potential commercial drivers identified in the report being at the micro- rather than the macro-level, further investigation into why there is a disconnect between the behaviour of boards and CEOs one the one hand, and WHS managers on the other hand, is warranted. In other words, why does interest and knowledge about WHS appears to diminish the higher you go in the organisational hierarchy? While it is the case that middle-level managers are most typically involved centrally with the day-to-day management of WHS issues, and this arguably explains the lower espoused interest in WHS amongst the higher echelons of the company—moving WHS to a strategic priority and into the scope of ESGs will require greater top leadership commitment.

Some of the narratives appearing in the safety section were often repeated throughout the different sections of the report (e.g. safety, environmental stewardship, our people, and innovation and technology). Therefore, the drivers of WHS may also be the drivers of other sustainability strategies not related to WHS. Our analysis found that external events could be potential drivers to prioritising WHS. For instance, COVID-19 has driven a focus on WHS and

improved safety, particularly at the micro-level (PPE, masks, hand sanitizer), but few accounts of a macro-level prioritisation of WHS (e.g. psychosocial safety) were present in the data. This finding might best be explained by 'safety fatigue' caused by COVID-related concerns dominating the safety space during the pandemic period. This could have resulted in reduced attention to other WHS concerns by senior leaders, who were already struggling with the business impacts of the pandemic.

The relatively low level of WHS commitment espoused in companies from low-risk industries (e.g. Telecommunications and Financials) suggests that non-traditional and emerging WHS concerns, notably psychosocial hazards, are yet to receive strategic attention by senior leaders, nor inclusion in ESG reporting. This finding also suggests that senior leaders may be motivated by safety risks that attract the greatest legislative and regulatory scrutiny, while psychosocial risks that may be present in low safety risk industries, notably workplace bullying and sexual harassment, can significantly impact the reputation of companies given the newsworthy nature of such events. These issues will receive attention in the Phase 2 interviews with senior business leaders.

Limitations

The financial database analysis and the documentary review limited data collection to that of ASX200 listed companies, a group of companies considered to be high performers across economic indicators. The ASX200 is a defined group and may not be representative of the reporting behaviours of companies that are not ASX200 listed. It is also acknowledged that excluding Annual Reports in the Documentary Analysis may have reduced our sample size, particularly with integrated reporting increasing in prevalence. Furthermore, limiting our documentary analysis to the content in reports that were publicly available and downloadable from company websites may have led to a sample that was not representative of all ASX200 companies, with several companies opting for interactive online visualisation of their progress towards meeting SDGs and ESG, which are two areas where WHS commitment may have been communicated to the general public. Finally, while steps were taken to minimise coding bias, and inter-rated reliability checks were conducted, we acknowledge potential bias as a limitation.

Conclusions and implications for phase 2 research

Discussion and conclusions

This exploratory research examined the nature of WHS commitment by business leaders as a form of organisational prosocial behaviour, and the extent and nature of evidence for commercial and business drivers of prosocial behaviour and WHS prioritisation at the macro level. Phase 1 research examined this problem through three discrete studies: a scoping literature review; analysis of financial and ESG data from ASX200 companies; and a documentary analysis of ASX200 company sustainability reports.

The evidence for commercial and business drivers of WHS prioritisation identified through our analysis of the international literature and company reports was limited and largely linked to the governance of companies. Several leadership and governance characteristics were observed as antecedents of WHS commitment and ESG performance in the analysis of ASX200 company financial and ESG databases, notably whether the firm had a CSR committee or executive compensation tied to ESG performance.

Where we did find evidence for the role of external drivers of WHS prioritisation, this was found to be mediated through reputation and business benefits, customer ethical expectations, and employee expectations for wider CSR and ESG concerns. As a result, the motivation for prosocial behaviours of business leaders related to WHS appears to be predominantly evidenced in documents reporting business performance and associated with the influences of the board (e.g. WHS-related skills and experience of individual board members).

The literature review identified strategy as a potential mediator between external drivers and prosocial behaviours for executives, highlighting that activities such as benchmarking and external accreditation for CSR/ESG business-related activities appeared to spur leaders into action (Larrieta-Rubín de Celis et al., 2017; Tanner et al., 2019; Villela et al., 2021). Considering all the evidence from these studies together, we conclude that relatively little evidence presently exists for how companies respond to external drivers of WHS prioritisation, including stakeholder expectations, investor and shareholder pressure, and reputational concerns.

The key findings from this exploratory study are summarised graphically in Figure 12. These findings will inform the next phase of the research (Phase 2) involving interviews with Australian business leaders. Figure 11 illustrates the range of external drivers, considered together as stakeholder influences, and their influence on WHS commitment of business leaders, directly

and through the alignment of organisational strategy. Board influence is presumed to be a driver of WHS commitments in the organisation, in acting between stakeholder influences and organisational strategy, and aligning external commercial and ethical drivers with business strategic drivers. Finally, the grey dotted boxes leading to WHS commitment in Figure 11, illustrate the gaps to be addressed in Phase 2 research. That is, what motivates WHS commitments of business leaders and why, and to what extent do WHS commitments respond to stakeholder expectations?

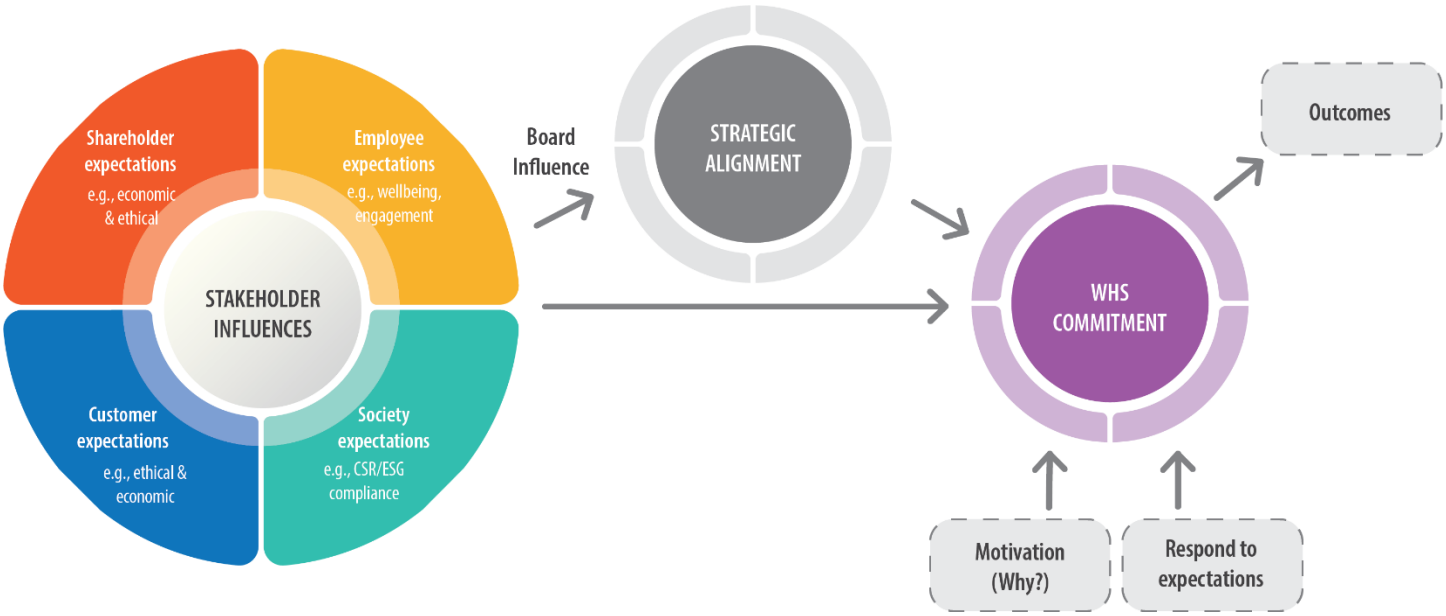


Figure 11: Summary of findings regarding the commercial drivers for business leaders' commitment to WHS.

Key research gaps

The key research gaps identified in this exploratory phase of the study will inform the Phase 2 research design which comprises interviews with senior business leaders. Key research questions to be examined in Phase 2 research include the following:

- What are the most important external and internal motivators of prosocial behaviour by business leaders in relation to WHS commitment?
- How do/should business leaders respond to commercial drivers (e.g. stakeholder expectations, investor and shareholder pressure, and reputational concerns) of WHS commitment in the best interest of the organisation?
- What role do collaboration, co-opetition, and benchmarking play in driving enhanced WHS commitment?
- How and why do boards influence WHS outcomes?

- What is the significance of the role played by activist institutional investors and social movements in dictating corporate policies related to WHS?
- What evidence is there for effective interventions targeting the enhancement of business leader prioritisation of WHS?
- To what extent is WHS commitment considered alongside other CSR and ESG areas when considering stakeholder expectations and associated drivers of business leaders' prosocial behaviour?
- Why is WHS under-represented in CSR and ESG reporting and disclosures?

References

Aksoy, M., Yilmaz, M. K., Tatoglu, E., & Basar, M. (2020). Antecedents of corporate sustainability performance in Turkey: The effects of ownership structure and board attributes on non-financial companies. *Journal of Cleaner Production*, *276*, https://doi.org/10.1016/j.jclepro.2020.124284

Alipour, M., Ghanbari, M., Jamshidinavid, B., & Taherabadi, A. (2019). Does board independence moderate the relationship between environmental disclosure quality and performance? Evidence from static and dynamic panel data. *Corporate Governance (Bingley)*, *19*(3), 580-610. https://doi.org/10.1108/CG-06-2018-0196

Alves, C., & da Conceição Ramos, M. (2022). Occupational health and safety: Quality and determinants of its disclosure in sustainability reporting. *RAE Revista de Administracao de Empresas*, *62*(5), https://doi.org/10.1590/S0034-759020220503

Amin, M., Kim, I., & Lee, S. 2021. Local religiosity, workplace safety, and firm value. Journal of Corporate Finance, 70,102093.

Arora, P., Hora, M., Singhal, V., & Subramanian, R. (2020). When do appointments of corporate sustainability executives affect shareholder value? *Journal of Operations Management*, *66*(4), 464-487. https://doi.org/10.1002/joom.1074

Australian Council of Superannuation Investors. (2022). *ESG Reporting Trends in the ASX200*, available at: https://acsi.org.au/research-reports/esg-reporting-trends-in-the-asx200-3/

Australian Council of Superannuation Investors. (2020). *Safety in Numbers: Safety reporting by ASX200 companies*, available at: https://acsi.org.au/research-reports/safety-in-numbers-safety-reporting-by-asx200-companies/

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Baraibar-Diez, E., & Odriozola, M. D. (2019). CSR committees and their effect on ESG performance in UK, France, Germany, and Spain. *Sustainability*, 11(18), 5077

Barko, T., Cremers, M., & Renneboog, L. (2021). Shareholder engagement on environmental, social, and governance performance. *Journal of Business Ethics*. https://doi.org/10.1007/s10551-021-04850-z

Bautista-Bernal, I., Quintana-García, C., & Marchante-Lara, M. (2021). Research trends in occupational health and social responsibility: A bibliometric analysis. *Safety Science*, *137*, https://doi.org/10.1016/j.ssci.2021.105167

Becker, B., & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *Academy of management journal*, *39*(4), 779-801.

Ben-Amar, W., Francoeur, C., Marsat, S., & Sijamic Wahid, A. (2021). How do firms achieve corporate social performance? An integrated perspective. *Corporate Social Responsibility and Environmental Management*, *28*(3), 1078-1090. https://doi.org/10.1002/csr.2107

Ben Amar, W., & Chelli, M. (2018). What drives voluntary corporate water disclosures? The effect of country-level institutions. B*usiness Strategy and the Environment*, 27(8), 1609–1622.

Bhagat, S., 2022. An Inconvenient Truth About ESG Investing. Harvard Business Review. https://hbr.org/2022/03/an-inconvenient-truth-about-esg-investing.

Bhuiyan, M. B. U., Huang, H. J., & de Villiers, C. (2021). Determinants of environmental investment: Evidence from Europe. *Journal of Cleaner Production*, *292*, https://doi.org/10.1016/j.jclepro.2021.125990

Birindelli, G., Iannuzzi, A. P., & Savioli, M. (2019). The impact of women leaders on environmental performance: Evidence on gender diversity in banks. *Corporate Social Responsibility and Environmental Management*, *26*(6), 1485-1499. https://doi.org/10.1002/csr.1762

Boardman, J. & Lyon, A. (2006) *Defining best practice in corporate occupational health and safety governance*, Research Report 506, HSE, https://www.hse.gov.uk/research/rrpdf/rr506.pdf

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40.
Brekke, K. A., & Pekovic, S. (2018). Why are firms environmentally responsible? A review and assessment of the main mechanisms. *International Review of Environmental and Resource Economics*, *12*(4), 355-398. https://doi.org/10.1561/101.00000105
Brennan, N. M., & Conroy, J. P. (2013). Executive hubris: The case of a bank CEO. *Accounting, Auditing & Accountability Journal*.
Briano-Turrent, G. (2022). Female representation on boards and corporate ethical behavior in Latin American companies. *Corporate Governance-an International Review*, *30*(1), 80-95. https://doi.org/10.1111/corg.12416
Brief, A. P., & Motowidlo, S. J. (1986). Prosocial organizational behaviors. *Academy of Management Review*, *11*(4), 710-725. https://doi.org/10.5465/AMR.1986.4283909
Bunget, O. C., Mateș, D., Dumitrescu, A. C., Bogdan, O., & Burcă, V. (2020). The link between board structure, audit, and performance for corporate sustainability. *Sustainability (Switzerland)*, *12*(20), 1-27. https://doi.org/10.3390/su12208408
Campopiano, G., De Massis, A., & Cassia, L. (2012). The relationship between motivations and actions in corporate social responsibility: An exploratory study. International Journal of Business & Society, *13*(3), 391-412.
Carroll, A. B. (1979). A three-dimensional conceptual model of corporate social performance. Academy of management review, 4(4), 497-505.
Carroll, A.B. (2016). Carroll's pyramid of CSR: taking another look. International Journal of Corporate Social Responsibility, 1(1), 1-8. https://doi.org/10.1186/s40991-016-0004-6
Chams, N., & García-Blandón, J. (2019). Sustainable or not sustainable? The role of the board of directors. *Journal of Cleaner Production*, 226, 1067–1081
Chevrollier, N., Zhang, J., van Leeuwen, T., & Nijhof, A. (2020). The predictive value of strategic orientation for ESG performance over time. *Corporate Governance (Bingley)*, *20*(1), 123-142. https://doi.org/10.1108/CG-03-2019-0105
Commission of the European Communities. (2001). *Green paper: Promoting a European framework for corporate social responsibility*. Presented by the Commission of the European Communities, July 18, Brussels. Retrieved from http://europa.eu/rapid/press-release_DOC-01-9_en.pdf
Costa, G. A., Oliveira, L. C., Rodrigues, L. L., & Craig, R. (2013). Factors associated with the publication of a CEO letter. Corporate Communications: An International Journal, *18*(4), 432-450.
Creek, S. A., Kuhn, K. M., & Sahaym, A. (2019). Board diversity and employee satisfaction: The mediating role of progressive programs. *Group & Organization Management*, *44*(3), 521-548.
Dai, Y., Tong, X., & Wang, L. (2022). Workplace safety accident, employee treatment, and firm value: Evidence from China. Economic Modelling, 115, 105960.
de-Miguel-Molina, B., Chirivella-González, V., & García-Ortega, B. (2019). CEO letters: Social license to operate and community involvement in the mining industry. Business Ethics: A European Review, *28*(1), 36-55.
de Villiers, C., Naiker, V., & van Staden, C. J. (2011). The effect of board characteristics on firm environmental performance. *Journal of Management*, *37*(6), 1636-1663. https://doi.org/10.1177/0149206311411506
Del Guercio, D., Seery, L., & Woidtke, T. (2008). Do boards pay attention when institutional investor activists "just vote no"? . *Journal of Financial Economics*, *90*(1), 84-103. https://doi.org/10.1016/j.jfineco.2008.01.002
Dežmar-Krainz, K. (2015). Enhancing wellbeing of employees through corporate social responsibility context. *Megatrend Revija*, *12*(2), 137-153. https://doi.org/10.5937/MegRev1502137D

Ebbevi, D., Von Thiele Schwarz, U., Hasson, H., Sundberg, C. J., & Frykman, M. (2021). Boards of directors' influences on occupational health and safety: a scoping review of evidence and best practices. *International Journal of Workplace Health Management*, *14*(1), 64-86. https://doi.org/10.1108/IJWHM-10-2019-0126

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, *60*(11), 2835-2857. https://doi.org/10.1287/mnsc.2014.1984

Eid, N. L., & Sabella, A. R. (2014). A fresh approach to corporate social responsibility (CSR): Partnerships between businesses and non-profit sectors. *Corporate Governance (Bingley)*, *14*(3), 352-362. https://doi.org/10.1108/CG-01-2013-0011

Elsayih, J., Tang, Q., & Lan, Y.-C. (2018). Corporate governance and carbon transparency: Australian experience. *Accounting Research Journal*, *31*(3), 405-422. https://doi.org/10.1108/arj-12-2015-0153

Evangelinos, K., Skouloudis, A., Fotiadis, S., Khan, N., Konstandakopoulou, F., Nikolaou, I., & Lundy, S. (2018). Occupational health and safety disclosures in sustainability reports: An overview of trends among corporate leaders. *Corporate Social Responsibility and Environmental Management*, *25*(5), 961-970-970. https://doi.org/10.1002/csr.1512

Ferguson, K. (2015), A Study of Safety Leadership and Safety Governance for Board Members and Senior Executives, Doctoral Thesis, Queensland University of Technology, available at: https://eprints.qut.edu.au/81349/.

Field, A. 2013. Discovering Statistics Using IBM SPSS Statistics. 4th Edition. Sage, London.

Filatotchev, I., & Nakajima, C. (2014). Corporate governance, responsible managerial behaviour, and corporate social responsibility: Organizational efficiency versus organizational legitamacy? *Academy of Management Perspectives*, *28*(3), 289-306. https://doi.org/10.5465/amp.2014.0014

Gahan, P., Sievewright, B. & Evans, P. (2014) *Workplace health and safety, business productivity and sustainability*, Safe Work Australia, available at: https://www.safeworkaustralia.gov.au/system/files/documents/1702/workplace-health-safety-business-productivity-sustainability.pdf

Galbreath, J. (2010). How does corporate social responsibility benefit firms? Evidence from Australia. *European Business Review*, *22*(4), 411-431. https://doi.org/10.1108/09555341011056186

García-Sánchez, I. M., Hussain, N., & Martínez-Ferrero, J. (2019). An empirical analysis of the complementarities and substitutions between effects of ceo ability and corporate governance on socially responsible performance. *Journal of Cleaner Production*, *215*, 1288-1300. https://doi.org/10.1016/j.jclepro.2019.01.130

Garel, A., & Petit-Romec, A. (2021). Engaging employees for the long Run: Long-term Investors and employee-related CSR. *Journal of Business Ethics*, *174*(1), 35-63. https://doi.org/10.1007/s10551-020-04572-8

Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, *66*, 101889. https://doi.org/https://doi.org/10.1016/j.jcorpfin.2021.101889

Glow. (2022). *UK Brand Sustainability Benchmark Report - Food & Grocery Industry,* November 2022, available at: https://www.thegrocer.co.uk/whitepapers/2022-uk-consumer-sustainability-benchmark-report-where-does-your-brand-sit/672790.article

Górny, A. (2014). Influence of corporate social responsibility (CSR) on safety culture. *Management*, *18*(1), 43-57. https://doi.org/10.2478/manment-2014-0004

Graafland, J., & Mazereeuw-Van der Duijn Schouten, C. (2012). Motives for corporate social responsibility. *Economist (Netherlands)*, *160*(4), 377-396. https://doi.org/10.1007/s10645-012-9198-5

Granerud, L. (2011). Social responsibility as an intermediary for health and safety in small firms. *International Journal of Workplace Health Management*, *4*(2), 109-122. https://doi.org/10.1108/17538351111143295
Griffin, J. J., & Youm, Y. N. (2018). Voluntarily disclosing prosocial behaviors in Korean firms. *Journal of Business Ethics*, *153*(4), 1017-1030. https://doi.org/10.1007/s10551-018-3915-1
Habel, J., Schons, L. M., Alavi, S., & Wieseke, J. (2016). Warm glow or extra charge? The ambivalent effect of corporate social responsibility activities on customers' perceived price fairness. *Journal of Marketing*, *80*(1), 84-105.
Haddock-Fraser, J. E., & Tourelle, M. (2010). Corporate motivations for environmental sustainable development: Exploring the role of consumers in stakeholder engagement. *Business Strategy and the Environment*, *19*(8), 527-542. https://doi.org/10.1002/bse.663
Hasson, H., Villaume, K., Schwarz, U.V. and Palm, K. (2014), Managing implementation roles of line managers, senior managers, and human resource professionals in an occupational health intervention, Journal of Occupational Environmental Medicine, *56*(1), 58-65.
Hayakawa, K., & Pesaran, M. H. (2015). Robust standard errors in transformed likelihood estimation of dynamic panel data models with cross-sectional heteroskedasticity. Journal of econometrics, 188(1), 111-134.
Hernandez, M. (2008). Promoting stewardship behavior in organizations: A leadership model. *Journal of Business Ethics*, *80*(1), 121-128. https://doi.org/10.1007/s10551-007-9440-2
Hooijberg, R. and Roi, R. (2021). *The convergence of executive pay and corporate social responsibility*. The Institute for Management Development, available at: https://www.imd.org/ibyimd/sustainability/the-convergence-of-executive-pay-and-corporate-social-responsibility/
International Labour Organisation. (2006). *Occupational safety and health: Synergies between security and productivity*, briefing to Committee on Employment and Social Policy, March 2006, available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/meetingdocument/wcms_110380.pdf
International Organisation for Standardization. (2010). *Guidance on social responsibilty*. In (Vol. ISO 26000:2010). https://www.iso.org/standard/42546.html.
Irastorza, X., Milczarek, M. and Cockburn, W. (2016), Overview Report: Managing Safety and Health at Work. Second European Survey of Enterprises on New and Emerging Risks (ESENER-2), European Agency for Safety and Health at Work, Luxembourg, available at: https://osha.europa.eu.
Jain, A., Leka, S., & Zwetsloot, G. (2011). Corporate social responsibility and psychosocial risk management in Europe. *Journal of Business Ethics*, *101*(4), 619-633. https://doi.org/10.1007/s10551-011-0742-z
Jiang, X., & Akbar, A. (2018). Does increased representation of female executives improve corporate environmental investment? Evidence from China. *Sustainability (Switzerland)*, *10*(12). https://doi.org/10.3390/su10124750
Kanashiro, P. (2020). Can environmental governance lower toxic emissions? A panel study of US high-polluting industries. *Business Strategy and the Environment*, *29*(4), 1634-1646. https://doi.org/10.1002/bse.2458
Karn, I., Mendiratta, E., Fehre, K., & Oehmichen, J. (2022). The effect of corporate governance on corporate environmental sustainability: A multilevel review and research agenda. *Business Strategy & the Environment*. https://doi.org/10.1002/bse.3279
Kawashita, F., Taniyama, Y., Hwi, S. Y., Fujisaki, T., Kameda, T., & Mori, K. (2005). Occupational safety and health aspects of corporate social responsibility (CSR) in Japanese companies listed on the Tokyo Stock Exchange (TSE) first section. *Journal of Occupational Health*, *47*(6), 533-539. https://doi.org/10.1539/joh.47.533

Keddie, L. (2020). *Corporate social responsibility performance-based incentives: investigations through the lens of corporate governance*, Doctoral Thesis, Concordia University Montréal, Québec, Canada, available at: https://spectrum.library.concordia.ca/id/eprint/986901/

Koskela, M. (2014). Occupational health and safety in corporate social responsibility reports . *Safety Science*, *68*, 294-308. https://doi.org/10.1016/j.ssci.2014.04.011

KPMG (2022) *Big shifts, small steps: Survey of Sustainability Reporting* available at: kpmg/xx/en/home/insights/2022/09/survey-of-sustainability-reporting-2022.htmlkpmg)

Kumar, A., Connell, J., & Bhattacharyya, A. (2021). Co-opetition for corporate social responsibility and sustainability: drivers and success factors. *Sustainability Accounting Management and Policy Journal*, *12*(6), 1208-1238. https://doi.org/10.1108/sampj-03-2020-0063

Larson, J., (2020) *How to make incentives for corporate social responsibility pay off*, W. P. Carey News, W. P. Carey School of Business, Arizona University, available at: https://news.wpcarey.asu.edu/20200316-how-make-incentives-corporate-social-responsibility-pay

Larrieta-Rubín de Celis, I., Fernández de Bobadilla-Güémez, S., Alonso-Almeida, M. D. M., & Velasco-Balmaseda, E. (2017). Women's occupational health and safety management: An issue for corporate social responsibility. *Safety Science*, *91*, 61-70. https://doi.org/10.1016/j.ssci.2016.07.019

Latapí Agudelo, M. A., Johannsdottir, L., & Davidsdottir, B. (2020). Drivers that motivate energy companies to be responsible. A systematic literature review of corporate social responsibility in the energy sector. *Journal of Cleaner Production*, *247*. https://doi.org/10.1016/j.jclepro.2019.119094

Li, T. T., Wang, K., Sueyoshi, T., & Wang, D. D. (2021). ESG: Research progress and future prospects. *Sustainability*, *13*(21), 11663.

Lim, A., & Pope, S. (2022). What drives companies to do good? A "universal" ordering of corporate social responsibility motivations. *Corporate Social Responsibility & Environmental Management*, *29*(1), 233-255. https://doi.org/10.1002/csr.2199

Lo, D. (2012). OHS stewardship - integration of OHS in corporate governance. *Procedia Engineering*, *45*, 174-179. https://doi.org/10.1016/j.proeng.2012.08.139

Looser, S., & Wehrmeyer, W. (2016). Ethics of the firm, for the firm or in the firm? Purpose of extrinsic and intrinsic CSR in Switzerland. *Social Responsibility Journal*, *12*(3), 545-570. https://doi.org/10.1108/SRJ-07-2015-0097.

London Stock Exchange Group. 2022. Environmental, Social and Governance Scores from Refinitiv.

Lornudd, C., Frykman, M., Stenfors, T., Ebbevi, D., Hasson, H., Sundberg, C. J., & von Thiele Schwarz, U. (2021). A champagne tower of influence: An interview study of how corporate boards enact occupational health and safety. *Safety Science*, *143*. https://doi.org/10.1016/j.ssci.2021.105416

Lornudd, C., Stenfors, T., Hasson, H., Frykman, M., Sundberg, C. J., & Schwarz, U. v. T. (2020). A piece of the boardroom pie-an interview study exploring what drives Swedish corporate boards' engagement in occupational health and safety. *Journal of Occupational and Environmental Medicine*, *62*(6), 389-397. https://doi.org/10.1097/jom.0000000000001845

Ludwig, P., & Sassen, R. (2022). Which internal corporate governance mechanisms drive corporate sustainability? *Journal of Environmental Management*, *301*, https://doi.org/10.1016/j.jenvman.2021.113780

Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing*, *70*(4), 1-18.

Mackenzie, C. (2007). Boards, incentives and corporate social responsibility: The case for a change of emphasis. *Corporate Governance: An International Review*, *15*(5), 935-943.

Mackieson, P., Shlonsky, A., & Connolly, M. (2019). Increasing rigor and reducing bias in qualitative research: A document analysis of parliamentary debates using applied thematic analysis. Qualitative Social Work, *18*(6), 965-980.

Mansour, M., Alaghbari, M., Beshr, B. Al-Ghazali, B. Perceived CSR on Career Satisfaction: A Moderated Mediation Model of Cultural Orientation and Organisational Pride. Sustainability, 15(6): 5288.

Martinez Garcia de Leaniz, P., & Rodriguez del Bosque Rodríguez, I. (2016). Corporate image and reputation as drivers of customer loyalty. *Corporate Reputation Review*, *19*(2), 166-178. https://doi.org/10.1057/crr.2016.2

Mavroulidis, M., Vouros, P., Fotiadis, S., Konstantakopoulou, F., Fountoulakis, G., Nikolaou, I., & Evangelinos, K. (2022). Occupational health and safety of multinational construction companies through evaluation of corporate social responsibility reports. *Journal of Safety Research*, *81*, 45–54.

McDermott, V., Zhang, R. P., Hopkins, A., & Hayes, J. (2018). Constructing safety: investigating senior executive long-term incentive plans and safety objectives in the construction sector. *Construction Management and Economics*, *36*(5), 276-290. https://doi.org/10.1080/01446193.2017.1381752

McGuinness, P. B., Vieito, J. P., & Wang, M. (2017). The role of board gender and foreign ownership in the CSR performance of Chinese listed firms . *Journal of Corporate Finance*, *42*, 75-99. https://doi.org/10.1016/j.jcorpfin.2016.11.001

Menner, M., & Menninger, F. (2018). The Causal Effect of Corporate Governance on Employee Satisfaction.

Montero, M. J., Araque, R. A., & Rey, J. M. (2009). Occupational health and safety in the framework of corporate social responsibility. *Safety Science*, *47*(10), 1440-1445. https://doi.org/10.1016/j.ssci.2009.03.002

Mullins, F., & Holmes, J. (2018). Balancing board? The effects of board independence and capital on firms offering work-family benefits. *Human Resource Management*, *57*(2), 457-469.

Murray, A. I. (1989). Top management group heterogeneity and firm performance. *Strategic management journal*, *10*(S1), 125-141.

Murphy, J.H. (2016), *Corporate board health and safety governance committees: Do they make any difference?,* Doctoral Thesis, University of Toronto, Canada, available at: https://tspace.library.utoronto.ca/handle/1807/76574

Nagata, T., Nakata, A., Mori, K., Maruyam, T., Kawashita, F., & Nagata, M. (2017). Occupational safety and health aspects of corporate social responsibility reporting in Japan from 2004 to 2012. *BMC Public Health*, *17*(1), 1-11. https://doi.org/10.1186/s12889-017-4356-y

Neumann, W. P., Dixon, S. M., & Nordvall, A. C. (2014). Consumer demand as a driver of improved working conditions: the 'Ergo-Brand' proposition. *Ergonomics*, *57*(8), 1113–1126. https://doi.org/10.1080/00140139.2014.917203

Newson, M., & Deegan, C. (2002). Global expectations and their association with corporate social disclosure practices in Australia, Singapore, and South Korea. *International Journal of Accounting*, *37*(2), 183-213. https://doi.org/10.1016/S0020-7063(02)00151-6

NSW Government (May 2021) NSW Mentally Healthy Workplaces, Strategy to 2022. https://www.nsw.gov.au/sites/default/files/2021-07/mentally-healthy-workplaces-strategy-2022.pdf

Oino, I., & Liu, J. (2022). Do Female Board Members Influence Corporate Social Responsibility Performance?. *IIM Kozhikode Society & Management Review*, *11*(2), 195-206.

O'Neill, S. (2014). *The business case for safe,healthy and productive work - Implications for resource allocation: Procurement, contracting and infrastructure decisions*, Safe Work Australia, available at:

https://www.safeworkaustralia.gov.au/system/files/documents/1702/business-case-for-safe-healthy-productive-work.pdf
O'Neill, S., Flanagan, J., & Clarke, K. (2016). Safewash! Risk attenuation and the (mis)reporting of corporate safety performance to investors. *Safety Science*, *83*, 114-130. https://doi.org/10.1016/j.ssci.2015.11.007
Patro, S., Zhang, L. Y., & Zhao, R. (2018). Director tenure and corporate social responsibility: The tradeoff between experience and independence. *Journal of Business Research*, *93*, 51-66.
Petro, G., (2022), *Gen Z And Sustainability: The Disruption Has Only Just Begun*, Forbes Magazine, available at: https://www.forbes.com/sites/gregpetro/2022/02/18/gen-z-and-sustainability-the-disruption-has-only-just-begun/?sh=6adb13713eb7
Pettigrew, A. (1992). On studying managerial elites. Strategic Management Journal, 13 (S2): 163-182.
Probst, T., & Extrada, A. 2010. Accident under-reporting among employees: testing the moderating influence of psychological safety climate and supervisor enforcement of safety practices. Accident analysis and prevention, 42(5): 4138-1444.
PwC (2021) *ESG reporting in Australia: The full story, or just the good story?* available at: https://www.pwc.com.au/assurance/esg-reporting-australia-2021.pdf
PwC (2022) *Reimagining the outcomes that matter: PwC's 25th Annual Global CEO Survey*, available at: www.ceosurvey.pwc
Radu, C., & Francoeur, C. (2017). Does innovation drive environmental disclosure? A new insight into sustainable development. *Business Strategy and the Environment*, *26*(7), 893-911.
Radu, C., & Smaili, N. (2021). Alignment versus monitoring: An examination of the effect of the CSR committee and CSR-linked executive compensation on CSR performance. *Journal of Business Ethics*, 1-19.
Raithel, S., & Schwaiger, M. (2015). The effects of corporate reputation perceptions of the general public on shareholder value. Strategic Management Journal, 36(6), 945-956. https://doi:10.1002/smj.2248
Ramirez, E. (2013). Consumer-defined sustainably-oriented firms and factors influencing adoption. *Journal of Business Research*, *66*(11), 2202-2209. https://doi.org/10.1016/j.jbusres.2012.01.012
Rehman, S., Orij, R., & Khan, H. (2020). The search for alignment of board gender diversity, the adoption of environmental management systems, and the association with firm performance in Asian firms. *Corporate Social Responsibility and Environmental Management*, *27*(5), 2161-2175. https://doi.org/10.1002/csr.1955
Robson, L. S., Amick, B. C., Moser, C., Pagell, M., Mansfield, E., Shannon, H. S., . . . South, H. (2016). Important factors in common among organizations making large improvement in OHS performance: Results of an exploratory multiple case study. *Safety Science*, *86*, 211-227. https://doi.org/10.1016/j.ssci.2016.02.023
SafeWork Australia. (2021). *Key Work Health and Safety Statistics, Australia 2022.* ISSN 2209-9190 https://www.safeworkaustralia.gov.au/doc/key-work-health-and-safety-statistics-australia-2022
Safe Work Australia. (February 2022). Model Code of Practice: Work health and safety consultation, cooperation and coordination. ISBN 978-0-642-33299-8 (PDF), available at: https://www.safeworkaustralia.gov.au/doc/model-code-practice-work-health-and-safety-consultation-cooperation-and-coordination
Shahab, Y., & Ye, C. (2018). Corporate social responsibility disclosure and corporate governance: Empirical insights on neo-institutional framework from China . *International Journal of Disclosure and Governance*, *15*(2), 87-103. https://doi.org/10.1057/s41310-018-0038-y

Shi, W., Xia, C., & Meyer-Doyle, P. (2021). Institutional investor activism and employee safety: The role of activist and board political ideology. *Organization Science*. https://doi.org/10.1287/orsc.2021.1542

Shin, T., & You, J. (2020). Changing words: How temporal consistency in a CEO's use of language toward shareholders and stakeholders affects CEO dismissal. Corporate Governance: An International Review, 28(1), 47-68.

Shu, P. G., & Chiang, S. J. (2020). The impact of corporate governance on corporate social performance: Cases from listed firms in Taiwan. *Pacific Basin Finance Journal*, 61. https://doi.org/10.1016/j.pacfin.2020.101332.

Sonnenfeld, J. (20020. What makes great boards great. *Harvard Business Review*, 80(9), 106-113.

Sowden, P., & Sinha, S. (2005). *Promoting health and safety as a key goal of the corporate social responsibility agenda*. (Research Report 339). HSE: HSE available at: https://www.hse.gov.uk/research/rrpdf/rr339.pdf

Tanner, G., Bamberg, E., Baur, C., & Schümann, M. (2019). Workplace health promotion inspired by corporate social responsibility - Interactions within supply chains and networks. *Management Revue*, *30*(2-3), 213-231. https://doi.org/10.5771/0935-9915-2019-2/3-213

The Economist (2022). *ESG should be boiled down to one simple measure: Emissions*, 21 July 2022, available at: https://www.economist.com/leaders/2022/07/21/esg-should-be-boiled-down-to-one-simple-measure-emissions

Thompson, S. & Tan, V. (2016), Leading from the top to reduce healthcare workers' injuries, Paper presented at Epworth Research Week, Richmond, available at: http://knowledgebank.epworth.org.au/epworthjspui/handle/11434/964

Tregaskis, O., Daniels, K., Glover, L., Butler, P., & Meyer, M. (2013). High performance work practices and firm performance: A longitudinal case study. *British Journal of Management*, *24*(2), 225-244.

Tsalis, T. A., Stylianou, M. S., & Nikolaou, I. E. (2018). Evaluating the quality of corporate social responsibility reports: The case of occupational health and safety disclosures. *Safety Science*, *109*, 313-323. https://doi.org/10.1016/j.ssci.2018.06.015

Tyndall, J. (2010), AACODS Checklist, Flinders University, available at: http://dspace.flinders.edu.au/dspace/

Unerman, J. (2000). Methodological issues-Reflections on quantification in corporate social reporting content analysis. Accounting, Auditing & Accountability Journal, 13(5), 667-681.

van Aaken, D., Splitter, V., & Seidl, D. (2013). Why do corporate actors engage in pro-social behaviour? A Bourdieusian perspective on corporate social responsibility. *Organization*, *20*(3), 349–371.

Velte, P., & Stawinoga, M. (2020). Do chief sustainability officers and CSR committees influence CSR-related outcomes? A structured literature review based on empirical-quantitative research findings . *Journal of Management Control*, *31*(4), 333-377. https://doi.org/10.1007/s00187-020-00308-x

Vig, S., Dumicic, K., & Klopotan, I. (2017). The impact of reputation on corporate financial performance: Median regression approach. *Business Systems Research*, *8*(2), 40-58. https://doi.org/10.1515/bsrj-2017-0015

Villela, M., Bulgacov, S., & Morgan, G. (2021). B Corp certification and its impact on organizations over time. *Journal of Business Ethics*, *170*(2), 343-357. https://doi.org/10.1007/s10551-019-04372-9

von Thiele Schwarz, U., Hasson, H. and Tafvelin, S. (2016), Leadership training as an occupational health intervention: improved safety and sustained productivity, Safety Science, 81, pp. 35-45,

Ward, J., Haslam, C. & Haslam, R. (2008), *The impact of health and safety management on organisations and their staff*, Institution of Occupational Safety and Health, available at:

https://iosh.com/media/1576/the-impact-of-health-and-safety-management-on-organisations-and-their-staff-full-research-report.pdf
Wiggenhorn, J., Pissaris, S., & Gleason, K. C. (2016). Powerful CEOs and employee relations: evidence from corporate social responsibility indicators. *Journal of Economics and Finance*, *40*(1), 85-104.
Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. 2nd Edition. MIT Press, London.
WorkSafe Queensland. (14 September 2020). High risk industries. https://www.worksafe.qld.gov.au/laws-and-compliance/workers-compensation-laws/guidance-materials/high-risk-industries
Wu, X., Li, Y., & Yu, Y. (2023). CEO inside dept and employee workplace safety. *Journal of Business Ethics*, 182(1), 159-175.
Xiao, J. Z., Gao, S. S., Heravi, S., & Cheung, Y. C. Q. (2005). The impact of social and economic development on corporate social and environmental disclosure in Hong Kong and the U.K. *Advances in International Accounting*, *18*, 219-243. https://doi.org/https://doi.org/10.1016/S0897-3660(05)18011-8
Zoeteman, B. C. J. (2013). What is behind the leadership shift in sustainable development from politicians to CEOs?.*Environmental Development*, *8*(1), 113-130. https://doi.org/10.1016/j.envdev.2013.08.006
Zahid, M., Rahman, H.U., Ali, W., Khan, M., Alharthi, M., Imran Qureshi, M. and Jan, A. (2019), Boardroom gender diversity: implications for corporate sustainability disclosures in Malaysia, Journal of Cleaner Production, 244, 18683.

Appendix

Appendix 1: Scholarly literature search strings

SCOPUS search 1	SCOPUS search 2
TITLE-ABS- KEY (motivat* OR drive* OR incentive* OR reward*and "corporate social responsibility" OR csr* OR sustainability OR "sustainable development goal*" OR reputation OR csr AND orientation OR "occupational health safety" OR "work health and safety" OR wellbeing OR "WHS commitment" OR "WHS prioritisation" OR ethical AND behaviour* OR "environmental social governance" OR "ESG" OR "common good HRM" OR "common good human resource management") AND (LIMIT- TO (PUBYEAR , 2022) OR LIMIT- TO (PUBYEAR , 2021) OR LIMIT- TO (PUBYEAR , 2020) OR LIMIT- TO (PUBYEAR , 2019) OR LIMIT- TO (PUBYEAR , 2018) OR LIMIT- TO (PUBYEAR , 2017) OR LIMIT- TO (PUBYEAR , 2016) OR LIMIT- TO (PUBYEAR , 2015) OR LIMIT- TO (PUBYEAR , 2014) OR LIMIT- TO (PUBYEAR , 2013) OR LIMIT- TO (PUBYEAR , 2012) OR LIMIT- TO (PUBYEAR , 2011) OR LIMIT- TO (PUBYEAR , 2010) OR LIMIT- TO (PUBYEAR , 2009) OR LIMIT-	TITLE-ABS- KEY (motivat* OR drive* OR incentive* OR reward* AND "corporate social responsibility" OR csr* OR sustainability OR "sustainable development goal*" OR reputation OR "csr orientation" OR "occupational health safety" OR "work health and safety" OR wellbeing OR "WHS commitment" OR "WHS prioritisation" OR "ethical behaviour*" OR "environmental social governance" OR "ESG" OR "common good HRM" OR "common good human resource management" OR "prosocial behaviour" AND executive* OR "business leader*" OR "board member*" OR "chief executive officer" OR ceo OR csuite) AND (LIMIT- TO (SRCTYPE , "j") OR LIMIT- TO (SRCTYPE , "b")) AND (LIMIT- TO (DOCTYPE , "ar") OR LIMIT- TO (DOCTYPE , "ch") OR LIMIT- TO (DOCTYPE , "re")) AND (LIMIT- TO (SUBJAREA , "BUSI") OR LIMIT- TO (SUBJAREA , "SOCI") OR LIMIT- TO (SUBJAREA , "ECON") OR LIMIT- TO (SUBJAREA , "DECI") OR LIMIT- TO (SUBJAREA , "MULT")) AND (LIMIT-

TO (PUBYEAR , 2008) OR LIMIT- TO (PUBYEAR , 2007) OR LIMIT- TO (PUBYEAR , 2006) OR LIMIT- TO (PUBYEAR , 2005)) AND (LIMIT- TO (DOCTYPE , "ar") OR LIMIT- TO (DOCTYPE , "re") OR LIMIT- TO (DOCTYPE , "ch")) AND (LIMIT- TO (LANGUAGE , "English")) **Generated 204 results** **Retained on potential relevance screening= 39**	TO (PUBYEAR , 2022) OR LIMIT- TO (PUBYEAR , 2021) OR LIMIT- TO (PUBYEAR , 2020) OR LIMIT- TO (PUBYEAR , 2019) OR LIMIT- TO (PUBYEAR , 2018) OR LIMIT- TO (PUBYEAR , 2017) OR LIMIT- TO (PUBYEAR , 2016) OR LIMIT- TO (PUBYEAR , 2015) OR LIMIT- TO (PUBYEAR , 2014) OR LIMIT- TO (PUBYEAR , 2013) OR LIMIT- TO (PUBYEAR , 2012) OR LIMIT- TO (PUBYEAR , 2011) OR LIMIT- TO (PUBYEAR , 2010) OR LIMIT- TO (PUBYEAR , 2009) OR LIMIT- TO (PUBYEAR , 2008) OR LIMIT- TO (PUBYEAR , 2007) OR LIMIT- TO (PUBYEAR , 2006) OR LIMIT- TO (PUBYEAR , 2005)) AND (LIMIT- TO (LANGUAGE , "English")) **Generated 674 results 13 duplicates** **Retained on potential relevance screening= 98**
Web of Science	**PsychInfo**
(TS=(motivat* OR drive* OR incentive* OR reward*)) AND TS=(Corporate social responsibility OR CSR* OR sustainability OR sustainable development goal* OR reputation OR CSR orientation OR occupational health safety OR work health and safety OR wellbeing OR WHS commitment OR WHS prioritisation OR Ethical behaviour* OR environmental social governance OR ESG OR common good HRM OR common good human	(motivat* OR drive* OR incentive* OR reward) AND (Corporate social responsibility OR CSR* OR sustainability OR sustainable development goal* OR reputation OR CSR orientation) OR (work health and safety OR occupational health safety OR wellbeing OR WHS prioritisation OR WHS commitment) OR (Ethical behaviour* OR Environmental social governance OR ESG OR Common good human resource management OR Common good HRM OR (prosocial behaviour or prosocial behavior))

resource management OR prosocial behaviour) **Limits** Article or review article Web of science core collection Research areas: business economics or public environmental occupational health English 2005-01-01 to 2022-12-31 **Generated 31773 results** **Refined** AND TS=(executive* OR "board member*" OR "chief executive officer" OR ceo OR csuite) **Generated 847, Duplicates to SCOPUS =344** **Retained on potential relevance screening=35**	**Limits** Publication Year: 2005-2022; Publication Type: Peer Reviewed Journal; Language: English; Population Group: Human; Document Type: Journal Article; Exclude Dissertations' KW: prosocial behaviour, wellbeing, motivation, rewards, business organizations, decision making, social responsibility, business, incentives, mental health, stakeholder, society, policy making, health, organisational behaviour, drivers, stress, organisational effectiveness, safety Journal: international journal of industrial ergonomics, human resource management review, human resource management journal, human factors, european management journal, environment and behavior, cross cultural management, cross cultural & strategic management, american journal of public health, journal of knowledge management, journal of economic psychology, group & organization studies, group & organization management, applied ergonomics, academy of management journal, systems research and behavioral science, journal of vocational behavior, journal of safety research, journal of managerial psychology, journal of management development, asia pacific journal of management, the academy of management review, strategic management journal,, scandinavian journal of work, environment & health, journal of management studies

	annual review of psychology, organizational dynamics, management decision, the international journal of human resource management, safety science, journal of occupational accidents, journal of consumer research, ergonomics, management science, business ethics: a european review, business ethics, the environment and responsibility, organizational behavior and human decision processes, organizational behavior & human performance, corporate reputation review, journal of economic behavior & organization, journal of business research ,business strategy and the environment, journal of business ethics **Generated 331, duplicates = 26** **Retained on potential relevance screening=24**
Business Source Complete	
Rerun PsychInfo search Limits KW: social values, human behaviour, incentive, social sustainability, ethics, well-being, prosocial behaviour, motivation, organizational behavior & human decision processes Journal: human resource management, academy of management review, academy of management journal, journal of managerial psychology, work, corporate social responsibility & environmental management, organizational behavior & human decision processes, management science, journal of	

applied social psychology, business strategy & the environment, social indicators research, journal of social psychology, journal of applied psychology, journal of business research, journal of economic behavior & organization, journal of cleaner production, journal of business ethics Subject: social values, human behavior, incentive (psychology), social sustainability, ethics, well-being, prosocial behavior, motivation (psychology) **Generated 378, 59 duplicates** **Retained on potential relevance screening=13**	

Appendix 2: Financial database descriptive statistics

	N	Mean[14]	Std. Dev.	p25	Median	p75
Employee Satisfaction	368	73.65	9.54	67.00	73.00	81.00
Lost Time Injury Rate Total	861	2.81	3.20	0.77	1.71	3.63
Injury Rate Total	703	9.03	9.20	3.20	5.90	11.07
Accidents to Total Employees	283	0.18	0.44	0.00	0.02	0.12
Employee Turnover	677	16.38	8.17	11.00	15.00	19.28
Employee Strike	316	49.10	9.83	50.00	50.39	51.97
WHS Commitment	2,368	31.76	26.22	2.79	29.59	56.148
WHS Policy	1,805	50.28	25.31	52.89	57.14	65.39
WHS Team	1,805	36.81	38.91	0.00	0.00	73.58
WHS Training	1,790	49.983	16.859	50	50	58.696
WHS certification	1,790	30.30	38.13	0.00	0.00	70.50
CSR committee	1,804	0.59	0.49	0.00	1.00	1.00
Board independence	1,801	69.55	20.34	60.00	75.00	85.71
Board gender diversity	1,802	22.39	13.52	14.29	22.22	33.33
Board size	1,802	7.53	1.86	6.00	7.00	9.00
Board tenure	1,773	6.17	3.03	4.38	5.63	7.25
Board frequency	1,740	97.04	4.15	96.10	98.21	100.00
ESG compensation	1799	0.67	0.47	0.00	1.00	1.00
CEO duality	1,805	0.10	0.30	0.00	0.00	0.00
Corporate governance score	1,805	58.30	22.98	41.70	61.93	77.30
Return on assets	1,995	2.95	19.45	1.33	5.89	10.75
Market to book value	1,960	3.44	4.40	1.15	1.91	3.67
Leverage	2,047	0.44	0.24	0.28	0.42	0.58
Firm Size	2,047	21.22	2.35	20.02	21.43	22.59

[14] Arithmetic mean is utilised. For Boolean items, the mean is representative of the proportion of the sample that possessed a true value (i.e. 1).

Appendix 3

Financial Database Analysis Section: Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1) Emp. Satis.	1.00																					
(2) Emp. Turnover	0.05	1.00																				
(3) Emp. Strikes	-0.07	0.09	1.00																			
(4) Accidents to em.	-0.29***	-0.04	-0.45***	1.00																		
(5) WHS commit.	0.01	0.13***	-0.13**	0.16***	1.00																	
(6) WHS policy	-0.08	0.08**	-0.09*	0.03	0.69***	1.00																
(7) WHS team	0.01	0.06	-0.03	0.16***	0.81***	0.41***	1.00															
(8) WHS training	-0.02	0.11***	-0.08	-0.04	0.63***	0.46***	0.41***	1.00														
(9) WHS cert.	0.07	0.11***	-0.16***	0.12***	0.75***	0.31***	0.40***	0.28***	1.00													
(10) CSR committee	0.02	0.10**	-0.13**	0.10**	0.44***	0.32***	0.36***	0.24***	0.32***	**1.00**												
(11) Board indep..	-0.16***	0.03	-0.09	0.17***	0.28***	0.23***	0.23***	0.18***	0.18***	**0.23*** **	1.00											
(12) Board gender.	0.12**	0.02	0.00	0.13***	0.28***	0.20***	0.21***	0.17***	0.21***	**0.21*** **	0.30***	1.00										
(13) Board size	-0.10*	-0.16***	-0.18***	0.43***	0.32***	0.25***	0.26***	0.18***	0.23***	**0.26*** **	0.18***	0.19***	1.00									
(14) Board tenure	0.02	-0.03	0.03	-0.04	-0.01	0.05**	0.01	-0.03	-0.06**	**-0.04**	-0.14***	-0.14***	0.00	1.00								
(15) Board frequen.	-0.08	0.03	-0.10*	0.02	0.11***	0.09***	0.09***	0.05*	0.09***	**0.10*** **	0.07***	0.08***	-0.10***	0.02	1.00							
(16) ESG comp.	-0.17***	-0.02	-0.08	0.06	0.41***	0.29***	0.30***	0.24***	0.33***	**0.33*** **	0.17***	0.27***	0.25***	-0.07***	0.13***	1.00						
(17) CEO duality	-0.11**	-0.13***	0.02	0.16***	-0.05**	-0.07***	-0.03	-0.04*	-0.01	**-0.06** **	-0.15***	-0.10***	-0.04	0.20***	-0.09***	-0.06**	1.00					
(18) Corp. gov. score	-0.23***	0.04	-0.10*	0.32***	0.47***	0.39***	0.35***	0.28***	0.35***	**0.43*** **	0.57***	0.39***	0.43***	-0.03	0.16***	0.40***	-0.17***	1.00				
(19) Return on asset	-0.04	-0.03	-0.03	-0.03	-0.03	-0.01	-0.08***	-0.05**	-0.03	**0.03**	-0.03	0.01	0.05**	-0.04	-0.01	-0.04*	-0.01	0.00	1.00			
(20) Market-to-book	0.03	0.17***	0.04	-0.06	0.10***	-0.01	0.09***	0.07***	0.02	**0.05***	0.05*	0.06**	0.00	0.00	0.05*	0.04*	-0.02	0.01	-0.01	1.00		
(21) leverage	0.12**	0.13***	-0.09	0.11**	0.03	0.01	0.02	0.00	-0.02	**-0.15*** **	-0.08***	0.06**	0.01	-0.01	0.02	-0.07***	-0.06**	-0.08***	0.08***	-0.02	1.00	
(22) firm size	-0.04	-0.02	-0.01	0.06	0.04*	0.06**	0.00	-0.02	0.00	**-0.08*** **	-0.07***	0.14***	0.03	0.00	-0.01	-0.07***	-0.05**	-0.04*	0.36***	-0.31***	0.52***	1.00
*** p<0.01, ** p<0.05, * p<0.1*																						

Appendix 4

Document Analysis Section: Code Book (Content Analysis)

Category	*Code & Description*
ASX200 Code	The 3-letter code on the ASX200 list
Company	Company name as listed on the ASX200 List (April 2021)
Sector	Sector in which the company operates. Using ACSI's Report 'ESG reporting trends in the ASX200' (Sept 2020) for the coding framework. Where company is not listed find a company in a similar industry to determine sector.
Sustainability Report or ESG Report	A report called a 'Sustainability Report', 'ESG Report' or something comparable, that can be accessed and downloaded by the public from the company's website. If a company does not publish a separate SR/ESG report, a company's annual report was checked to see whether such a separate report was integrated in the Annual Report. In those instances, we only included companies when there was a clearly defined section dedicated to sustainability information and identified in the content's page in order to make sure we would compare similar statements across the ASX200 companies N = No SR = Sustainability Report ESG = ESG Report CSR = Corporate Responsibility Report SIR = Social Impact Report
Signatory of letter introducing report	The title of the person(s) who introduces, signs the introductory letter at the start of the Report
Level of WHS commitment in letter	The text in the letter is categorised using these categories, and the content written. If unsure add a note in the comments section and colour the row green (for a second opinion) • None – Not mentioned in letter • Low – Less than 3 sentences about WHS is mentioned in the letter • Medium – one paragraph about WHS contained in the letter • High – one section about WHS contained in the letter and/or considerable attention to WHS
Is WHS linked to the overall strategy of the organisation?	Consider the contents of the report to code for this section, using the following categories: • None - Nothing mentioned • Low - mentioned • Medium - some targets • High - Comprehensive targets/reporting