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Corporate social and environmental reporting in the mining sector: seeking pragmatic and moral forms of legitimacy?

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Abstract

Purpose – The study examines the social and environmental responsibility indicators disclosed by three International Council on Mining and Metals (ICMM) corporate mining members in their social and environmental reporting (SER) from 2006 to 2014. To achieve this aim, the author limits the data two years before (i.e. from 2006 to 2007) and six years after (i.e. from 2009 to 2014) the implementation of the Sustainable Development Framework in the mining sector in 2008.

Design/methodology/approach – Using the techniques of content analysis and interpretive textual analysis, this study examines 27 social and environmental responsibility reports published between 2006 and 2014 by three ICMM corporate mining members. The study develops a disclosure index based on the earlier work of Hackston and Milne (1996), together with other disclosure items suggested in the extant literature and considered appropriate for this work. The disclosure index for this study comprised six disclosure categories ("employee", "environment", "community involvement", "energy", "governance" and "general"). In each of the six disclosure categories, only 10 disclosure items were chosen and that results in 60 disclosure items.

Findings – A total of 830 out of a maximum of 1,620 social and environmental responsibility indicators, representing 51% (168 employees, 151 environmental, 145 community involvement, 128 energy, 127 governance and 111 general) were identified and examined in company SER. The study showed that the sample companies relied on multiple strategies for managing pragmatic legitimacy and moral legitimacy via disclosures. Such practices raise questions regarding company-specific disclosure policies and their possible links to the quality/quantity of their disclosures. The findings suggest that managers of mining companies may opt for "cherry-picking" and/or capitalise on events for reporting purposes as well as refocus on company-specific issues of priority in their disclosures. While such practices may appear appropriate and/or timely to meet stakeholders' needs and interests, they may work against the development of comprehensive reports due to the multiple strategies adopted to manage pragmatic and moral legitimacy.

Research limitations/implications – A limitation of this research is that the author relied on self-reported corporate disclosures, as opposed to verifying the activities associated with the claims by the sample mining companies.

Practical implications – The findings from this research will help future social and environmental accounting researchers to operationalise Suchman's typology of legitimacy in other contexts.

Social implications – With growing large-scale mining activity, potential social and environmental footprints are obviously far from being socially acceptable. Powerful and legitimacy-conferring stakeholders are likely to disapprove such mining activity and reconsider their support, which may threaten the survival of the mining company and also create a legitimacy threat for the whole mining industry.

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Originality/value – This study innovates by focusing on Suchman's (1995) typology of legitimacy framework to interpret SER in an industry characterised by potential social and environmental footprints – the mining industry.

Keywords Mining companies, Stakeholder management, Pragmatic legitimacy, Moral legitimacy, Disclosure categories, SER

Paper type Research paper

1. Introduction

Despite a wealth of prior literature on the subject, corporate social and environmental reporting (SER) continues to attract considerable attention from the research community (see Benameur *et al.*, 2023; Wachira and Mathuva, 2022; Qian *et al.*, 2021; Ali *et al.*, 2017, for an overview of some of the research). In relation to the prior literature, authors have provided different explanations about why organisations adopt SER practices. For instance, various studies have linked the type and extent of SER disclosures to the apparent information needs of "powerful" stakeholder groups; to various legitimacy-threatening events; or to various institutional pressures (Benameur *et al.*, 2023; Crossley *et al.*, 2021; Hörisch *et al.*, 2020; Böhling *et al.*, 2019; De Villiers and Alexander, 2014; De Villiers *et al.*, 2014; Khlif *et al.*, 2015; Lodhia and Hess, 2014; Murguia and Böhling, 2013; Mutti *et al.*, 2012; Pellegrino and Lodhia, 2012).

However, because differences in contextual issues in SER practices can be substantial, it is crucial that we focus on a "single industry" and/or a particular context in *researching* SER disclosures (Wachira and Mathuva, 2022; Crossley *et al.*, 2021; Qian *et al.*, 2021). The relevance of SER disclosure research focused on a "single industry" and/or a particular context is noted in the prior literature (e.g. Wachira and Mathuva, 2022; Crossley *et al.*, 2021; Qian *et al.*, 2021). Qian *et al.* (2021, p. 1029), for instance, posit that contextual development and contextual issues are crucial in SER research and that "deciding the scope and industry ranges where contextual issues are located is the foremost thing to consider". In some industries, for instance, SER practices represent a proactive or pre-emptive attempt to mitigate adverse regulatory pressures. Hence, companies operating in controversial and/or high-risk industries with strong regulatory and/or normative pressures regarding their social and environmental footprints are expected to develop substantial SER disclosures to seek legitimacy from, and/or maintain legitimacy with, "powerful" stakeholder groups (Lodhia and Hess, 2014).

Given the mining industry's apparent incompatibility with sustainability, and its legacy of social and environmental impacts, there is a certain level of distrust among stakeholder groups and lingering academic curiosity when it comes to the SER disclosures of mining companies. Powerful stakeholder groups, such as international non-governmental organisations (NGOs) who are part of the global mining community, have increased expectations about mining companies' SER disclosures (Amos, 2018a; Amoako *et al.*, 2017; Böhling *et al.*, 2019; Fonseca, 2010; Jenkins, 2004; Lodhia and Hess, 2014; Murguia and Böhling, 2013; Mutti *et al.*, 2012). We can, therefore, expect such development to motivate mining companies to consider the social and environmental dimensions of their operations, especially, as they are disclosed to stakeholders *via* the annual report (or social and environmental report).

This research examines the social and environmental responsibility indicators disclosed by three International Council on Mining and Metals (ICMM) corporate mining members in their SER from 2006 to 2014. To achieve this aim, we limit the data two years before (i.e. from 2006 to 2007) and six years after (i.e. from 2009 to 2014) the implementation of the Sustainable Development Framework (SDF) in the mining sector in 2008. The inclusion of social and environmental reports for 2006 and 2007 was to allow us to examine SER disclosures two years before the implementation of the SDF, and over the next six years, from 2009 to 2014, after the implementation of the SDF in the mining sector in 2008. The examination entails comparing the social and environmental reports of the three mining companies. A total of 27 social and environmental reports (i.e. three reports each from 2006 to 2014) were collected and examined. The examination shows that the disclosure categories “employee”, “environment” and “community involvement” featured the highest number of disclosures. In contrast, disclosure categories, “energy”, “governance” and “general” disclosures presented the lowest number of disclosures.

This study contributes to the social and environmental accounting literature in a number of ways. First, a distinctive contribution of this research, compared to prior studies drawing on a legitimacy theory framework (e.g. Böhling *et al.*, 2019; Mahadeo *et al.*, 2011; Pellegrino and Lodhia, 2012), is the examination of legitimising disclosure strategies at a company level, which may complement an industry level analysis. In essence, variations in legitimising strategies may be due to their focus on differing legitimacy-conferring stakeholders. In this way, our research seeks to contribute to academia as well as practice. Second, our research findings may help mining industry regulators to formulate future social and environmental responsibility indicators that may encourage mining companies to disclose more useful information in order to enhance the “quality” of disclosures in the mining industry. Third, our two-stage data collection and analysis method of content analysis and interpretative textual analysis, together, add qualitative depth to our analysis, and thus, will help stakeholders to improve their understanding of disclosure practices in the mining industry. Fourth, our study contributes to the development of social and environmental accounting theory by operationalising aspects of Suchman’s (1995) typology of legitimacy: pragmatic legitimacy and moral legitimacy in the context of disclosures, thus helping future researchers to operationalise Suchman’s (1995) typology of legitimacy in other contexts. Fifth, our 60-item disclosure index in itself contributes to the social and environmental accounting literature as it provides a good level of mining industry related information, thus helping future researchers interested in researching social and environmental disclosures in the mining industry.

The remainder of the study is organised as follows: after a background discussion and an overview of the three case companies, we review the literature on SER disclosures in the mining sector. The study then proceeds with the theoretical discussion that is used to make sense of the empirical evidence, before considering the research procedures adopted in the collection of data. The study then presents the findings, and thereafter, these are discussed. The study concludes with a reflection and offers social and practical implications as well as direction for future research.

2. Background

In this section, we describe and explain the background to the study of SER disclosures in the mining sector. We begin with an overview of the mining sector in relation to the adoption of SER disclosures by mining companies. We then describe and explain the background of the three cases used in the study to justify, among other things, their credentials as sources of data for the type of study we are conducting.

2.1 Overview of the mining sector in relation to SER disclosures

The work of Guthrie *et al.* (2008) argues that due to the varying features of industries, there is the need to emphasise on items considered appropriate for SER disclosure in a given context. It is a fact that the apparent paradoxical nature of the expression “sustainable mining” (Fonseca, 2010) has frequently been called into question; resulting in the emergence of SER standards targeted at the mining sector. Prominent among these are the Extractive Industries Transparency Initiatives (EITI) https://eiti.org, which enjoins mining companies to publish their payments to host governments; and the Voluntary Principles on Security and Human Rights http://www.voluntaryprinciples.org, which aims to address one of the most recurring human right violation and abuse in the mining sector: torture, physical harm and the deaths caused by extractive companies as they seek to protect their investment assets in host communities. Consequently, mining companies' participation in voluntary SER standards suggests their acceptance of social and environmental responsibilities (Fonseca, 2010; Hilson and Maconachie, 2008). Jenkins (2004, p. 27), in turn, notes that "social and environmental reporting is a necessary tool in the current social and business climate as increased pressure on business performance also places a need for mining companies to distinguish themselves in a competitive market place".

The period of analysis covered by this study could be considered appropriate because of two major events that are relevant to SER disclosures in the mining sector. First, a major initiative in 2001 led to the formation of the ICMM https://www.icmm.com/en-gb, a mining industry institution that advocates sustainability-related issues. Second, among the ICMM's most influential works is the *Sustainable Development Framework* (SDF), comprising a set of ten principles, public reporting of social and environmental information, and external assurance of SER disclosures. In May 2008, member companies of the ICMM committed to report their social and environmental information (beginning in 2008), and through the adoption of the Global Reporting Initiative (GRI) https://www.globalreporting.org framework for uniformity/comparability reasons (Fonseca, 2010). The mining sector is arguably one of the industries with high environmental impacts. To this end, mining companies have been one of the pioneers in the production of social and environmental reports. "Noranda", a Canadian mining and metals company, for instance, has annually reported its social and environmental responsibility information, since 1991 (Perez and Sanchez, 2009). The mining sector has thus adopted varying approaches to SER disclosures through self-regulatory initiatives (Table 1).

2.2 Overview of the cases: AngloGold Ashanti, Anglo American and Lonmin

2.2.1 AngloGold Ashanti (ANGASH). ANGASH, as it conducts business today, was formed in 2004 following the business combination of AngloGold Limited (AngloGold) with Ashanti Goldfields Company Limited (Ashanti). Headquartered in Johannesburg, South Africa, it is one of the world's foremost gold mining companies and has approximately 66,000 employees and contractors in 11 countries, which host its 21 operations comprising open-pit and underground mines and surface metallurgical plants (Argentina, Australia, Brazil, Ghana, Guinea, Mali, Namibia, South Africa, Tanzania, the Democratic Republic of Congo (DRC) and the United States of America) (*ANGASH*; Sustainability Report, 2012; AngloGold Ashanti;

Initiative	Objective	Time frame
GMI	A group of ten global mining companies responded to continued criticism with collaborative effort at industry self-regulation to justify mining and counter threat of NGO push for tougher international standards	1998–present
MMSD	GMI initiative in anticipation of WSSD in Johannesburg in 2002 with key objective to advance understanding about how mineral and mining sector contribution to SD at global, regional and local levels could be maximised; considered as the largest multi-stakeholder process in relation to the mining sector	1999–2002
ICMM	Created to meet NGO criticism on MMSD (vague recommendations) and take more concrete steps: Launch of SD Framework (adherence is a condition for membership) Close collaboration with GRI to establish reporting criteria (GRI reporting is mandatory for ICMM members)	2001–present
ICMM	Commitment to independent third-party assurance	2008–present

Note(s): GMI = Global Mining Initiative; NGO = Non-Governmental Organisation; MMSD = Mining, Minerals and Sustainable Development Projects; WSSD = World Summit on Sustainable Development; SD = Sustainable Development; ICMM = International Council on Mining and Metals; GRI = Global Reporting Initiative

Source(s): Adapted from Böhling *et al.* (2019)

Table 1. Global initiatives in the mining sector for voluntary self-regulation

Sustainability Report, 2013). It is the world's third largest gold producer and the largest on the African continent, producing 3.944 million attributable ounces of gold in 2012. At the end of December 2012, it had a market capitalisation of US$12.02 billion (*ANGASH*; Sustainability Report, 2012). *ANGASH*'s primary listing is on the Johannesburg Stock Exchange, South Africa. It is also listed on the New York, Australia and Ghana Stock Exchanges (*ANGASH*; Sustainability Report, 2012).

2.2.2 Anglo American (ANGAME). ANGAME was founded in 1917 and its portfolio of mining businesses spans the following: *bulk commodities*, i.e. iron ore and manganese, metallurgical coal and thermal coal; *base metals and minerals*, i.e. copper, nickel, niobium and phosphates; and *precious metals and minerals*, i.e. platinum and diamonds (*ANGAME*; Sustainable Development Report, 2013). In 2010, *ANGAME* became the first mining company to be selected to join the "Business Call to Action", a global initiative which challenges companies to apply their business and technological expertise to tackle poverty and contribute to the achievement of the Millennium Development Goals (London, 2010). Now headquartered in London, United Kingdom, it is the world's fourth largest mining company and has been traded publicly on the London Stock Exchange since 1999. It operates corporate and representative offices in China, Brazil, Australia, South Africa, DRC, Luxembourg, Mozambique, India, Chile, Singapore and Mongolia (*ANGAME*; Sustainable Development Report, 2013; London, 2010). With operations in over 60 countries in different continents, it has approximately 158,900 employees and contractors (*ANGAME*; Sustainable Development Report, 2013). Notable subsidiaries of *ANGAME* include Anglo Platinum (the world's largest platinum producer) and De Beers (the world's largest diamond producer).

2.2.3 Lonmin (LONMIN). LONMIN was founded in 1909 (as the London and Rhodesian Mining and Land Company) in the United Kingdom as a holding company for private acquisitions in mining rights and farming land. *LONMIN*'s operations are primarily concentrated within the companies of Western Platinum Limited and Eastern Platinum Limited, both located close to Marikana in the North West Province of South Africa (*LONMIN*; Sustainable Development Report, 2017; 2018). It holds rights to substantial areas of the *Bushveld Igneous Complex* in South Africa – the world's largest deposit of platinum group metals (PGMs) and home to approximately 80% of the world's known PGMs resources (*LONMIN*; Sustainable Development Report, 2017; 2018). Listed on the Johannesburg Stock Exchange and the London Stock Exchange, it has its operational head office in Marikana, South Africa, and a registered office in London, United Kingdom (*LONMIN*; Sustainable Development Report, 2018). It is the world's third largest primary platinum producer, and is one of the world's few integrated mine-to-market producers of PGMs in South Africa, producing 1,336,000 attributable ounces of PGMs and selling 696,000 ounces of PGMs in 2013, respectively. It has 38,292 employees and contractors engaged in its operations at North West, Limpopo and Gauteng provinces in South Africa in 2014 (*LONMIN*; Sustainable Development Report, 2014). In 2019, Sibanye Stillwater Limited (Sibanye-Stillwater), a leading international precious metals producer, mining and processing PGMs and gold, acquired full ownership of *LONMIN*'s assets – the Marikana operations, associated processing and smelter plants, and the base and precious metals refineries in South Africa. The group is domiciled and headquartered in South Africa (Sibanye-Stillwater; Integrated Report, 2019).

3. Social and environmental reporting in the mining sector: a literature review

In terms of which industry is expected to produce quality reports, Lodhia and Hess (2014) assert that mining companies are under various pressures from "powerful" stakeholder groups that they account for the social and environmental impacts of their activities. KPMG (2013, p. 10), claims that "CR [corporate responsibility] reporting is now undeniably a mainstream business practice worldwide, undertaken by almost three quarters (71 per cent) of the 4,100 companies surveyed in 2013". Additionally, KPMG (2013, p. 13) notes that "large companies in the electronics and computers, mining and pharmaceuticals sectors produce the highest quality CR reports". Previously, Perez and Sanchez (2009, p. 10) showed that "all [mining]companies [in their sample] improved their sustainability reports in terms of form, comprehensiveness and depth" and that "there is a general trend toward improvement and adherence to best practices of reporting guidelines". Jenkins and Yakovleva (2006), in turn, observe that, despite the evidence of increasing improvement in social and environmental disclosure in the mining sector, the maturity of reporting content and styles appear to vary between companies and reports.

Findings across countries and study sites (Khalid *et al.*, 2019; Böhling *et al.*, 2019; Lodhia and Hess, 2014; Murguia and Böhling, 2013; Mutti *et al.*, 2012; Pellegrino and Lodhia, 2012) suggest that SER disclosure appears a powerful legitimacy device to legitimise mining companies' operational activities. In an earlier study, De Villiers (1999, p. 43) showed that "pressures exerted on organisations from outside sources" appear to explain why managers increase environmental disclosures in South Africa. A more disturbing explanation lies in the work of De Villiers and Barnard (2000) that provides evidence to suggest that decreases in disclosure stem primarily from the observation that companies are unlikely to disclose negative information for fear of being held liable for the information provided. The work of De Villiers and Van Staden (2006, p. 779), in turn, concludes that industry distinction makes a difference in social and environmental information disclosure research, and that "the mining companies [in their sample] decreased their specific disclosures more than the Top-100 industrial companies" in their study in South Africa. The results of the study by De Villiers *et al.* (2014, p. 57) provide evidence of the growth of SER in the mining sector, which explains that "a certain amount of environmental disclosure should be done" to address legitimacy threats from stakeholder groups. The work of Fonseca (2010) and Fonseca *et al.* (2014) suggest specific changes that can contribute to improve mining companies' SER frameworks if such reports are to provide accurate and meaningful information about their sustainability progress.

In their study, De Villiers and Alexander (2014, p. 210) showed that isomorphic pressures impact on SER practices, and that "global CSRR" [corporate social responsibility reporting] patterns are a reflection of "local CSRR content" with emphasis on local rules and realities. Complementary to this finding, differences in individual country legislation, managerial discretion and cultural interests are seen as major factors accounting for variations in the contents of the social and environmental reports produced by different plants owned by the same mining company (Amoako *et al.*, 2017). In the same vein, a more recent work by Böhling *et al.* (2019, p. 219) suggests that the social licence to operate in the extractive industries should be interpreted as a matter of "both beyond- *and* below-compliance effects" of SER decisions, and should complement other policy initiatives to address environmental concerns of the mining sector. This finding is in line with earlier findings by Pellegrino and Lodhia (2012, p. 78) that suggest that mining companies use SER disclosures to maintain external legitimacy and to seek "system-wide legitimacy for an entire industry". Murguia and Böhling (2013) showed that, in response to stakeholder scrutiny, mining companies in Argentina increased their SER disclosures to lessen those pressures. In a recent study, Lauwo *et al.* (2016) showed that the increasing social and environmental problems in the mining sector of Tanzania are primarily due to a weak regulatory regime as well as little pressure from pressure groups and NGOs with regard to SER disclosures. A more recent study showed that mining companies make partial disclosure of social, environmental and ethical information aimed at "masking of corporate reality" in order to "placate stakeholders" (Khalid *et al.*, 2019, p. 70).

The specific SER disclosures of mining companies differ (Jenkins and Yakovleva, 2006; Perez and Sanchez, 2009), and this may be in part due to the information needs of various stakeholder groups. Azapagic (2004), for instance, notes that environmental issues, such as energy, water, greenhouse gas (or carbon) emissions and conservation of natural resources are of most interest to local communities, governments and local authorities, while social issues, such as employment, health and safety, skills development, resettlement arrangements and local enterprise development are of most interest to labour unions, employees and local communities. In particular, Azapagic (2004) suggests that powerful labour unions are more interested in social information than environmental information. This appears to explain why some mining companies tend to pay attention to powerful stakeholder groups and respond with meaningful disclosures, while less powerful stakeholder groups may be ignored or treated with short symbolic disclosures, as suggested by De Villiers and Alexander (2014).

To minimise societal pressures on mining companies, the ICMM https://www.icmm.com/en-gb issues and publishes a number of guidelines and reports that are of topical interest to the sector, and its stakeholders, and which are focused on issues, such as how to manage risk associated with hazardous waste, how to address health and safety concerns and how to engage with society and deal with company–community conflicts. The work of Ali *et al.* (2017) showed that companies that are highly visible appear to pay attention to the social and environmental issues linked with their operations. The authors' findings indicate that political, social and cultural factors influence SER disclosures. The authors drew the conclusion that when highly visible companies, such as mining companies, are exposed to various pressures from stakeholders, they consider social and environmental issues "in their disclosure decisions to lessen those pressures" (p. 289).

Given that mining companies operate in a controversial and/or high-risk sector, the disclosure of corporate governance information is expected to enable them to become transparent, and could possibly enhance their corporate reputation. Governance-related issues explored in prior research include board composition, board committees, governance system relating to ethics, transparency and accountability, third-party assurance, description of vision and strategy underpinning SER practices, description of governance structure, compliance with legal requirements and policies aimed at promoting SER (De Villiers and Alexander, 2014; De Villiers *et al.*, 2014; Perez and Sanchez, 2009). For example, De Villiers *et al.* (2014, p. 57) showed that 14 of the 18 companies in their sample are audited by one of the BIG four audit firms. The authors argue that the use of auditors, i.e. third-party assurance, is expected to "influence reporting, including sustainability disclosure".

Disclosure of community involvement issues has been explored in prior research (Khalid *et al.*, 2019; Perez and Sanchez, 2009; Lauwo *et al.*, 2016; Lodhia and Hess, 2014; Sobhani *et al.*, 2009). Through an analysis of the literature, Lodhia and Hess (2014, p. 48) stated that, although there was a desire for the disclosure of environmental commitments and policies, "mining companies do have a role to play in regard to social issues", such as poverty alleviation, sponsorship, women's and/or disadvantaged group's development, local community development and equitable resource sharing. The authors called for future research to explore the management and reporting of these issues by mining companies. The recent content analysis of Khalid *et al.* (2019, p. 67) shows that the "social information was produced to fulfil a predetermined expectation, in particular, the reporting of the responsibility of mining corporations to their communities".

Moreover, general disclosure has been described as those social and environmental disclosures that cannot be conveniently included in other disclosure categories used in a study (Sobhani *et al.*, 2009, p. 176). Some general disclosures explored in prior research include issues, such as expression of social and environmental responsibility in corporate vision, giving prominence to SER practices, i.e. evidence of stand-alone CSR reports, listing of key stakeholders, comparison of sustainability indicators disclosed over time, contact information for questions and feedback on social and environmental reports (Perez and Sanchez, 2009; Sobhani *et al.*, 2009).

Overall, the prior literature has identified varying features of industries when it comes to SER practices and/or the need for more SER research focused on a "single industry" and/or a particular context (Benameur *et al.*, 2023; Wachira and Mathuva, 2022; Crossley *et al.*, 2021; Qian *et al.*, 2021; Amoako *et al.*, 2017; Lodhia and Hess, 2014; Gray *et al.*, 2001; Guthrie *et al.*, 2008). This is primarily due to the concern that "disclosure studies have paid relatively less attention to internal contextual factors [and for that reason] more disclosure studies at the organisational and individual level of analysis" might further develop theory to explain organisations' SER practices (Ali *et al.*, 2017, p. 290). However, there is limited research based on a "single industry" and/or a particular context, and focused on the individual company level of analysis that seeks to understand SER practices *via* a longitudinal study and using the two-stage data collection and analysis method of content analysis and interpretative textual analysis, with few exceptions in the mining sector (Lodhia and Hess, 2014; Pellegrino and Lodhia, 2012; Perez and Sanchez, 2009). In examining the social and environmental responsibility indicators disclosed by three ICMM corporate mining members in their social and environmental report *via* a nine-year longitudinal analysis, this study helps address the gap in the social and environmental accounting literature.

4. Theoretical lens: pragmatic legitimacy and moral legitimacy

This study uses an organisational legitimacy theory – the strategic approach, as a theoretical lens for understanding and appreciating disclosure practices by mining companies. In drawing on aspects of Suchman's (1995) typology of legitimacy, this paper is inspired by De Villiers *et al.*'s (2014, p. 57) conclusion that based on the level of conformity in their analysis, "corporate environmental disclosure may in future not yield many meaningful results" when analysed under the lens of institutional theory (see Amos, 2018b, pp. 292–294, for an overview of the theoretical frameworks used in researching CSR in developing countries). We note that organisational legitimacy theory is characterised by divergent approaches (and/or assumptions), which are further subdivided among researchers with varying orientations and, which are sometimes complementary and sometimes conflicting (Suchman, 1995, p. 572). The perspective that guides our analyses recognises how the organisation has the ability to engage in and control the processes of legitimation through various SER practices and, therefore, making the organisation behave in certain defined ways to demonstrate its congruence with societal norms and values (see, Böhling *et al.*, 2019; Mahadeo *et al.*, 2011).

Suchman (1995) argues that "legitimacy", like an intangible asset, is an operational resource, the value of which must be maintained to ensure continued support from society. The insights provided by legitimacy theory suggest that "legitimacy" is a resource on which an organisation is dependent for survival (Suchman, 1995; O'Donovan, 2002). Legitimacy is expressed, for example, in terms of customer/supplier appreciation, government "support" and community acceptance on account of acting as socially responsible and environmentally responsive "corporate citizen". Suchman (1995) further notes that the concept of organisational legitimacy is a useful tool for understanding the different behavioural dynamics that underpin organisational actions.

Lindblom (1994) distinguishes between "legitimacy" and "legitimation". To her, whilst legitimacy denotes a status or condition, legitimation is considered to be the process that leads to an organisation being viewed as legitimate. Islam and Deegan (2008) note that, unlike other resources, legitimacy is a "resource" that the organisation is able to impact/manipulate through SER practices. In other words, communication is considered a crucial element of the legitimation process because society or constituents are likely to accord legitimacy to the organisation based on the actions taken by the organisation and intended to seek legitimacy (Dowling and Pfeffer, 1975; Lindblom, 1994). Suchman (1995, p. 596) points out that legitimacy represents the overall evaluation of social norms, beliefs or values and expectations and may be influenced by a history of events, rather than by specific events, i.e. the organisation "should avoid unexpected events" in order not to open itself up for "scrutiny".

Lindblom (1994, p. 2) notes that when there is a disparity, actual or potential, between organisational activities and societal values, there is a threat to the organisation's legitimacy within the broader social system. This appears to support the view that where legitimisation strategies are employed, they should explicitly consider the specific contextual (e.g. social, geopolitical, industry and cultural) factors and how these might affect SER practices not only at one point in time but rather over a period of time (Islam and Deegan, 2008; Mahadeo *et al.*, 2011). An insight from legitimacy theory relating to the latter is that legitimacy is a dynamic construct in that societal norms, beliefs and values do not remain fixed over time; therefore, suggesting that organisations should be responsive to changing expectations. In this regard, Lindblom (1994, p. 3) states

Legitimacy is dynamic in that the relevant publics continuously evaluate corporate output, methods, and goals against an ever evolving expectation. The legitimacy gap will fluctuate without any changes in action on the part of the corporation. Indeed, as expectations of the relevant publics change the corporation must make changes or the legitimacy gap will grow as the level of conflict increases and the levels of positive and passive support decreases.

Suchman (1995) identified three types of mechanisms through which legitimacy is conferred upon the organisation by society, these are as follows:

(1) Pragmatic legitimacy,

(2) Moral legitimacy and

(3) Cognitive legitimacy

Suchman cautions that the three types of organisational legitimacy and their subtypes have areas of "contrasts and interrelations" in terms of the "disparate processes" through which "constituents are likely to accord legitimacy" to the organisation (Suchman, 1995, pp. 577–578). However, he points out that while the three types have interrelations, they tend to be derived from different behavioural dynamics and may also lead to different outcomes (Suchman, 1995, pp. 577–584).

In analysing organisational legitimacy, Suchman (1995, p. 578) proposes that pragmatic legitimacy "rests on the self-interested calculations of an organization's most immediate audiences", and it often involves direct exchanges and/or dependence between the organisation and its audience. He argues that such audience of organisation tend to consider themselves as "constituencies scrutinizing organizational behaviour to determine the practical consequences, for them, of any given line of activity" undertaken by the organisation. In contrast, moral legitimacy rests not on judgements about whether a given activity, for example, SER practices, benefits the evaluator, but rather, on judgements about whether the activity is "the right thing to do". Moral legitimacy thus reflects on beliefs about whether the activity effectively promotes societal welfare, which may well be in line with the audience's socially constructed value system (Suchman, 1995, p. 579).

Pragmatic and moral legitimacy appear helpful to make sense of SER in view of the assumption that "managerial initiatives can make a substantial difference" in the organisation's legitimation processes (Suchman, 1995, p. 585). Prior research on SER practices (e.g. Böhling *et al.*, 2019; Islam and Deegan, 2008; Kamal and Deegan, 2013; Mahadeo *et al.*, 2011; Pellegrino and Lodhia, 2012) note that the legitimacy phenomenon can explain patterns of disclosure over time and variations in disclosure between companies, based on, for example, size, industry and country/region effects. Drawing on Suchman (1995), Mahadeo *et al.* (2011, p. 161) posit that the notion of pragmatic legitimacy is closely associated with stakeholder management because direct exchanges between organisation and audience may result in organisational action affecting the audience's well-being. The insights provided by stakeholder theory suggest that the disclosure of particular types of information can be used to gain or maintain the support of particular stakeholder groups. Thus, if it is accepted by mining companies that employees and host communities are "powerful" stakeholder groups, then mining companies may see a need to react to their expectations. Mining companies will react to the demands of employees (when there are unresolved issues with wages), or will react to the expectations of host communities (for being custodians of the land on which mining activities are performed) for pragmatic legitimacy reasons.

Suchman (1995, p. 578) argues that pragmatic legitimacy stems primarily from three processes. In his view, there are three sub-concepts of pragmatic legitimacy, namely, *exchange legitimacy* (i.e. support for an organisational policy based on that policy's expected value to a particular set of constituents), *influence legitimacy* (i.e. constituents support the organisation because they see it as being responsive to their larger interests) and *dispositional legitimacy* (i.e. the organisation is deemed to be trustworthy and shares the values of its constituents). While various kinds of relationships may exist between the organisation and its constituents, SER practices that provide information in relation to (1) the form/nature of exchanges between the organisation and its constituents, (2) evidence of activities meant to demonstrate the organisation's responsiveness to the interests of its constituents and/or (3) activities or statements that could be interpreted to mean that the organisation accepts the values of its constituents and for that reason, it is "trustworthy"; can be said to be a strategy in pursuit of pragmatic legitimacy.

According to Suchman (1995), there are three processes through which moral legitimacy is conferred upon the organisation by society. Suchman (1995, pp. 580–591) argues that moral legitimacy can be evaluated on the basis of the organisation's *consequences*, i.e. evaluation based on what is accomplished (e.g. providing humanitarian assistance to victims of a natural disaster), *procedures*, i.e. evaluation based on the organisation's procedures (e.g. adopting environmentally responsive practices in the production process) and/or *structure*, i.e. evaluation based on the organisation's structural characteristics (e.g. a registered charitable organisation). From the above, Suchman (1995) points out three sub-concepts of moral legitimacy, namely, *consequential legitimacy, procedural legitimacy* and *structural legitimacy*.

Suchman (1995, p. 579) states that the fulfilment of moral legitimacy enables and/or manifests in the organisation being able to communicate a "pro-social logic" (e.g. contribute to society's well-being) and to demonstrate its support for social issues (e.g. not indulging in the issue of child labour), rather than a "narrow self-interest" ambition behind its activities to promote its own legitimacy. Mele and Armengou (2016) indicate that "*moral legitimacy* is the 'true meaning of the word legitimacy'" (p. 730). To them, pragmatic legitimacy is indicative that "an authority is acknowledged and submitted to" and that "whether this authority deserves its status" is not a criterion for pragmatic legitimacy. We argue that this theoretical argument is central to SER practices in the mining sector, which lends legitimacy to mining companies and which enables them to continue their operations. SER practices which can address threats to mining companies' perceived legitimacy are not only perceived as moral "claim" by mining companies (or particular activities) to their constituents (or the relevant publics) but can also serve to assure their constituents (or the relevant publics) that their business of mining (or particular activity) is acceptable, based on ethical principles (Mele and Armengou, 2016).

We conclude this section by observing that the use of the legitimacy perspective to examine SER disclosures is not a new phenomenon (see, Böhling *et al.*, 2019; Islam and Deegan, 2008; Kamal and Deegan, 2013; Mahadeo *et al.*, 2011; Pellegrino and Lodhia, 2012). These studies examined SER disclosure by comparing the social and environmental information reporting in various companies. With the exception of Böhling *et al.* (2019) and Mahadeo *et al.* (2011), the analyses of these studies involved a focus on legitimacy theory from a more general perspective.

Both Böhling *et al.* (2019) and Mahadeo *et al.* (2011) emphasised a combination of pragmatic legitimacy and moral legitimacy strategies and observed that SER practices have been used as a powerful legitimacy device to enable the companies to continue their operations. None of these studies examined the legitimating nature of SER practices in the mining sector *via* a longitudinal analysis by employing a two-stage data collection and analysis method of content analysis and interpretive textual analysis. Mahadeo *et al.* (2011, p. 161) note the paucity of research which provide "a more detailed understanding and appreciation of the legitimacy phenomenon to inform the empirical data, such as annual report disclosures", and call for future research in this area. This study argues that SER practices in the mining sector is an appropriate interpretive issue for the application of Suchman's (1995) concepts of pragmatic legitimacy and moral legitimacy. We, therefore, draw on the above discussion to examine the social and environmental responsibility indicators disclosed by three ICMM corporate mining members in their SER from 2006 to 2014.

5. Method

This study draws on organisational legitimacy theory to examine the social and environmental responsibility indicators disclosed by three ICMM corporate mining members in their SER from 2006 to 2014. Qualitative research, such as case studies, can help to unveil previously unseen patterns that may help in extending or generating theory (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). As ICMM corporate mining members have varying financial year ends, the 2008 period covered in the social and environmental report varies. However, most ICMM corporate mining members have a 31 December year end. Of the ICMM corporate mining members, only nine complied with the directive for the inclusion of external assurance statements in their 2008 social and environmental reports published in 2009 (Fonseca, 2010, p. 361).

5.1 Sample design

We initially selected the nine companies that included external assurance statements in their 2008 social and environmental report because "all companies were expected to seek assurance in accordance with the SDF" (Fonseca, 2010, p. 361). From the initial selection, five companies were removed as the "full versions" of their social and environmental reports from 2006 to 2014 were not publicly available, during searches on the companies' websites and ICMM's website. One of the remaining four companies published its social and environmental reports in what it described as "digest" edition (i.e. a summary of its social responsibility information), whilst the "full versions" of its social and environmental reports were inaccessible *via* the electronic links provided. This company was also removed from the study. In the end, there were three ICMM corporate mining members left. These are *Anglo American Limited* (*ANGAME*), *AngloGold Ashanti Limited* (*ANGASH*) and *Lonmin Limited* (*LONMIN*). For instance, Perez and Sanchez's (2009) study in the mining sector had a sample size of four companies which is quite comparable to the sample size used in this study. Theoretical sampling provides researchers with qualitative methods to gain insights into unusual phenomena studied (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). Thus, although the sample companies were not randomly selected, they suit the objective of the study which is to examine the social and environmental responsibility indicators disclosed by three ICMM corporate mining members in their SER from 2006 to 2014.

5.2 Content analysis

The technique of content analysis is used in this study because it provides researchers with a systematic approach to analyse large and unstructured data set, such as social and environmental reports. Guthrie *et al.* (2004, p. 287) state that content analysis aims at analysing published information systematically and objectively by "codifying qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information". As a technique for analysing the content of text, the importance of a particular subject is assumed to reflect in the frequency at which it is captured in a report (Krippendorff, 2004). Content analysis has been widely used in researching SER disclosure (Ahmad and Hossain, 2019; Islam and Deegan, 2008; Kamal and Deegan, 2013; Mahadeo *et al.*, 2011; Perez and Sanchez, 2009; Sobhani *et al.*, 2009). Parker (2005), for instance, notes that content analysis is the dominant research method for collecting empirical evidence on accounting reporting. Guthrie *et al.* (2004) observe also that certain technical requirements have to be met for content analysis to be effective. In particular, Haque and Deegan (2010) caution that the unit of analysis and the basis of classification must be clearly defined.

5.3 Unit of analysis

In relation to the technique of content analysis, the social and environmental accounting literature usually adopts one of two approaches: the "number of disclosures", or the "amount/extent of disclosures", related to a particular issue. Both approaches have been commonly used in previous SER disclosure research (Hackston and Milne, 1996; Haque and Deegan, 2010; Kamal and Deegan, 2013). We follow Haque and Deegan (2010) and Kamal and Deegan (2013) and considered the "number of disclosures" as a measure to capture data, rather than using "amount/extent of disclosures" (for example, number of words, sentences and paragraphs). In this way, it was possible to primarily focus on the presence or absence of disclosure item relating to a particular social and environmental responsibility indicator in a particular year.

To capture the total number of disclosures per company and per the various disclosure categories, if a disclosure on a company's social and environmental report falls under any disclosure item comprising the 60-item disclosure index, a score of one is assigned, otherwise zero. While a score of zero means that no meaningful information is provided on the specific disclosure item, a score of one means that the report contains information on the specific disclosure item. The study's approach is intentionally simpler (Perez and Sanchez, 2009), but not necessarily inferior, given that the study also sought to examine the diversity and scope of the three mining companies' social and environmental responsibility information.

5.4 Disclosure categories

We developed a disclosure index based on the disclosure categories used in the earlier work of Hackston and Milne (1996), together with other disclosure items suggested in the extant literature (e.g. Azapagic, 2004; Kamal and Deegan, 2013; Sobhani *et al.*, 2009; Perez and Sanchez, 2009), and considered appropriate for this study. In addition, we also considered the social and environmental disclosure items suggested by the ICMM's Mining Principles and the accompanying ten thematic areas of Performance Expectations https://www.icmm.com/en-gb/our-principles: (1) ethical business, (2) decision-making, (3) human rights, (4) risk management, (5) health and safety, (6) environmental performance, (7) conservation of biodiversity, (8) responsible production, (9) social performance and (10) stakeholder engagement. The disclosure index used by Hackston and Milne (1996) comprised six disclosure categories, namely *environment*, *energy*, *human resources (employee)*, *products (development, safety and quality)*, *community involvement* and *others*. Within each of these six disclosure categories, sub-classifications of disclosure were identified. The disclosure index for this study also comprised six disclosure categories (*environment*, *energy*, *employee (human resources)*, *community involvement*, *governance* and *general*). Within each of the six disclosure categories, only 10 items of disclosure are identified (see, "Social and environment-related performance/governance disclosure index" for details of the disclosure index). This results in 60 items of disclosure (which also implies a maximum score of 60 in any particular year).

Although most of the sub-classifications of disclosure used in this study are similar to those used in previous SER disclosure research (Kamal and Deegan, 2013; Sobhani *et al.*, 2009; Perez and Sanchez, 2009; Hackston and Milne, 1996), the inclusion of the "governance" category and its sub-classifications of disclosure is for the reason that effective governance is integral to social and environmental information disclosure (Kamal and Deegan, 2013). The disclosure index is shown in Table A1, together with the checklist. The disclosure index of a company is calculated as the total number of items disclosed by a company divided by the total number of disclosure items in the disclosure index (i.e. 60 items of disclosure) (for details of the total number of disclosures per disclosure category and per year, see, "Number of companies disclosing each item per year" in Table A2).

The prior literature on social and environmental accounting suggests that annual reports are a major source of social and environmental information (Ahmad and Hossain, 2019; Amoako *et al.*, 2017; O'Donovan, 2002; Haque and Deegan, 2010). Besides annual reports, it has been observed that many corporate reports and corporate websites contained social and environmental information (Haque and Deegan, 2010). In view of the finding that the contents of corporate websites tend to change frequently (van Staden and Hooks, 2007), the stand-alone social and environmental reports preserved on the corporate websites and/or ICMM's website were accessed in the relatively short period from 4 May to 26 August 2017. The social and environmental report was chosen because it remains an important vehicle for communicating social and environmental information. In total, 27 social and environmental reports (three reports each from 2006 to 2014) were collected and examined.

The 27 social and environmental reports were then coded according to the disclosure items comprising the 60-item disclosure index. Although the stand-alone social and environmental reports had written and visual information, because of the interpretative subjectivism of visual data (Steenkamp and Northcott, 2007), only qualitative and quantitative data were collected and examined. We searched for evidence of the disclosure items in the 60-item disclosure index on the social and environmental reports. We did this by performing an analytical reading and then a cross-comparison between the disclosure items in the 60-item disclosure index and the disclosures shown in the social and environmental reports (Table A2).

5.5 Interpretive textual analysis

This study adopts a textual analysis method, i.e. an interpretive approach (Parker, 2008) to analyse the sample companies' SER disclosures, which consist of SER disclosures shown in the social and environmental reports. The study's aim is not to end up with generalisations but to provide a thorough analysis of the SER disclosures by the cases under study. Specifically, this study performed detailed interpretive textual analysis (Makela and Nasi, 2010), by analytically reading and coding all relevant pages from the 27 social and environmental reports. Each relevant segment of text or SER disclosure was coded under the various types of pragmatic legitimacy and moral legitimacy. One can recall that the various types of legitimacy in Suchman's (1995) typology sometimes have areas of "contrasts" and "interrelations" in terms of the "disparate processes" through which "constituents are likely to accord legitimacy" to the organisation (pp. 577–8). Depending on the perspective adopted, the same SER disclosure strategy can arguably be classified under more than one type of legitimacy. The study's aim is not to force the data into the pragmatic legitimacy and moral legitimacy typology but to find the best fit between the SER disclosure strategies that the study has discovered and Suchman's (1995) description of the various categories of his framework. While we acknowledge that other interpretations may be possible, we believe that our detailed descriptions explain how the empirical data can be interpreted through the lens of Suchman's (1995) theorisation. This study will thus help future researchers interested in operationalising Suchman's (1995) typology of legitimacy in other contexts.

5.6 Reliability and validity

In content analysis, reliability and validity are important issues that must be assured. The reliability of the analysis was sought by drawing on the insights provided by past literature on SER disclosures (Hackston and Milne, 1996; Kamal and Deegan, 2013; Perez and Sanchez, 2009; Sobhani *et al.*, 2009) as well as the social and environmental disclosure items suggested by the ICMM's Mining Principles and the accompanying ten thematic areas of Performance Expectations, to the design of a data collection and analysis instrument shown in Appendix (Table A1). The validity of the method employed in a study could be estimated by the percentage of agreement between raters. However, due to cost constraints, only one person performed both the coding and analysis. Despite our efforts to ensure coding reliability, there remain some elements of subjectivity in the determination and undertaking of coding practices in content analysis research, as suggested by Guthrie and Abeysekera (2006).

Moreover, we acknowledge that although our methodological approach of developing the 60-item disclosure index may appear fairly arbitrary (or subjective), we believe it represents a sound start in developing a disclosure index specifically for the mining industry that is not only used in this study but that can also be adopted by other researchers interested in researching social and environmental disclosures in the mining industry. Again, we would argue that our 60-item disclosure index represents a means of evaluating the "quality" of disclosures made by the sample companies in relation to reporting information about their social and environmental responsibility performance.

5.7 Visual presentation of data

Having coded all 27 reports, our findings were gathered in a tabular form, presenting total score for each sub-classification and each disclosure category (Table A2). The summary view of the SER disclosures of the three companies has been presented in Table 2. Graphics were prepared to show how disclosure category scores vary for each year (Figure 3), how disclosures by companies vary for each year (Figure 2) and how total disclosures for each disclosure category vary for each year (Figure 1). In this way, we sought to allow for ease of comparison across the period of our analysis.

6. Findings

The findings are presented in two parts. First, the study provides the SER disclosures by the sample companies based on the disclosure categories adopted by the study. Next, the study focuses on the interpretations of the legitimation strategies described and explained in the theoretical discussion section and adopted by the sample companies in their SER disclosures.

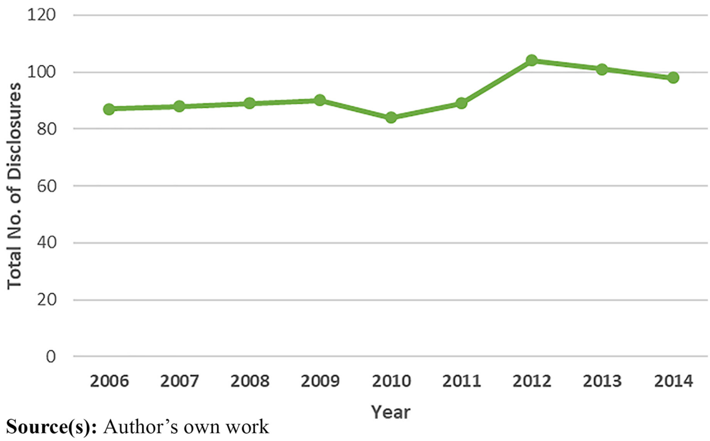
6.1 Content analysis

6.1.1 Trends in disclosures by the sample companies. In examining the social and environmental responsibility indicators disclosed by the sample companies, i.e. *Anglo American Limited* (*ANGAME*), *AngloGold Ashanti Limited* (*ANGASH*) and *Lonmin Limited* (*LONMIN*), all 27 social and environmental reports were collated for each of the six disclosure categories: governance, environment, energy, employees, community involvement and general. In general terms, we observed that disclosures were made in line with the individual

Table 2.
Total disclosure by the sample companies (2006–2014)

Year	ANGAME	ANGASH	LONMIN	Total
2006	31	29	27	87
2007	30	27	31	88
2008	27	31	31	89
2009	30	28	32	90
2010	26	25	33	84
2011	33	22	34	89
2012	35	31	38	104
2013	33	32	36	101
2014	32	32	34	98
Total	277	257	296	830
	33.4%	31.0%	35.7%	100%

Source(s): Author's own work

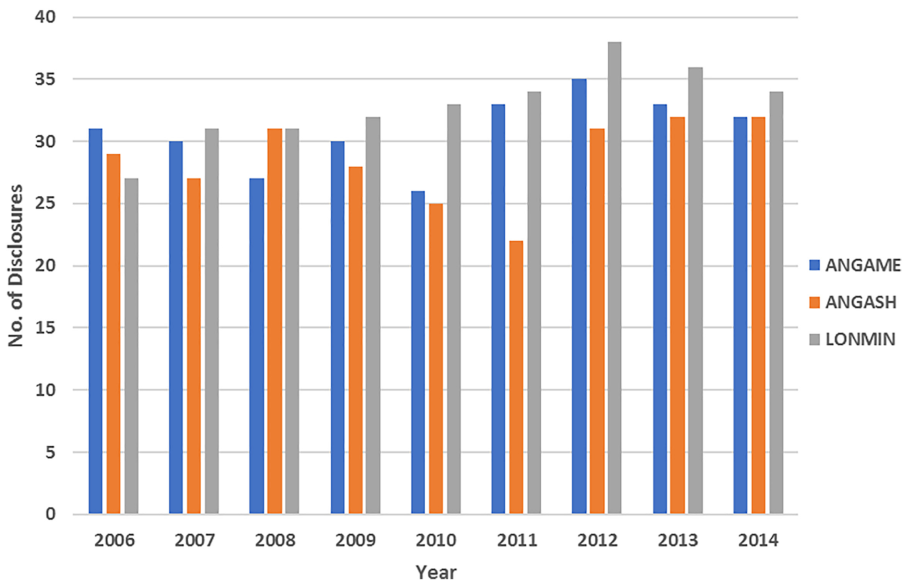


Source(s): Author's own work

Figure 1.
Total number of SER disclosures for all six disclosure categories between 2006 and 2014

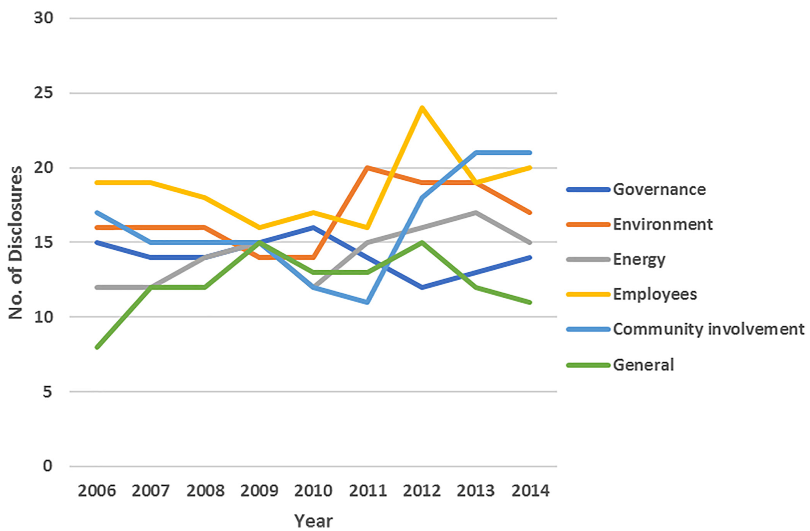
company's mission and vision statements. Disclosures were also premised on Board Chairman's forewords and Chief Executive's letters. Across time, while the general trend of disclosures is marginally upward from 2006, there is a decline in 2010, and then, a marginally increasing trend in disclosures is observed from 2011.

From 2006 to 2008, disclosures were approximately 49% (i.e. 88 out of a possible 180 disclosures) of the disclosure index used by this study. From 2009 to 2014, the disclosures increased marginally and resulted in almost 105 out of a possible 180 disclosures (60 items multiplied by three companies) in the year 2012 (Figure 1). Figure 1 synthesises the overall number of disclosures for all disclosure categories and for all three companies for the period of study. The relatively low disclosures from 2006 to 2008 are expected. This pattern may be reflective of the sample companies having exposure to relatively minimal pressures (or expectations) from the mining sector's stakeholders for social and environmental responsibility information disclosures during this period of our analysis. In addition, this provides evidence in support of the May 2008 initiative by the ICMM that called on its corporate mining members to voluntarily disclose and seek external assurance on their social and environmental responsibility information, beginning from 2008.



Source(s): Author's own work

Figure 2. SER disclosures by the sample companies between 2006 and 2014



Source(s): Author's own work

Figure 3. SER disclosures per disclosure categories between 2006 and 2014

6.1.2 Number of disclosures by the sample companies. In relation to the social and environmental responsibility indicators disclosed by the sample companies, we find that *LONMIN* reports showed rapid growth in the number of disclosures. From very little disclosure in 2006 (31% of all the recorded disclosures in 2006), *LONMIN* attained maximum disclosure scores in 2012 (37% of all the recorded disclosures in 2012), and thereafter, a marginal decline in disclosures was found in 2013 and 2014. *LONMIN* disclosed a total of 296 items during the period of study, which is almost 36% of the total disclosures (Figure 2). As *LONMIN* clearly has the highest number of disclosures, it is imperative that we investigate what accounts for the relatively high number of disclosures, especially in 2012 (Figure 2). In this respect, it is important to note that in 2012 *LONMIN* published a relatively long version of its *Sustainable Development Report*, which may justify the high number of disclosures for that year. In this way, it is perceived that *LONMIN* was facing legitimacy threats from its stakeholders (Khalid *et al.*, 2019; Böhling *et al.*, 2019; Pellegrino and Lodhia, 2012). In particular, it appears that the "tragedy at Marikana" [1] is the "trigger" event that explains the high number of disclosures in 2012. This view is illustrated in the following quote from the acting CEO's letter to the 2012 Sustainable Development Report:

"This year has been like no other in the history of Lonmin, with the tragic events of August 2012 which took place at Marikana becoming a seminal episode for our company, our sector, our industry and our country. The consequences of these events will be felt for many years to come" (*LONMIN* plc; Sustainable Development Report, 2012).

In contrast to our expectations, the high number of disclosures by *LONMIN* in 2012 appears not to justify the relatively low number of disclosures in the subsequent years, i.e. 2013 and 2014. The decrease in the number of disclosures by *LONMIN* in 2013 and 2014 appears to lend some support to the perception that mining companies do "cherry-picking" in the issues they highlight in their social and environmental responsibility reports to "portray an image of a socially and environmentally responsible company" (Fonseca *et al.*, 2014, p. 76). Consistent with our data, some prior research (e.g. Böhling *et al.*, 2019; Khalid *et al.*, 2019; Fonseca *et al.*, 2014; Fonseca, 2010) have criticised mining companies' social and environmental responsibility reports on the basis that they lack robustness in producing reliable information, despite external assurance requirement instituted by the ICMM.

Table A2 provides further detail by breaking all disclosure categories into their sub-classifications. This comparison is undertaken to illustrate that the similarities and differences identified above persist even when social and environmental responsibility disclosures are broken down into sub-classifications. The results show that the sample companies tend to "cherry-pick" on issues for disclosure in their social and environmental responsibility reports. This finding is expected. Given the overwhelming evidence in prior research that there is increased social pressure on mining companies, they need to be selective in their disclosures to ensure that their legitimacy is not threatened, and thus, have continued access to resources. Hence, for instance, the pattern (or fluctuations) shown in the "Employee category", the "Community involvement category" and the "General category" of disclosures between 2011 and 2014 could be considered unsurprising (Table A2).

The social and environmental responsibility indicators disclosed by *ANGAME* fluctuated over the period from 2006 to 2011. *ANGAME*'s disclosures reached a maximum in 2012 (34% of all the recorded disclosures in 2012). It provides the second highest number of disclosures with a total of 277 disclosures during the period of study, which represents about 33% of all the recorded disclosures (Figure 2). From 2012, its disclosures continuously declined, which is about 33% of all the recorded disclosures in 2013 and 2014 (compared to the highest number of disclosures by *LONMIN*, which is approximately 36% of all the recorded disclosures in 2013 and 2014) (Figure 2).

The other company in our sample (*ANGASH*) clearly has the lowest number of disclosures with a total of 257 disclosures during the period of study, which is about 31% of all the recorded disclosures, despite providing the joint-highest number of disclosures (along with *LONMIN*) in 2008 (Figure 2). The social and environmental responsibility indicators disclosed by *ANGASH* also fluctuated over the period of study (from 2006 to 2014). For instance, *ANGASH* provided the joint-highest number of disclosures in 2008, but it sharply fell after 2008, recording the lowest number of disclosures in 2011, which is about 25% of all the recorded disclosures in 2011 (Figure 2). From 2011, it showed continuous rapid growth in disclosures, reached maximum and remained consistent at around 32% of all the recorded disclosures in 2013 and 2014, respectively (see, Table 2 for total disclosure by the sample companies).

Initially, a great deal of the disclosure would be expected to be associated with company-specific disclosure policies. Conversely, we would expect to see a general absence of some disclosures given that a company may opt to refocus on different disclosure categories in its social and environmental reports to improve understanding about how specific social and environmental issues have been addressed in subsequent social and environmental responsibility reports. Besides the overall lowest number of disclosures of *ANGASH*, it seems appropriate that a company employs many legitimation strategies in its social and environmental responsibility disclosures to convince its stakeholders that it has not breached its social contract, and therefore, it deserves their support, i.e. a company is expected to communicate legitimate behaviour to its stakeholders *via* SER disclosures. Nonetheless, the decision by managers of *ANGASH* to refocus on different disclosure categories in its social and environmental responsibility reports, with effect from 2009, appears to have impacted negatively on its number of disclosures in 2009 and the subsequent years. *ANGASH* puts the need to refocus its social and environmental responsibility report to suit the company's social context as follows:

> In 2009 we undertook a review of the way in which we compile our sustainability report taking into account a wide range of internal and external perspectives. [. . .] We have implemented a series of changes to our reporting which are designed to: align the company's reporting with the needs and interests of our stakeholders, including employees, and social and business partners; and give these groups a clearer sense of sustainability issues which are shared concerns, their potential impact on our business, and the way in which we, together with partners, are managing them (*ANGASH*; Sustainability Review, 2009, p. 4).

6.1.3 Disclosures by the sample companies based on disclosure categories. Turning to the disclosure categories, the summary (aggregated) total number of disclosures over the nine-year period from 2006 to 2014 is shown in Table A2 for all six disclosure categories. It is observed that the most extensive disclosures were in the "Employee category" (168 disclosures), followed by the "Environmental category" (151 disclosures), while the "Community Involvement category" (145 disclosures) comes in third place. In fourth place comes the "Energy category" (128 disclosures). The "Governance category" and the "General category" had disclosures of 127 and 111, respectively. Thus, a total of 830 disclosures (approximately 51%) in terms of social and environmental responsibility indicators were found across the period of study. It is observed from Figure 3 that all six disclosure categories fluctuated across the period of study, with no clear pattern of disclosure emerging. While the general trend of all disclosure categories is upward between 2010 and 2012, the "Employee category" consistently accounted for the highest proportion of the total number of disclosures across the period of study. For instance, from 2006 up until 2010, all disclosure categories, except the "General category" and the "Energy category", showed rapid decline in the number of disclosures. However, from 2006, the "General category" and the "Energy category" sharply increased; up until 2010, when the number of disclosures decreased, accounting for 6.7% (60 out of 900 possible disclosures) and 7.2% (65 out of 900 possible disclosures) for the period 2006 to 2010, respectively (Table 3).

The finding of the highest number of disclosures in the "Employee category" is interesting (Figure 3). Perhaps, our finding that the sample companies' social and environmental responsibility reports disclose more information on employees may indicate that employees are, relative to other disclosure categories, more important to various stakeholders, and therefore, must be taken care of, in order to be seen as legitimate. The findings of this study suggest that an apparent pressure from stakeholders may not vary across industry sectors; similar to findings reported by Islam and Deegan (2008) that employee information attracted the highest number of disclosures by companies operating in the Bangladeshi clothing industry in terms of their social and environmental responsibility disclosures. Our findings partially follow Perez and Sanchez (2009), who argue that the disclosure category "Context and Commitment" and "Social Performance" present the best number of disclosures, when they examined the social and environmental responsibility indicators disclosed between 2001 and 2006 by four mining companies in their SER.

While the 60-item disclosure index used in this study is not the same as those of Perez and Sanchez (2009), the disclosure items categorised under "Social Performance" are closely related to the "Employee category" and the "Community Involvement category" used by this study. Given the mining sector's visibility in relation to its environmental footprint and the pragmatic steps taken to "reverse its 'horrible image' as a 'dirty business'", it is not surprising that the "Environmental category" attracted the second highest number of disclosures (Böhling *et al.*, 2019, p. 196). This finding contrasts with the findings by Perez and Sanchez (2009) in their study of the evolution of SER of four mining companies (*BHP Billiton*, *Anglo American*, *Lafarge* and *Cemex*). While it is evident that the "Environmental category" of disclosure has shown rapid growth over the period of study (Figure 3), in contrast, the work of Perez and Sanchez (2009) showed that the "Environmental category" had relatively slow growth in the number of disclosures.

The third most extensive disclosures in the "Community Involvement category" may be reflective of the sample companies having attached considerable attention to issues of company–community relations, arguably, to convince their stakeholders that they deserve their support. Along these lines, our findings are similar to those reported in Islam and Deegan (2008) and Perez and Sanchez (2009), involving companies operating in the clothing and mining industry sectors, respectively, suggesting that an apparent pressure for disclosures relating to business and community relations from industry-specific stakeholders remain high, despite the evidence that different stakeholders require different disclosures. Perhaps, the three most extensive disclosures; i.e. the "Employee category", the "Environmental category" and the "Community Involvement category", might suggest "possible" steps taken in reaction to an apparent pressure for business and community relations, health and safety issues of employees, and risks posed to the natural environment by mining companies in their production facilities – all of which may have attracted considerable attention from "powerful" stakeholders, such as employees of mining firms and

Year	Social and environmental report examined	Total amount of possible disclosure	Total disclosure found	% of disclosures
2006	3	180	87	48.33
2007	3	180	88	48.89
2008	3	180	89	49.44
2009	3	180	90	50.00
2010	3	180	84	46.67
2011	3	180	89	49.44
2012	3	180	104	57.78
2013	3	180	101	56.11
2014	3	180	98	54.44
Total	*27*	*1,620*	*830*	*51.23*

Source(s): Author's own work

Table 3. Disclosures in percentage over the years (2006–2014)

local communities that host mining firms' activities during the period of study. Similarly, these disclosures suggest that the sample companies attach considerable attention to "sustainability" issues in order to "deflect or ameliorate criticism and build legitimacy", as posited by Böhling *et al.* (2019, p. 217). In this way, these disclosures may suggest attempts by the sample companies to mask corporate reality in order to placate stakeholders, which partially follow Khalid *et al.* (2019).

However, towards the end of 2012, the "tragedy at Marikana" has meant that *LONMIN*, in particular, and the two other companies in our sample (*ANGAME* and *ANGASH*) can be expected to refocus their disclosures on the "Employee category" and related disclosure items included in the "Environmental category" and the "Community Involvement category" in their social and environmental reports. In contrast to our expectation, the "trigger" effects of the "tragedy at Marikana" appears not to have energised the selected companies to increase their number of disclosures in the subsequent years (from 2013 to 2014), possibly, to convince the mining industry's stakeholders to minimise their scrutiny that may pose threats to the legitimacy of the sample mining companies (Figure 3). This suggests that, unlike as claimed by Murguia and Böhling (2013), mining-related conflicts tend not to persist if managers take a step to secure their companies' social license through managing stakeholder expectations, rather than external reporting of social and environmental responsibility information.

The second lowest number of disclosures in the 'Governance category' – higher only than the 'General category', albeit, interesting, is worrying. As we can see, there were 127 governance-related disclosures throughout the period of study. Moreover, the fact that the 'Governance category' is the only disclosure category to show a sharp decrease from 2010 to 2012, is indicative that there is an apparent lack of pressures from the mining sector's stakeholders for governance-related disclosures (Figure 3). This finding contrasts with those reported by Perez and Sanchez (2009), who showed that their sample mining companies' "Context and Commitment" (equivalent to the "Governance category" in this study), when adopted as an "Assessment Category", produced one of the highest numbers of disclosures. Perhaps, a plausible explanation for the relatively low number of disclosures in the "Governance category" might be that the Boards of the mining companies in our sample intentionally opted to emphasise on concrete (or actual) manifestations of social and environmental responsibility activities, rather than social and environmental governance systems to boost social disclosures.

The items of disclosure included in the "General category" are those that cannot be conveniently included in the other disclosure categories. Following the work of Sobhani *et al.* (2009), together with disclosure items commonly used in previous research, the "General category" of disclosure in this study included (1) CSR in corporate mission/vision and/or value, (2) CSR information presented under separate report/title, (3) CSR report focused on special themes, (4) involvement of "expert review panels" in evaluating CSR information, (5) adoption of industry-specific self-regulatory standards and (6) CSR information regarding the adoption of known frameworks in reporting (Table A1). The "General category" of disclosure may be reflective of the sample companies' commitment to transparency. Perhaps, the low number of disclosures may stem from the fact that the disclosure items included in this disclosure category are primarily "taken for granted" in the mining industry, in much the same way that "possible" pressures (or expectations) from the mining industry's stakeholders for disclosures might have also been minimal. Nonetheless, the low number of disclosures is consistent with the findings reported in Perez and Sanchez (2009, p. 958), who showed that the four mining companies in their sample "obtained the lowest scores and did not present a clear evolution trend", in the "Accessibility and Assurance" category (equivalent to the "General category" in this study), when used as one of the "Assessment Category" of disclosures.

Next, the study will focus on the interpretations of the legitimation strategies described and explained in the theoretical discussion section and adopted by the sample companies in their SER disclosures.

6.2 Interpretive textual analysis

Suchman (1995, p. 578) proposed that pragmatic legitimacy "rests on the self-interested calculations of an organization's most immediate audiences", and it often involves direct exchanges and/or dependence between the organisation and its audience. Next, we discuss how the SER by the sample companies illustrated the three sub-concepts of pragmatic legitimacy, namely, *exchange*, *influence* and *dispositional* legitimacy, with reference to their disclosures.

6.2.1 Managing exchange legitimacy. Managing exchange legitimacy through disclosures involves providing information on corporate practices that benefit specific stakeholder groups. Suchman (1995) explains that when an organisation establishes direct relationships with particular audiences, the organisation could be said to be pursuing exchange legitimacy because such "organizational action [. . .] visibly affects the audience's well-being" (p. 578). In the SER by the sample companies, we observe some evidence of exchange legitimacy through their SER disclosures. More specifically, some evidence from the "Employee category" and the "Community involvement category" – the groups deemed to be the most powerful stakeholders, such as disclosures in the form of "employee welfare programmes", "training and development programmes for employees", "recognising and rewarding performance" and "resettlement arrangements for communities affected by mining activities" are expected to benefit specific stakeholders in the context of the sample companies' activities.

Moreover, stakeholders are expected to have preset a notion of the form of social information that suggests fulfilment of social contract by the organisation. Stakeholder theory would suggest that an organisation will respond to the expectations (and/or concerns) of powerful stakeholders, and some of the responses will be in the form of strategic disclosures. Consistent with this perspective, one of such types of social information is strategic disclosures on corporate relations with the community in which it operates in – one of the groups deemed to be the most powerful stakeholders. Hence, the sample companies arguably sought to demonstrate their socially responsible character by reporting on their "good deeds" to the community in which they operate in. In essence, the sample companies acted and reported out of interest in stakeholders' concerns and expectations, which also would be in the sample companies' interest to address those concerns and expectations. Illustrations include, for example, the following:

> In Ghana we embarked on the resettlement of the *Dokyiwa* community in 2009. This involved the relocation of 106 households into new housing (physical resettlement) as well as a grant of replacement cropland and a plot for a community farm (economic resettlement). The procedures we followed included the formation of a resettlement working group, a baseline survey of farmland tenure and housing metrics, negotiating the terms of resettlement, allocating new cropland, constructing new houses and assisting with physical resettlement (*ANGASH*; Annual Sustainability Report, 2013, p. 65).

Additionally, *ANGASH* commented on employee welfare programmes it had embarked on:

> Following significant industrial relations unrest in 2012, particularly in South Africa, the industrial relations climate in 2013 had become relatively more stable, albeit unpredictable [. . .] During the year we concluded a two-year wage settlement covering our employees within the unionised bargaining unions in South Africa (*ANGASH*; Annual Sustainability Report, 2013, p. 32).

Similarly, *LONMIN* commented that it has a firm commitment to the sustainable transformation of the *Greater Lonmin Community*, and reported on its education, training and skills development projects as follows:

> In 2007 the Lonmin Community Development Trust spent US$3.16 million to deliver sustainable community development. The key focus areas were healthcare, education and community engagement, through the *Lentswe* (The Voice) process (*LONMIN* plc; Sustainable Development Report, 2007, p. 24).

6.2.2 Managing influence legitimacy. Managing influence legitimacy through disclosures involves practices that the organisation takes the interests/concerns of its constituents into account in their SER. Recall that this type of legitimacy is enacted, for instance, when "the organization incorporates constituents into its policy-making structures or adopts constituents' standards of performance as its own" (Suchman, 1995, p. 578). In managing influence legitimacy, our data clearly illustrates disclosures, such as those on "occupational health and safety management system certification", "employee safety and physical or mental health", and "accident statistics" across the sample companies. These actions (or disclosures) demonstrate efforts by the sample companies to enhance their legitimacy *vis-à-vis* their various constituents.

From influence legitimacy perspectives, we can expect disclosures that reflect a determination to showcase the sample companies' identity and/or performance within their industry. Here, disclosures, such as certification schemes could be market-driven and intended to facilitate market access. In the mining industry, the need for a mining firm to obtain OHSAS 18001 or related ISO 45001 certification is a regulatory requirement focused on "healthy work environments". The sample companies arguably may have made these disclosures with the aim of showing that they had a system in place for occupational health and safety, and that they adhere to regulatory requirements. Illustrations of SER disclosures aimed at managing influence legitimacy include, for example, the following:

> 86 per cent of Group companies certified to OHSAS 18001, AS 4801 [*Safety Management Systems*] or ISRS [*International Safety Rating System*] (*ANGAME* plc; Report to Society, 2006, p. 7).

> All operations maintained ISO 14001 certification. OHSAS 18001 certification at the Assay Laboratory lapsed in 2008 (*LONMIN* plc; Sustainable Development Report, 2008, p. 11).

> The Group fatal injury frequency rate (FIFR) at the end of 2014 was 0.003, representing a 63 per cent improvement on 0.008 in 2013 (*ANGAME* plc; Sustainable Development Report, 2014, p. 32).

> At the end of September 2008, we have improved our lost time injury frequency rate (LTIFR) by 42 per cent (*LONMIN* plc; Sustainable Development Report, 2008, p. 12).

> In 2008, we have reduced our new diagnosed noise-induced hearing loss (NIHL) cases by 62.2 per cent from our 2007 baseline year to 236 cases (*LONMIN* plc; Sustainable Development Report, 2008, p. 12).

6.2.3 Managing dispositional legitimacy. Following the "tragedy at Marikana", for instance, one of the sample companies, *LONMIN*, managed its dispositional legitimacy by extending condolences, expressing regret and expressing gratitude for the support of employees and their families, contractors and local support services. Recall that this type of legitimacy comes into play, for instance, when constituents accord legitimacy to the organisation that has their best interests at heart, that shares their values or that is honest and trustworthy, i.e. the organisation is deemed to be trustworthy and shares the values of its constituents (Suchman, 1995, p. 578).

For instance, *LONMIN*'s official comment on the "tragedy at Marikana" reads:

> Lonmin reflects with great sadness on the loss of lives of our employees, members of the South African Police Service (SAPS) and members of the local community during the tragic events at our Marikana operations in 2012 [. . .] (*LONMIN* plc; Sustainable Development Report, 2012).

Consistently, *LONMIN* expressed regret and extended its condolences to those affected by the tragedy in its SER disclosures and described the atmosphere after the "tragedy at Marikana" as "trying time". In the 2012 Sustainable Development Report, *LONMIN* observes:

> We extend our heartfelt condolences to the families and colleagues of the 46 people who died. We also extend to our employees, their families, our contractors, and local support services our thanks for

> their support and endeavours during this trying time [. . .] (*LONMIN* plc; Sustainable Development Report, 2012).

This study argues that by signalling that they regret the tragedy and has the best interests of employees and other stakeholders at heart, *LONMIN* was seeking to maintain its dispositional legitimacy, notwithstanding the loss of human life and/or injury issues related to the tragedy.

Suchman (1995, pp. 577–578) cautioned that the three types of organisational legitimacy and their subtypes have areas of "contrasts and interrelations" in relation to the "disparate processes" through which "constituents are likely to accord legitimacy" to the organisation. However, Suchman (1995, pp. 577–584) also observes that while the three types have interrelations, they tend to be derived from different behavioural dynamics and may also lead to different outcomes. Next, we discuss how the SER by the sample companies illustrated the three sub-concepts of moral legitimacy, namely, *consequential*, *procedural* and *structural* legitimacy, with reference to their disclosures.

6.2.4 Managing consequential legitimacy. Suchman (1995) notes that moral legitimacy can be evaluated based on the organisation's *consequences*, i.e. "organisations should be judged by what they accomplish" (p. 580). Hence, for instance, the pursuit of consequential legitimacy is probably in reaction to the growing stakeholder awareness about the economic benefit of mining companies' activities. In other words, the pursuit of consequential legitimacy demonstrates that social activities are part of mining companies' output. Mining companies thus do not only produce economic outputs, such as gold, profit and/or dividends to their shareholders. Here, the sample companies sought to legitimise their activities by signalling that they were doing the "right thing". This was, for instance, accomplished by maintaining transparency in their SER activities *via* disclosures on "external audits" and/or the involvement of "expert review panels". Managing consequential legitimacy is illustrated in the following written statement published in the social and environmental report. *ANGASH* report stated that

> Since November 2010, we have benefitted from diverse and multi-disciplinary inputs from a Sustainability Review Panel – a group of advisers whose advice complements our own understanding of our business and shareholder imperatives (*ANGASH*; Annual Sustainability Report, 2013, p. 20).

> . . . the panel is appreciative of the challenges facing AngloGold Ashanti, commends its efforts in preparing the Annual Sustainability Report 2013. The report signals the company's continued commitment to sustainability in principle and practice, tested to the full in difficult times (*ANGASH*; Annual Sustainability Report, 2013, p. 21).

This study interprets this type of reporting as appearing to be motivated by transparency considerations, signalling that the company was doing the "right thing", rather than any real attempts to enthusiastically comply with mining industry regulations. A further example of disclosures that appear to be motivated by transparency considerations is found in *LONMIN*'s report as follows:

> To support our goal of producing a balanced and transparent report, we engaged with a number of independent reviewers to provide feedback on the report, to ensure that we have captured the interests of stakeholders, reported on those issues that are critical, and reported in a sensible manner [. . .] (*LONMIN* plc; Sustainable Development Report, 2013, p. 17).

> Lonmin extends its gratitude to the panel members for their considered and frank comments. We also welcome feedback from all stakeholders [. . .] (*LONMIN* plc; Sustainable Development Report, 2013, p. 20).

Although many constituents are interested in the SER and/or activities of mining companies, this transparency suggests that the sample companies considered that the disclosure of particular types of social and environmental responsibility information can be crucial for the purpose of gaining or maintaining the support of particular stakeholder groups. This study argues that, notwithstanding the possible self-reported bias that may be inherent in the production of social and environmental reports by the sample companies, the use of "external audits" and "expert review panels" could signal that the "right thing" had been done by the sample companies, and that they deserve support from their stakeholders.

6.2.5 Managing procedural legitimacy. Evidence from the disclosures indicates that the sample companies sought to manage their procedural legitimacy, particularly, through disclosures in the form of social and environmental responsibility reporting and/or activities and decision-making structure and governance. For instance, disclosures in the form of "board committee for corporate social responsibility" and "management committee for corporate social responsibility" suggest real attempts by the sample companies to manage their procedural legitimacy, to the extent that, the "proper means and procedures are given a positive moral value" (Suchman, 1995, p. 580). By emphasising the decision-making structure and governance in the area of social and environmental responsibility and/or reporting activities, the sample companies are not only managing their procedural legitimacy, they have also arguably shown an effort to increase goodwill and enhance the ethical nature of their activities (Mele and Armengou, 2016). The cautious approach adopted by the sample companies to the disclosure of information relating to the decision-making structure and governance in reference to their disclosure practices is illustrated in the following extracts from *ANGAME* plc's report:

> Anglo American's Board and committee structure has been designed with the desire to achieve the best results for our shareholders, and all others affected by our actions, in the most responsible way. As such, the Board is supported by dedicated [...] and Sustainable Development Committees (*ANGAME* plc; Sustainable Development Report, 2010, p. 13).

Similarly, *LONMIN* plc stated the following in its report:

> The Board has established four Committees [*including Safety and Sustainability*] and provides sufficient resources to enable them undertake their duties ... [The Safety and Sustainability committee is mandated to] report to the Board on developments, trends and/or forthcoming significant legislation on safety and sustainability matters which may be relevant to the Group's operations, its assets or employees (*LONMIN* plc; Sustainable Development Report, 2010, pp. 15–16).

Further examples of disclosure of information relating to the decision-making structure and governance on disclosure practices are shown below.

> The Executive Committee, chaired by the chief executive officer [...] also reviews any social and environmental issues of concern to the company. In 2008, an executive vice president: business sustainability was appointed to oversee the sustainability functions in the business and to represent these issues in the executive committee (*ANGASH*; Sustainability Review, 2009, p. 16).

> Management of sustainability issues at each operation is responsive to local needs and requirements. Managers of sustainability functions report to the general managers of each mine who in turn report into regional management structures (*ANGASH*; Sustainability Review, 2009, p. 16).

Another illustration of the pursuit of procedural legitimacy is the reporting of the sample companies' stand on corruption. *ANGAME* plc reported the following information:

> We support the Extractive Industries Transparency Initiative (EITI) and report annually on the tax and royalty payments we make in our significant countries of operation (*ANGAME* plc; Sustainable Development Report, 2010, p. 13).

> The value distributed directly by Anglo American in 2012 amounted to US$29,558 million. This figure includes [...] US$3,568 million in taxes and royalties to governments (*ANGAME* plc; Sustainable Development Report, 2012, p. 26).

This study argues that the implementation of these initiatives probably in response to an apparent threat to the sample companies' perceived legitimacy can help assure their stakeholders that their business of mining embraces "socially accepted techniques and procedures", and thereby, it is acceptable, based on ethical principles (Suchman, 1995, p. 580).

6.2.6 Managing structural legitimacy. In the SER by the sample companies, we observe some evidence of structural legitimacy through disclosures (Suchman, 1995). The sample companies managed their structural legitimacy by, for instance, making disclosures on activities, such as "recruiting/supporting racial minorities and/or women", "procuring from disadvantaged groups", "donation of cash, products or employee services to support community activities" and "sponsoring public health projects in the broader community". With disclosures like these, the sample companies arguably appeared to express an affiliation with socially positive endeavours, and thereby, show high levels of *structural* legitimacy. Managing structural legitimacy is illustrated in the following written statement published in the social and environmental report:

> In 2009, total black economic empowerment (BEE) procurement spend by managed and independently managed businesses and enterprise development was R 23.5 billion (US$2.79 billion). Anglo American managed businesses spent a total of R18.6 billion (US$2.2 billion) with (Historically Disadvantaged South African) HDSA businesses (*ANGAME*; Report to Society, 2009, p. 41).

> In 2012, AngloGold Ashanti held its inaugural Community Awards, intended to reinforce good-practice principles by initiating, implementing and measuring the impacts of community projects (*ANGASH*; Sustainability Report, 2012, p. 60).

> In 2009, Anglo American supported the establishment of a new postgraduate diploma in Strategic Engagement at the University of Cape Town's Graduate School of Business. The course [. . .] is aimed at site-based community relations employees. Around half of the attendees were sponsored by Anglo American, including officials from local governments in our mining areas (*ANGAME* plc; Report to Society, 2009, p. 33).

It is evidently clear that some of the disclosures in the "Employee category" and the "Community involvement category", such as "procurement from disadvantaged groups", "support for local enterprise development", "resettlement arrangements for communities affected by mining activities" and "recruiting/supporting racial minorities and/or women" could be considered "*systems* of activity" that are of social intervention in nature, and are, "valuable and worthy of support" because they conform to societal norms and values in the context in which the sample companies operate (Suchman, 1995).

In the following, the company claims that its activities help the larger society in which it operates:

> During 2011 we spent US$5 million (R 37,980,955) on (social and labour plan) SLP local economic development projects (*LONMIN* plc; Sustainable Development Report, 2011, p. 31).

> In 2009, the 509 businesses in Anglo American's various enterprise development initiatives in South Africa were collectively responsible for employing 9,570 staff members (*ANGAME* plc; Report to Society, 2009, p. 35).

> At the end of 2013, Lonmin had 47.2 per cent (Historically Disadvantaged South Africans) HDSAs, including white women, in permanent management positions (*LONMIN* plc; Sustainable Development Report, 2013, p. 116).

7. Discussion on findings

From pragmatic legitimacy and moral legitimacy perspectives, it can be expected that the sample companies would disclose social and environmental responsibility information targeted at particular audiences in light of an apparent pressure (or expectations and concerns) from powerful and legitimacy-conferring stakeholders, such as host communities and employees of mining companies. Legitimacy theory explains that an organisation seeks to accrue acceptance from the social system within which it operates by fulfilling its (expressed or implied) social contract (Dowling and Pfeffer, 1975; Lindblom, 1994; Suchman, 1995). In essence, because of increased societal expectations on organisations, such as mining companies, they may need to increase their disclosures to ensure that their legitimacy is not threatened, and thus, have continued access to resources. The social and environmental report is thus a tool by which acceptance may be accrued to the organisation related to the "business case" for producing social and environmental report (Böhling *et al.*, 2019; Islam and Deegan, 2008; Mahadeo *et al.*, 2011).

In the context in which the sample companies operate, environmental disclosures could be considered crucial to inform stakeholders about the contribution and/or impact of mining on the natural environment. Although the disclosures during the period of our analysis increased from the 2006 level, the disclosures arguably are statements expressing the sample companies' concerns about the natural environment, e.g. disclosures in the form of "prevention/repair of damage to the environment", "pollution control", "environmental management certification" and "award received in relation to environmental policies and programmes". This seeming lack of specificity in issues relating to the natural environment is not new to research focused on the mining industry (e.g. Böhling *et al.*, 2019; Khalid *et al.*, 2019; Fonseca *et al.*, 2014; Murguia and Böhling, 2013). The work of de Villiers *et al.* (2014), for instance, showed that mining companies typically make "a certain amount of environmental disclosure" in reaction to legitimacy threats from stakeholders (p. 57).

In proposing solutions to address issues relating to the natural environment, Fonseca *et al.* (2014), for instance, argued for a "desirable" social and environmental framework, which could limit "cherry-picking" in environmental and other related disclosures in mining companies' social and environmental reports (pp. 76–77). In this regard, Böhling *et al.* (2019) argued that lack of precision and/or quality may drive a mining company to make disclosures about its environmental performance through "various pragmatic strategies to please its constituents" (p. 217). In essence, the environmental disclosures by the sample companies arguably could be considered symbolic disclosures that are probably intended to express their commitment to environmental stewardship that accords with strategies for managing moral legitimacy. Nonetheless, the disclosures on the natural environment by the sample companies could be considered "the right thing to do" in promoting societal welfare (Suchman, 1995).

By emphasising on the visibility of the disclosures by the sample companies in terms of, for instance, the identity of beneficiaries, e.g. disclosures on "local entrepreneurs", "children", "students" and "indigenes of mining communities", and the partners and/or organisations involved, e.g. disclosures on "local businesses", "schools" and "hospitals" not only contributed to managing the sample companies' structural legitimacy but clearly also contributed in discharging their social contract with their constituents. These disclosures suggest that the sample companies were somewhat transparent with regard to their SER, which finds support in legitimacy theory (e.g. Böhling *et al.*, 2019; Islam and Deegan, 2008; Mahadeo *et al.*, 2011). In this regard, the disclosures appeared to have been used by the sample companies to highlight some level of congruence between their activities and the "norms of acceptable behaviour in the larger social system" (Dowling and Pfeffer, 1975, p. 122; Lindblom, 1994).

The visibility given to the "Employee category" in the number of disclosures reacting to the "tragedy at Marikana" could be considered unsurprising. This finding of the study corroborates Guthrie and Parker's (1989) finding that corporate disclosure policies are reactive to major social and environmental events. Murguia and Böhling (2013), in turn, underscore the importance that mining companies attach to stakeholder scrutiny, arguing that mining companies in Argentina increased their SER disclosures to lessen pressures from stakeholders for social and environmental responsibility information. Along these lines, we can expect that there would be some sort of correspondence between the peaks in the "Employee category" of disclosures in 2012, with the "tragedy at Marikana" serving as the "trigger" event. While this study provides some evidence in support of pragmatic legitimacy and moral legitimacy, i.e. 2012 recorded the peaks in the "Employee category" of disclosures, it clearly contrasts the desire of organisations to manage legitimacy with powerful and legitimacy-conferring stakeholders, such as employees and host communities *via* disclosures of social and environmental responsibility information (Böhling *et al.*, 2019; Mahadeo *et al.*, 2011). This is because our sample companies' number of disclosures for the subsequent years after the "tragedy at Marikana", i.e. from 2013 to 2014, surprisingly showed rapid decline in the "Employee category" of disclosures.

8. Conclusions, implications and areas for future research

Against a backdrop of an intense scrutiny of mining companies' social and environmental responsibility behaviour, this study examines the social and environmental responsibility indicators disclosed by three ICMM corporate mining members in their social and environmental responsibility reports from 2006 to 2014, after the implementation of the SDF in the mining sector in 2008. Organisational legitimacy is a complex phenomenon that involves various legitimation strategies (Suchman, 1995). A total of 830 out of a maximum of 1,620 social and environmental responsibility indicators, representing 51% (168 employees, 151 environmental, 145 community involvement, 128 energy, 127 governance and 111 general) were identified and examined in corporate SER. While some of the disclosure categories were relatively well disclosed in terms of the number of disclosures (e.g. various items of disclosure under "employee", "environment" and "community involvement"), there are other disclosure categories for which relatively low disclosures were provided (e.g. various items of disclosure under "energy", "governance" and "general").

The study showed that the sample companies relied on multiple strategies for managing pragmatic legitimacy and moral legitimacy *via* SER disclosures. Such practices raise questions regarding company-specific disclosure practices and their possible links to the quality/quantity of their disclosures. The study also showed that managers of organisations may opt for "cherry-picking" and/or capitalise on specific events for reporting purposes and refocus on company-specific issues of priority in their disclosures. While such practices may appear appropriate and/or timely to meet stakeholders' needs and interests, they may work against the development of comprehensive reports due to the multiple strategies adopted to manage pragmatic and moral legitimacy. Moreover, because of the ever-increasing societal expectations on mining companies and the empirical evidence that the social and environmental impact of mining activities is felt most in the host community and/or the natural environment in which mining companies operate in, it is not surprising that, collectively, the disclosure categories "Employee", "Environment" and "Community Involvement" were the three most widely disclosed "disclosure categories".

The findings from this research have both social and practical implications. With growing large-scale mining activity, potential social and environmental footprints are obviously far from being socially acceptable. Legitimacy-conferring and powerful stakeholders are likely to disapprove such mining activity and reconsider their support, which may threaten the survival of the mining company and also create a legitimacy threat for the whole mining. It is thus of utmost importance to understand the multiple strategies used by corporate managers in their attempt to secure legitimacy *via* stakeholder support. This research operationalises aspects of Suchman's (1995) typology of legitimacy in the context of SER by mining companies. This work will thus help future CSR researchers to operationalise Suchman's typology of legitimacy in other contexts. Managers of mining companies can better develop their disclosure contents by analysing the sources of their legitimacy. Depending on the countries and/or sites that a mining company operates, managers of subsidiaries should consider the social and environmental interests of their host governments as well as the parent company's policies in developing their own disclosure strategies. This study innovates by focusing on Suchman's (1995) typology of legitimacy framework to interpret SER in a sector characterised by potential social and environmental footprints – the mining sector.

This study has some limitations. First, we relied on self-reported corporate disclosures, as opposed to verifying the activities associated with the claims by the sample companies. A limitation of this study lies in the lack of field interviews which would have allowed us to triangulate our data sources and added qualitative depth to our findings and analysis. A second limitation is that as this study is based on a few illustrative case studies (i.e. using the theoretical sampling approach), it can only claim to be theoretically – not statistically – generalisable to other ICMM corporate mining members. A third limitation is that this study did not examine all types of legitimacy management strategies, limiting itself only to pragmatic legitimacy strategies (i.e. *exchange*, *influence* and *dispositional*) and moral legitimacy strategies (i.e. *consequential*, *procedural* and *structural*), which we consider could better explain the sample companies' disclosures. Future research could attempt to overcome the limitations identified in this study by exploring managers of mining companies' unpublished opinions about SER disclosures *via* in-depth interview study to add qualitative depth to this study's findings and analysis.

Note

1. The tragedy at Marikana

   On 10 August 2012, approximately 3,000 people, mostly Rock Drill Operators (RDOs) employed at Lonmin's Marikana operations in South Africa embarked on an unprotected (i.e. unlawful) work stoppage and protest. The demonstrations were caused by a dispute over RDO wages, with the strikers demanding that their monthly salary be increased to R12,500, contrary to the existing wage agreement. In the first two days of the strike, six employees who sought to report for work were injured, and on 12 August 2012, two security guards became the strike's first fatalities. In the ensuing week, eight people, including two police officers of the South African Police Service (SAPS), were killed. On the evening of 16 August 2012, following intense stand-off, a total of 34 people lost their lives in a clash between the SAPS and protestors. Of the 34 individuals, 31 were Lonmin employees, one employee of a contractor and two ex-Lonmin employees. A further 55 people were injured on 16 August 2012, bringing the total number of those injured during the strike to 78. During the weeks that followed, two lives were lost relating to the ongoing violence, both Lonmin employees, bringing the total death toll to 46. Following the announcement of the "Farlam Commission", the President of South Africa, Jacob Zuma, declared the week of 22–26 August 2012 a national week of mourning. Within weeks of the strike at Lonmin, employees at mining operations across all sectors in South Africa embarked on unprotected strike action, often accompanied by violence, demanding wage increases. The escalating strikes resulted in a crackdown by the government, after President Jacob Zuma explained that mines could not continue to be ungovernable. In an effort to curb intimidation and further acts of violence, officers of the SAPS seized weapons from striking workers and clamped down on unlawful gatherings. This was in the hope of encouraging the strikers to use formal channels of negotiations and to bring to an end the violence and intimidation that had characterised the protest. After several rounds of negotiations, a final agreement was signed on 18 September 2012, with a "return to work" clause agreed for Thursday, 20 September 2012. The agreement included the introduction of a Drilling Allowance for RDOs and RDOs' Assistants. On sealing the agreement, approximately, 80% of Lonmin's workforce returned to work by 20 September 2012, although normal-level operations were only resumed by 1 October 2012.

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Appendix

	Items of disclosure
Governance	
1	Providing commentary on behalf of the board to the effect that the board has commitment to and recognises the crucial role of CSR in the company
2	Providing commentary on behalf of the board to the effect that the board or a subcommittee of the board takes regular account of the significance of social and environmental matters to the business of the company
3	Providing commentary on behalf of the board regarding the practice of "good governance" throughout the company, e.g. explicit commitment by the board in the fight against conflict of interest, corruption, etc.
4	Providing commentary on behalf of the board to the effect that the governance system encompasses ethics, transparency and accountability
5	Providing commentary on behalf of the board regarding the quality of the company's key relationships with stakeholders (e.g. employees, host communities, suppliers, investors, regulators, customers, NGOs, etc.), e.g. steps taken by the company towards building and/or rebuilding trust with stakeholders groups
6	Providing commentary on behalf of the board regarding its commitment to establish and maintain appropriate ethical standards, e.g. implementation of a whistle-blowing policy, etc.
7	Providing commentary on behalf of the board to the effect that the company has commitment, policy or initiatives to promote corporate social responsibility related practices amongst all
8	Providing commentary on behalf of the board to the effect that the board has specific remuneration and/or audit committee or performance review board
9	Providing commentary on behalf of the board regarding the existence of a board committee in charge of "work environment" related governance
10	Providing commentary on behalf of the board regarding the existence of a board committee in charge of "employee" (occupational) health, safety, welfare and recreation related governance
Environment	
1	Pollution control in the conduct of the business operations; capital, operating and research and development expenditures for pollution abatement
2	Disclosing the company's concern about the water shortage, e.g. plans directed at addressing the water shortage
3	Discussing the company's efforts to reduce pollution from operations or damage to the environment, e.g. disclosing efforts to reduce GHG (carbon) emissions, discussing different operational interventions that have the potential to reduce GHG emissions
4	Prevention or repair of damage to the environment resulting from processing or natural resources, e.g. land reclamation or reforestation
5	Conservation of natural resources, e.g. recycling glass, metals, oil, water and paper
6	Using recycled materials, e.g. using recycled water, using recycled materials in the production process, etc.
7	Efficiently using materials resources in the manufacturing process
8	Supporting/maintaining environmental campaigns, e.g. certification [ISO 14001]
9	Receiving an award relating to the company's environmental programmes or policies
10	Preventing waste, e.g. switching to lower water quality grade in place of potable water used in the production process, migration of water from discontinued mines, etc.
Energy	
1	Conservation of energy in the conduct of business operations
2	Using energy more efficiently during the production process
3	Utilising waste materials for energy production and/or recovering waste energy in the production process
4	Disclosing energy savings resulting from current energy mix or energy savings resulting from planned (future) energy mix
5	Discussing the company's efforts to reduce energy consumption
6	Disclosing increased energy efficiency achieved in recent production

(*continued*)

Table A1. Social and environment-related performance/governance disclosure index

	Items of disclosure
7	Research or activities aimed at improving energy efficiency in the production process
8	Receiving an award for an energy conservation or optimisation programme
9	Disclosing the company's concern about the energy shortage, e.g. disclosing that mining is an energy-intensive business and what the energy shortage means to the company's current and future operations
10	Disclosing the company's energy policies/strategies, e.g. establishing energy plans or forecast
Employee	
1	Reducing or eliminating pollutants, irritants or hazards in the work environment, e.g. occupational health programmes
2	Promoting employee safety and physical or mental health, e.g. safety training programmes
3	Disclosing accident statistics, e.g. providing accident statistics in annual reports
4	Diversity in employment, e.g. recruiting/supporting racial minorities and/or women
5	Occupational health and safety management system certification, e.g. OHSAS 18001
6	Providing employee welfare programmes, e.g. providing advisory services towards managing employee financial debt burden
7	Receiving a safety award
8	Recognising and rewarding performance, e.g. recognising exceptional performance
9	Conducting research or programme to improve work safety
10	Providing training and development programmes for employees
Community involvement	
1	Donations of cash, products or employee services to support established community activities, events, organisations, education and the arts
2	Sponsoring public health projects and/or medical care and medical research in the broader community
3	Using external "expert panels" in assessing community intervention programmes, e.g. stakeholder consultations, surveys, forums, community consultants, etc.
4	Sponsoring educational conferences, seminars or art exhibits
5	Internship or part-time employment for students, e.g. providing internship or part-time jobs for students from *local* communities
6	Providing resettlement arrangements for communities affected by mining activities, e.g. providing housing and other infrastructure for mining-induced displacement and resettlement
7	Sponsoring/supporting local enterprise development programmes
8	Funding scholarship programmes, bursaries or activities for community, e.g. impartation of skills to community members
9	Other special community-related programmes or activities, opening the company's facilities to *local* communities or public, responding to community complaints, etc.
10	Supporting national pride/government-sponsored campaigns, e.g. procuring from lesser developed countries, procuring from disadvantaged groups based in *local* communities, etc.
General	
1	Disclosing/reporting to groups in society other than shareholders and employees, e.g. indicating stakeholders as "addressee" in the chief executive's letter
2	Using external "expert review panels" in appraising the contents of CSR reports, e.g. publishing comments/reports issued by external "expert review panels" upon completion of review activities
3	Disclosing/reporting and acknowledging, albeit, briefly, the past year's challenges and performance in relation to the current year's performance
4	Disclosing/reporting and forecasting, albeit, briefly, future expectations or projections in relation to current CSR performance
5	Providing prominence to CSR reporting practices, e.g. evidence of stand-alone CSR reports, etc.
6	Using well-known frameworks in compiling and reporting CSR performance, e.g. using the Global Reporting Initiative (GRI) framework, triple bottom line, etc.

Table A1.

(*continued*)

	Items of disclosure
7	Providing prominence to CSR reporting practices by focusing on special CSR-related theme(s) in the annual presentation of CSR performance, e.g. using annual theme(s) as the basis of reporting CSR performance, using reporting accolades, tag lines, etc.
8	Providing commentary on behalf of the board or management that the company endorses CSR initiatives that are specific to the mining industry, e.g. endorsing the extractive industries transparency initiatives (EITI), etc.
9	Providing commentary on behalf of the board or management that the CSR report reflects the company's overall sustainability policy, strategy or strategic planning
10	Providing commentary on behalf of the board or management that the CSR report relates the company's mission and values to its CSR performance and priorities

Source(s): Author's own work

Table A1.

Disclosure index item	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
1	0	0	0	0	0	0	0	0	0	0
2	2	1	1	3	3	2	1	2	2	17
3	1	1	2	1	1	1	0	0	0	7
4	3	2	2	3	3	3	3	3	3	25
5	0	0	0	0	0	0	0	0	0	0
6	3	3	2	2	2	1	1	1	2	17
7	0	0	0	0	0	0	0	0	0	0
8	2	3	3	2	3	3	3	3	3	25
9	3	3	3	3	3	3	3	3	3	27
10	1	1	1	1	1	1	1	1	1	9
Total governance	*15*	*14*	*14*	*15*	*16*	*14*	*12*	*13*	*14*	*127*
11	0	1	1	1	1	2	2	1	1	10
12	2	2	2	2	2	2	3	3	3	21
13	2	2	1	2	2	1	3	3	2	18
14	3	2	3	2	2	1	2	2	1	18
15	2	1	1	1	1	3	1	2	1	13
16	1	2	1	0	1	3	3	2	3	16
17	1	0	0	0	2	2	0	0	1	6
18	3	3	2	3	1	2	3	2	2	21
19	0	2	2	1	0	1	0	1	0	7
20	2	1	3	2	2	3	2	3	3	21
Total environment	*16*	*16*	*16*	*14*	*14*	*20*	*19*	*19*	*17*	*151*
21	1	0	0	1	1	2	1	2	1	9
22	0	3	2	2	2	3	2	2	1	17
23	1	1	0	0	0	1	1	0	1	5
24	1	3	1	3	2	2	3	3	2	20
25	2	0	2	0	0	1	2	1	1	9
26	1	0	1	2	0	1	0	0	1	6
27	1	1	2	1	3	2	2	3	2	17
28	0	0	0	1	0	0	0	1	0	2
29	3	2	3	3	3	2	3	2	3	24
30	2	2	3	2	1	1	2	3	3	19
Total energy	*12*	*12*	*14*	*15*	*12*	*15*	*16*	*17*	*15*	*128*
31	3	3	1	2	2	2	3	2	3	21
32	3	2	2	1	2	1	3	2	2	18

(*continued*)

Table A2.
Number of companies disclosing each item per year (maximum = 3)

Disclosure index item	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
33	3	3	2	3	3	3	3	3	3	26
34	2	2	2	2	1	3	3	3	3	21
35	1	1	2	1	1	1	2	1	1	11
36	3	2	2	2	3	2	3	2	3	22
37	1	0	1	0	1	0	1	1	1	6
38	1	1	1	1	1	1	1	0	0	7
39	0	3	2	2	2	1	2	2	2	16
40	2	2	3	2	1	2	3	3	2	20
Total employees	*19*	*19*	*18*	*16*	*17*	*16*	*24*	*19*	*20*	*168*
41	3	3	3	3	3	3	3	3	3	27
42	3	2	1	3	1	1	2	3	3	19
43	1	1	1	2	2	1	2	2	1	13
44	0	0	0	0	0	0	0	0	0	0
45	1	0	0	0	0	0	2	2	2	7
46	2	2	2	1	0	0	0	1	2	10
47	3	3	3	2	2	2	3	3	3	24
48	2	2	2	2	0	1	2	2	2	15
49	2	0	2	1	2	1	1	2	2	13
50	0	2	1	1	2	2	3	3	3	17
Total community	*17*	*15*	*15*	*15*	*12*	*11*	*18*	*21*	*21*	*145*
51	0	0	0	0	0	0	0	1	1	2
52	0	0	0	0	1	1	2	2	0	6
53	1	0	0	2	1	1	2	1	1	9
54	1	2	3	3	3	2	2	2	2	20
55	3	3	3	3	3	3	3	3	3	27
56	2	2	2	2	1	2	2	0	1	14
57	1	2	2	3	3	3	2	2	3	21
58	0	1	0	0	0	0	1	0	0	2
59	0	1	1	2	0	0	0	0	0	4
60	0	1	1	0	1	1	1	1	0	6
Total general	*8*	*12*	*12*	*15*	*13*	*13*	*15*	*12*	*11*	*111*
Grand total (Year by year)	*87*	*88*	*89*	*90*	*84*	*89*	*104*	*101*	*98*	*830*

Table A2.

Source(s): Author's own work

About the author

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