



Mapping and Achievement of Sustainable Development Goals in Indonesia's High-Tech Industries: A Tale of Two Industries

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ABSTRACT

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The study shows an analysis of the non-financial reporting of the United Nations Sustainable Development Goals (SDGs) by a case of companies in the high-tech industry, especially the chemical and pharmaceutical industries. Using a qualitative approach to content analysis, this study focuses on specific issues related to SDGs and reported by high-tech companies. We choose four companies as our case from two different sectors in Indonesia's High-Tech Industries. The findings indicate that SDGs related to this industry are SDGs 3, 4, 5, 7, 8, 9, 12, and 13 for the chemical industry. Meanwhile, for the pharmaceutical industry, the SDGs, which are the main priority, are 3. The pharmaceutical industry generally supports other SDGs but does not contribute to SDGs 11 and 14. SDGs reporting is not exactly the same between these two industries even though they are included in the high-tech industry category. Indicators that have been identified from the results of materiality analysis using an ESG approach and stakeholders' needs, including energy, water, emissions, environmental management, circular economy, climate resilience, community engagement, health and safety, labor and human rights, human capital development, sustainable supply chain, corporate governance, and others. Implications for public policymakers, managers, and other stakeholders are also explored.

1. INTRODUCTION

Academic research on Sustainable Development Goals (SDGs) has gained momentum, attracting interest from scholars across various fields concerning adopting the Global Agenda. The 2030 Agenda, introduced by the United Nations in 2015, includes 17 SDGs with 169 targets and over 230 indicators. These SDGs have become a crucial framework for businesses, aligning them with global sustainable development objectives [1]. The agenda states that this plan will be implemented by all countries and all stakeholders in a collaborative partnership [2]. Stakeholders in the agenda, including local governments, industries, and civil societies, have been asked to commit to the SDGs.

Although achieving a more sustainable planet by 2030 is crucial, empirical evidence shows that only a small fraction of businesses follows a specific SDG strategy. This suggests that most companies do not prioritize SDGs adequately, and those that do often implement such strategies in a symbolic manner [3]. Some companies may be genuinely committed to achieving the SDGs and recognize their value in enhancing stakeholder relationships. However, they might not prioritize incorporating SDGs into their business strategies due to the lack of sustainability disclosure regulations and the absence of

clear evidence that such integration leads to improved financial performance [4]. According to a 2023 UN report, only 15% of the UN's SDGs are on track, 48% are off track, and 37% are stagnated or regressed [5].

The 2024 Sustainable Development Report evaluates the progress of all UN member states towards achieving the SDGs. There are suggested essential reforms for the UN system to address the challenges of the 21st century [6]. To enhance support for Member States in achieving the SDGs, the United Nations Economic Commission for Europe (UNECE) has pinpointed four key areas where its programs and expertise align, where one of the nexus areas is measuring and monitoring progress towards the SDGs [7]. Annual evaluation is needed to track how well countries are progressing towards achieving the SDGs. The SDG Index and Dashboards offer an annual evaluation of SDG progress across all 193 UN member states [6].

Measuring and monitoring progress toward SDGs explores the intricate process of tracking and assessing SDGs, which involves various stakeholders, e.g., global organizations, regional organizations, national governments, local authorities, civil society, general public, and private sector [7]. Based on a survey conducted by PwC, one of the world's largest professional services networks, companies view SDGs as

opportunities for future business growth, with SDG 8 (decent work and economic growth) being the most significant objective for potential impact. This is also in line with previous research in high-tech industries, which emphasizes a focus on SDGs 8 (decent work and economic growth) and 9 (Industry, Innovation, and Infrastructure) [8].

The SDGs are significant for corporations' non-financial disclosure and reporting when it comes to Environmental, Social, and Governance (ESG) standards [9]. Businesses can show their dedication to tackling important sustainability challenges and their advancement by including the SDGs in their reporting, and this action has been seen as a positive approach toward corporate sustainability [10]. This alignment with the SDGs is intended to improve the transparency and credibility of companies' ESG reporting, enabling stakeholders to evaluate their impact on global sustainability goals [11].

The high-tech industry has a vital role in the economy and development of a country because it plays a role in increasing industrial productivity and efficiency, global competitiveness, sustainability, and energy efficiency. Based on the analysis of the industry's impact, it can be reported that the chemical industry and the pharmaceutical industry, as part of the high-tech industry, have proven to have a very important role in the development and economy of Indonesia. Some of the justifications for why these two industries are vital are as follows: (1) Economic Contributor: The chemical industry is one of the largest contributors to Indonesia's non-oil and gas gross domestic product (GDP). By 2022, the industry is the third largest contributor [12]; (2) Investment Opportunities: Investment in the chemical industry by both domestic and foreign investors shows great potential for further development and job creation; (3) Raw Material Provider: The chemical industry plays an important role in the sustainability of various other industries by providing important raw materials for various other industrial sectors, such as food and beverage, textiles, automotive, and electronics; (4) Economic Growth: The pharmaceutical industry also contributes significantly to economic growth by creating jobs and increasing foreign exchange reserve of Indonesia, and (5) Public Health: The pharmaceutical industry plays a vital role in providing the medicines needed to maintain public health.

Previous studies highlight that the production process of the high-tech industry is highly dependent on technology, with high-tech products as its output. The high-tech industry needs to pay attention to environmental aspects, including energy, pollution, temperature, emissions, and other issues, as important factors. For the social aspect, companies in the high-tech industry need to pay attention to circular economy, efficiency issues in its use of resources, supply chains, waste management, and other factors in maintaining the company's relationships and reputation with its stakeholders. For the governance aspect, companies need to consider advanced manufacturing techniques, emergency management, value chains, and other factors to maintain good and sustainable processes in the company's governance [8]. Other research shows that the most significant factor in driving sustainable practices within the industry is stakeholder expectations, which are the highest importance factor. The second most significant factor is the competitive advantage that emerged that contributed to the adoption of sustainable strategies by companies. On the other hand, business cost and return on investment (ROI) concerns show a constraint that potentially detained sustainable development adoption [13].

However, there is still limited knowledge regarding the actual focus on SDGs Coverage in the Sustainability Report, especially in the chemical and pharmaceutical industries in the high technology industry. Current research is still restrained regarding which SDGs become of concern to the high-tech industry and what indicators corporate decision-makers need to pay attention to. It is necessary to identify and prioritize the issues that are most significant for companies and their stakeholders and formulate them that can be used by companies to become the company's focus in determining policy and strategy direction that is in line with achieving the SDGs. This research aims to understand the materiality analysis related to the SDGs and SDGs Coverage in the Sustainability Report in the high-tech industry.

2. METHODS

An investigation was carried out to address the research question. This involved a qualitative and analysis of sustainability reports from organizations that claim to support the SDGs. This study uses a qualitative approach to analyze the content of company sustainability reports to evaluate the SDG practices implemented by the selected companies. The method is a theory-based procedure requiring systematic reading and material analysis. It is commonly adopted in corporate disclosure studies as it supports reliable and valid conclusions from the reporting data.

The study was conducted in the high-tech industry in Indonesia. The high-tech industry in Indonesia was selected as the study context due to its pivotal role in economic growth and its emphasis in the 2020-2024 National Mid-Term Development Plan [14]. The investigation was conducted in 2 (two) stages. The first stage, choose the industry to be analyzed from the high-tech industry. High-tech industry consists of 7 industries based on two-digit International Standard Industrial Classification (ISIC) manufacturing industries, namely chemical, pharmaceuticals, computer, electronic and optical products, electrical equipment, machinery and equipment, motor vehicles, trailers, and semi-trailers, as well as other transport equipment [15, 16]. The chemical industry and pharmaceutical industry were chosen in this study with consideration that chemical industry plays a major role in the success of the circular economy, and most chemicals produced today rely on fossil fuels as an energy source or raw material. The pharmaceutical industry is a very vital industry for a country because it contributes to the survival and health of people in a country. This industry contributes to building human resources in developing countries so they can compete globally.

The second stage, a case of the chemical industry and pharmaceutical industry in SDG reporting was identified from high tech companies participated in SDG reporting. The case is limited to companies that have been listed on the Indonesian stock market. This limitation is because the companies that have been included in the list have sustainability reports. The sustainability reports were chosen from the company website or Indonesia stock market website (<https://www.idx.co.id/>). Four companies were selected from these industries. Table 1 summarizes the key characteristics of the 4 companies in the case. Although the sustainability reports are public and the information included in the following section is easily accessible through the internet, the anonymity of the analyzed companies has been maintained.

Table 1. Key characteristics of the analyzed companies

Company	ISIC	Revenues	Total Permanent Employees	Female Permanent Employees	CSR Fund	
1	Division 20	Chemicals and Chemical Products	17.716 Billion Rupiah	1,992	13.40%	15.3 Billion Rupiah
2	Division 20	Chemicals and Chemical Products	32.400 Billion Rupiah	2,013	15.90%	85.5 Billion Rupiah
3	Division 21	Pharmaceuticals	30.449 Billion Rupiah	16,795	33%	14.8 Billion Rupiah
4	Division 21	Pharmaceuticals	3.570 Billion Rupiah	4,016	48%	11.1 Billion Rupiah

In this study, the criteria used to categorize and analyze the data are as follows: (1) Data collection: Data was collected from the company's sustainability report published on the company's official website or from the company website or the Indonesia stock market website. The selection of industries studied is based on the urgency and important role of the industry in Indonesia's economic development; (2) Data categorization: The collected data is coded to identify the research sample. Coding was carried out for four companies in the high-tech industry selected based on the completeness of the sustainability report by assigning codes 1 to 4. This coding helps organize the data for research analysis. The coded data is then categorized based on the type of industry, the chemical industry and pharmaceutical industry; (3) Data analysis: research findings are described in two issues related to SDG-reporting in the chemical industry and pharmaceutical industry: materiality analysis related to the SDGs, and contribution to the achievement of SDGs.

The descriptive data in the sustainability reports was analytically categorized, arranging the information on the basis of issues. The process generated a selection of representative patterns extracted from the reports. The following section summarizes the main findings from the analysis carried out from the company's sustainability report.

3. RESULT AND DISCUSSION

SDG reporting varies for companies in nations with sustainability regulations and higher SDG performance ratings. Companies in shareholder-oriented countries reported more SDGs than those in stakeholder-oriented ones, which was unexpected. Additionally, companies in developing countries reported more SDGs at the corporate level than companies in developed countries [10].

Two issues related to SDG reporting in the chemical and pharmaceutical industries were identified from the qualitative analysis of the 4 cases: (1) Materiality analysis related to the SDGs; (2) Contribution to the Achievement of SDGs.

3.1 Materiality analysis related to the SDGs

In the context of SDGs analysis, materiality is a concept used to identify and prioritize the most significant issues for companies and their stakeholders [17]. It includes important economic, environmental, and social impacts that can influence stakeholder decisions and assessments. Materiality analysis helps companies determine which areas to focus on in their sustainability efforts, ensuring that the actions taken are relevant and significantly impact global sustainability goals [18]. The materiality matrix helps companies to prioritize SDGs and establish strategic objectives [11].

Two of the companies provide a materiality matrix providing information about SDGs, and the other presents materiality information in the form of a list of topics with an approach to ESG. All companies studied involve stakeholders to obtain opinions regarding critical issues that need to be paid attention to by the company. Company 2 and Company 4 present a materiality matrix with two different axes. Company 2 presents importance to external stakeholders and to the company as shown in Figure 1, while Company 4 presents an impact on stakeholders and sustainability.

The content of Company 1's report was established by initially identifying specific topics and then assigning weights to these topics through materiality testing to determine which were relevant and significant enough to be included. Material topics and boundaries are identified based on issues that significantly impact the company and all stakeholders. Indicators used to determine priority include the economic, environmental, and social impact.

Table 2 shows that the significant and important issues for companies and their stakeholders are related to SDG 4, 5, 6, 7, 8, 10, 11, 12, 13, 16. The topic of most concern is the social topic, which focuses on promoting sustainable, inclusive and sustainable economic growth and providing full and productive employment and decent work, ensuring inclusive and equitable education and promoting learning opportunities, gender equality, increasing social inclusion, making cities and human settlements inclusive, safe, resilient and sustainable, and ensure sustainable consumption and production.

Previous studies argue that institutions need to focus on two critical factors: (1) the notion of social capital and (2) value chain management in order to fulfill SDGs at the level of local or other institutions. Generally, local leaders mobilize social capital to socialize the importance of SDGs. Value chain management enables local leaders to manage sustainable economic activities. So, these two concepts eventually enhance the implementation of SDGs [19]. This is in line with Company 2's objectives, which are stated that it is important to improve the societal impact of the company and its workforce.

Through the identification process, Company 2 thoroughly understands stakeholders' expectations and needs, enabling it to pinpoint issues or topics of concern that are crucial for the company's sustainability. Company 2 carried out an in-depth assessment of key sustainability issues associated with both its internal and external business operations. This evaluation involves analyzing the company's risks, taking into account stakeholder expectations, and monitoring current sustainability trends in the petrochemical industry.

Table 3 depicts that Company 3 conducts stakeholder mapping by considering the proximity and influence of each group on the sustainability of the company's business. Company 3 routinely establishes communication with

stakeholders through various methods and approaches. From the list of stakeholders' responses, then the key topics and

stakeholder needs are identified to see their relationship with the SDGs.

Table 2. Company 1's material topic and boundary related to SDGs

Environmental Topics		Social Topics		Economic Topics	
1. Materials	SDG 12	1. Employment	SDG 8	1. Corporate Economic Performance	SDG 8
2. Energy	SDG 7	2. Occupational Health and Safety	SDG 8	2. Indirect Economic Impact	SDG 8
3. Water	SDG 6	3. Training and Education	SDG 4	3. Anti Corruption	SDG 16
4. Emissions	SDG 13	4. Diversity and Equal Opportunities	SDG 5		
5. Affluent and Waste	SDG 12	5. Non-discrimination	SDG 10		
6. Environmental Compliance	SDG 12	6. Forced Labor	SDG 8		
		7. Local Community	SDG 11		
		8. Marketing, Labeling	SDG 12		
		9. Social and Economic Compliance	SDG 8		

Source: Adapted by the authors using details from the report of company 1

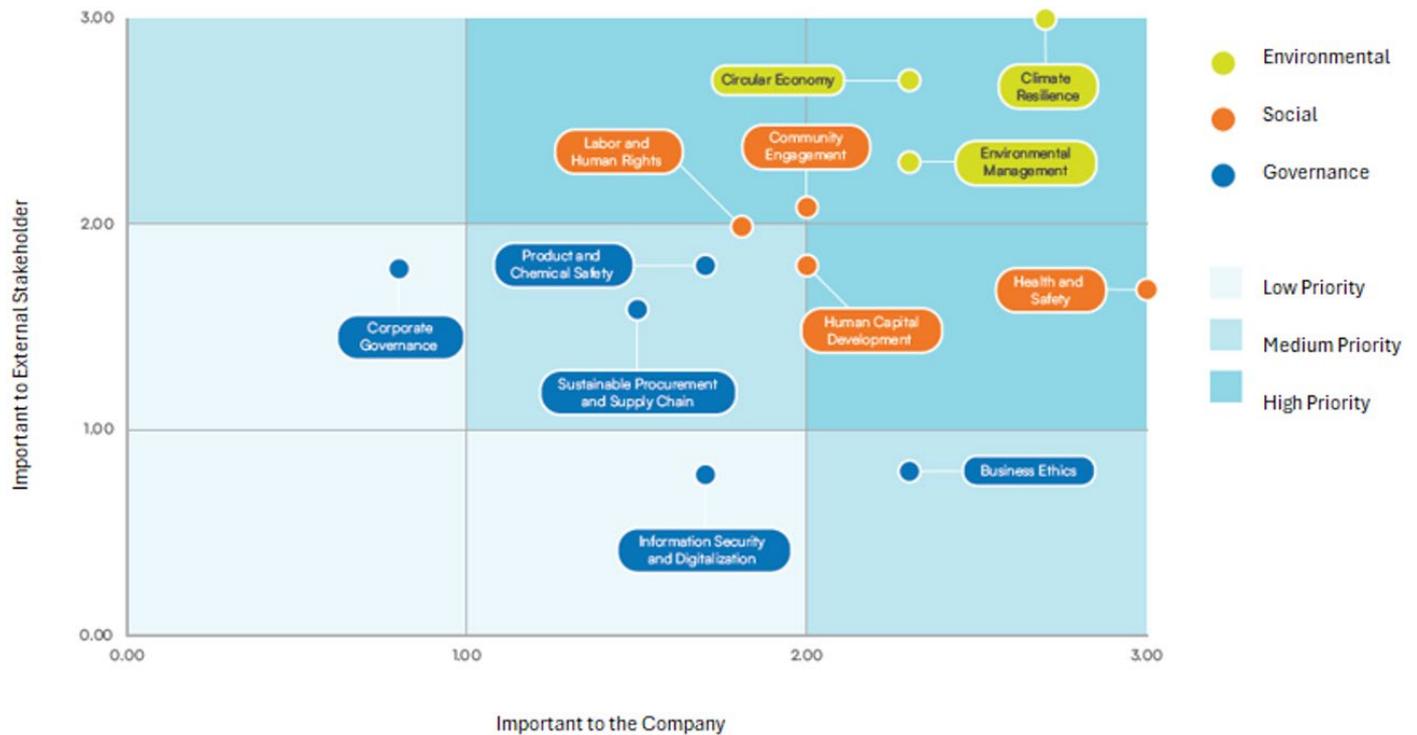


Figure 1. Company 2's materiality matrix related to SDGs

Source: Adapted by the authors using details from the report of company 2

Notes: Environmental (Environmental Management, Circular Economy, Climate Resilience); Social (Human Capital Development, Health and Safety, Community Engagement, Product and Chemical Stewardship, Labor and Human Rights); Governance (Digital Transformation, Sustainable Procurement and Supply Chain, Corporate Governance, Business Ethics)

Table 3. Company 3's stakeholder response and approach related to the SDGs

Stakeholders	Key Topics and Stakeholder Needs	SDGs
Shareholders	Sustainability performance	5, 8, 13
Communities	Company participation in community development; Hiring local workers according to the company's needs.	1, 8, 11
Customers	Health-related sustainability initiatives	3
Employees	Employee well-being; Healthy, safe, and conducive working environment; Equality; Career training and development	3, 4, 5, 8
Associations	Alignment with sustainability initiatives set to be the focus in Indonesia and globally	7, 8, 11, 12, 13
Media	Public health education	3
Business Partners	Sustainability initiatives	7, 9, 12, 13
Government & Regulators	Implementation of social responsibility and reporting	5, 8, 10, 12
Investors	Commitment to Sustainability initiatives as assessed by questionnaires, Sustainability Report, and Annual Report	7, 8, 9, 12, 13

Source: Adapted by the author using details from the report of company 3

To prioritize the impacts for reporting based on their significance, company 4 adopts the following process: (1) Assessment Criteria, (2) Materiality Matrix, (3) Reporting Priority. Company 4 utilizes a materiality matrix to visualize and prioritize sustainability issues. This matrix is constructed considering the importance of issues to our stakeholders and the influence of issues on long-term business success, which impacts the company's sustainability. The workshop and Focus Group Discussion (FGD) outcomes revealed that 11 material topics were deemed most relevant. The mapping results, utilizing a materiality test matrix, are as follows.

3.2 Contribution to the achievement of SDGs

Based on the discussion of the company's commitment to the SDGs, Company 1's objectives covered in the discussion in the sustainability report are as follows, with the company's

commitment to SDGs is especially related to the following Table 4.

Company 2 emphasizes the 17 SDGs across its entire operational value chain. These goals are significant as they demonstrate the company's dedication to sustainability and its objectives. The company groups contributions to the SDGs based on relevance: High, Medium, and other goals, as shown in Table 5.

Company 3 supports the achievement of SDGs through 13 Goals, namely Goals 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 16, and 17. Goal 3, 'Good Health and Well-being,' is the company's priority, and it is in line with our efforts to fulfil the healthy life of each individual and the whole Indonesian nation. The company provides primary support for the achievement of Goal 3, to ensure a healthy life and support well-being for all ages.

Table 4. Company 1's SDGs coverage in sustainability report

SDGs	Scope within the Company
3, 4, 5, 8	<ul style="list-style-type: none"> Implement a good Occupational Health and Safety Management System Ensuring equality in hiring, skill development, and advancement opportunities, irrespective of gender, ethnicity, race, or religion Adhere to the labor wage and rights regulations in Indonesia Promoting safety awareness through training to achieve the goal of six zeroes Community empowerment in education, health, and economic enhancement Fostering close customer engagement by addressing complaints through a technological system Using natural gas for Java Integrated Industrial And Port Estate (JIPE) power plants Tree planting and mangrove restoration
7, 9	<ul style="list-style-type: none"> Lowering the company's energy usage Backing government initiatives for biofuel programs Introducing high-standard fuel products Implementing stringent control measures in managing products from upstream to downstream
13	<ul style="list-style-type: none"> Adopt the 'Six Zeroes' target commitment to promote eco-friendly operations and reduce environmental impacts

Source: Adapted by the authors using details from the report of company 1

Table 5. Company 2's contribution to the achievement of SDGs

Goals	Relevance	Scope within the Company
13	High	The enhancement of energy efficiency, development of green businesses, adoption of green technologies and the implementation of nature-based solutions are prioritized by decarbonization initiatives through the ABCD strategies.
12	High	Implementation of reduce, reuse, recycle, recovery (4R principle) and extended producer responsibility (EPR) principle, i.e., reducing plastic waste, recycling water, waste, process materials, and final products.
8	High	Dedicated to ensuring a decent work environment that adheres to human rights principles, occupational health and safety (OHS) standards, and fosters human capital development.
9	High	Infrastructure and renewable energy ventures that align with the goal of fostering sustainable and inclusive industrial growth.
1	Medium	Enhances community knowledge and skills to facilitate the creation of decent jobs and actively participates in establishing a productive economy aimed at reducing poverty.
3	Medium	Encourages a culture focused on safety and engages the community in efforts to improve their well-being.
4	Medium	Initiatives that focus on community education through CSR activities, with a particular emphasis on the education sector.
5	Medium	Fosters workplace diversity and inclusion by enacting policies that ensure equality and empower every employee.
6	Medium	Facilitates access to clean water and sanitation by promoting efficient water use and adopting environmentally friendly practices.
7	Medium	Energy efficiency initiatives and the adoption of renewable energy sources as strategic measures to promote the use of cleaner, more environmentally friendly, and sustainable energy.
10	Medium	The CA Women Team program is designed to encourage participation and create opportunities for qualified female candidates.
14	Medium	Mangrove planting projects and efforts to restore coral ecosystems.
15	Medium	Assessing the biodiversity index in the area and incorporating it into conservation efforts.
17	Medium	Partnering with all stakeholders as a strategic move to foster the exchange of knowledge, innovation, and resources.

Source: Adapted by the authors using details from the report of company 2

Company 4's sustainability approach is inclusive, considering the interests and well-being of all stakeholders. They focus on creating shared value by engaging with employees, customers, suppliers, and communities, as shown in Figure 2. Their growth and success are designed to positively impact these stakeholders. This inclusive strategy is central to their mission, aiming to contribute meaningfully to the SDGs and fostering a more sustainable and equitable world, as shown in Table 6.

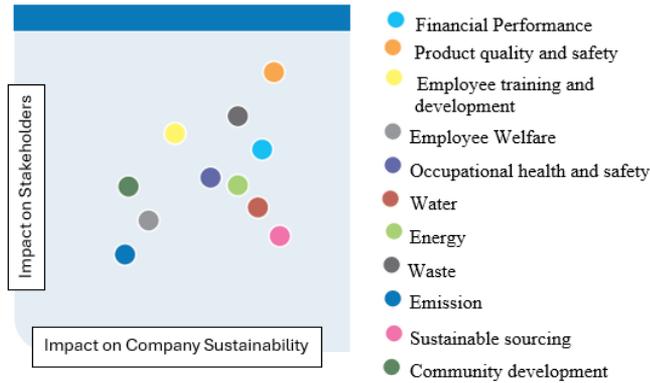


Figure 2. Company 4's materiality matrix related to SDGs
Source: Adapted by the authors using details from the report of company 4

Table 6. Company 4's material topics covered and relevant to SDGs indicators

Focus	Material Topics Covered	Goals
Environmental Preservation	Water, energy, waste, emission	6, 7, 12, 13, 15
Inclusive Business Practices	Community Development	1, 2, 3, 4, 5, 8, 17
Employee Welfare	Employee Training and Development, Employee Welfare	3, 5, 10, 16
Product Integrity	Product Quality and Safety	3, 9
Sustainable Supply Chain	Community Development	1, 8, 17
Inclusive Economic Advantage	Economic Performance	1, 8, 17

Source: Adapted by the authors using details from the report of company 4

Companies 1 and 2, which are part of the chemicals and chemical Products industry, focus on and prioritize almost all SDGs as a company commitment to supporting sustainability. The high priority of this industry is related to environmental and social topics such as environmental management, health and safety, circular economy, climate resilience, community engagement, labour and human rights, and human capital development. This high priority is especially related to the industry producing the most waste in the last 10 years [20]. This finding also aligns with previous research, which stated that the industry's main environmental impacts are pollution and energy consumption, which are directly related to carbon emissions. Other material issues include health, safety, and water and waste management [21].

Meanwhile, for the pharmaceutical industry, case studies on companies 3 and 4 show that the stakeholders' concerns are mostly focused on promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all (SDG 8), including aspects that are considered to have a high impact on stakeholders and company sustainability, such as product quality and safety, waste

management, and financial performance. Previous research also outlined environmental concerns that focused on reducing carbon emissions, improving water sustainability, and waste management, with areas that need improvement, such as contamination and packaging [22]. The company's focus on SDG 3 (Good Health and Well-being) as an important role in contributing to public health comes from customers, employees, and media stakeholders. These two industries were found to have a substantial impact and contributed to their position as key players in the manufacturing industry by serving sustainable practices.

All companies cited in this research emphasize company strategies to achieve targets while still paying attention to and implementing sustainability-based programs. Apart from that, the importance of using technology to achieve company goals while still paying attention to sustainability is something that needs special attention, especially regarding the company's ability to absorb technology [23]. Networking between companies also has an impact on implementing SDGs-based company strategies because, with this network, efficiency and technology transfer can be carried out to achieve company goals [24].

4. CONCLUSION

Materiality analysis is used to identify a thorough understanding of stakeholder expectations and needs, enabling the identification of issues or topics that are important to stakeholders and crucial for the company's sustainability. Many indicators have been identified from the results of materiality analysis using an ESG approach and stakeholders' needs, including energy, water, emissions, environmental management, circular economy, climate resilience, community engagement, health and safety, labour and human rights, sustainable supply chain, corporate governance, human capital development, and others. Industries can increase their SDGs reporting performance by adequate their SDGs challenges with the deliverables of the SDGs models. It adds value to strategic company sustainability by analysing the connection among companies' SDGs approaches in the same industry [25]. There are some concerns from these industries to support achieving the SDGs, including collaboration, reporting and communication, sustainable supply chains, setting goals and integrating targets, and also community engagement.

Based on materiality analysis related to the SDGs and contribution to the achievement of SDGs analysis of sustainability reporting from 4 companies in the high-tech industry, especially in the chemical industry and pharmaceutical industry, this study discovers SDGs related to this industry are SDGs 3, 4, 5, 7, 8, 9, 12, 13 for the chemical industry. Meanwhile, for the pharmaceutical industry, the SDGs, which are the main priority, are 3. In general, the pharmaceutical industry also supports other SDGs but does not contribute to SDGs 11 and 14. This industry contributes to the achievement of SDGs through various work programs throughout its operational value chain or special programs according to the SDGs focus, such as tree planting and mangrove restoration, implementing the Six Zeroes, implementing the 4R principle (reduce, reuse, recycle, recovery), and others. Companies have realized the importance of linking company activities to the implementation of SDGs.

However, this study also has limitations because of its exploratory characteristics and methodological approach. The primary constraint is in the limited size of the case. With the limited number of companies studied, the potential for bias is high. Further research should include longitudinal studies that analyse the sustainability reports of a larger number of companies. Apart from that, analysis can also involve companies in the low-tech industry and middle-tech industries. Overall, this study provides a valuable overview of the current situation in terms of materiality within the chemical and pharmaceutical industries. This information can be useful for academics, researchers, practitioners, and the industry. Stakeholders from this industry can work together to create a high-tech industry that not only meets the profit goals but also ensures a more sustainable and responsible future.

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AUTHOR CONTRIBUTION

Noerlina and Tirta Nugraha Mursitama conceived of the presented idea. Tirta Nugraha Mursitama developed the concept, and Noerlina performed the literature review, conducted analysis, and drafted the manuscript. Erma Lusia and Aninda Rahmasari conducted a search for supporting references. Aninda Rahmasari proofread the manuscript. Tirta Nugraha Mursitama encouraged the team to investigate this topic and supervised the findings of this work. All authors discussed the results and contributed to the final manuscript.

AVAILABILITY OF DATA AND MATERIAL

Data regarding the sustainability reports are available on companies' websites or Indonesia stock market websites.

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