



Exploring the implementation of sustainable development goals: a comparison between private and state-owned enterprises in Indonesia

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Abstract

This study explores the extent of the United Nations Sustainability Development Goals (UN SDGs) implementations by listed companies in Indonesia. It also evaluates whether the SDG practices differ between state-owned enterprises (SOEs) and private companies listed in the Indonesia Stock Exchange (IDX). The main contributions of this paper are twofold: (1) it compares SGD reports and disclosures of listed SOEs vis-à-vis listed private companies in a developing country, and (2) it evaluates and compares the SDGs disclosures before and during the COVID-19 pandemic. Thirty-four listed companies produced sustainability reports consecutively from 2016 to 2020, resulting in 170 reports were used and analyzed in this study. A content analysis was applied to observe the SDGs disclosures in these reports. The findings show that overall, the listed companies in the study performed moderately well in their SDGs practice, with an overall disclosure index of 74% during the observed period. While a private company was a clear leader in its SDGs disclosure, overall, listed SOEs performed better to some extent than their private companies counterparts at a combined level. These indicate some aspect of legitimacy to maintain a good reputation in the community and also implies some level of coercive isomorphism, especially for the SOEs. At the level of sustainable development targets, however, the study finds indications to strongly propose that the achievements of the SDG targets were not yet significant. This study also finds slightly less but no significant difference in the SDGs practice during the COVID-19 pandemic compared to the practice before the COVID-19 pandemic. The findings of this study contribute to enriching the currently limited literature in this area and providing insights to relevant users, investors, and policymakers concerning the UN SDGs practices in Indonesia.

Keywords Content analysis · Indonesia Stock Exchange (IDX) · Private companies · State-owned enterprises · Sustainability reports · United Nations Sustainability Development Goals (UN SDGs)

The datasets generated during and/or analysed during the current study are available in the Indonesia Stock Exchange repository.

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1 Introduction

Corporate management has continuously shifted from profit paradigm to sustainability paradigm. The concept of sustainability started to emerge as an explicit social, environmental, and economic ideal in the late 1970s and 1980s (Caradonna, 2014). It has started to gain a stronger momentum since the Brundtland Commission published its report, *Our Common Future*, in 1987, and defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (United Nations General Assembly, 1987, p.43). This sustainability connotation was echoed and promoted by John Elkington in his Triple Bottom Line concept (Elkington, 1994). In the simplest terms, the triple bottom line agenda focuses not just on the economic value of organizations but also on their environmental and social values (Elkington, 2013). In effect, the activities of organizations are expected to contribute to all of their stakeholders and provide a comprehensive economic, environmental and social impact (Ioannou & Serafeim, 2019).

In order to evaluate the performance of organizations in reaching sustainable development, the sustainability activities of organizations must be recorded and reported (Ong & Djajadikerta, 2017, 2020). While annual reports could be used as the simplest medium to report sustainability performance, there have been several standards or guidelines related to sustainability set by non-government international organizations. One of the most commonly used guidelines is one that is published by the Global Reporting Initiative (GRI), an independent organization that has concerns over sustainability reporting and has developed and constantly updated its set of guidelines for sustainability reporting since 2000 (Istianingsih et al., 2020; Zhang et al., 2020). Nowadays, GRI-based stand-alone sustainability reports have become more commonly produced by organizations, separately from their annual reports (Trireksani et al., 2021).

In 2010, an integrative thinking movement towards the integration of annual and sustainability reports into a single integrated report (IR), was started by several organizations, including A4S (Accounting for Sustainability) and GRI, and they formally set up the International Integrated Reporting Council (IIRC) (Donkor et al., 2021a). The issuance of integrated reports by organizations has also been growing, although up to now, the practice is mainly voluntary, and it has only been made mandatory in South Africa for all listed companies at the Johannesburg Stock Exchange (Di Vaio et al., 2020; Donkor et al., 2021b; Wang et al., 2020).

The newest standard in sustainable development measurement was developed by the United Nations (UN) in 2015 (Bebbington & Unerman, 2020; Pizzi et al., 2021; Tsalis et al., 2020), and it has been one of the most popular instruments for identifying the indicators of sustainability (Jain & Jain, 2020). The UN's sustainable development goals (SDGs) contain the agendas for the achievement of sustainable development, which have been adopted by the United Nations General Assembly on 25 September 2015, and identify 17 goals to be achieved by the member nations by 2030 (Mugellini & Villeneuve, 2019). SDGs include 169 targets that allow the governments of the member countries to set their national targets according to their specific circumstances and capacities (Campagnolo et al., 2018).

In line with the growing use of UN SDGs as a platform for sustainability performance, research that uses and focuses on UN SDGs has also been growing (e.g., Ali et al., 2018; Bebbington & Unerman, 2018, 2020; Campagnolo et al., 2018; Di Vaio et al., 2021; Jain & Jain, 2020; Pedersen, 2018; Tsalis et al., 2020; van der Waal & Thijssens, 2020). While the

studies in this area continue to grow, Bebbington and Unerman (2020) have indicated that there are still not enough accounting scholars contributing to the academic debate on the SDGs. Similarly, Pizzi et al. (2021) state that "... only a few scholars have tried to evaluate the quality of SDG reporting" (p. 405) and suggest that "future research could also analyze contexts different from the Italian one and contribute to the assessment of country-specific characteristics that affect firms' SRS (SDG Reporting Score)." (p. 416). Additionally, van der Waal and Thijssens (2020) argue the importance of studying corporate involvement in SDGs.

Among the currently available studies, not many so far has been conducted on UN SDGs practice in Indonesia (Hudaefi, 2020). Indonesia is the largest country in the South-East Asian region and the fourth largest county in the world. Indonesia's involvement in the whole formulation process in the post-2015 SDG agenda has been significant (Soetikno, 2015). The 2017 Indonesia Presidential Decree Number 59 on the implementation of UN SDGs indicates the government's commitment to achieving sustainable development in Indonesia. This decree is also the Indonesian government's effort to involve and include all national resources to participate in the national sustainable development program. As stated in article 3 of the 2017 Presidential Decree No. 59, this decree should become a guideline not only for government institutions, but also for non-government organizations, mass-organizations, philanthropy organizations, business organizations, academic institutions, and other organizations that plan, implement and evaluate the sustainable development applications in Indonesia (President of Indonesia, 2017). The Indonesian government also ratified the Regulation of the Financial Services Authority (FSA) No. 51/POJK.03/2017 requires sustainability reporting as an obligation by 2019 (Financial Service Authority of Indonesia, 2017). With these mandatory requirements stated in the presidential decree and the FSA's regulation in operation, the motivation to study the implementations of UN SDGs in SOEs and the private sector in Indonesia becomes justified. Additionally, whilst there have been several studies related to the SOEs and/or sustainability in Indonesia (e.g., Rakhman, 2018; Budianto, 2019; Sutiono, 2019), these studies did not compare the implementation of SDGs among private companies and SOEs and before and during the COVID-19 pandemic.

SOEs and private companies are two major company types in Indonesia. The main difference among these two types of companies is that the majority shareholder of SOEs (51% or more) is the government (Law No.19, 2003), while the public owns the shares of private companies. SOEs are worth studying as they play a strategic role in the Indonesian economy (Pulungan et al., 2019). Their strategic roles are to make an economic contribution to the national budget, be profit-oriented, hold a public benefit, pioneer business activities, and provide guidance and assistance for young entrepreneurs (Law No.19, 2003). A further statement on the objective of SOEs, as stated in the Law on SOEs, is that SOEs should actively participate in coaching and giving assistance to small entrepreneurs, cooperatives, and the community (Ministry of SOE's of Indonesia, 2018). Hence it is clear that there are differences between the strategic roles of SOEs and private companies that may influence the SDG implementation.

Among the currently available studies, none so far has been conducted on UN SDGs implementation in SOEs and private companies in Indonesia. With the emergence of the COVID-19 pandemic, it is also a suitable time to see whether such a disruption affects the SDGs practice made by organizations. Accordingly, this paper aims to address the following research questions: (1) to what extent have SDGs been implemented by companies in Indonesia, (2) whether there are differences in the level of implementation of the SDGs and their targets by SOEs and private companies in Indonesia, and (3) whether there are

differences in the level of implementation of the SDGs and their targets by SOEs and private companies in Indonesia before and during the COVID-19 pandemic.

This study focuses on listed SOEs and private firms on the Indonesia Stock Exchange (IDX). It applies the well-established content analysis method to evaluate annual sustainability reports issued by listed SOEs and private companies on the Indonesia Stock Exchange (IDX). All listed companies that issued their sustainability reports consecutively from 2016 to 2020 (5 consecutive years since the adoption of UN SDGs in 2015) were included as sample firms. The findings from the disclosure analysis of these sustainability reports show that all 17 goals receive moderate to high scores, indicating relevant activities performed by the companies to achieve the goals. However, the overall score for the targets is quite low, indicating that the performed activities had not reached the expected target. This study also evaluates data from the pre- (2016–2019) and during the COVID-19 periods (2020). The findings show a slight decrease in the overall SDGs disclosure made by the companies during the COVID-19 pandemic, but the difference is not significant to the disclosure made pre-COVID-19 pandemic. It is also found that Indonesian listed SOEs made slightly more UN SDGs coverage as compared to their private companies counterparts from 2016 to 2019, but interestingly, in 2020, the situation was reversed.

Accordingly, this study aims to contribute by enriching the literature in this area and providing insights to various parties, such as the relevant governmental institutions (such as the Ministry of National Development Planning (Bappenas) that coordinates the UN SDGs implementation in Indonesia), investors and potential investors, and industry practitioners, regarding the current stage of implementation of SDGs by SOEs and private companies in Indonesia.

The remainder of the paper is presented as follows. Section 2 presents the relevant literature background leading to the aims of this study. Section 3 describes the methodology. Section 4 presents and discusses the findings. Section 5 provides the conclusions.

2 Literature background

The concept of sustainable development implies limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities (World Commission on Environment & Development, 1988). Human activities on the planet have left many negative impacts which cannot be ignored. The United Nations is a global organization founded in 1945 by the signing of the UN Charter by 51 member states. One aspect in its preamble focuses on the promotion of “social progress and better standards of life in larger freedom” and “the economic and social advancement of all people” (Preamble of the UN Charter 1945). Its commitment to the environment and sustainability has been reflected in their activities in the form of conferences and summits (including one in 1987, which led to the definition of sustainable development in the Brundtland report), and more recently, the development of the UN SDGs that contain the agendas for the achievement of sustainable development by the member nations by 2030 (Bebbington & Unerman, 2020; Mugellini & Villeneuve, 2019; Pizzi et al., 2021).

While past global governance efforts mostly relied largely on top-down regulations or market-based approaches, the SDGs promise a novel type of governance that makes use of non-legally binding approaches (Biermann et al., 2017). The UN SDGs include 17 goals and 169 targets to be achieved that allow the governments of the member countries to set

their national targets according to their specific circumstances and capacities (Campagnolo et al., 2018). Figure 1 shows the 17 UN SDGs.

Indonesia, as one of the UN member states, has also been involved in an international agreement on UN sustainability. To emphasize the essential meaning of sustainable development to Indonesia, the government issued Presidential Decree No. 59 of 2017 on the Implementation of Sustainability Development, setting a guideline for both medium- and long-term development programs not only for central and local governments but also for other organizations, including businesses, on the implementation of the National Action Plan of Sustainability Development. Additionally, the government gives a mandate to the National Development Planning Agency (Bappenas) to establish the National Sustainability Development Roadmap and the National Action Plan of Sustainability Development in Indonesia.

Any business is not and cannot be separated from its environment and stakeholders, including the government. In general, businesses expect policymakers for precise and robust long-term policy frameworks whereby they can operate and have a guide for making investments, target innovations, and business development decisions (Pedersen, 2018). The endorsement of UN SDGs by the government provides an essential and clear guide for companies to run a business accordingly within the context of SDGs. Current performance index levels on the UN SDGs by the UN member states could be seen on the SDG Index and Dashboards Report prepared by an independent expert at the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung. In 2019, the Sustainable Development Report showed Indonesia's global index score increased to 64.2 (out of 100) from 62.8 in 2018, and the 2021 report shows an improved score of 66.3, placing Indonesia in 97th place among 165 countries globally (Sachs et al., 2021).

There have not been many studies on the UN SDGs implementation by firms (Bebbington & Unerman, 2020; Di Vaio et al., 2020). Some scholars still try to offer frameworks for evaluating or assessing the level of alignment of corporate sustainability reporting practices within the scope of the UN SDGs (e.g., Calabrese et al., 2021; Tsalis et al., 2020). Among some relevant studies that evaluate SDGs implementation at the organizational level, Ali et al. (2018) made a comparison of the implementation of the UN SDGs among



Fig. 1 The UN SDGs (Kim, 2018)

BRICS member states (Brazil, Russia, India, China, and South Africa) by content analyzing the adaptation of the UN SDGs in the top 25 companies' visions and missions (5 companies from each country). The study suggested a low level of engagement of companies in SDGs reflected in the companies' vision and mission statements. In a study evaluating disclosures made by higher education institutions in the UK, Saha et al. (2021) found no relationship between carbon emission disclosure and the disclosure of SDGs, indicating a lack of engagement in the SDGs implementation. Pedersen (2018) found that organizations had different views on new sustainable development goals establishment. Some organizations might feel that the UN SDGs agenda did not match with the organizations' targets. In contrast, some other organizations might feel differently, especially those which already had their goals aligned with the UN SDGs before its ratification in 2015.

Considering the limited number of studies that evaluate the UN SDGs performance of firms, the need for more studies on this topic is strong. In line with the strong development in sustainability reporting, utilizing the more well-established sustainability reports as a basis and proxy for estimating the UN SDGs practice through disclosures made in the sustainability reports is also more relevant rather than, for example, analyzing vision and mission statements like what Ali et al. (2018) did. In the case of Indonesia, which has quite a significant number of state-owned enterprises (SOEs), it would be interesting to explore how companies perform in their UN SDGs practice and see whether the UN SDGs performance differs between SOEs and private companies. This study aims to conduct exploratory research to address these two issues by evaluating listed companies on the Indonesia Stock Exchange (IDX).

As a latent theoretical basis for this exploratory study, two perspectives under the political economy theory are used, i.e., legitimacy and institutional theories. Legitimacy is considered to be a resource on which an organization is dependent for survival (Dowling & Pfeffer, 1975), by maximizing its stakeholders' benefits without resorting to trade-offs (Wahyuningrum et al., 2020; Zhang et al., 2018). Legitimacy-related strategies may include targeted disclosures or perhaps controlling or collaborating with other parties who in themselves are considered to be legitimate (Deegan, 2002). Gaining legitimacy from the environment is one of the concerns of an organization for it to maintain a good reputation in the community or community views. In line with the fundamental principle of sustainable development, the legitimacy theory may be relevant to this study.

Given the overlapping nature of many theories, the notion of legitimacy is also central to the institutional theory (DiMaggio & Powell, 1983). When the environments or stakeholders of an organization require particular social responsibility, the organization will tend to obey the request as a normal requirement to be accepted in the community due to institutional pressures (Deegan, 2007, 2013). This constraining process is commonly known as isomorphism, which refers to "a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (DiMaggio & Powell, 1983, p.149). Isomorphism works and functions within three mechanisms, i.e., coercive (regulative) mechanisms that are prescribed mainly by the government, normative processes that are arranged by professional bodies or officials, and cultural-cognitive or mimetic mechanisms that organizations observe and learn from their peers (DiMaggio & Powell, 1983; Scott, 1995, 2011). Under this theory, organizations will change their structures or operations to conform to external pressures and expectations about what forms or structures are acceptable (legitimate), and hence it explains why organizations tend to undertake similar approaches, including in their reporting practices (Campbell, 2007; Deegan, 2002, 2013). Within the context of listed companies, and more particularly, the listed SOEs in Indonesia, isomorphism is highly relevant in their SDGs practice.

3 Methodology

3.1 Sample and data sources

This study uses data from listed firms on the Indonesia Stock Exchange (IDX) to form the sample. Considering that the UN SDGs was signed in 2015, we employed purposive sampling to select private companies and state-owned enterprises (SOEs) listed on the IDX that had released stand-alone sustainability reports for 5 consecutive years from 2016 to 2020.

In 2020, there were 716 companies listed on the IDX (IDX, 2020). From our data searching, we found that only 34 (out of 716) companies released stand-alone sustainability reports in addition to their annual reports for 5 consecutive years from 2016 to 2020, resulting in a total of 170 research sample units. Twenty-five of these 34 companies were private companies, and the remaining nine companies were SOEs. This sample was representable across industries and covered nine industrial sectors listed on the IDX: agriculture (4 companies), mining (6 companies), basic industry and chemicals (4 companies), consumer goods (2 companies), property, real estate, and building construction (3 companies), infrastructure, utilities, and transportation (4 companies), finance (8 companies), trade, services, and investment (2 companies), and miscellaneous industry (1 company). The sustainability reports of these 34 companies were downloaded from the companies' official websites in PDF form.

3.2 Data analysis and interpretation

This study applies the content analysis method to analyze the 170 sustainability reports from 2016 to 2020. Content analysis entails a systematic reading of a body of texts, images, and symbolic matter (Krippendorff, 2004). It has been used extensively in analyzing sustainability disclosure (Djajadikerta & Trireksani, 2012; Trireksani & Djajadikerta, 2016). Accordingly, this method is appropriate to be used for analyzing the disclosure of UN SDGs by private companies and SOEs in Indonesia because the object of this research is texts in sustainability reports (Trireksani et al., 2021). The results of the analysis will accordingly help answer the research questions of the extent of UN SDGs disclosure made in the companies' sustainability reports and the comparison between the practices made by SOEs and private companies.

In implementing the content analysis techniques, this study follows the basic procedures from Krippendorff (2004), which have been implemented by Ali et al. (2018) in their study in BRICS countries. The whole process of recording/coding included the following steps: preparation of the coding sheet formulation, selection of coders, building of shared perception basis, coding and scoring, and discussion and finalization of results.

The coding sheet contained 17 UN SDGs and their 169 targets that functioned as the basis for content-analyzing the sustainability reports. The 17 SDGs describe the goals that are aimed to be achieved, and these were used as main keywords for goal-level analysis. The 169 targets explain how private companies and SOEs implemented the UN SDGs. Each target represents one of the main keywords for target-level analysis. To enhance the reliability of the coding and scoring process, three coders with an accounting background and experience in sustainability report research were assigned to perform the tasks. Reliability distinguishes among three designs for generating data to measure reliability, which leads to three manifestations

of reliability: stability, reproducibility, and accuracy (Krippendorff, 2004). All of them turn out to be functions of the agreement achieved among observers, coders, judges, or measuring instruments (Krippendorff, 2004).

The shared perception basis for coding in this study was carried out by referring to the coding stages conveyed by Tesch (1990), i.e., (1) understand the entire report; (2) focus on each part of the document to understand the meaning behind an expression or statement; and (3) record or group the information throughout based on the main topic, and summarize them into codes. Subsequently, scoring was made on the extent of SDG disclosure in each of the companies' sustainability reports under study. For each goal that was considered to be adequately disclosed in a sustainability report, a score of 1 was given. Hence each company's sustainability report could get a score between 0 to 17 for SDG disclosure. Similarly, for each SDG target that was considered to be adequately disclosed, a score of 1 was given. Hence each company's sustainability report could get a score between 0 to 169 for SDG target disclosure.

To increase the validity of the results, discussions between coders were made once the scoring process had been completed. Validity indicates the extent to which observations accurately record the behavior in which one is interested (Sekaran & Bougie, 2016). The results from the different coders were collected, analyzed, and discussed to form the ideal conclusion of the results (Smith, 2003). When the coders produced different scoring results, evaluation of similarities and differences in perceptions was carried out between the three coders. After the completion of the evaluation, a final construct evaluation and analysis on the outputs from the coding and scoring processes were finalized.

4 Results and discussion

4.1 Results

This study presents separate tables that provide information on UN SDGs-based disclosure by goals and by targets. Table 1 describes the UN SDGs disclosure score (i.e., between 0 and 17) achieved by each of the 34 companies in five separate consecutive years. A higher score shows a greater extent of UN SDGs reported in the sustainability report.

Table 2 shows the comparison between the average percentage of SDGs reporting of SOEs and private companies. The percentage figures reflected the average disclosure scores across the 17 UN SDGs (from 5-year implementation) of SOEs and private companies. The gap was the difference in the percentages of SOEs and private companies.

The analysis of SDG targets disclosure indicates the level of achievement of SDG targets by the Indonesian listed companies included in this study. There were 169 possible targets to achieve in the UN SDGs implementation. Hence in this study, the content analysis of SDG targets disclosure for each company could range from 0 to 169. Table 3 describes the UN SDG targets disclosure score (i.e., between 0 and 169) achieved by each of the 34 companies in five separate consecutive years. A higher score shows a greater extent of UN SDG targets reported in the company's sustainability report.

Table 1 Disclosure scores of UN SDGs by Indonesian listed SOEs and private companies (2016–2020)

No	Name	Sector	SOE	Private	2016	2017	2018	2019	2020	Ave
1	Austindo Nusantara Jaya Tbk	Agriculture		X	15	16	16	15	14	15.2
2	Eagle High Plantations Tbk	Agriculture		X	13	16	16	16	15	15.2
3	Salim Ivomas Pratama Tbk	Agriculture		X	16	16	16	16	12	15.2
4	Sawit Sumbermas Sarana Tbk	Agriculture		X	13	14	14	11	10	12.4
5	Aneka Tambang Tbk	Mining		X	9	10	10	10	10	9.8
6	Bumi Resources Tbk	Mining		X	13	8	8	12	13	10.8
7	Vale Indonesia Tbk	Mining		X	12	13	12	14	14	13.0
8	Indo Tambangraya Megah Tbk	Mining		X	8	8	10	16	9	10.2
9	Bukit Asam Tbk	Mining		X	15	13	16	17	17	15.6
10	Petrosea Tbk	Mining		X	11	15	14	17	17	14.8
11	Indocement Tungal Prakarsa Tbk	Basic Industries & Chemical		X	15	16	16	16	14	15.4
12	Semen Indonesia Tbk	Basic Industries & Chemical	X		15	14	15	15	14	14.6
13	Waskita Beton Precast Tbk	Basic Industries & Chemical		X	9	10	14	15	16	12.8
14	Wijaya Karya Beton Tbk	Basic Industries & Chemical		X	11	13	13	13	12	12.4
15	Astra Internasional Tbk	Miscellaneous Industry		X	11	12	13	14	17	13.4
16	Multi Bintang Indonesia Tbk	Consumer Goods Industry		X	11	8	8	11	8	9.2
17	Unilever Indonesia Tbk	Consumer Goods Industry		X	17	17	17	17	17	17.0
18	Adhi Karya Tbk	Property Real Estate & Building Const	X		13	12	11	13	7	11.2
19	Total Bangun Persada Tbk	Property Real Estate & Building Const		X	11	9	10	17	16	12.6
20	Wijaya Karya Tbk	Property Real Estate & Building Const	X		10	9	10	13	16	11.6
21	Indika Energy Tbk	Infrastructure Utilities & Transportation		X	11	10	9	5	12	9.4
22	Jasa Marga Tbk	Infrastructure Utilities & Transportation	X		10	11	10	10	5	9.2
23	Mitrabaltera Segara Sejahta Tbk	Infrastructure Utilities & Transportation		X	8	9	8	8	6	7.8
24	Perusahaan Gas Negara Tbk	Infrastructure Utilities & Transportation	X		15	15	17	17	10	14.8
25	Bank Central Asia Tbk	Finance		X	9	13	12	14	7	11.0
26	Bank Negara Indonesia Tbk	Finance	X		16	16	16	15	10	14.6
27	Bank Rakyat Indonesia Tbk	Finance	X		12	12	15	16	15	14.0

Table 1 (continued)

No	Name	Sector	SOE	Private	2016	2017	2018	2019	2020	Ave
28	BFI Finance Indonesia Tbk	Finance		X	9	10	11	12	3	9.0
29	BPD Jawa Barat dan Banten	Finance	X		15	12	15	16	16	14.8
30	Bank Mandiri Tbk	Finance	X		11	11	11	16	16	13.0
31	Bank Maybank Indonesia Tbk	Finance		X	16	13	15	16	16	15.2
32	Bank CIMB Niaga Tbk	Finance		X	8	8	9	15	14	10.8
33	AKR Corporindo Tbk	Trade Services & Investment		X	13	14	13	13	13	13.2
34	United Tractors Tbk	Trade Services & Investment		X	12	13	14	9	8	11.2
Total number of companies			9	25						
Average score of the total sample companies					12.1	12.2	12.7	13.8	12.3	12.6

Table 2 Average disclosure of UN SDGs by Indonesian listed SOEs and private companies (2016–2020)

UN SDGs	2016			2017			2018			2019			2020		
	SOEs (%)	Private Companies (%)	Gap (SOEs-Private)	SOEs (%)	Private Companies (%)	Gap (SOEs-Private)	SOEs (%)	Private Companies (%)	Gap (SOEs-Private)	SOEs (%)	Private Companies (%)	Gap (SOEs-Private)	SOEs (%)	Private Companies (%)	Gap (SOEs-Private)
1	89	72	17	100	76	24	100	84	16	89	68	21	100	68	32
2	44	32	12	22	32	-10	56	40	16	22	32	-10	56	52	4
3	78	84	-6	78	96	-18	78	100	-22	56	80	-24	67	84	-17
4	100	96	4	100	92	8	100	84	16	100	88	12	89	96	-7
5	78	68	10	89	76	13	89	64	25	89	68	21	78	72	6
6	89	92	-3	78	100	-22	89	92	-3	78	84	-6	78	80	-2
7	67	76	-9	67	84	-17	89	76	13	67	76	-9	78	80	-2
8	89	96	-7	100	100	0	100	100	0	100	88	12	100	84	16
9	78	84	-6	67	80	-13	78	80	-2	67	60	7	44	72	-28
10	67	48	19	56	52	4	67	56	11	67	44	23	44	52	-8
11	100	72	28	100	72	28	89	80	9	67	60	7	89	56	33
12	78	84	-6	89	80	9	78	88	-10	67	76	-9	67	72	-5
13	100	60	40	67	64	3	89	68	21	56	68	-12	33	68	-35
14	22	20	2	33	20	13	22	44	-22	33	40	-7	33	48	-15
15	89	80	9	100	76	24	100	92	8	100	72	28	78	80	-2
16	67	60	7	67	68	-1	67	68	-1	89	72	17	78	72	6
17	44	48	-4	44	68	-24	56	60	-4	67	32	35	33	48	-15
Average gap (SOEs-Private)			6.29			1.24			4.17			6.23			-2.29

Table 3 Disclosure scores of UN SDG targets by Indonesian listed SOEs and private companies (2016–2020)

No	Name	Sector	SOE	Private	2016	2017	2018	2019	2020	Ave
1	Austindo Nusantara Jaya Tbk	Agriculture		X	45	57	55	47	40	48.8
2	Eagle High Plantations Tbk	Agriculture		X	31	33	36	36	33	33.8
3	Salim Ivomas Pratama Tbk	Agriculture		X	33	44	57	39	28	40.2
4	Sawit Sumbermas Sarana Tbk	Agriculture		X	42	42	41	23	17	33.0
5	Aneka Tambang Tbk	Mining		X	22	26	25	18	19	22.0
6	Bumi Resources Tbk	Mining		X	40	33	22	22	28	29.0
7	Vale Indonesia Tbk	Mining		X	16	28	23	25	26	23.6
8	Indo Tambangraya Megah Tbk	Mining		X	23	21	22	22	20	21.6
9	Bukit Asam Tbk	Mining		X	44	34	63	47	51	47.8
10	Petrosea Tbk	Mining		X	25	40	42	36	29	34.4
11	Indoement Tungal Prakarsa Tbk	Basic Industries & Chemical		X	48	64	72	70	64	63.6
12	Semen Indonesia Tbk	Basic Industries & Chemical	X		44	52	50	50	38	46.8
13	Waskita Beton Precast Tbk	Basic Industries & Chemical		X	19	16	19	20	19	18.6
14	Wijaya Karya Beton Tbk	Basic Industries & Chemical		X	44	28	15	14	12	22.4
15	Astra Internasional Tbk	Miscellaneous Industry		X	29	29	25	45	50	35.6
16	Multi Bintang Indonesia Tbk	Consumer Goods Industry		X	19	11	10	24	10	14.8
17	Unilever Indonesia Tbk	Consumer Goods Industry		X	25	27	20	14	12	19.6
18	Adhi Karya Tbk	Property Real Estate & Building Const	X		17	17	13	20	10	15.4
19	Total Bangun Persada Tbk	Property Real Estate & Building Const		X	15	12	14	36	33	22.0
20	Wijaya Karya Tbk	Property Real Estate & Building Const	X		14	13	14	31	36	21.6
21	Indika Energy Tbk	Infrastructure Utilities & Transportation		X	17	16	10	17	23	16.6
22	Jasa Marga Tbk	Infrastructure Utilities & Transportation	X		10	20	13	10	10	12.2
23	Mitrabaltera Segara Sejati Tbk	Infrastructure Utilities & Transportation		X	10	15	15	8	8	11.2
24	Perusahaan Gas Negara Tbk	Infrastructure Utilities & Transportation	X		20	17	25	31	16	21.8
25	Bank Central Asia Tbk	Finance		X	13	30	20	42	18	24.6
26	Bank Negara Indonesia Tbk	Finance	X		32	35	31	35	13	29.2
27	Bank Rakyat Indonesia Tbk	Finance	X		25	27	35	49	19	31.0

Table 3 (continued)

No	Name	Sector	SOE	Private	2016	2017	2018	2019	2020	Ave
28	BFI Finance Indonesia Tbk	Finance		X	18	15	18	23	5	15.8
29	BPD Jawa Barat dan Banten	Finance	X		44	30	44	44	44	41.2
30	Bank Mandiri Tbk	Finance	X		22	17	23	30	44	27.2
31	Bank Maybank Indonesia Tbk	Finance		X	69	47	49	45	40	50.0
32	Bank CIMB Niaga Tbk	Finance		X	13	14	16	35	38	23.2
33	AKR Corporindo Tbk	Trade Services & Investment		X	31	33	31	20	23	27.6
34	United Tractors Tbk	Trade Services & Investment		X	25	29	30	20	18	24.4
Total number of companies			9	25						
Average score of the total sample companies					27.8	28.6	29.4	30.8	26.3	28.2

4.2 Discussion

4.2.1 The extent of SDGs disclosures by listed SOEs and private companies in Indonesia

The overall results in Table 1 show that Unilever Indonesia (a private consumer goods company) is the top performer who reported a consistent maximum score of 17 in their UN SDGs disclosures. All 17 SDGs were steadily identified in its five annual sustainability reports. Some of the notable findings in their sustainability reports include disclosures such as direct and active involvement in the formulation and implementation of SDGs along with all stakeholders from around the world, and development of the Unilever Sustainable Living Plan, a Unilever's global long-term strategic initiative that has been implemented since 2010 (Unilever Sustainability Report, 2016). These actions had likely led to the company's alignment on sustainable development policy and programs that supported its UN SDGs achievements from 2016 to 2020.

Annual analysis of the results of SDGs disclosures shows some slight variations in the other high performing companies. In 2016, the second position was co-held by one private agriculture company, Salim Ivomas, and two finance companies, i.e., Bank Negara Indonesia (BNI) (an SOE), and Maybank Indonesia (a private company), obtaining the same score of 16 disclosed goals. In 2017, the second position was pinned to five companies, i.e., three private agriculture companies (Salim Ivomas, Austindo Nusantara Jaya, and Eagle Plantation), one finance SOE (BNI), and one SOE in the basic industries and chemical sector (Indocement Tunggul Prakarsa), which all obtained 16 disclosed goals. Maybank Indonesia, which did well in 2016, dropped significantly in 2017 by only showing 13 disclosed goals. In 2018, Perusahaan Gas Negara (PGN), an SOE in the infrastructure, utilities and transportation sector, achieved a maximum disclosure score of 17, and it put the company in a similar top position as Unilever Indonesia. In 2019, PGN maintained its maximum disclosure score of 17, as it was in 2018, while improved performances were achieved by Bukit Asam and Petrosea (both were private companies in the mining sector) and Total Bangun Persada (a private company in the property, real estate and building construction sector), where all three companies achieved a maximum disclosure score of 17. Finally, in 2020, both Bukit Asam and Petrosea managed to keep their maximum disclosure score of 17 as they were in 2019.

The lowest-performing company, and the only company that received an average disclosure score below 8 in the combined 5 years, was Mitrabahera Segara (a private company in the infrastructure, utilities and transportation sector). However, its overall score still shows an SDGs disclosure level of more than 50%. Overall, the listed companies in the IDX which produced annual sustainability reports consistently from 2016 to 2020 achieved a consistent score above 12 out of the maximum of 17 (i.e., more than 70%) each year, with an overall SDGs disclosure score made by all 34 companies in the sample of 12.6 out of 17 (74%) in the combined 5 years, which indicate moderately high performance. These findings answer the first research question in this study regarding the extent of SDGs implementation by listed companies in Indonesia.

There has been a lack of studies related to the evaluation of SDGs implementation, moreover those that use sustainability reports as an evaluation basis. Hence it is unfeasible to compare the finding of this study to any equivalent studies done elsewhere. One of the available related SDGs studies is one by Ali et al. (2018), although their study does not analyze reports and only uses a very limited number of sample companies. They

investigated the adoption and implementation of the UN SDGs in Brazil, Russia, India, China and South Africa (BRICS) by conducting a content analysis on a minimal number of companies' vision and mission statements, i.e., 25 top multinational companies in the five countries (5 companies from each country). Ali et al. (2018) suggested that although it was likely that companies in BRICS countries had tried to adopt UN SDGs, the extent of their applications indicated from the companies' vision and mission statements were still not significant. An earlier Ethical Corporation's State of Responsible Business 2016 report, which surveyed 2045 sustainability professionals globally, also suggested that less than half of global companies plan to engage with SDGs (Guardian, 2016). Contrary to the suggestion from the above works that companies do not yet engage with SDGs, the findings of this study suggest that listed companies in Indonesia provide a moderately high level of SDGs disclosure, indicating a high level of engagement in the 17 UN SDGs.

4.2.2 Level of implementation of the SDGs and their targets by listed SOEs and private companies in Indonesia pre- and during the COVID-19 pandemic

Overall, the results in Table 1 show that there were thirteen top performers in the SDG disclosures, with an average score of 80% (i.e., 13.6 out of 17) and above in the combined 5 years, which consist of both SOEs (5 companies) and private companies (8 companies). Considering that there were nine SOEs and 25 private companies in the sample, the percentage of high performing SOEs was 56% compared to 32% for the high performing private companies, providing an initial indication of better performance by the SOEs.

As shown in Table 2, the average differences in the percentages of SDGs reporting of SOEs and private companies across the 17 UN SDGs (from 5-year implementation) were 6.29, 1.24, 4.17, 6.23, and -2.29% , respectively, in 2016, 2017, 2018, 2019 and 2020. The consistent average gap in four consecutive years since 2016 to 2019 (i.e., the pre-COVID-19 period) strengthens the initial indication in the prior discussion of the stronger SDGs performance of listed SOEs against their listed private companies counterparts. This complete sample analysis answers the second research question in this study. It shows a strong indication that listed SOEs in Indonesia performed better in implementing UN SDGs than listed private companies. This study is exploratory. Considering that SOEs are practically government-owned institutions, they likely need to comply with the government policy on implementing UN SDGs. The findings suggest that listed SOEs in Indonesia perform better in their SDGs practice than their listed private companies counterpart, leading to some indications of legitimacy to maintain a good reputation in the community or community views (Mejía et al., 2019). The moderately high level of SDGs practice by Indonesian listed companies in this study could also indicate some level of coercive isomorphism as part of the institution theory, in which external factors, in this case, government policies and regulations, force these companies to adopt specific internal structures and procedures (Moll et al., 2006). Additionally, this situation might also lead to a stakeholder explanation, where these companies consider the interests of their multiple constituencies in their SDGs decisions.

Table 3 describes the UN SDG targets disclosure score (i.e., between 0 and 169) achieved by each of the 34 companies in five separate consecutive years. The overall results show that the top two performers were both private companies, i.e., Indocement Tungal Prakarsa (in the basic industries and chemical sector) and Maybank Indonesia (in the finance sector), with scores of 63.6 (37.2%) and 50 (29.6%), respectively, in the combined

5-year disclosures. The remaining companies received only scores lower than 50 out of the maximum score of 169.

The overall score for combined companies was 28.2 out of 169 (16.7%). This shows that while the extent of SDGs disclosure made by the listed Indonesian companies in this study at the goal level is moderately high, there is a strong indication that the achievements of the targets were not yet significant. When the overall SDG targets disclosure performance of combined SOEs is compared to that of combined private companies, it could be seen that there is no significant difference between them, i.e., 27.4 out of 169 (16.2%) for combined SOEs and 29.0 out of 169 (17.1%) for combined private companies. However, there is also an indication of very slight but consistent improvement in the average overall scores from year to year in the pre-COVID-19 period (i.e., 27.8, 28.6, 29.4 and 30.8 respectively in 2016, 2017, 2018 and 2019). Improvements are notable, but a much higher improvement rate is needed if we refer to the ideal achievements of SDGs and their targets by 2030.

Finally, the disclosure analysis for the year 2020 shows some slight decline in the SDG disclosure performance. In Table 1, it is shown that after consistent increases in the average overall UN SDGs disclosure scores during the pre-COVID-19 period (i.e., 12.1, 12.2, 12.7 and 13.8 for 2106, 2017, 2018 and 2019, respectively), the average overall score dropped slightly to 12.3 in 2020 (during the COVID-19). This indicates less extent of UN SDGs reported in the sustainability reports of the 34 listed companies in the sample in 2020, but the decline in the average overall score was not significant. Table 3 also shows some slight decline in the disclosure scores of UN SDG targets by the sample companies from the pre-COVID-19 period to the period during the COVID-19 pandemic (from 27.8, 28.6, 29.4 and 30.8 in 2106, 2017, 2018 and 2019, respectively, to 26.3 in 2020). This indicates less extent of UN SDGs' targets reported in the sustainability reports of the 34 listed companies in the sample in 2020, but the decline in the average overall score was also not significant. These findings answer the third research question in this study. It shows that while COVID-19 might likely affect the capability of the companies to perform sustainably, the effects on the SDGs disclosure were not significant. Table 2 indicates that the decline in the average overall UN SDGs disclosure scores during the COVID-19 period was experienced more by the listed SOEs. While in the pre-COVID-19 period (i.e., 2016–2019), the listed SOEs disclosed slightly more SDGs than the listed private companies, in 2020 (i.e., during the COVID-19 period), the listed private companies disclosed slightly more SDGs than the SOEs.

5 Conclusions

This study aims to explore the extent of the UN SDGs that have been implemented by listed companies in Indonesia, and to evaluate whether there are differences in the level of implementation of the SDGs and their targets by SOEs and private companies in Indonesia. It also evaluates the practices pre- and during the COVID-19 pandemic. The study focuses on listed SOEs and private firms on the Indonesia Stock Exchange (IDX) that had issued sustainability reports consecutively from 2106 to 2020. These periods are 5 years since the ratification of UN SDGs in 2015. Among 716 listed companies at the Indonesian Stock Exchange as of 2020, only 34 companies were found to have issued consecutive sustainability reports from 2016 to 2020, resulting in a total of 170 sample units. This study subsequently conducted a content analysis process on the 170 sustainability reports using the UN SDGs and their targets as indicators.

The findings show that overall the listed companies in the study performed moderately well in their UN SDGs practice, as indicated by an overall score of 12.64 out of 17 (74%) in the combined 5 years, which show moderately high performance. Contrary to the suggestion from the limited works on this area that companies do not yet engage with SDGs (Ali et al., 2018; Guardian, 2016), this study's findings propose that Indonesian listed companies engaged moderately well in their SDGs practices. When the UN SDGs performances of listed SOEs and listed private companies were compared, the study found that the listed SOEs performed overall consistently, to some extent, better than their private companies counterparts during the period of observation. While there was a notable slight decline in the SDGs disclosure during the COVID-19 period compared to those in the pre-COVID-19 period, the difference was not significant.

Linking this with the possible theoretical perspective that applied in this situation, the fact that the companies in this study performed moderately well in their SDGs disclosures indicate some level of compliance with the legitimacy perspective (Deegan, 2002). As listed companies, gaining legitimacy from the community is obviously one of the main concerns of the companies for them to maintain a good reputation in the community or community views (Mejía et al., 2019). While all listed companies likely need to comply with the government policy on implementing UN SDGs, the fact that listed SOEs are owned by the government, and that they were overall perform better than their private companies counterparts, may also imply some higher level of coercive isomorphism, where government policies and regulations had forced these companies to adopt specific internal structures and procedures (Moll et al., 2006). Finally, while at the level of the goals, Indonesian listed companies performed moderately well in their SDGs practices, at the level of targets, the study finds a strong indication that the achievements of the targets were not yet significant, with an overall score of 28.2 out of 169 (16.7%) in the combined 5 years, implying that the actual practice at the operational level is still uncertain.

The findings of this study contribute to enriching the literature in this area and providing insights to relevant users, investors, and policymakers, such as the Ministry of National Development Planning (Bappenas) that coordinates the UN SDGs implementation in Indonesia) and industry practitioners concerning the current stage of implementation of SDGs by Indonesian listed SOEs and private companies. The results of this study will also be useful for companies by providing an overview of the level of SDGS practice carried out by business people in various sectors in Indonesia. This knowledge is useful for the companies to make informed decisions about what strategy should be taken so as not to be left behind in the competition and the business field since it is no doubt that the community continues to become aware of the importance of SDGs, and consequently expects companies to perform well in this context.

There are limitations that need to be considered in this study to ensure that the findings are interpreted within these contexts. Firstly, the study relied on disclosures on the sustainability reports and hence while disclosures have been well-accepted and well-tested to be a good proxy for performance, there was no certain way to guarantee that the SDGs reported activities were actually performed. Secondly, since sustainability reports are not mandatory, it could not be assumed that other companies that did not produce sustainability reports performed worse or better. This study is among the first to dig up a bit deeper the extent of the UN SDGs practices by companies. Accordingly, more research is expected to strengthen the findings, either using expanded information sources, different data collection and/or analytical methods, or undoubtedly different research subjects.

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