Corporate social responsibility: Qualitative and quantitative content analysis study

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ABSTRACT

In the midst of a growing legitimacy gap, CSR disclosure is becoming increasingly important. Comprehensive CSR disclosures, especially in the mining industry sector, are expected to demonstrate accountability and transparency to stakeholders. This study seeks to develop indicators of CSR disclosure that are commonly used by mining sector companies with a cross reference method from various research articles and adapted to the GRI standard. There are 24 main indicators obtained after developing indicators. Furthermore, these indicators are used in content analysis techniques to measure CSR disclosure. The results of this study indicate that companies in the mining industry sector still tend to use quantitative disclosures and disclosures on material aspects that focus on only a few indicators. This research contributes to the development of indicators and mapping of disclosures commonly made by mining sector companies that are listed on the Indonesia Stock Exchange for the period 2017 – 2019.

ABSTRAK

Pengungkapan CSR saat ini menjadi semakin penting di tengah legitimacy gap yang semakin besar. Pengungkapan CSR yang komprehensif dan sesuai dengan sektor industri diharapkan dapat menunjukan akuntatabilitas dan transparansi bagi pemangku kepentingan. Penelitian ini berupaya mengembangkan indikator pengungkapan CSR yang umum digunakan pada industri pertambangan dengan metode cross reference dari berbagai artikel penelitian dan disesuaikan dengan GRI standar. Dari hasil pengembangan indikator diperoleh 24 indikator utama yang umum digunakan dan kemudian indikator tersebut digunakan dalam teknik konten analisis untuk mengukur pengungkapan perusahaan. Hasil penelitian menunjukan bahwa perusahaan di dalam industri tambang masih condong pada pengungkapan kuantitatif dan pengungkapan atas aspek material terpusat pada beberapa indikator saja. Kontribusi pada penelitian ini terletak pada pengembangan indikator serta pemetaan atas pengungkapan yang umum dilakukan perusahaan di dalam Industri tambang yang terdaftar di Bursa Efek Indonesia periode 2017 - 2019.

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1. INTRODUCTION

Currently, companies have increasingly complex responsibilities. Apart from being responsible to investors and creditors as funders, they are also responsible to other stakeholders, such as employees, communities, government and the environment (Cincalova & Hedija, 2020; Bianchi et al., 2019). The complexity of these responsibilities is in line with the triple bottom line concept proposed by Elkington that company achievement goals must be balanced with economic, social and environmental aspects (Saputra and Setiawan, 2018; Dias et al., 2019; Tsang, Hu & Li, 2020; Ur et al. al., 2020). One of the company's real efforts to fulfill its responsibilities is to design a Corporate Social Responsibility (CSR) program.

implementation The design, and achievement of CSR programs must be presented to stakeholders completely and transparently (Gnanaweera & Kunuri, 2018; Gonçalves & Silva, 2021; Ong & Djajadikerta, 2020; Lestari & Lelyta, 2019, Putri, 2017). In general, CSR programs are presented through annual reports or sustainability reports (Navenggita, Raharjo & Resnawaty, 2019). However, only a few companies present the CSR programs through sustainability reports because it is still voluntary (Setiawan et al., 2018). Most companies convey their CSR programs through their annual reports. Companies that present CSR programs through sustainability reports generally use the Global Reporting Initiative (GRI) reference, which is currently using the GRI Standard 2016 and is aiming for the GRI Universal 2022. In addition to using the GRI as a reference, report disclosures can also be prepared with other disclosure indicators that are deemed relevant and material.

Many studies have attempted to develop CSR disclosure indicators that are tailored to the characteristics of certain countries or industries (Lindman et al., 2020; Setiawan et al., 2022; Ahmad et al., 2019; Firmialy & Nainggolan, 2019; Hristov & Chirico, 2019; Otero-Gonzales et al., 2021; Hang & Ngoc, 2018). According to Allen et al. (2017), in the last two decades there has been a massive development in CSR disclosure methods and indicators which are part of the development of sustainability issues. Many organizations and countries have adopted a series of sustainability development indicators in measuring their sustainability progress (Papoutsi & Sodhi, 2020; Platonova

et al., 2018; Salehi et al., 2019). This research is important and interesting because it aims to develop disclosure indicators based on previous research articles and combined with GRI standard disclosures. Even though GRI universal has also been developed, its implementation still requires an adaptation process. Therefore, the use of GRI standard is still permitted. The results of this study are expected to be developed in further research with reference to the GRI universal.

study uses content techniques quantitatively (broad disclosure) and qualitatively (various disclosures). This study also uses previously developed indicators to analyze CSR disclosure through annual reports and sustainability reports in mining industry companies in Indonesia. Companies in the mining industry sector are chosen because they are categorized as high-density industries which often have negative social and environmental impacts (Angelakoglou & Gaidajis, 2020). Therefore, special attention is needed to minimize or eliminate these negative impacts, or even turn them into positive impacts economically, socially and environmentally. Thus the legitimacy gap can be eliminated and stakeholders can be satisfied.

2. THEORITICAL FRAMEWORK AND HYPOTHESIS

Stakeholder Theory

Stakeholder theory explains that an entity must be able to meet the expectations of stakeholders (Setiawan, Sudibyo & Purwanti, 2021). The closer the company meets stakeholder expectations, the greater the community's support for the company's existence. Companies should not focus on obtaining high profits and maximizing the interests of investors only. They should also be responsible for the safety and well-being of their employees, the security and satisfaction of their customers, and the preservation of nature. The disclosure of CSR programs in both annual reports and sustainability reports is a form of transparency and accountability of entities in meeting the expectations of stakeholders (Lindrianasari & Komalasari, 2018). The wider CSR disclosure, the more relevant and trustworthy it will be.

Legitimacy Theory

According to Deegan (2002), there is a difference between the priorities held by the entity and the priorities held by the community, so that the company is in a threatened position. This difference creates a gap called the legitimacy gap. Legitimacy gaps will arise if the entity is not sensitive to stakeholders' expectations. Impact will occur if the expectations are not met (Setiawan et al., 2021).

Legitimacy theory emphasizes entities must eliminate the existence of a legitimacy gap which is a gap between entity priorities and community priorities. There needs to be an intermediate point so that the priorities can be reconciled and the existence of entities in the community can be accepted and sustainable. CSR carried out by the company is an activity that is expected to eliminate this gap. Transparency in CSR disclosure is very important for stakeholders because they cannot monitor every entity's business operations directly. Therefore, the indicators described in this study are part of the legitimacy gap in mining industry companies that need to be addressed as a form of accountability.

Corporate Social Responsibility (CSR)

According to Gantino (2016), the concept of CSR originally referred to activities with

philanthropic motives in accordance with universal ethical-based human values in helping others. CSR is not an occasional activity. It needs to be done continuously, planned and measurable in terms of time and cost. CSR activities must be able to provide results for society, the environment, and the company (Awuy et al., 2016; Setiawan et al., 2022).

Global Reporting Initiative (GRI)

The Global Reporting Initiative (GRI) is an organization that issues standards for reporting on corporate or organizational sustainability aspects. GRI accommodates the needs of many business, social and government organizations to understand and communicate sustainability issues (Lindman et al., 2020). GRI is an international organization headquartered in Amsterdam, the Netherlands. The main focus of this organization is to achieve transparency in the reporting carried out by the organization through the development of sustainability reporting standards or guidelines.

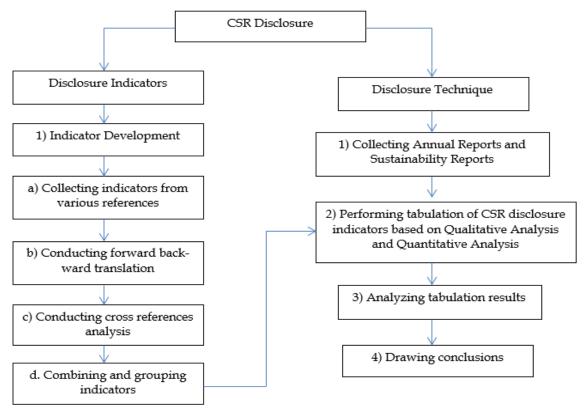


Figure 1 Research Design

Source: Processed data

3. RESEARCH METHOD

This research is a descriptive qualitative research by exploring the data and interpreting them broadly based on the results of understanding and critical thinking with logical reasons. The data used are secondary data obtained from the company's official website and other internet sources. The research steps as described in the research design can be seen in Figure 1. Based on the research design in Figure 1, there are 2 main stages of research: developing disclosure indicators and studying CSR disclosure in annual reports or sustainability reports using quantitative and qualitative content analysis.

Indicator Development Collecting indicators based on aspects

Indicator development begins with studying previous research articles on the theme of CSR disclosure in mining industry companies and commonly used standards such as the GRI. Based on search results on the internet, there are 6 research articles in which the CSR disclosure indicators contained in them are often used as references and citations such as Angelakoglou & Gaidajis (2020); Lindman, Ranangen & Kauppila (2020); Allen et al (2017); Nainggolan and Handoyo (2019); Szczepankiewicz & Mucko (2016); and Dyduch & Krasodomska (2017). After studying these articles, the next step is to map CSR disclosure indicators based on aspects of disclosure, such as ethical, economic, social, environmental and governance.

Conducting forward backward translation

After the indicators have been collected, the next step is to translate the language. This is done so that the words used as references have the right meaning and are not biased. According to Setiawan et al (2018), the arrangement of adaptation sentences from the source language to the target language can often be understood

by users in the target language, but actually does not match the expected meaning when users read from the source language. This can lead to misinterpretation of meaning. Therefore, it is necessary to have a process that can improve accuracy in the process of language translation so that the meaning to be conveyed to users in the source language can be understood by users in the target language. This process is referred to as forward backward translation.

The language or choice of words used in the source article (source language) needs to be translated into the target language. The target language is then translated back into the source language and it is necessary to check whether the equivalent words are the same. If they are the same, the translation process from the source language to the target language is correct. However, if it is not correct, the translation process from the source language to the target language is distorted or biased. Therefore, the translator must review and use the right choice of words. This process is important in collecting indicators because it can influence the process of analyzing CSR disclosure information. Meanwhile, the indicators that will be developed are obtained from articles written in English and Indonesian.

Conducting cross references analysis

Cross references analysis is carried out to develop indicators obtained from various existing references. In this process, indicators are grouped into economic, social and environmental categories. An indicator is declared passed, if it is used by at least 5 references (articles and GRI standards). Meanwhile, indicators that are not used by at least 5 references will be eliminated. The cross reference process should be assisted by using a table in excel. Table 2 provides an example

Table 1
Total aspects and indicators of CSR disclosure from various journals

Journal	Aspect	Indicator
Angelakoglou & Gaidajis.,(2020)	3	8
Lindman, Ranangen & Kauppila (2020)	5	10
Allen et al., (2017)	6	12
Nainggolan dan Handoyo (2019)	3	6
Szczepankiewicz & Mucko (2016)	3	6
Dyduch & Krasodomska (2017)	3	7

Source: Summarized researcher

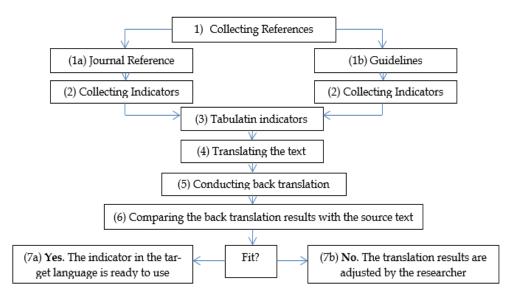


Figure 2
Procedure in Forward-Backward Translation

Source: Setiawan, et.al (2018)

of the cross reference process. Disclosure indicators for each reference are identified and tabulated in the following format.

Combining and Grouping Indicators

Disclosure indicators that have passed and met the requirements are then combined and grouped. Grouping is done by dividing the indicators according to the category of CSR disclosure consisting of economic, environmental and social categories. This grouping of indicators is the end result of indicator development which can then be used as a reference for indicators in CSR disclosure through the company's annual report.

Disclosure Techniques

Collecting Annual Reports and Sustainability Reports

Annual reports and sustainability reports are media that companies can use to report on their social responsibility. The company's annual report and sustainability report can be obtained through the official website of the Indonesia Stock Exchange (www.idx.co.id) and the company's official website.

This research has succeeded in compiling 135 annual reports and 30 sustainability reports of mining sector companies listed on the IDX during 2017-2019. Thus, the object of research is 165 report data.

Performing tabulation of CSR disclosure indicators based on Qualitative Analysis and Quantitative Analysis

Tabulation of CSR disclosure indicators is carried out using quantitative and qualitative content analysis techniques based on previously developed indicators. This tabulation is part of the analysis of the 165 reports (annual reports and sustainability reports) that have been submitted. The tabulation carried out is exemplified in Table 3.

Analysing tabulation results

Furthermore, the results of the tabulation are analysed in depth and detail. The results of the tabulation analysis are very important in answering the formulation of the problem regarding the scope and variety of CSR disclosures that are commonly carried out by mining industry companies for the period 2017-2019.

Drawing conclusions

The last stage is drawing conclusions on the results of the tabulation analysis and opening up the discussion.

Table 2 Disclosure Tabulation Format

Category	Indicator	Reference Title	The number of references that disclose the indicators	Qualified/ not
Fconomy				

Source: Processed Data

Table 3 Content Analysis Tabulation

	_	Indicator 1						
No	Name of Company	Vanu	Quantitiativ		ive	Q	ualitativ	7e
	rame of Company	Year	AR	SR	Score	AR	SR	Score
1	Adaro Energy Tbk.	2017						
		2018						
		2019						

Source: Processed Data

4. DATA ANALYSIS AND DISCUSSION

In preparing CSR disclosure based on the analytical method in Figure 3, allowance is made for 82 standards based on the GRI and 49 standards from previous research articles. The same indicators will be eliminated. Then, the indicators that pass (at least are disclosed in the 5 references that become the reference) will be re-examined. Indicators that pass the second stage of elimination will be grouped into three major categories in the economic, social and environmental fields.

The results of the final tabulation provide 24 general indicators that are disclosed, consisting of 3 indicators for the economic category, 9 indicators for the environmental category, and 12 indicators for the social category. Table 4 shows the results of developing indicators.

Quantitative disclosure analysis

Quantitative disclosure analysis is carried out by conducting content analysis on the data collected. Scoring is given from 1 to 5. The higher the company's CSR disclosure score, the wider the information disclosed. A score of 1 is given if the company discloses using only 1-2 explanatory sentences; Score 2 for disclosure using 1 paragraph (more than 2 sentences); score 3 for disclosure using 2 - 3 paragraphs; score 4 for disclosure using 4 - 5 paragraphs; and a score of 5 for disclosure using more than 5 paragraphs (Setiawan, Jonathan and Kurniawati, 2022). The analysis is carried out by looking at CSR disclosure in the company's annual report and sustainability report. Content analysis techniques aim to determine the extent of disclosure made by the company based on the amount of information submitted.

Economic Category

In the economic category, disclosure is dominated by the distribution of the resulting company's direct economic value. This information is also presented in annual reports, particularly in financial reports, and there are developments in its presentation. Meanwhile, the indirect economic impact is added with information related to the company's operational activities. Regarding the E2 indicator, the company does not present the wage ratio for entry-level employees because the compensation policy is an internal company policy. There are many things to consider when it comes to salary payments, such as the supply of labor, the skills possessed by employees, the company's financial condition, etc. Even though there is already a provision for a minimum wage, in practice not all companies are able to comply with this provision for various internal policy reasons. Figure 3 presents data related to each information on each indicator.

Environmental Category

There are 9 indicators for the environmental disclosure category. Environmental indicators focus on 3 main aspects: water, air and waste. Although the mining industry deals a lot with the impact on the environment, it is not disclosed much quantitatively. The dominant disclosures in Table 6 show solid and liquid waste management. Meanwhile, the data in Figure 6 explains that disclosure is mostly found in the indicator L9. The following are the results of a content analysis of environmental disclosures in mining sector companies in Indonesiawhich can be seen in Table 6.

Table 4
Disclosure Indicator Index

Category	Index	Indicator	Category	Index	Indicator
Economy	E1	Distribution of the resulting direct economic value of the company	Social	S1	Work safety management
	E2	The minimum wage for entry- level employees which is reaching the regional minimum and presented by gender		S2	Occupational health services
	E3	Significant indirect economic impact		S3	Participation, consultation and communication of workers on occupational safety and health
Environment	L1	Interaction with water (source and utilization)		S4	Improvement of the quality of workers' health
	L2	Water management		S5	Prevention and mitigation of the impact of occupational safety and health that is directly related to business relationships
	L3	Direct (Scope 1) GHG emissions		S6	Issues and solutions to work accident problems
	L4	Indirect (Scope 2) GHG emissions		S7	Occupational diseases
	L5	Other indirect (Scope 3) GHG emissions		S8	Work training
	L6	GHG emission intensity		S9	Job career, wages, bonuses and security in employment contracts
	L7	GHG emission reduction		S10	Human rights (employee training, policies and regulations)
	L8	Waste by type and disposal method		S11	Assessment of the health and safety impact of various categories of products and services
	L9	Solid and liquid waste		S12	Information regarding accomodation or house ownership plans, food and other benefits for employees

Source: Processed Data

Table 5
Quantitative Content Analysis of the Economic Category

		~ ,	
No	Index	Indicator	Score
1	E1	Distribution of the resulting direct economic value of the company	4.99
2	E2	The minimum wage for entry-level employees which is reaching the regional minimum and presented by gender	1.31
3	E3	Significant indirect economic impact	3.45

Source: Processed Data

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Figure 3
Data Disclosing the Economic Indicators

Source: Processed Data

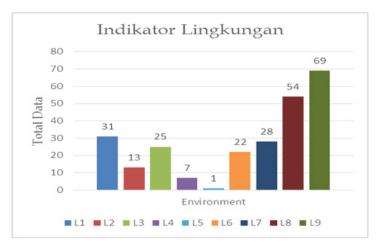


Figure 4
Data Disclosing the Environmental Indicators

Source: Processed Data

Table 6
Quantitative Content Analysis of The Environmental Category

No	Index	Indicator	Score
1	L1	Interaction with water (source and utilization)	2.61
2	L2	Water management	2.09
3	L3	Direct (Scope 1) GHG emissions	2.45
4	L4	Indirect (Scope 2) GHG emissions	2.17
5	L5	Other indirect (Scope 3) GHG emissions	1.00
6	L6	GHG emission intensity	2.05
7	L7	GHG emission reduction	2.39
8	L8	Waste by type and disposal method	2.57
9	L9	Solid and liquid waste	3.60

Source: Processed Data

Table 7
Quantitative Content Analysis of The Social Category

No.	Index	Indicator	Score
1	S1	Work safety management	3.18
2	S2	Occupational health services	2.12
3	S3	Participation, consultation and communication of workers on occupational safety and health	1.88
4	S4	Improvement of the quality of workers' health	3.06
5	S5	Prevention and mitigation of the impact of occupational safety and health that is directly related to business relationships	1.92
6	S6	Issues and solutions to work accident problems	2.09
7	S7	Occupational diseases	1.50
8	S8	Work training	2.03
9	S9	Job career, wages, bonuses and security in employment contracts	1.80
10	S10	Human rights (employee training, policies and regulations)	2.00
11	S11	Assessment of the health and safety impact of various categories of products and services	1.19
12	S12	Information regarding accomodation or home ownership plans, food and other benefits for employees	1.60

Source: Processed Data

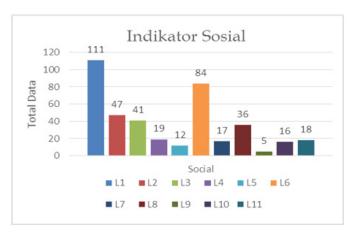


Figure 5
Data Disclosing the Social Indicators

Source: Processed Data

Social Category

Of the three existing categories, the social category has the most indicators. This is because in Indonesia in particular, CSR is more focused on improving human quality and human rights. Companies pay more attention to essential issues such as employee health, education and safety (Setiawan et al., 2018). There are 12 indicators for social categories as described in Table 7 and Figure 5 for the results of quantitative content analysis.

Qualitative Disclosure Analysis

Qualitative analysis is conducted to determine the diversity of disclosures made by companies based on the indicators presented. Scoring is given from 1 to 8 (Setiawan, Sudibyo, Purwanti, 2021; Setiawan et al., 2018). Score 1 indicates that disclosure is only narrative in nature, while score 8 indicates that disclosure is not only narrative in nature, but also includes pictures, tables, diagrams and other monetary and non-monetary information.

Economic Category

In the economic category, the most detailed disclosure is indicator E1, where disclosure is made in a narrative/qualitative descriptive manner accompanied by tables or pictures as well as monetary and non-monetary information. Almost all mining sector companies present the same trend. In indicator E3, disclosure is also presented in detail. But in indicator E2, disclosure is only presented in a narrative manner accompanied by a table that compares conditions between periods or by gender.

Environmental Category

Based on the information in Table 9, the results of the qualitative content analysis for the environment category can be interpreted as follows: First, it appears that the disclosure is more aimed at the Greenhouse Gas issue because the mining industry is very at risk of the greenhouse effect (categorized as a high-density industry). Therefore, in mining industry companies, the impacts and efforts in handling the greenhouse effect are material things to be disclosed and become important information for various stakeholders.

Second, disclosure is not only made in narrative form, but is also accompanied by tables/diagrams and other non-monetary information related to interactions with water and its management. Third, the issue of solid and liquid waste is also a concern in disclosure, especially in information related to the type of waste and the unit of measurement for the waste. Comparison between periods is interesting information.

Table 8
Qualitative content analysis of economic category

No	Index	Indicator	Score
1	E1	Distribution of the resulting direct economic value of the company	7.97
2	E1	The minimum wage for entry-level employees which is reacing the regional minimum and is presented by gender	2.31
3	E3	Significant indirect economic impact	4.16

Source: Processed Data

Table 9
Qualitative Content Analysis of Environmental Category

No	Index	Indicator	Score
1	L1	Interaction with water (source and utilization)	4.91
2	L2	Water management	2.09
3	L3	Direct (Scope 1) GHG emissions	5.73
4	L4	Indirect (Scope 2) GHG emissions	6.43
5	L5	Other indirect (Scope 3) GHG emissions	7.00
6	L6	GHG emission intensity	5.70
7	L7	GHG emission reduction	3.17
8	L8	Waste by type and disposal method	3.59
9	L9	Solid and liquid waste	3.42

Source: Processed Data

Table 10 Qualitative Content Analysis of Social Category

No	Index	Indicator	Score
1	S1	Work safety management	1.65
2	S2	Occupational health services	2.79
3	S3	Participation, consultation and communication of workers on occupational safety and health	2.79
4	S4	Improvement of the quality of workers' health	3.00
5	S5	Prevention and mitigation of the impact of occupational safety and health that is directly related to business relationships	1.33
6	S6	Issues and solutions to work accident problems	4.56
7	S7	Occupational diseases	1.13
8	S8	Work training	5.67
9	S9	Job career, wages, bonuses and security in employment contracts	2.60
10	S10	Human rights (employee training, policies and regulations)	1.13
11	S11	Assessment of the health and safety impact of various categories of products and services	1.13
12	S12	Information regarding accomodation or home ownership plans, food and other benefits for employees	1.10

Source: Processed Data

Social Category

Table 10 describes the qualitative content analysis of social category.

- a. Indicator S8 (job training) is an indicator with a large variety of disclosures. In addition to the narrative, this disclosure is also accompanied by a table explaining the type of training, training participants from various levels and gender of the participants. There are even some company data that explain the cost of the training and the impact of the training. Therefore, in this indicator, the variety of disclosures is very wide.
- b. Another interesting disclosure is the issue of work accidents and their solutions. These disclosures usually explain the number of work accidents, their impact, and the company's solution to this issue. Some company data explains comparisons between periods and the company's success in overcoming or reducing these problems. For indicator S6, companies tend to provide positive and non-monetary disclosures.
- c. Even though the social category has the most indicators, compared to the other 2 categories, the variety of disclosures for each indicator is only narrative or quantitative in nature, especially on issues

that are sensitive or related to company strategy such as occupational safety management, the impact of occupational safety issues, human rights., health impact assessments, product and service safety, information on accommodation or housing plans for employees, meals, and other benefits.

5. CONCLUSION, IMPLICATION, SUG-GESTION AND LIMITATION

Mining sector companies are prone to negative impacts on the environment and society, so it is important for these companies to disclose their social responsibility both through annual reports and sustainability reports. Even though disclosure through sustainability reports is still voluntary, in reality the legitimacy pressure is getting higher so that CSR disclosure becomes mandatory. In general, disclosure through sustainability reports refers to GRI, while disclosure through other media still uses various standards. This research has succeeded in developing 24 disclosure indicators that are commonly used in mining sector companies in Indonesia. In addition, information related to disclosures commonly made by mining sector companies in the period 2017-2019 has been analysed and discussed.

This study is expected to be a reference in the development of indicators using cross reference and forward back translation techniques. In addition, the indicators that have been successfully developed are also expected to be used in quantitative research using CSR disclosure as a measurement dimension. The practical implication for companies is that in preparing CSR disclosures, the developed indicators can be used and become a benchmark for disclosure in mining sector companies in general in Indonesia.

This study contributes to research that raises CSR as a research variable, so that the disclosure indicators can be used further. In addition, this research makes a practical contribution to financial and management practitioners to see what indicators have broad and varied disclosures so that they can make analysis from other perspectives as needed. For companies, this research is useful in determining which indicators should be disclosed based on general indicator information, including which material information will be developed for other disclosures. This research only involves 6 articles so that the number of indicators discussed is very limited. Future research is expected to involve more research articles or other general standards besides the GRI so that the development of indicators will be maximized. In addition, the content analysis technique in this study is only carried out using one coder. In order to get better results, it is necessary to involve more coders.

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