



‘Walking the talk’: Exploring heterogeneity in gender diversity performance in mining

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ABSTRACT

Although gender diversity has been an increasingly important criterion for investors screening for environmental, social and governance metrics, it has long been a challenge for the mining sector, given its strong legacy and reverence for masculine identity. Mining has consistently continued to significantly lag other industries and cutting across all levels of employment. Moreover, there is reported evidence of notable variations amongst different regions in the matter of gender diversity adoption. We investigate these issues through a qualitative empirical study of self-reported narratives of the 24 largest mining companies spread across eight regions. We find that stronger gender diversity performance is invariably evidenced in a higher degree of coherence between articulated diversity aspirations and specific diversity initiatives. While this interlinkage is more likely symptomatic than causal, we argue that a commitment to stated position drives strategic action and in turn stronger performance. On the contrary, lack of coherence between aspirations and action is likely reflective of a superficial approach to diversity management that in turn tends to derail the diversity agenda.

1. Introduction

Contributing 6.9% of the world’s gross domestic product (GDP) at USD 5.9 trillion in 2019 (Yushou, 2019), the global mining industry is the mainstay of several developing economies by bringing in much needed investments, high-wage employment, exports and government revenues to the resource rich regions of the world (Constable, 2020). UNCTAD (2020) considers mining to be the most international industry, as more than half of all mining projects are sponsored by foreign companies that occupy a pre-eminent position among globalized firms in terms of the proportion of foreign assets owned and operated by them. However, the performance of the mining industry with regard to gender diversity does not hold up to the global stature it enjoys; women who constitute nearly 50% of the world’s population (World Bank, 2021) are largely left out of the economic benefits from employment in mining.

Gender diversity has long been a challenge for the mining sector despite having increasingly caught the eye of investors screening for environmental, social and governance metrics (Kuykendall and Darden, 2022). Male dominated project-based industries such as mining are characterized by extreme levels of occupational gender segregation with a largely male dominated workforce and limited opportunities for female career progression (Baker et al., 2019; French and Strachan, 2015).

The mining industry’s long standing and disproportionate reverence for masculine identity has been one of the factors reinforcing this system over time (Mackenzie, 2019). However, rising fluctuations in commodity prices and the increasing incorporation of digital technologies in operations are forcing mining firms to transition from a “traditional, command-and-control” (hierarchical) and masculine-centric leadership model to a “transformational leadership” (Mackenzie, 2019) model that emphasizes data driven decision making, fostering a sense of community, trust, connectivity and flexibility to compete - thus making a strong case for gender diversity (Mackenzie, 2019).

Yet, according to Price Waterhouse Coopers (2013), the top 100 global companies in the mining sector have the lowest average share of female board representation (7.59%) when compared to companies in other major sectors such as consumer goods (17.35%), consumer services (16.36%), financial services (14.08%), telecommunications (13.35%) technology (11.43%) and oil & gas (8.29%). The disparity appears to extend across all career levels as mining companies are reported to have a lower representation of women compared to the same occupation (level) in other industries, irrespective of whether the occupation has been historically associated with a higher or lower female representation (Osler, 2021). S&P Global reports that despite the launch of several diversity initiatives in mining, women constitute only

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14.0% of executive ranks, 10.3% of the industry's board positions and 11.1% of the C-suite executive roles in 2022 (The term "C-suite" here refers to corporate executive positions such as chief executive officer, chief financial officer and chief operating officer) (Kuykendall and Darden, 2022). The lowest proportion of women at the executive (12.9%) and board (9.0%) levels were found in companies in the Asia-Pacific region, while African mining companies appeared to have the highest proportion of women at the executive (21.0%), board (24.7%) and C-suite (20.0%) levels, which could be attributed to regulatory diversity requirements (Kuykendall and Darden, 2022). In Europe as well as in U.S. and Canada, women occupy about 12.0% and 10.4% of C-suite positions respectively (Kuykendall and Darden, 2022). Further research is required to understand whether such regional variations are accompanied by variations in the adoption of gender diversity initiatives in mining.

Moreover, the percentage of women executives in the mining sector has largely remained static over time. The proportion of women executive officers in mining companies listed in the Toronto Stock Exchange (TSX) rose only marginally from 13% in 2015 to 15% in 2021 whereas the corresponding figures for all companies listed in TSX ranged from 15% in 2015 to 18% in 2021 (Osler, 2021). This prompts the question as to why gender diversity initiatives fail to deliver results in mining.

While there is ample literature on gender diversity management (GDM) practices, studies pertaining to gender diversity initiatives in the mining industry are still at a nascent stage. From a theoretical perspective, scholars have used signaling theory to determine the relationship between gender equality initiatives and female representation in the Australian mining industry and contingency theory to assess the impact of the presence of women in top management teams on this relationship (Baker et al., 2019). From an empirical perspective, Kansake et al. (2021) have comprehensively identified and summarized the challenges facing female miners in order to help design initiatives to address their low representation. As pointed out by Kansake et al. (2021), various dynamic factors, often with a location/country specific character, contribute to poor female representation in mining. In the context of large-scale industrial mining, these widely documented factors include: lower levels of female education, restrictive social norms, gender stereotypes, poor accessibility to childcare and changing facilities at mining sites (Rickard et al., 2017), moral conviction against mining development and the low trust placed by women on mining firms (Measham and Zhang, 2019). Restrictive regulations and cultural norms (Fernandez-Stark et al., 2019), idealized gender roles (Pugliese, 2020), lack of career progression coupled with gender discrimination and wage disparity owing to unsupportive immediate supervisors and unfavourable company policies (Kaggwa, 2020) are other contributing factors. Further, legal discrimination in the form of unfavourable labour legislation, lack of safety gear, mining equipment and sanitary facilities designed for women workers (Perks and Schulz, 2020), hazardous work conditions, associated risk and security concerns, remote work-sites, gender-based violence, harassment and gender bias (Kansake et al., 2021) also contribute towards poor female representation. At an industry level, scholars have shed light on how diversity management is received by the mining industry (Fältholm and Norberg, 2017), established a business case for gender equality in mining (Mayes and Pini, 2014) that may not address the normative structures determining power and resource allocation (Johansson and Ringblom, 2017) and also investigated how technology may be harnessed to enhance female participation in mining (Fernandez-Stark et al., 2019).

However, there is little research that offers potential explanations as to (i) why gender diversity initiatives in the mining industry may vary across different regions and (ii) why such initiatives seem to fail to deliver the desired outcomes in the mining industry. This paper attempts to address the gap by delving into the gender diversity initiatives adopted by 24 of the top 50 mining companies of the world (in terms of market capitalization as of March 2021) that are headquartered across eight regions which jointly contribute 93.2% of value share (Mining.com Editor, 2021).

Yang and Konrad (2011) have used institutional theory (DiMaggio and Powell, 1983) and resource-based view (Barney, 1991) to arrive at a model explaining why firms may adopt diversity management practices and have called for the examination of diversity practices within industry contexts. Using a textual qualitative approach to analyze the gender diversity initiatives reported by 24 mining companies in their sustainability reports, this study attempts to understand whether Yang and Konrad's (2011) model is applicable to the mining industry context. Our findings lend credence to the simple but powerful notion underlying the "knowing-doing gap" (Pfeffer and Sutton, 2000). Mining firms whose diversity practices reveal discernible interlinkages with their articulated positions on diversity, emerge as more likely to conform to Yang and Konrad's (2011) model, whereas mining companies deploying diversity practices with little evident connect to the aspirations articulated in their diversity statements, fall short on gender diversity performance. We argue that the latter are more likely to adopt practices that are largely superficial in nature, aimed solely at meeting regulatory pressures and gaining legitimacy by being seen to be adhering to social and professional norms.

The rest of this paper is structured as follows: The first section discusses the background on diversity initiatives and the criteria used for categorization of diversity initiatives found in the sustainability reports. The next section focusses on the data and methodology used for analysis. The results section discusses the findings in detail. The discussion section integrates the findings with the existing theoretical perspectives. The paper concludes by highlighting the potential implications of the findings for the study of gender diversity initiatives in general and for the mining industry in particular along with the way forward.

2. Conceptual background

"Diversity management practices" (Leslie, 2019) or "diversity initiatives" (Leslie, 2019) (including equal employment opportunity (EEO) and affirmative action (AA) programmes) have been variously defined "as a set of formalized practices" (Leslie, 2019) that organizations develop and implement to generate positive outcomes such as improved workplace experiences for disadvantaged groups including ethnic/racial minorities and women as well as to "manage diversity effectively among all organizational stakeholders" (Leslie, 2019; Yang and Konrad, 2011). This paper restricts itself to studying the diversity initiatives aimed at improving the workplace experiences and career outcomes for women in mining. Gender diversity initiatives are intended towards achieving the following goals: (i) increasing representation of targets (in this case women) (Leslie, 2019) (ii) reducing gaps in career success between targets and nontargets (in this case between women and men) (Leslie, 2019) (iii) increasing inclusion of targets (i.e.: perceptions of organizational justice, being well-integrated and valued within the organization) (Leslie, 2019; Yang and Konrad, 2011; Kossek and Pichler, 2006) (iv) reducing discrimination (Yang and Konrad, 2011; Kossek and Pichler, 2006) and (v) improving financial competitiveness (Yang and Konrad, 2011; Kossek and Pichler, 2006).

While Yang and Konrad (2011) have offered a research model outlining the antecedents and outcomes of diversity management practices from institutional theory and resource-based view perspectives, studies that have examined the antecedents and consequences of gender diversity initiatives in the mining industry are scarce. Kansake et al. (2021) point out that gender diversity initiatives in mining should be designed to address the key challenges faced by female miners including discrimination, poor work-life balance, patriarchal prejudices and gender biased stereotypes, limited support for career growth, poor confidence, harassment and lack of female role models in leadership. In the Australian context, Baker et al. (2019) argue - using signaling theory - that gender equality initiatives in mining such as gender focused recruitment, retention and promotion have little to no impact on female representation as compared to work-life initiatives (e.g.: employer funded parental leave, flexible work arrangements), as the former do not

send effective signals to prospective employees. Although the idea that diversity helps increase innovation and creativity drives the case for increasing female representation in organizations, Fältholm and Norberg (2017) show that in mining, women are not being expected to contribute on the innovation front despite the adoption of diversity initiatives. Johansson and Ringblom (2017) argue that the business case for gender equality initiatives in mining do not address the underlying structural inequalities. However, there is a growing need for studies that offer a theoretical explanation on why gender diversity initiatives in the mining industry may vary across different regions and why such initiatives often fail to deliver the desired results.

Based on institutional theory (DiMaggio and Powell, 1983), organizations adopt diversity initiatives owing to (i) coercive institutional pressures from regulatory bodies imposing legislations and quotas (ii) normative pressures from society and (iii) mimetic institutional pressures forcing imitation of initiatives adopted by competitors in order to gain legitimacy (Manoharan et al., 2021; Yang and Konrad, 2011). Given the highly localized nature of mining operations, these institutional pressures vary based on the geographical contexts in which the business operates. Thus, institutional theory may offer an explanation for the variation in gender diversity initiatives adopted by mining companies belonging to different regions as well as homogeneity of diversity initiatives among mining firms belonging to the same region.

Diversity and inclusion statements are used by companies to portray an ethical image with respect to how well they manage diversity and guard against discrimination (Singh and Point, 2006). While Leslie (2019) has categorized diversity statements as a resource practice intended to facilitate organizational progress towards diversity goals, such statements also play a pivotal role in “socially constructing how diversity should be regarded in the company by minority and majority groups, as well as indicating corporate values to external stakeholders” (Singh and Point, 2006). Diversity statements may position the notion of gender diversity, either as a liability in need of protection or as a source of competitive advantage (Singh and Point, 2006). Research is yet to analyze the content of diversity statements issued by mining companies, which this paper attempts to do.

Based on the resource-based view (Barney, 1991) which accounts for firm performance heterogeneity, a diverse workforce constitutes a valuable, rare and inimitable resource that serves to improve the organization’s competitiveness (Richard et al., 2013). Gender diversity initiatives intended to bring in competitive advantage are primarily framed as a business case for gender equality (Johansson and Ringblom, 2017). The business case logic associates improved gender equality with increased profitability and competitiveness by building a positive public image of the organization that helps attract skilled employees, fosters

creativity and innovation and improves the work environment (Johansson and Ringblom, 2017). Although the business case logic depoliticizes gender and does not directly challenge the male norms determining power relations and resource allocation within organizations (Johansson and Ringblom, 2017), Yang and Konrad (2011) argue that when organizations perceive the relevance of diversity to firm strategy, they attempt to acquire and exploit this valuable resource by adopting diversity practices in a more comprehensive manner. Exploring the relationship between firm strategy and diversity management may help establish why GDM practices differ across firms (Yang and Konrad, 2011). Thus, strong interlinkages of an organization’s diversity statements with its GDM practices might indicate the substantial nature of its efforts to manage gender diversity. Conversely, weak linkages between an organization’s diversity statements with its GDM practices may indicate the superficial nature of its efforts at GDM.

The diversity initiatives classification scheme provided by Leslie (2019) is a useful framework for assessing the superficial or substantial nature of GDM initiatives as it comprehensively covers the initiatives that target the potential filtering points faced by women at each of the basic career stages and transitions (Bartol, 1981) in the organization. Leslie (2019) has classified diversity initiatives into three broad categories (as shown in Table 1): (i) non-discrimination practices – merit-based decision making, diversity training; (ii) resource practices – preferential treatment, targeted recruitment, diversity statements, targeted training, forming diversity networking groups and diversity mentoring programs as well as (iii) accountability practices – diversity plans, diversity performance evaluations, diversity positions and grievance systems.

Several points of alignment emerge between Leslie’s (2019) diversity initiatives classification framework and the three dimensions of Johansson and Ringblom’s (2017) business case for gender equality. Resource practices such as targeted recruitment, issuing diversity statements and forming diversity networking groups as well as accountability practices such as diversity plans and diversity positions, serve to create a new gender equality-friendly image of the organization, aligning themselves with the “marketing as gender equality” (Johansson and Ringblom, 2017) dimension of the business case logic. While resource practices serve to build a gender-equality friendly image of the organization, they do little to uncover the underlying masculine norms, as resource practices aim to address the unequal distribution of power in favour of men, by helping increase the number of women at various levels within the organization. A combination of non-discrimination practices such as diversity training (that serves to expose and prevent gender bias) and accountability practices such as diversity performance evaluations and grievance systems help address the “uncovering male

Table 1
Diversity initiatives core-categories and sub-categories (adapted from Leslie (2019)).

Core Category	Non-discrimination Practices	Resource Practices	Accountability Practices
Sub Category	Merit-based decision making Diversity training	Preferential treatment Targeted recruitment Issuing diversity statements Targeted training Forming diversity networking groups Diversity mentoring programs	Diversity plans Diversity performance evaluations Diversity positions Grievance systems

norms” (Johansson and Ringblom, 2017) dimension of the business case logic. Non-discrimination practices such as merit based decision-making view competence as gender neutral, and in alignment with the “gender equality as a depoliticized value” (Johansson and Ringblom, 2017) dimension of the business case logic.

While non-discrimination and resource practices focus on the means to achieve progress towards the diversity goals, accountability practices focus on the end of diversity goal progress (Leslie, 2019). This paper utilizes the above categorization as a framework to explore the nature of gender diversity initiatives currently deployed by 24 leading mining companies.

3. Methodology

A textual qualitative approach was considered appropriate for evaluating the content of (i) diversity statements (ii) GDM initiatives and (iii) the nature of the interlinkage between the diversity statement and the GDM initiatives (Manoharan et al., 2021) adopted by mining firms. Qualitative research has quite a few advantages in terms of providing a holistic view of the phenomena under investigation (Bogdan et al., 1975; Patton, 1980), offering flexibility with respect to data collection, analysis and interpretation (Matveev, 2002) as well as being useful for exploratory and explanatory purposes (Marshall and Rossman, 1995).

Leading mining companies provide fairly detailed sustainability reports to address investor concerns about the high environmental and social costs associated with mining in comparison to other industries. In general, such companies tend to have operations across multiple geographies and hence can be assumed to pay more attention to creating and sustaining a brand image of caring about sustainability amongst their existing and potential investors and other stakeholders. Our methodology is heuristically driven. Since the primary focus of this paper was on the regional variation among gender diversity initiatives in the mining industry, we began by identifying the countries in which the top 50 mining companies in terms of market capitalization - as sourced from Mining.com (Mining.com Editor, 2021) - are headquartered. The Mining.com top 50 classification of mining companies is based on data from varied sources viz. Mining.com, Miningintelligence, Morningstar, GoogleFinance, company reports as well as trading data from the primary-listed stock exchange (Mining.com Editor, 2021). Mining.com ranks the top 50 companies on the basis of market capitalization where “market capitalization is calculated at primary exchange, where applicable, from total shares outstanding, not only free-floating shares” (Mining.com Editor, 2021). The ranking list excludes unlisted and state-owned enterprises (e.g.: “a number of entities in China and developing countries around the world” (Mining.com Editor, 2021)) after taking “levels of operational or strategic involvement and size of shareholding” (Mining.com Editor, 2021) into consideration. Further, a company’s headquarters (HQ) is considered to be its operational headquarters wherever applicable except in the case of Antofagasta. Antofagasta’s HQ is listed as London in Mining.com owing to its stocks being listed in London since the 1800s, although most of the company’s operations are in Chile. This leads to the company adopting regulations applicable in both the United Kingdom (UK) as well as in Chile.

Ordering the sample revealed a very high concentration in certain geographies, such that 42 of the top 50 mining companies were headquartered in nine countries, collectively accounting for 93.2% of the value share as on March 31, 2021 (Mining.com Editor, 2021). The nine

countries were: Australia (30.1%, 5), United States of America (USA) (13%, 6), Canada (12.5%, 8), China (8.9%, 8), Russia (7.8%, 4), Brazil (6.7%, 2) South Africa (6.1%, 6), United Kingdom (UK) (5%, 2) and Switzerland (3.1%, 1) (Mining.com Editor, 2021). The figures in brackets above indicate the combined value share in percentage, followed by the number of companies headquartered in each country. For example: five of the top 50 mining companies are headquartered in Australia with a combined value share of 30.1%. Owing to the considerable variation in the number of mining companies headquartered in each country as well as the need to ensure that the sample is unbiased and spread in a reasonably uniform manner across geographies, a purposive sample of the top three companies was chosen from each country. We adopted this approach considering the primary objective of examining regional variation, reasoning that adding more firms from each country may not offer additional significant insights at this stage. Moreover, given the exploratory nature of this study, a sample size of three from each country allowed for a sufficiently in-depth analysis of the gender diversity initiatives of the companies headquartered therein. Since the sample from UK and Switzerland were found to be individually insufficient, we decided to combine companies from these countries to represent Europe.

In general, higher ranked companies (with greater market capitalization value) were assumed to be more likely to adopt standardized organization-wide policies and practices (such as gender diversity initiatives) - given their size and extent of operations - when compared to lower ranked companies. Accordingly, it was decided to include only those firms in the sample that had a market capitalization value of at least 10 billion USD, as of March 2021. Among the two Brazilian firms figuring in the top 50, only one (Vale) had a market capitalization greater than 10 billion USD. Hence in addition to Vale from Brazil, we included Grupo México (parent company of Southern Copper, with a market capitalization of 52.47 billion USD) from Mexico and SQM (with a market capitalization of 13.97 billion USD) from Chile to represent Latin America. Some higher ranked companies from China had to be excluded from the analysis owing to non-availability of their sustainability reports or annual reports for the year 2020 (e.g.: Shaanxi Coal (rank: 20) and China Molybdenum (rank: 30)). In lieu of these, the next highest ranked companies from the same country (e.g.: Shandong Gold Mining (rank: 24) and Jiangxi Copper (rank: 33)) were included in the analysis.

The final sample included 24 companies, cumulatively accounting for 78% value share (in terms of market capitalization as of March 2021) and headquartered in 11 countries (Mining.com Editor, 2021): three each from Australia, Canada, China, Russia, South Africa and the USA, two from the UK and one from Switzerland (together representing Europe) and one each from the Latin American countries: Brazil, Chile and Mexico. As shown in Table 2, data on diversity statements and GDM practices of these companies were gathered from their most recent sustainability reports or relevant sections of the annual report (for the year 2020) availed from their respective websites.

Since the textual analysis was solely based on the identified reports which contained only publicly available data, no notable ethical considerations arose during the course of this study. Thematic analysis was chosen as the appropriate method for analyzing the textual data as it is flexible and can adequately summarize the relevant features of a large body of data “and/or offer a ‘thick description’ of the data set” (Braun and Clarke, 2006). Initially, a string search for the words “women”, “female”, “gender”, “diversity” and “inclusion” was conducted on the

downloaded reports of each of the chosen firms to identify the relevant data set and to undertake an initial word count analysis. This enabled a comparison of the frequency of the occurrence of the search words in the reports of different companies. Two assumptions underly the word count analysis: (1) sections of the reports that contain words such as “women”, “female”, “gender”, “diversity” and “inclusion” are assumed to contain comprehensive descriptions of the gender diversity initiatives adopted by the respective firms, which can then be subjected to detailed textual qualitative analysis (2) a higher occurrence of the search words can be equated with a greater degree of occurrence of conversations pertaining to gender diversity and inclusion i.e.: sustainability reports with more frequent usage of the search words are more likely to discuss gender diversity initiatives than those with less frequent usage. The results of

the word count analysis indicated clear regional and country-level differences, with respect to the occurrence of the search words and the corresponding reported gender diversity and inclusion initiatives, providing grounds for further textual analysis. Subsequently, the relevant sections were read in detail and diversity statements as well as GDM initiatives that have been reported by the firms were identified. An inductive approach was followed for the analysis of diversity statements allowing the data to direct the process (Manoharan et al., 2021). A deductive approach was followed in the analysis of GDM practices allowing theory to direct the process (Manoharan et al., 2021). Each GDM initiative identified was classified as falling into one of the three categories and corresponding sub-categories of diversity initiatives as adapted from Leslie (2019) (Refer Table 1). Although, Leslie (2019) has

Table 2

List of countries/regions and mining firms considered for analysis.

Sl. No:	Country	Company	HQ	Operations	Market cap end-Mar 2021 (\$bn)	Mining.com Ranking (Mar 2021)	Data Source	Year Published	Scope of Review
1	Australia	BHP Group	Melbourne	Diversified	173.27	1	Annual Report	2020	Diversity & Inclusion
2	Australia	Rio Tinto	Melbourne	Diversified	135.53	2	Annual Report	2020	Diversity & Inclusion
3	Australia	Fortescue Metals	Perth	Iron Ore	46.53	10	Sustainability Report	2020	Diversity & Inclusion
4	Canada	Barrick Gold	Toronto	Gold	35.23	13	Sustainability Report	2020	Diversity & Inclusion
5	Canada	Nutrien	Saskatoon	Potash	30.63	14	ESG Report	2020	Diversity & Inclusion
6	Canada	Franco-Nevada	Toronto	Royalty	23.88	15	ESG Report	2020	Diversity & Inclusion
7	China	Zijin Mining	Xiamen	Diversified	37.14	12	ESG Report	2020	Diversity & Inclusion
8	China	Shandong Gold Mining	Jinan	Gold	14.07	24	Annual Report	2020	Diversity & Inclusion
9	China	Jiangxi Copper	Guixi City	Copper	11.65	33	Annual Report	2020	Diversity & Inclusion
10	Russia	Norilsk Nickel	Moscow	Diversified	49.33	7	Sustainability Report	2020	Diversity & Inclusion
11	Russia	Polyus	Moscow	Gold	20.26	17	Sustainability Report	2020	Diversity & Inclusion
12	Russia	Alrosa	Mirny	Diamond	10.05	40	Sustainability Report	2020	Diversity & Inclusion
13	South Africa	Anglo American Platinum	Johannesburg	PGM	39.04	11	ESG Report	2020	Diversity & Inclusion
14	South Africa	Impala Platinum (Implats)	Johannesburg	PGM	15.6	22	ESG Report	2020	Diversity & Inclusion
15	South Africa	Kumba Iron Ore	Johannesburg	PGM	13.47	27	Sustainability Report	2020	Diversity & Inclusion
16	USA	Newmont Goldcorp	Denver	Gold	48.22	8	Sustainability Report	2020	Diversity & Inclusion
17	USA	Freeport-McMoRan	Phoenix	Copper	48.01	9	Sustainability Report	2020	Diversity & Inclusion
18	USA	Albemarle	Charlotte	Lithium	15.61	21	Sustainability Report	2020	Diversity & Inclusion
19	UK (Europe)	Anglo American	London	Diversified	53.38	4	Sustainability Report	2020	Diversity & Inclusion
20	UK (Europe)	Antofagasta	London	Copper	22.95	16	Annual Report	2020	Diversity & Inclusion
21	Switzerland (Europe)	Glencore	Baar	Diversified	52.18	6	Sustainability Report	2020	Diversity & Inclusion
22	Brazil (Latin America)	Vale	Rio de Janeiro	Diversified	89.23	3	Integrated Report	2020	Diversity & Inclusion
23	Chile (Latin America)	SQM	Santiago	Lithium	13.97	26	Sustainability Report	2020	Diversity & Inclusion
24	Mexico (Latin America)	Grupo México (Southern Copper)	Mexico City	Copper	52.47	5	Annual Report	2020	Diversity & Inclusion

Source: Mining.com (<https://www.mining.com/value-of-top-50-mining-companies-surge-600-billion-from-covid-lows/>)

categorized issuing diversity statements as a resource practice, this paper devotes an entire sub-section to diversity statements to differentiate between the firms that position gender diversity as a liability in need of protection and those that view gender diversity as a source of competitive advantage. MS Excel was used for coding. The results were then aggregated to arrive at relevant findings whose implications are subsequently discussed to draw appropriate conclusions.

4. Results

The word count analysis for the words “women”, “female”, “gender”, “diversity” (excluding “biodiversity”) and “inclusion” in the downloaded reports of each of the chosen firms yielded the results shown in Table 3 that indicates strong regional/country level differences. Australian firms lead the list in terms of the total number of times the above-mentioned key words appear in their annual/sustainability reports, followed by firms from South Africa. Notably firms from Russia and China rank the lowest in this regard. The high figures for South African firms are in line with S&P Global’s finding that African mining companies appeared to have the highest proportion of women at C-suite, Board and Executive levels (Kuykendall and Darden, 2022) possibly associating increased conversation on gender diversity and inclusion with higher female representation. The word count results for Latin American firms are cumulatively close to that of the firms from USA and far higher than that of the Canadian firms (Refer Table 3) (despite the fact that figures for Grupo México includes figures from its non-mining divisions such as transportation and infrastructure as well) which mirrors the S&P Global’s findings with respect to female representation in these regions. The results indicate that there is a likely relationship between increased conversation around gender diversity and inclusion, and female representation in mining firms, which may vary with geographical context, and is worth exploring. Australian firms Fortescue Metals has mentioned the keywords “women” and “female” whereas Rio Tinto has mentioned the keyword “diversity” the maximum number of times in their sustainability reports among the sample.

The numbers show that conversations around gender diversity and inclusion are yet to attract sufficient interest among investors in mining firms from Russia and China, whereas investors in Australia, South Africa and UK based mining firms are increasingly paying attention to these issues. Further, firms registered in the UK are required to periodically file gender pay gap reports (Government Equalities Office, 2020), which make the firms more conscious of gender pay gap and related discrimination in their organizations and hence more accountable to address the same. Interestingly only two out of the 24 firms in the list are headed by women CEOs, Fortescue Metals (Australia) headed by CEO Elizabeth Gaines and Anglo-American Platinum (South Africa) headed by Natascha Viljoen, but both rank among the top five firms with respect to giving prominence to diversity and inclusion related themes in their sustainability/annual reports, as evident from the word count. Hence, whether mining companies headed by women CEOs pay additional attention to gender diversity in their organizations, is a question worth exploring in the future. We revisit this question in greater detail in the discussion section.

Further, gender diversity initiatives vary in terms of intent, organizational requirements and implementation complexity. Owing to this varied nature of gender diversity initiatives and the operational presence of the chosen multinational firms in countries with different institutional environments, not all initiatives were found to lend themselves equally to uniform adoption, across company-wide operations. While non-discrimination practices, such as merit-based decision making and diversity training, are stated to be adopted uniformly across company-wide operations in different countries, institutional forces in the form of country level regulations, regional/local community involvement coupled with the level of technology implementation, appear to determine the extent to which resource practices such as targeted recruitment are adopted across different country operations within the same company. Accountability practices such as diversity plans, diversity positions and performance evaluations appear to be uniformly adopted across company-wide operations in the few companies that espouse them. Yet, adoption of accountability initiatives

Table 3
Firms listed as per wordcount of key terms as they appear in their sustainability reports.

Sl. No:	Company	Country	Women/Female	Gender	Diversity	Inclusion	Total
1	Fortescue Metals	Australia	138	18	46	8	210
2	BHP Group	Australia	52	44	58	41	195
3	Rio Tinto	Australia	69	30	64	29	192
4	Anglo American Platinum	South Africa	71	40	29	6	146
5	Kumba Iron Ore	South Africa	84	25	18	16	143
6	Impala Platinum (Implats)	South Africa	17	26	6	22	71
7	Antofagasta	UK (Europe)	69	19	62	45	195
8	Anglo American	UK (Europe)	59	25	23	16	123
9	Glencore	Switzerland (Europe)	16	5	14	5	40
10	Grupo México (Southern Copper)	Mexico (Latin America)	55	32	34	25	146
11	SQM	Chile (Latin America)	77	14	16	2	109
12	Vale	Brazil (Latin America)	20	10	30	26	86
13	Newmont Goldcorp	USA	41	38	34	26	139
14	Freeport-McMoRan	USA	43	15	36	29	123
15	Albemarle	USA	23	8	38	24	93
16	Franco-Nevada	Canada	19	5	37	11	72
17	Barrick Gold	Canada	34	12	17	7	70
18	Nutrien	Canada	13	5	30	13	61
19	Norilsk Nickel	Russia	35	18	0	5	58
20	Alrosa	Russia	20	14	7	3	44
21	Polyus	Russia	13	13	15	0	41
22	Zijin Mining	China	18	13	7	3	41
23	Shandong Gold Mining	China	5	5	10	3	23
24	Jiangxi Copper	China	0	1	11	0	12

such as grievance redressal system were found to gain prominence in operations in countries with a heightened prevalence of Gender Based Violence, such as South Africa. However, more studies are needed to determine the factors that contribute to variation in country level implementation of different GDM initiatives within multinational mining companies. The diversity statements and the GDM initiatives categorized according to the framework provided by Leslie (2019), as adopted by firms in each country/region are discussed below.

4.1. Diversity statements

The dominant themes in the diversity statements as grouped by country/region are as shown in Table 4. Certain themes such as “equal opportunity”, “safe and inclusive workplaces” and “increasing female representation” were common in the diversity statements across regions. Addressing Gender Based Violence was a theme found specific to South African firms. Board diversity targets were a prominent feature of Canadian mining firms as well as European (UK) mining firms. The diversity statements of Chinese and Russian firms were more generic in comparison to other regions as can be seen in Table 4.

However, Australian as well as South African firms were found to actively seek external recognition either by signing gender equality pacts with international organizations (e.g.: BHP group signed the CEO Statement of Support for the United Nations (UN) Women’s

Empowerment Principles in FY2020, Fortescue Metals signed the global Parity Pledge an initiative of Parity.org requiring companies to commit to interviewing at least one qualified female candidate for every executive position) or participating in various international diversity benchmarking assessments (e.g.: Fortescue Metals participated in the SAM Corporate Sustainability Assessment (formerly Dow Jones Sustainability Index), Bloomberg Gender-Equality Index and Workplace Gender Equality Agency (WGEA). South African firms Anglo-American Platinum and Impala Platinum maintained their inclusion in the Bloomberg Gender-Equality Index for 2021.) as shown in Table 5.

4.2. Non-discrimination practices

4.2.1. Merit based decision making

Seventeen (17) out of the 24 firms (70.83%) in the sample report adopting some form of merit-based decision making when it comes to performance assessment and pay practices, by taking steps to eradicate bias and to enhance the transparency and robustness in decision making. Companies reporting the adoption of merit-based decision-making practices appeared to implement them uniformly across their different operations. Australian firms BHP and Fortescue Metals report conducting annual benchmarking assessments/review of the gender pay gap to assess the changes required to performance assessment processes in their firms. Rio Tinto tracks both “equal pay gap” (Rio Tinto, 2020) –

Table 4
Diversity statements – Dominant themes by country/region and company.

Sl. No:	Country	Company	Dominant Theme in Diversity Statements
1	Australia	BHP Group	Signing of gender diversity pacts with external organizations of repute
2	Australia	Rio Tinto	Fostering inclusion and embracing diversity Increasing female representation at all levels
3	Australia	Fortescue Metals	Signing of gender diversity pacts with external organizations of repute Participation in international benchmarking assessments
4	Canada	Barrick Gold	Equal opportunity employment
5	Canada	Nutrien	Promoting gender diversity on boards through targets
6	Canada	Franco-Nevada	Promoting gender diversity on boards through targets Building safe, inclusive and accessible workplaces
7	China	Zijin Mining	Equal employment opportunity and diversity
8	China	Shandong Gold Mining	Equal employment opportunity and diversity
9	China	Jiangxi Copper	Equal employment opportunity and diversity
10	Russia	Norilsk Nickel	Equal opportunities, working conditions, benefits
11	Russia	Polyus	Diversity benefits business performance, board level diversity
12	Russia	Alrosa	Equal opportunities, working conditions, benefits
13	South Africa	Anglo American Platinum	Equality, non-discrimination, gender mainstreaming Participation in international benchmarking assessments Promoting safe, respectful and inclusive work environments Improve female representation across levels Gender Based Violence
14	South Africa	Impala Platinum (Implats)	Participation in international benchmarking assessments Promoting safe, respectful and inclusive work environments Improve female representation across levels
15	South Africa	Kumba Iron Ore	Equality, non-discrimination, gender mainstreaming Promoting safe, respectful and inclusive work environments Improve female representation across levels Gender Based Violence
16	USA	Newmont Goldcorp	Valuing difference, Paradigm for Parity (equal opportunity)
17	USA	Freeport-McMoRan	Inclusive workspace and culture External recognition – best employer for diversity awards
18	USA	Albemarle	Inclusive workspace and culture
19	UK (Europe)	Anglo American	Inclusive culture and workplace
20	UK (Europe)	Antofagasta	Compliance with various acts in terms of female board representation (e.g.: UK Modern Slavery Act and Code of Ethics)
21	Switzerland (Europe)	Glencore	Diversity of thought Inclusive culture and workplace
22	Brazil (Latin America)	Vale	Equal opportunities, fair work practices Promoting psychological health/wellbeing, respectful and inclusive environments
23	Chile (Latin America)	SQM	Equal opportunities, fair work practices Equal rights and responsibilities for people with disabilities - initiatives aligned with inclusiveness law Promoting psychological health/wellbeing, respectful and inclusive environments
24	Mexico (Latin America)	Grupo México (Southern Copper)	Equal opportunities, fair work practices Promoting psychological health/wellbeing, respectful and inclusive environments

Table 5
Diversity statements - External recognition advertised by mining firms.

Sl. No:	Country	Company	External recognition
1	Australia	BHP	Signed the CEO Statement of Support for the United Nations (UN) Women's Empowerment Principles to strengthen commitment to gender equality
2	Australia	Fortescue Metals	Participated in benchmarking assessments including: SAM Corporate Sustainability Assessment (formerly Dow Jones Sustainability Index), Bloomberg Gender-Equality Index, Workplace Gender Equality Agency (WGEA)
3	Canada	Nutrien	Member of the 30% Club, an international group of Chairs and CEOs promoting gender diversity on Boards and senior management teams
4	South Africa	Anglo American Platinum	Maintained its inclusion in the Bloomberg Gender-Equality Index for 2021
5	South Africa	Impala Platinum (Implats)	One of only eight South African companies to be included in the Bloomberg 2020 Gender Equality Index
6	USA	Freeport-McMoRan	Awarded 2020 Best Employers for Diversity
7	UK (Europe)	Antofagasta	Complies with UK Modern Slavery Act and its Code of Ethics and Human Rights Policy

defined as the extent to which women and men employed by the company in the same location and performing work of equal value receive the same pay (less than 2% in favour of men in 2020) as well as "gender pay gap" (Rio Tinto, 2020) - defined as the measure of the difference between average earnings of women and men across the group (excluding incentive pay), regardless of role, expressed as a percentage of men's earnings (slightly over 1% in favour of women in 2020).

Further UK and US firms (e.g.: Anglo American, Antofagasta, Freeport McMoRan and Albemarle) conduct an annual benchmarking assessment/review of the gender pay gap to assess the changes required with regard to performance assessment processes in their firms. While all South African firms in the sample benchmark pay, Anglo-American Platinum uses additional measures such as Gini coefficient and Palma ratios to assess organizational pay gap. Although among Latin American firms Vale (Brazil) and SQM (Chile) have started reporting the gender pay gap, they do not report taking any action to address the same. While several firms report adoption of policies espousing equal opportunity, only a few firms such as Newmont Goldcorp in USA tend to combine policy (e.g.: Paradigm for Parity) with best practices such as regular audit of their talent management systems for unconscious biases and their potential impact over the employee lifecycle, accepting blind resumes, inclusive job postings, adopting diverse hiring slates and interview panels for attracting, hiring and retaining diverse talent (Newmont, 2020). However, Newmont Goldcorp does not report its gender pay gap. All three Chinese firms in the sample as well as Barrick Gold (Canada) and Alrosa (Russia) do not report any specific policy or

practice in this regard, except for generic statements. The key policies and practices are outlined in Table 6.

4.2.2. Diversity training

Only fifteen (15) out of the 24 firms (62.50%) in the sample reported adopting some form of diversity training to prevent discrimination - by helping their employees address unconscious biases and gain awareness on inclusive leadership and gender intelligence. The sample firms offering diversity training largely appeared to implement them uniformly across their operations in different countries. Firms in Russia and China do not touch upon this topic, indicating that it is not a matter of investor concern for them. Other notable exceptions include European firm Glencore (Switzerland) as well as Franco Nevada and Barrick Gold from Canada. While most firms provide training on general topics such as disrespectful behaviour, sexual harassment, racism, sexual orientation, diversity and inclusion as well as disability, a few firms focus on integrating them with practice-oriented modules such as managing inclusive teams and inclusive recruitment (Anglo American in UK) for managers (Refer Table 7). Some firms conduct specialized programmes such as the bullying, harassment and victimization/gender-based violence programme at South African firms Anglo-American Platinum and Kumba Iron Ore as well as biannual contractor gender diversity forums conducted by Australian firm Fortescue Metals to share learnings across partners in the industry. Latin American firm Vale engages in hosting reverse mentoring sessions with the Executive Board for conceptual deepening and raising awareness about gender, racial-ethnic equity and

Table 6
Non-discrimination practices: Merit based decision making - Prevalent policy and practice.

Sl. No:	Country	Company	Merit Based Decision Making	Policy/ Practice
1	Australia	BHP Group	Annual review of gender pay gap	Practice
2	Australia	Rio Tinto	Annual review of gender pay gap and equal pay gap	Practice
3	Australia	Fortescue Metals	Annual review of gender pay gap	Practice
4	Canada	Franco-Nevada	Discrimination, Harassment and Equal opportunity policy	Policy
5	Canada	Nutrien	Board Diversity Policy	Policy
6	Switzerland (Europe)	Glencore	Equality of Opportunity Policy	Policy
7	Brazil (Latin America)	Vale	Global Policy on Diversity and Inclusion Global Human Rights Policy and Code of Conduct	Policy
8	Chile (Latin America)	SQM	Human Rights Policy, Inclusiveness and Diversity Policy Improved selection process to facilitate meritocracy	Policy Practice
9	Mexico (Latin America)	Grupo México	Policy on Diversity, Inclusion and Non-Discrimination, and Zero Tolerance for Workplace or Sexual Harassment	Policy
10	Russia	Norilsk Nickel	Equal Remuneration & Non-discrimination Conventions	Policy
11	South Africa	Anglo-American Platinum	Employment equity as per mining charter Pay benchmarking; Use of Gini coefficient and Palma ratios to assess organizational pay gap	Policy Practice
12	USA	Newmont Goldcorp	Paradigm for Parity framework Audit of talent management systems for unconscious biases Accepting blind resumes, inclusive job postings, adopting diverse hiring slates and interview panels	Policy Practice
13	USA	Freeport-McMoRan	Periodically conduct internal compensation reviews to identify possible pay gaps Engaged a third-party compensation consultant to support a formal, comprehensive evaluation of gender pay equity practices covering global operations	Practice
14	USA	Albemarle	Conduct regular review of pay practices across locations Driving diverse candidate slates for open positions within the organization	Practice

Table 7
Non-discrimination practice: Diversity training in mining firms.

Sl. No:	Country	Company	Diversity Training
1	Australia	BHP Group	Our Code of Conduct Training, Respectful Behaviour Campaign, BHP Leadership Programme and Leading Inclusion
2	Australia	Rio Tinto	Cultural awareness training
3	Australia	Fortescue Metals	Biannual Contractor Gender Diversity Forums
4	Brazil (Latin America)	Vale	Executive Workshop on Diversity and Inclusion Reverse Mentoring sessions Gender Based Violence Programme
5	South Africa	Anglo American Platinum	
6	South Africa	Kumba Iron Ore	Gender Based Violence Programme
7	UK (Europe)	Anglo American	Inclusive Leadership Training
8	USA	Freeport McMoRan	Trained employees on managing unconscious bias
9	USA	Newmont Goldcorp	Inclusive Leadership Training
10	USA	Albemarle	Training on inclusive leadership and fostering a culture of accountability Training for recruiting and hiring personnel to recognize and overcome biases during hiring

LGBTQIA + issues while SQM (Chile) holds lecture sessions on inclusiveness for employees. In the light of the COVID-19 pandemic, firms have taken to delivering online training modules on their Code of Conduct and Ethics for their employees (e.g.: Albemarle University - USA).

4.3. Resource practices

4.3.1. Preferential treatment

None of the firms in the sample reported offering preferential treatment to women in terms of giving them an advantage in decision making, as defined by [Leslie \(2019\)](#). However, Canadian firms such as Franco-Nevada reported hiring executive search consultants to hire highly qualified female candidates for fulfilling their board diversity targets.

4.3.2. Targeted recruitment

Only nine (9) out of 24 firms (37.50%) in the sample report engaging in recruitment drives targeting women candidates. All three Australian firms in the sample were adopting several initiatives to actively hire women employees (Refer [Table 8](#)). Women constituted 39.3% of new hires at BHP Group as a result of initiatives such as (i) improved employment branding indicating why women should join the firm (ii) progressed market mapping to proactively target those not actively looking to work with BHP or in mining and (iii) reaching out through multiple communication channels such as social, digital and traditional media. Rio Tinto successfully launched its “Pathways to Mining” ([Rio Tinto, 2020](#)) recruitment campaign for women candidates with no prior experience in mining, attracting over 2500 applications against a target of 100. Fortescue Metals increased women hires in trade and professional roles through its Trade Up and Graduate Programmes ([Fortescue Metals, 2020](#)).

The extent to which targeted recruitment of women candidates occurs in different operations within the same company appears to vary based on institutional regulations pertaining to female employment as well as the level of technology deployment in mining operations. Thus, regulations in China and Russia prevent female employment in “harmful working conditions” ([Polyus, 2020](#)), restricting women to largely administrative roles in the mining firms operating in these countries. South African firms Anglo American Platinum and Kumba Iron Ore mentioned targeted recruitment drives for women, in order to fulfill the requirements of the South African government’s Broad-Based

Table 8
Resource practices: Targeted recruitment initiatives.

Sl. No:	Country	Company	Targeted Recruitment	Nature of Impact
1	Australia	BHP Group	Improved employment branding Progressed market mapping Reaching out through multiple communication channels	Indirect
2	Australia	Rio Tinto	Pathways to Mining	Direct
3	Australia	Fortescue Metals	Trade Up and Graduate Programmes	Direct
4	Chile (Latin America)	SQM	Training and motivational talks for female students from the professional technical schools to join mining	Indirect
5	Mexico (Latin America)	Grupo México	Forjando Futuro (Forging Futures) programme “Introduction to job security for women in mining” workshop	Direct
6	UK (Europe)	Antofagasta	Apprenticeship programmes targeting local women in Chile	Direct
7	USA	Freeport McMoRan	Increased visibility into job openings Use of inclusive language and graphics in official communications and confirmed equal gender representation on hiring panels	Indirect

Socio-Economic Empowerment Charter for the Mining and Minerals Industry, popularly known as Mining Charter III. Mining firms operating in Chile such as the UK firm Antofagasta and the Chilean firm SQM are required to be members of the Women in Mining Working Group - in partnership with Mining Ministry and Women & Gender Equality Ministry in Chile - to encourage participation of local women in the mining industry. 50% (356) of the new recruits in Antofagasta in Centinela (Antofagasta’s mining division) were female candidates, recruited largely through their apprenticeship programmes (35 out of 87 women apprentices were hired in mine and concentrate areas) ([Antofagasta, 2020](#)). Although Canadian firm Barrick Gold claims to attempt increasing women employees at all levels through its one-day career workshops, these mostly target local women and hence help fulfill non-managerial roles. Despite Brazilian firm Vale allocating 50% of its training programme vacancies for women ([Vale, 2020](#)), no specific hiring initiatives targeting women were reported. Mexican firm Grupo México attempted to recruit more women through the Forjando Futuro (Forging Futures) programme and the “introduction to job security for women in mining” workshop ([Grupo México, 2020](#)).

4.3.3. Targeted training

Thirteen (13) out of 24 firms (63.16%) in the sample engaged in various training initiatives targeting professional development of women candidates. While Australian firms such as BHP Group and Rio Tinto focused on improving female representation in their existing entry level employee training programmes and apprenticeships, others such as UK based Anglo-American ran exclusive training programmes for women engineering graduates (with the support of leadership incubator WomEng etc.) and Latin American firm Vale (Brazil) adopted both strategies as shown in [Table 9](#). South African firms specify targets for increasing female participants in existing training programmes and conduct leadership development programmes for women. Canadian firms ensure female participation in both graduate training programmes at entry level as well as leadership development programmes in alignment with their goal of increasing board diversity. Although firms from China and Russia report the regular mining operations and other mandatory training hours attended by female as well as male employees, they do not report any specific initiatives to increase

Table 9
Resource practices: Targeted training in mining firms.

Sl. No:	Country	Company	Targeted Training	Nature of the Initiative
1	Australia	BHP Group	Entry level programmes and apprenticeships	Increasing female representation in existing employee training programmes
2	Australia	Rio Tinto	Technical Rio-Experts training (23% women)	
3	Australia	Fortescue Metals	Empower Programme (with 50% mandatory female participation), Apprenticeship Programmes, Succession Planning	
4	Brazil (Latin America)	Vale	Employee Trainee Programme selection involving 50% women	
5	Canada	Barrick Gold	Greenfield talent programme for college graduates (27% women)	
6	Canada	Nutrien	Leadership Essentials and Global Leadership Development Programme	
7	South Africa	Kumba Iron Ore	Ensuring at least 30% female representation in talent pipeline programmes. 10 out of 16 professionals in training are women graduates	
8	UK (Europe)	Antofagasta	Apprenticeship programme targeting women (87 out of 91 candidates) Young Graduates Programme (19 women out of 20 candidates)	
9	USA	Albemarle	LAUNCH 2-year rotational development programme for recent graduates	
10	Brazil (Latin America)	Vale	Professional Training Programme exclusively for 500 women candidates in Brazil and Canada.	Exclusive training programmes for women
11	South Africa	Anglo-American Platinum	Women in leadership programme (9 women)	
12	South Africa	Kumba Iron Ore	Leadership Academy and Women Leadership programmes	
13	UK (Europe)	Anglo American	Promoting female engineering talent at DeBeers by engaging with 800 female students through 3 programmes with leadership incubator WomEng	
14	USA	Newmont Goldcorp	New Futures for Girls Leadership Camp Programme Best Graduating Female Student in Mining Engineering Award for skill enhancement	
15	USA	Freeport McMoRan	Women empowerment programmes	

female representation in existing programmes or the launch of any new training programmes for women. In the case of increasing female representation in existing training programmes, firms did not appear to differentiate between their operations in different countries. However, targeted training programmes for women workers appeared to be largely focused in those countries of operation where the firms were engaging in targeted recruitment. Targeted training programmes also appeared to rely on support from local community bodies as well as organizations such as Women in Mining.

4.3.4. Diversity networking groups

As shown in Table 10, only five (5) out of 24 firms (20.83%) in the sample mention formal or informal employee diversity groups which help target groups (women employees) bond and derive support from each other. These are: BHP Group (Australia), Nutrien (Canada) Anglo-American (UK-Europe) as well as Newmont Goldcorp and Albemarle (USA). Although several firms report volunteering activities that their employees (both male and female) engage in as part of local community

Table 10
Resource practices: Diversity networking groups in mining firms.

Sl. No:	Country	Company	Diversity Networking Groups
1	Australia	BHP Group	Women@BHP Group on BHP's social networking service
2	Canada	Nutrien	16 voluntary, employee-led resource group chapters as well as an Inclusion Council (>45 representatives) that serve under-represented employee populations and contribute to a more inclusive workplace
3	UK (Europe)	Anglo American	WoMine women's network in Brazil and Chile Women@GHT in the UK Diversity groups catering to LGBTQ + as well as employees belonging to different race, ethnicity, gender etc.
4	USA	Albemarle	Women's Connect group provides opportunities for female employees to share their backgrounds, experiences, and beliefs, and to use them to benefit others
5	USA	Newmont Goldcorp	Employee led Executive sponsored Business Resource Group

development, these do not constitute diversity network groups as defined by Leslie (2019). Although gender diversity networking groups appeared to be organization-wide networks spread uniformly across operations in different countries, the strength of these networks were bound to vary with the size of the female workforce in each operation.

4.3.5. Diversity mentoring programmes

Only nine (9) out of 24 firms (37.50%) are engaged in providing women with formal mentoring and leadership training. The diversity mentoring initiatives of each company appeared to be initially focused in the country of primary operations; gradually spreading to other countries occupied by the firm. Of these only a few firms offer specific mentoring programmes targeting women employees (e.g.: Australian firms Fortescue Metals' partnership with Mentor Walks programme and BHP Group's provision of coaching and support material for women leaders, Canadian firm Barrick Gold provides career workshops and leadership initiatives for women). Most firms offer mentoring programmes for all employees while setting aside a fixed share of the seats for women candidates (e.g.: UK firm Anglo-American's global mentoring programme targeting 375 employees in 2020). South African firms such as Anglo-American Platinum identify, mentor and develop future candidates for strategic board renewal through their established succession plan (presently three out of eight Platinum Management Committee (PMC) members are women) whereas Kumba Iron Ore offers Leadership Academy and Women Leadership programmes to nurture women with potential to fulfill leading technical roles. Some of the other unique initiatives aimed at mentoring women employees are given in Table 11.

4.4. Accountability practices

4.4.1. Diversity plans

While twenty-one (21) out of 24 firms (87.50%) in the sample report the female representation in their workforce by levels owing to regulatory concerns, only 15 firms (62.50%) have well quantified diversity goals with respect to achieving a gender-balanced workforce by a specified future date. Diversity plans appeared to be applicable uniformly across company operations in different countries. Table 12 lists the targets set against performance of firms by region.

Table 11

Resource practices: Select diversity mentoring initiatives in mining firms.

Sl. No:	Country	Company	Diversity Mentoring Initiatives
1	Australia	Fortescue Metals	Partnered with Mentor Walks to provide West Australian women and Fortescue employees with the opportunity to connect with Fortescue's female leaders through an hour-long 'walk and talk' in cities across Australia. The inaugural Perth walk was attended by CEO, Elizabeth Gaines, Deputy CEO, Julie Shuttleworth, Non-Executive Director, Jennifer Morris, along with other senior female leaders. The walk builds on a range of initiatives to ensure as many women as possible can make a strong contribution to the Australian resources sector. 20 women participated in 2020.
2	UK (Europe)	Antofagasta	Leadership development programmes for 130 women employees Professional development programmes for women in mining and transport divisions resulting in a 61% increase in the number of women in their talent pool since 2018. "Promociona" programme - a local initiative to support women reach leadership positions Sponsored four high potential women employees in the Inter-American Development Bank Programme to strengthen their leadership skills
3	USA	Albemarle	Women's Connect leadership development programme – a three-year program offering coaching, mentoring and networking opportunities (40 women across 17 global sites participated in 2020) Partnership for 2021 with Fairygodboss, the largest career community for women that provides free resources and a safe, inclusive environment for highly motivated women to connect with other career-minded individuals while helping each other succeed. Currently USA focused, with a growing audience in Canada, Mexico, China, India, and the United Kingdom

Table 12

Accountability practices: Diversity plans and performance of mining firms.

Sl. No:	Country	Company	Diversity Target	Performance as of 2020
1	Australia	BHP Group	Achieve a gender-balanced workforce by CY2025	Women constitute 26.5% of the workforce; 22.4% female leaders
2	Australia	Rio Tinto	Achieve a gender-balance of at least 40% in long term with annual targets of 2% increase in women in senior leadership and at every level, 50% women in graduate intake with 30% from areas with new businesses	Women comprise 20% of workforce, 23% of Executive Committee, 26.1% of Senior Leadership 26.5% of Professional Roles 60% of graduate intake
3	Australia	Fortescue Metals	By 2020 achieve a female employment rate of 30% in manager and above roles	Women comprise 19% of total workforce in FY20 25% in manager & above roles 26% in senior leadership roles
4	Canada	Barrick Gold	Women to represent at least 30% of directors by the end of 2022	Women constitute 10% of workforce 20% of Board of Directors, 15% of Executive Officers, 14% of Barrick Partners, 17% of Vice Presidents
5	Canada	Nutrien	Women in 30% of Vice President roles by the end of 2020, and in 20% of senior leadership roles by the end of 2022	Women comprise 19% of workforce 33% of directors (4 women) 5% of VP and above & 15% of Senior Leaders 16% Junior Management 14% of All management
6	Canada	Franco Nevada	Board comprised of at least 30% women directors by 2022	18 Women (47%) in entire workforce 3 Women (7%) on 11 board of directors
7	UK (Europe)	Antofagasta	Double female participation by the end of 2022 compared to the 2018 baseline of 8.6%	Women constitute 13% of total workforce 18% of Executive Committee (EC) (2 women) 17% of reports to EC (12 women) 23.4% in supervisory roles 14.7% of mining division
8	UK (Europe)	Anglo-American	33% female representation by 2023 at Group Management Committee, all management levels, in every business unit and group function	Women comprise 23% of workforce 27% of GMC (Senior management) 27% in management positions
9	Brazil (Latin America)	Vale	Double the number of women employees from 13% to 26% by 2030 and increase their presence in senior leadership from 12% to 20%	Women comprise 16.3% of workforce 15.9% of Senior Leadership
10	Chile (Latin America)	SQM	Aim to have a 20% female workforce by 2021	Reduced voluntary termination rates by 33.5% Women formed 17.1% of workforce (924 women) at the end of 2020
11	South Africa	Anglo-American Platinum	33% female representation in workforce by 2023	Women comprise 20% of total workforce 25% of management 17% of disciplines (mining, projects) 24% of junior management 21% of top management (maximum 2 levels removed from CEO)
12	South Africa	Impala Platinum (Implats)	Maintain a balance between male and female board members and to ensure that female board representation is at 40% or above	Women represent 12% of workforce 50% of 14 board members 46% of board members at group level 22% of managers
13	South Africa	Kumba Iron Ore	Have females in 33% of leadership roles at all management levels by 2023	Women account for 32% of talent pool, of which 54% is represented by black females
14	USA	Newmont Goldcorp	Paradigm for Parity where women and men have equal power, status and opportunity in senior leadership by 2030	Women comprise 13% of workforce 50% of Board of Directors 43% of Executive Leadership Team 25% of Senior Leaders
15	USA	Freeport McMoRan	Increase the percentage of women employees, including representation in managerial roles to 15%	Women comprise 13% of workforce 13% of managerial positions 33% of Board of Directors 22% of new hires

Most firms are still far from achieving their targets indicating that there is a lot more that needs to be done with respect to increasing participation of women at the workplace. However, there are regional variations as well. Firms from Australia, South Africa and Canada have clear diversity targets against which they measure their performance. All three Australian firms, two South African firms as well as the two UK firms in the sample have female representation of more than 20% in their managerial levels. All three firms from China do very poorly in this regard as they report only the total number of female employees in their workforce without offering details at each level or providing any diversity targets. Firms from Russia (Polyus, Norilsk Nickel and Alrosa) report the female representation in their workforce (15.4%, 24% and 30% respectively) but have not specified any targets.

To better inform their company-wide inclusion strategy Canadian firm Nutrien held roundtables with subject matter experts in human resources, procurement, and sustainability and stakeholder relations to assess the current state of inclusivity in their talent and business processes (Nutrien, 2020). In addition, they conducted one-on-one interviews with diverse employees to evaluate the true experience of inclusion across Nutrien's workforce, the results of which shall be useful in improving their diversity and inclusion strategy (Nutrien, 2020). Firms might do well to adopt such practices to ensure that their diversity plans are on track and capable of delivering results on ground.

4.4.2. Diversity performance evaluations

Only five (5) out of 24 firms (20.83%) of the sample have introduced meeting diversity targets as one of the aspects of their supervisor/leader's performance evaluation criteria in 2020, indicating the huge gap between rhetoric and implementation among the mining industry leaders. Similar to diversity plans, diversity performance evaluations appeared to be applicable uniformly to the executive leadership team heading company operations in different countries. Once again, the Australian firms - BHP Group, Rio Tinto and Fortescue Metals stand out, with each one adopting a slightly different strategy. While BHP Group added advancing gender representation to the individual performance score card targets for the CEOs of its group companies, Rio Tinto's inclusion and diversity targets are linked to executive compensation through short term incentive plans. In Fortescue Metals the board has ultimate responsibility on addressing diversity and inclusion matters through its Remuneration and People Committee. Fortescue also runs recognition programmes to celebrate success in diversity at the level of individual employee supervisors through its Northern Spirits award which recognizes the role of the recipients in encouraging female employees to thrive within the organization (Fortescue Metals, 2020).

Canadian firm Nutrien established quarterly diversity scorecards for the Executive Leadership Team (ELT) outlining the progress of each executive officer's contribution to its gender diversity goals. Nutrien also created diversity dashboards for business units in North America and Australia that show real-time data on team diversity and progress in new hire and turnover rates for each monitored category (gender and race, where possible). Also, a component of leadership compensation is tied directly to Nutrien's ESG performance during the year to demonstrate its focus on key ESG risks and progress in terms of sustainability goals (Nutrien, 2020). From 2021 in the USA, Albemarle requires its 'people leaders' to meet "DE&I performance goals" (Albemarle, 2020) such as driving diverse candidate slates for open positions within the organization, to increase accountability.

UK firm Antofagasta included targets for the inclusion of women in employees' performance scorecards for the first time in 2020. Metrics associated with the development of the group's diversity and inclusion strategy form part of the annual bonus plan and formal talent management and succession planning exercise, with performance being assessed by the Remuneration and Talent Management Committee at the end of each year. The Remuneration and Talent Management Committee is responsible for succession planning for the Executive Committee which allows for ongoing monitoring of the impact of the diversity and

inclusion strategy on appointments that are made and their progress within the company, including at the level of those who report to the Executive Committee (Antofagasta, 2020).

4.4.3. Diversity positions

Only four (4) out of 24 firms (16.67%) have started appointing personnel for overseeing and directing the organization's diversity efforts. These are BHP Group (Australia), Newmont Goldcorp (USA), Freeport McMoRan (USA) and Albemarle (USA). Diversity position personnel (such as Vice President of Inclusion and Diversity) set the organization-wide diversity and inclusion strategy and oversee its implementation across company operations in different countries. In 2020, BHP Group began assembling an internal working group to develop a holistic plan for addressing the controls and cultural enablers of sexual harassment and assault in the workplace (BHP, 2020). Freeport McMoRan established a dedicated HR team in 2020 to focus solely on inclusion and diversity, formalized a new Inclusion and Diversity Policy, and created a cross-functional Inclusion and Diversity Steering Committee (sponsored by the Board President and Chief Financial Officer with senior representatives from key functions as members) that meets on a quarterly basis to help guide the strategy and direction of the inclusion and diversity team apart from enhancing its tracking and disclosure of various diversity metrics. The Chief Human Resources Officer and Vice President - Transformation and Organizational Development, maintain specific responsibility for inclusion and diversity efforts at Freeport McMoRan (Freeport McMoRan, 2020). In 2020, US firm Albemarle hired an inclusion and diversity leader in addition to forming a Diversity, Equity and Inclusion Steering Committee comprising 13 members to accelerate their inclusion and diversity roadmap and deliver meaningful change across the organization (Albemarle, 2020). The outcomes and success of these initiatives shall be known only over the years to come.

4.4.4. Grievance systems

While most firms have some form of an ethics helpline that handles all stakeholder complaints with respect to the firm's operations, only three (3) out of 24 firms (12.50%) have installed a dedicated system for employees to report instances of gender-based discrimination and other hindrances to achieving diversity goals. Newmont Goldcorp (USA) has a site-based complaints and grievances (C&G) mechanism coupled with an online Integrity Helpline, which allows employees to anonymously file a complaint pertaining to human rights-related grievances or allegations ranging from discrimination based on gender or race to sexual harassment. South African firms Anglo-American Platinum as well as Kumba Iron Ore have a Gender Based Violence response and prevention mechanism in combination with a sexual harassment response mechanism and employee assistance programme. More studies are required to understand why adoption of such systems is low among the leading mining companies or whether it is a highly contextual response i.e.: whether gender-based violence is a more common occurrence in South African mines compared to Australian ones.

4.5. Work-life initiatives

While Leslie's (2019) categorization of diversity practices served as an extremely useful tool to understand the diversity practices adopted by the leading companies in the mining industry, a few work-life initiatives undertaken by these firms do not fall into any of the identified sub-categories as some are specific to hazardous industries such as mining. In particular, the work-life initiatives appear to address the challenges pertaining to "family commitment", "lack of support", "discrimination" and "harassment" as elaborated by Kansake et al. (2021) with respect to women in mining. While policies concerning flexible working and parental leave appeared to be uniformly adopted across the organization, setting up of infrastructure and basic amenities for women workers appeared to gain prominence in country operations

where women form part of the technical workforce. Practices adopted by some of the mining firms in the sample that can be categorized as “work-life initiatives” include:

- Embedding flexible work arrangements (all firms in the sample)
- Identifying and eliminating basic symbols of exclusion such as uniform designs and Personal Protective Equipment (PPE) across the business (Newmont Goldcorp (USA)) and providing PPE designed specifically for women (Freeport McMoRan (USA))
- Providing enclosed changing rooms, installing independently partitioned sanitation facilities onsite (Freeport McMoRan (USA), SQM (Chile), Grupo México (Mexico))
- Sixteen weeks paid parental leave for primary carers to encourage all eligible employees to access paid parental leave and to return to work following parental leave (Fortescue Metals (Australia))
- Establishment of on-site family room, lactation rooms and introduction of in-home child care facilities ((Fortescue Metals (Australia), Kumba Iron Ore (South Africa) SQM (Chile))
- Safety and security measures such as self-defense training, cages safety and panic button systems (South African firms - Anglo-American Platinum and Kumba Iron Ore)

5. Discussion

This study highlights that strong regional variation appears to exist in the way in which diversity initiatives are being deployed by the 24 mining firms in the sample. Ever since the British mines act of 1842 erected legal and cultural barriers, resulting in the hypermasculinization of the mining industry (Lahiri-Dutt, 2019; Perks and Schulz, 2020), both protective and anti-discriminatory regulations have played a critical part in shaping the role of women in mining. Our findings appear to largely mirror the distinction between the industrialized North and the global South with respect to coercive institutional pressures. In the industrialized North, improvements in gender equality arising from changes in family law coupled with social and economic transformation affecting the position of women, led to the modification of protective conventions into anti-discriminatory labour conventions and progressive legislations in mining (Lahiri-Dutt, 2019). Accordingly, firms in our sample headquartered in countries belonging to the industrialized North such as Australia, USA and UK appear to adopt most of the gender diversity initiatives in Leslie’s (2019) framework to varying degrees, followed by firms from Canada. Regulatory requirements regarding female representation in company boards as well as gender pay gap reporting imposed by the Australian and UK governments respectively, result in mining companies headquartered in Australia and UK offering some of the most detailed gender pay gap reports. However, Russian firms and the lone firm from Switzerland were found to be the exceptions in the industrialized North, as they rarely reported any diversity initiatives – seemingly in the name of espousing equal employment opportunity and anti-discrimination policies.

In contrast, labour legislations in the global South, with the exception of South Africa, have either largely remained protective or are very slow to transition from prohibiting female participation in shiftwork and underground work in mines to a more anti-discriminatory and progressive stance (Lahiri-Dutt, 2019). The sample firms headquartered in countries belonging to the global South exhibited significant variation, with South Africa leading the way in diversity initiatives owing to progressive legislations such as the Mining Charter - that set quotas, standards and terms for women’s involvement in the mining sector (Kaggwa, 2020). Also, Latin American countries (Brazil, Mexico, Chile) were found to perform much better when compared to firms from China in terms of adoption of gender diversity initiatives. In Chile, the combination of legislations such as the Chilean Standard 3262 (SQM, 2020), the voluntary gender equality and work-life balance ordinance (Freeport McMoRan, 2020) and the presence of formal multilateral groups such as the Women in Mining Working Group made of representatives from

Ministry of Mining, Ministry of Women and Gender Equity and mining firms, ensures that firms headquartered and/or operating in this country, actively pursue increasing workforce diversity with targets.

Further, cultural factors, in the form of societal and organizational norms, appear to play a role in determining the nature of initiatives employed by mining firms belonging to each region and the challenges that are to be addressed. Countries championing market feminism (Johansson and Ringblom, 2017) such as Australia, USA, UK and Canada, which have a culture that espouses the liberal feminist goal of gender equality (Laplonge, 2016), appear to fail to challenge the status quo concerning gender equality, by inadequately addressing the structures governing power and resource allocation (Johansson and Ringblom, 2017) and placing the onus of career advancement on individual women workers themselves (Mayes and Pini, 2014). This corresponds with the noticeable shortfall in the adoption of accountability practices such as diversity performance evaluations (except for Australia), diversity positions (except for USA) and dedicated grievance systems to address gender-based violence in firms headquartered in these countries, which seem to be doing well on other initiatives. In contrast, firms headquartered in countries espousing state feminism, such as Russia and China, have a culture in which a paternalistic view towards gender equality, emphasizing protection of women’s rights, is firmly entrenched. Both Russian and Chinese mining firms cite state regulations prohibiting employment of women in harmful working conditions. In China, women are discouraged from studying mining in universities, reflecting powerful gender stereotypes (Perks and Schulz, 2020), impeding their access to lucrative roles in the mining industry. Despite the noticeable absence of gender diversity initiatives, the Russian firm Alrosa boasts one of the highest share of women employees in the mining industry at 30%, with women holding 44% of managers, specialist and administrative staff roles and 20% roles in the supervisory board in 2020 (Alrosa, 2020). More data and research is needed to verify these claims.

Although gender equality was legally established in 1996 in Switzerland, its traditional society is characterized by strong gender roles and patriarchal values (Federal Office for Gender Equality, 2021). Accordingly, despite having operations in over 35 countries, the Swiss firm Glencore has finalized an Equality of Opportunity Policy and a Diversity and Inclusion Policy only in 2020 and is yet to incorporate gender diversity initiatives into its sustainability report (Glencore, 2020). Interestingly, South Africa introduced anti-discriminatory legislations such as the Gender Policy Framework of 1994 as well as the Employment Equity Act 55 of 1998 around the same time as Switzerland, but followed it up with the progressive Mining Charter in 2002, which held mining firms accountable with mandatory quotas for women (Kaggwa, 2020). Unlike Switzerland, South Africa’s reliance on the legislative route to encourage female participation in the country’s mining sector has proven very useful, although much more needs to be done to enable the career advancement of women (Kaggwa, 2020), especially in terms of forming diversity networking groups, offering diversity mentoring programmes, holding supervisors accountable through diversity performance evaluations and having diversity positions within the company to tailor the firm’s strategy in fighting pervasive gender bias. Also, in order to overcome the pervasive culture of abuse and harassment faced by women miners (Kaggwa, 2020; Kan-sake et al., 2021) mining firms headquartered in South Africa report various activities that they have undertaken to address gender-based violence in their communities and the society.

In Latin America, although almost every country has lifted bans on women’s employment in mining (Perks and Schulz, 2020), country level variations can be discerned with respect to their approach to fostering gender diversity. While accepting the societal norm that the physical nature of mining operations requires men to dominate the mining workforce (Grupo México, 2020), Brazil and Mexico appear to rely on industry wide organizations such as the Brazilian Mining Association to prepare an action plan for advancement of women in the Brazilian

mining industry along with Women in Mining (WIM) Brazil (IBRAM, 2020) and Mexico (Lutz-Ley and Buechler, 2020). In contrast, Chile has combined progressive legislation with formal cooperation initiatives between the Ministry of Mining and Ministry of Women and the mining companies, to attract more women into mining (Perks and Schulz, 2020) by overcoming societal norms. Thus, the findings appear to support Yang and Konrad's (2011) model, in that, the institutional theory helps explain the regional variations in GDM initiatives adopted by the mining firms in the sample, with institutional forces playing a critical role in determining the nature of initiatives that firms engage in as well as the areas they focus on to address the lack of gender diversity in the mining industry.

The regional variation may also be linked to the specific dimension of the business case logic (Johansson and Ringblom, 2017) that mining firms from each country espouse. As shown in Table 13, the high adoption of non-discriminatory and resource practices as well as the steady progress in the adoption of accountability practices across mining firms headquartered in Australia, South Africa, USA and UK, signifies almost equal emphasis on "marketing as gender equality", "uncovering male norms" and "gender as a depoliticized value" dimensions of the business case logic (Johansson and Ringblom, 2017). From a resource-based view perspective, the linkage between the vision (diversity statements) and action (GDM initiatives) appear to be somewhat strong in the case of firms headquartered in the above countries, suggesting that both governments and the mining firms potentially view diversity as a source of competitive advantage. Yet, in order to achieve

the desired results, these firms still need to address the challenges faced by women miners such as the "lack of support" (Kansake et al., 2021), "low self-esteem" (Kaggwa, 2020) and "lack of common goals" (Kansake et al., 2021) by engaging in more targeted recruitment activities that offer equal opportunities, forming diversity networking groups and offering diversity mentoring programmes. The sex-based division of labour (Lahiri-Dutt, 2019; Mayes and Pini, 2014) and sustained gender stereotyping over the centuries, has resulted in a shortage of women in corporate boardrooms (Perks and Schulz, 2020), that has led to all the mining firms in the sample struggling to form diversity networking groups and offer diversity mentoring programmes for women.

Firms headquartered in Canada appear to lay more emphasis on the "marketing as gender equality" and "gender as a depoliticized value" dimensions (Johansson and Ringblom, 2017) rather than the "uncovering male norms" (Johansson and Ringblom, 2017) dimension of the business case logic. Accordingly, the linkage between the diversity statements and GDM initiatives appear to be moderate in Canada. Despite being at the forefront of implementing technology that will help open up lucrative technical roles for women by reducing the dependence on physical labour in mining operations (Fernandez-Stark et al., 2019), Canadian firms are still characterized by vertical and horizontal sex-segregation (Perks and Schulz, 2020). As evident from Table 13, Canadian mining firms need to engage more in diversity training to overcome gender bias at the workplace as well as conduct targeted recruitment and diversity mentoring programmes alongside building diversity networking groups to further gender equality. Given the

Table 13
Categorization of diversity initiatives - Summary of key findings.

Category	Sub-Category	Percentage of Firms	Australia	South Africa	USA	Canada	Russia	China	Europe		Latin America		
									UK	Switzerland	Brazil	Chile	Mexico
Non-discrimination Practices	Merit-Based Decision Making	70.83%	H	H	H	M	L	-	H	Y	Y	Y	Y
	Diversity Training	62.50%	H	H	H	L	-	-	H	-	Y	Y	Y
Resource Practices	Targeted Recruitment	37.50%	H	M	L	-	-	-	L	-	-	Y	Y
	Diversity Statements	100.00%	H	H	H	H	H	H	H	Y	Y	Y	Y
	Targeted Training	63.16%	H	H	H	M	-	-	H	-	Y	-	-
	Diversity Networking Groups	20.83%	L	-	M	L	-	-	L	-	-	-	-
	Diversity Mentoring Programmes	37.50%	M	M	L	L	-	-	H	-	-	-	-
Accountability Practices	Diversity Plans	62.50%	H	H	M	H	-	-	H	-	Y	Y	-
	Diversity Performance Evaluations	20.83%	H	-	-	L	-	-	L	-	Y	-	-
	Diversity Positions	16.67%	L	-	H	-	-	-	-	-	-	-	-
	Grievance System	12.50%	-	M	L	-	-	-	-	-	-	-	-
Work-life Initiatives	45.83%	H	M	M	L	-	-	-	L	-	-	Y	Y

Note: H = High (when all three firms in the country are adopting this initiative).
M = Moderate (when two out of three firms in the country are adopting this initiative).
L = Low (when only one out of three firms in the country are adopting this initiative).
- = None (when no sample firms in the country are adopting this initiative).
Since the sample contains only two firms from UK, in the case of UK: H = High (when both companies are adopting this initiative and L = Low (when only one out of two companies are adopting this initiative).
Since the sample contains only one firm each from Switzerland, Brazil, Chile and Mexico; in the case of these firms: Y = Yes, the firm adopts this initiative.

pervasive nature of abuse and harassment faced by women miners (Kansake et al., 2021), accountability practices including setting up dedicated grievance systems are essential.

The linkage between the diversity statements and GDM initiatives appears to be moderate in Latin America, given that firms headquartered here appear to uniformly adopt non-discriminatory practices such as diversity training. They have also begun to experiment with resource and accountability practices giving prominence to the “uncovering male norms” and “gender as a depoliticized value” dimensions of the business case (Johansson and Ringblom, 2017), while still working on marketing themselves as a gender-friendly organization. One could argue that firms headquartered in this region are new to sustainability reporting, which is known to have originated in the context of the developed world. The results here concur with Mayes and Pini (2014) as well as Perks and Schulz (2020) that state regulatory intervention coupled with collective action are critical to furthering gender equality.

Lastly, firms belonging to Russia and China and the lone firm from Switzerland (Glencore) appear to espouse the “gender as a depoliticized value” dimension of the business case logic (Johansson and Ringblom, 2017), as generic diversity statements that emphasize “equal opportunity” (Norilsk Nickel, 2020; Zijin Mining, 2020; Glencore, 2020) and a non-discriminatory environment apparently obviate the need for adopting progressive diversity initiatives. Thus, based on their self-reported narratives, the linkage between the diversity statements and GDM initiatives appear to be especially weak in the case of firms headquartered in Russia, China and Switzerland. The absence of firm level initiatives such as clear diversity plans and diversity mentoring activities that are strongly linked to their diversity statements on actively promoting gender diversity and inclusion, suggest that both governments and the mining firms view diversity more as a liability rather than as a source of competitive advantage, despite the claims in their diversity statements.

We close this discussion with a preliminary exploration of the question we raised in the results section i.e.: whether mining companies headed by women CEOs pay additional attention to gender diversity in their organizations. An in-depth analysis is outside the scope of the present paper, since many mining companies headed by women CEOs are either privately held (e.g.: Hancock Prospecting headed by Gina Rinehart) or are publicly listed firms that do not figure in the Mining.com’s top 50 ranking (e.g.: Perpetua Resources headed by Laurel Sayer, Lucara Diamond headed by Eira Thomas). Yet, anecdotal evidence demonstrates that mining companies headed by women CEOs do appear to pay more attention to gender diversity. Gina Rinehart, a prominent figure in Australian mining, has ensured that the female participation rate in her firm’s 10 billion USD Roy Hill project is better than the industry average at 20%. Site visit programmes arranged for female students alongside other measures have helped increase the population of female apprentices, trainees and graduates to 26%. Other initiatives undertaken by Hancock Prospecting under Gina Rinehart include the pink trucks programme to raise awareness on breast cancer and gender diversity as well as the launch of their first female only job assessment centre (Rinehart, 2016). According to Laurel Sayer, CEO of US firm Perpetua Resources Corp., diversity at the top is essential to help diversify the workforce. Thus, women constitute 70% of Perpetua Resources Corp.’s executive team, 66% of board members, 50% of senior staff and 40% of the company’s workforce (Kuykendall and Darden, 2022; Midas Gold, 2020). Eira Thomas, President and CEO of Canadian firm Lucara Diamond Corp. pushes for creating a work environment where women feel valued as part of the team and are able to appreciate the culture. Thus, 85% of Lucara Diamond Corp.’s senior leadership team, 43% of board members and over 35% of its workforce are women, making the case for gender diversity as a “differentiator between successful and not-as-successful companies” (Kuykendall and Darden, 2022; Lucara Diamond, 2020). Further research is needed to explore the specific GDM initiatives upon which mining firms headed by women CEOs are performing much better compared to others.

6. Conclusion

This study is one of the earliest to apply Yang and Konrad’s (2011) model of GDM initiatives to the mining industry context using Leslie’s (2019) diversity initiatives classification scheme to analyze the GDM initiatives adopted by mining firms, and thus, show how the firms are going about addressing the challenges facing women miners in large scale mining as identified in literature (Kaggwa, 2020; Kansake et al., 2021; Perks and Schulz, 2020). Our study also highlights the need to study regional variation in GDM initiatives undertaken by mining firms using different theoretical frameworks and research techniques. Given our limited sample, this study finds that firms headquartered in Australia, South Africa, USA and UK exhibit reasonably strong linkages, whereas firms headquartered in Canada and Latin America exhibit moderate linkage (likely for different reasons) while those headquartered in Russia, Switzerland and China exhibit weak linkages between their stated vision (diversity statements) and action (GDM initiatives). As evident from Table 13, mining firms would do well to examine whether their articulated positions on diversity are adequately reflected in their actual adoption of diversity initiatives, as there is still a long way to go for them to ‘walk the talk’ - specifically regarding improving targeted recruitment for promising women employees (only 37.50%) and conducting diversity mentoring programmes to increase women in leadership roles (only 37.50%), building diversity networking groups (only 20.83%), linking diversity targets to performance evaluations (only 20.83%), creating diversity positions within organizations (16.67%) as well as having dedicated grievance systems in place to address harassment (only 12.50%). Unless more firms engage their workforce in diversity evaluation, achieving diversity targets shall remain a distant dream. It is heartening that 45.83% of the firms have begun to adopt a range of work-life initiatives that help women miners balance family demands better, apart from offering PPE kits specifically designed for them, as called for in literature (Kaggwa, 2020; Kansake et al., 2021; Perks and Schulz, 2020). Further, 16.67% of the firms have set up diversity positions within their organizations as shown in Table 13. It is hoped that in the coming years this will help the firms attain a gender-balanced workforce and more firms shall adopt such practices by taking a leaf out of their book. By offering an exploratory perspective on the gender diversity initiatives engaged in by mining companies headquartered in different countries, this study adds to the four-way mind map model developed by Kansake et al. (2021) which outlines how government, companies, chamber of mines and employees can work together to enable a gender inclusive mining industry.

In a manner of “walking the talk”, a focus on strengthening the linkage between publicly committed diversity positions and actual GDM initiatives is likely to help a firm advance its GDM agenda. This will likely force a strategic approach to GDM, and help the firm reap the advantages of viewing women employees as a source of competitive advantage in mining. However, in line with Lahiri-Dutt’s (2019) arguments regarding the importance of regulations in shaping the role of women in mining, on the whole, the institutional theory-based arguments appear to be the stronger drivers of GDM initiatives in mining industry compared to arguments based on the resource-based view. This leaves a lot more room for firms to address the unequal structures of power and resource allocation (Johansson and Ringblom, 2017) within organizations. This could be one of the reasons as to why GDM initiatives in the mining industry are not able to deliver the desired outcomes with respect to gender diversity in mining.

Further, this paper throws up more questions for future research such as: What are the contextual factors that can drive universal adoption of GDM initiatives such as diversity performance evaluation? and Do mining firms headed by female CEOs pay more attention to devising and implementing GDM initiatives? Our brief exploration of the latter question in the discussion section indicates potential for further analysis. This study has several limitations largely on account of the small sample size. Also, as the sample is restricted to publicly held companies figuring

in the [Mining.com](#) top 50 ranking, GDM initiatives undertaken by privately held firms fall beyond the scope of the present study. Yet, this study highlights the need for (i) Mining firms to examine whether their articulated positions on diversity are adequately reflected in their actual adoption of diversity initiatives and to adopt a strategic approach to GDM that will help the firms reap the advantages of viewing women employees as a source of competitive advantage in mining and (ii) Government institutions and international agencies to pay attention to the impact that regulations and external recognition can have on enhancing gender diversity in mining at the firm level by studying the actions of successful institutions in different regions. Given that mining is a significant contributor to the world economy, research and practice both need to explore further as to what it takes to have more women integrated into the industry and reap the economic benefits of being employed in mining.

Author statement

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