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Is Environmental Performance Able to Strengthen the Effect ofGreen Strategy and Green Intellectual on Expansion of Sustainability Report Disclosure?

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Abstract:
Background*: In Indonesia, the sustainability reports disclosure is encouraged by the Authority Regulation No. 51/POJK.03/2017. Entities that have been listed on a stock exchange strive to follow the applicable rules by issuing sustainability reports that meet or exceed the requirements. To comply with these regulations, an integrated environmental management system is required, beginning with the strategy stage and progressing to the availability of environmentally conscious human resources and achieving good environmental performance. The transition from voluntary to mandatory reporting in a short period of time results in green strategy and green intellectual capital efforts being pushed immediately, so that sustainability reports are still in the early stages. This prompted researchers to investigate whether environmental performance can strengthen the influence of green strategy and green intellectual capital on the growth of sustainability reports in Indonesia.*
Materials and Methods*: This study employs exploratory and descriptive non-experimental designs. This type of quantitative research employs secondary data from the websites of 74 manufacturing entities listed on the Indonesia Stock Exchange in the basic and chemical industries from 2015 to 2020. The research sample is a saturated sample in which the entire population is divided into 370 company years. The time span selected is the range of transition from voluntary to mandatory sustainability report disclosure (SRD) in Indonesia. Path analysis with the Amos program was used to determine the substructure between variables. The hypotheses compiled in this study consist of five hypotheses that describe the temporary answer to the effect of the research variables.*
Results*: The results of the analysis show that Green Strategy has a positive effect on Environmental Performance and SRD. Green Intellectual Capital has a positive effect on Environmental Performance and does not negatively affect the SRD. Meanwhile, environmental performance can mediate the effect of Green Strategy on the SRD, but it does not mediate the effect of Green Intellectual Capital on the SRD.*
Conclusion: *Environmental performance can mediate the influence of Green Strategy on SRD. This indicates that environmental performance with the highest ratings will result in more in-depth and broader SRD, despite the fact that manufacturing companies in Indonesia's basic and chemical industries are still in the process of developing a green strategy. Environmental performance cannot mitigate the impact of Green Intellectual Capital on SRD, where stakeholders play a significant role in the sustainability reports disclosure in order to meet Indonesian regulatory obligations.*
Keywords*: Green Strategy, Green Intellectual Capital, Sustainability Report*

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I. Introduction

Along with the development of theories and concepts related to environmental issues that open new perspectives on business management leading to sustainability, which are designed in the Sustainability Development Goals (SDGs) with the Triple Bottom Line concept (People, Planet, and Profit), the most recent is related to the Five Bottom Line concept (People, Planet, Profit, Partnership, and Prosperity), Corporations must be cautious when adopting these new concepts in order to survive in competitive environments, create competitive adventures, and comply with the regulations under which the business is run. Historically, many environmentally beneficial projects undertaken by businesses were the result of new laws, societal pressure, or customer safety concerns[23]. Many studies have attempted to explain what motivates entities to participate in sustainability reporting activities, ranging from contextual factors and company characteristics to internal factors such as leadership andindividual motivation to achieve accountability[2,22].

The Financial Service Authority Regulation No. 51/POJK.03/2017 encourages the publication of a Sustainability report in Indonesia. Furthermore, stakeholders are increasingly pressing entities to provide

transparent, accountable information and to practice good corporate governance[11]. Sustainability report disclosure by entities in Indonesia is still at the surface level, with only a few disclosing sustainability reports that exceed the standards. This could be due to the entity's failure to incorporate green and sustainability concepts into various aspects of its operations. This is due to the fact that companies that have demonstrated ESG performance will disclose their accomplishments in greater detail in sustainability reports.

Environmental management is emphasized in 21st-century company management because it has a significant impact on a company's sustainability and competitiveness[7]. As a result, sustainability performance must be explicitly recorded in the company's business strategy objectives[14]. Meanwhile, according to Narayanan and Adams (2017)[21], whether the organization operates and practices that are based on sustainability is a long-term effort. Tarquinio and Xhindole's (2021)[28] findings indicate that radical and transformational change toward sustainability requires a fundamental shift in organizational logic. Companies should consider different types of capital, such as natural, relational, and human capital, in addition to financial gain.

Environmental performance is presented as a real and concrete outcome measure of environmental management success in the environmental management system. Environmental performance can be interpreted quantitatively as the end result of a process or qualitatively as an in-process to produce information for environmental decision making[20].

Adoption of new concepts and compliance with applicable government regulations require a long-term culture and behavior that involves many stakeholders within the company. Creating a green culture frequently entails reinforcing behaviors that people already want to adopt, but changing them requires the right tools and training. Olson (2008)[23] states that Green Strategy for Companies includes complementary business strategies for managing company operations and assets that are frequently pronounced and well understood by companies. Green strategy essentially encourages businesses to make decisions that benefit the environment. The implementation of a green strategy not only allows businesses to reduce total costs and risks, but it can also assist them in increasing revenue and intangible values such as reputation and trusted brands, which may contribute to the company's competitive advantage[18].

Companies will be sustainable if they can secure resources and develop competencies to deal with emerging environmental problems[19]. Challenges to environmental problems can be a booster for companies if they are turned into opportunities. This is possible if the company has personnel or employees with intellectual intelligence and knowledge of the environment and sustainability. Intellectual capital is able to link between entities and employee mobilization in achieving goals[26]. The combination of direct and indirect knowledge will be effective through environmental management[3]. Green intellectual capital plays a significant role in the transfer of knowledge related to sustainability in accordance with the provisions, technology used, and best practices that prompted the company to embark on the sustainability journey. Chen (2008)[6] defines green intellectual capital as total assets that include intangible assets such as knowledge, expertise, and other matters related to environmental protection and green innovation at both the individual and organizational levels.

Several previous studies that raised the research variables related to green strategy and green intellectual capital on sustainability reporting through mediating environmental performance variables had never been studied before. A resource-based view (RBV) was used to develop a theoretical relationship between green strategies and company competitive advantages. It was discovered that there are various types of environmental strategies, which include pollution prevention, product stewardship, and clean technologies[18]. Because green vision is less associated with strategy and technology development, most businesses miss out on these opportunities[10]. Padash et al. (2015)[24] conducted a study that linked green strategy to the concept of sustainable development. Meanwhile, studies on green intellectual capital that are linked to Green Human Resource Management towards organizational sustainability is being conducted by Malik et al. (2020)[16] and Yusliza et al. (2020)[29], both of which link green intellectual capital tosustainability performance.

The authors attempt to see and analyze the impact of Green Strategy and Green Intellectual Capital on Sustainability Report Disclosure using Environmental Performance as a moderating variable in this study. This study aims to gather empirical evidence on whether environmental performance can strengthen the effect of green strategy and green intellectual capital on the expansion of sustainability report disclosures in manufacturing entities listed on the IDX in the basic and chemical industries from 2016 to 2020.

Meanwhile, this study is expected to be useful in providing empirical evidence for academics and practitioners to develop knowledge and references, as well as sources of information for companies, investors, and future researchers to make decisions.

II. Material And Methods

A. Natural Resource Based View (NRBV)

In the **Natural Resource Based View** (NRBV), entities see challenges and environmental protection as opportunities to increase profits through responsible natural resource management as a competitive advantage[10]. This NRBV is a more detailed version of the Resource Based View (RBV) for creating a green strategy. By

determining the relationship between resources and capabilities and strategic outcomes, the NRBV perspective allows for a more systematic examination of the relationship between environmental and financial performance. Pollution prevention, product stewardship, and clean technologies[18] are examples of environmental strategies.

B. Sustainability Report Disclosure

Sustainability Reporting is a report that discloses and communicates to all stakeholders in an accountable manner about the company's environmental, governance, and social affairs over a specific time period. Meanwhile, according to Elkington (1997), the sustainability report is the performance of the triple bottom line (profit, people, and planet).

The Global Reporting Initiative guidelines are used for the practice of reporting on social and environmental responsibility activities (GRI). The following are the advantages of disclosing sustainability reports:

1. Benchmarks of good governance, environmental performance, and social performance;
2. Expressing the organization's commitment to sustainable development;
3. As a comparison tool for organizational performance every time.

C. Environmental Performance

Environmental performance is a metric that measures the effectiveness of an environmental management system that has jurisdiction over the prospective environment. Environmental performance can be studied through strategic environmental aspects, objects, and environmental goals to be achieved.

The quantitative environmental performance results of the environmental management system are related to the physical assessment of environmental aspects. Meanwhile, the results of the environmental management system take the form of qualitative environmental performance, which refers to the performance of non-physical assets such as procedures, innovation, motivation, and work spirit, as well as actors who carry out environmental policies, goals, and targets. Another indicator of qualitative environmental performance is a work climate that makes employees motivated which is a stimulus to behave without damaging the environment.

The indicators of environmental performance are divided into two categories:

1. Lagging indicators measure outputs such as pollutants
2. Leading indicators measure in-process performance.

In this study, environmental performance is measured using the PROPER color from the Ministry of Environment and Forestry of the Republic of Indonesia, which is on a scale of 1-5 with two categories, an assessment of obedience and an assessment of more than required.

D. Green Strategy

A green strategy for a company, whether public or private, government or commercial, is part of the company's business strategy, operations, and assets. Green strategies essentially encourage decisions that have a positive environmental impact. The principles that underpin a green strategy should guide businesses in making decisions that are based on sound business logic and sound business sense[23].

Green strategy is classified into two types: low-level strategy and high-level strategy. Pollution prevention and product stewardship are examples of low-level green strategies that provide businesses with incremental improvements to their existing processes and products. Green strategies at the highest levels drive disruptive changes in company processes and products. Companies that use this strategy seek to radically change their products and business models while capitalizing on future market opportunities by developing innovative clean technologies[13].

According to the Natural Resource Based View (NRBV), there are three types of green strategies:

1. Pollution prevention strategy

Pollution prevention is the process of reducing waste and emissions from a company's current operations by gradually improving the company's existing products and processes. The objectives of this strategy can be met through better housekeeping, material substitution, internal recycling, or process innovation, according to the NRBV framework.

2. Product Management Strategy

Product stewardship strategies will have a positive impact on the environment throughout the company's value chain. Some of the environmental indices used to measure the results of this strategy include reducing the use of scarce materials and increasing the rate of reuse or recycling of grocery products.

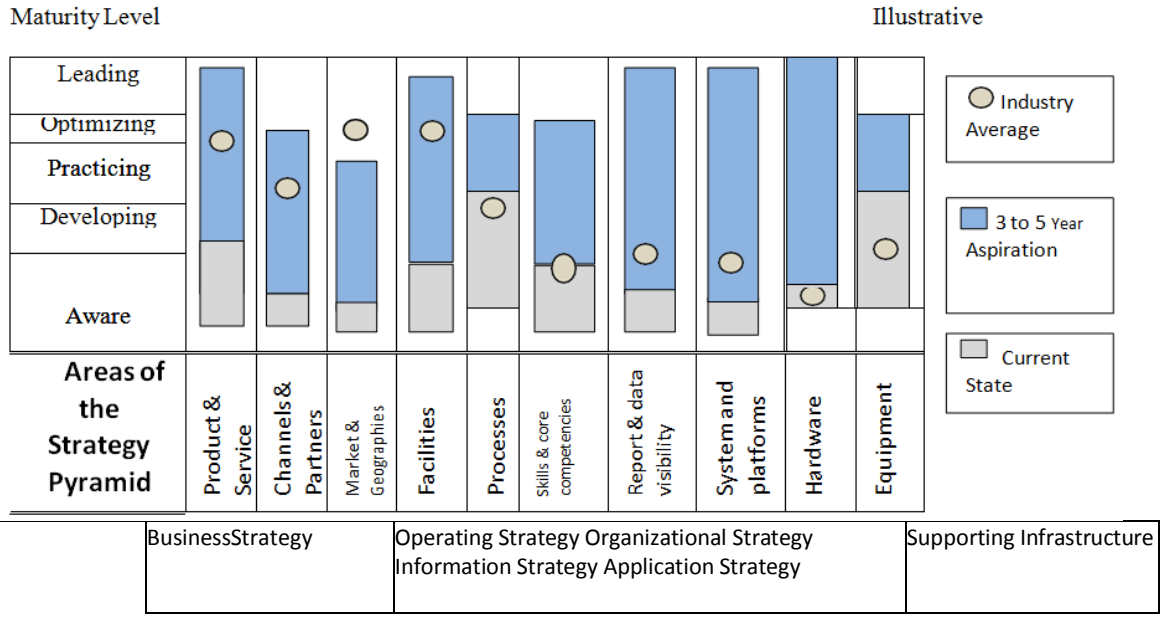
This strategy enables businesses to reduce product life cycle environmental costs. Furthermore, by incorporating the perspectives of various stakeholders into business processes, the adoption of a product stewardship strategy will provide the company with a competitive advantage in terms of reputation and legitimacy.

3. Clean Technology Strategy

While pollution prevention and product stewardship are more closely related to environmental efficiency, the

environmental outcomes of clean technology strategies are associated with lower material and energy consumption. Clean technologies can enable organizations to reposition their internal skills and capabilities in order to benefit from the marketplace of the future.
Olson (2011)[23] states that the first step in developing a green strategy at the corporate level is to assess the current state of green operations and initiatives that have been completed or are in the works.

Figure 1 Green Strategy Maturity Model Analysis Frameworks



Source: Olson (2008)

E. Green Intellectual Capital

Chen (2008)[6] defines Green Intellectual Capital as a combination of environmental and intellectual capital concepts to present the depth of the concept. Green intellectual capital is an intangible asset that consists of knowledge, policy, experience, and innovation in the concept of environmental protection.

Green Human Capital, Green Structural Capital, and Green Relationship Capital are all areas that can be studied in relation to Green Intellectual Capital. Yusliza et al. (2019)[29] found that Green Intellectual Capital has a positive effect on environmental, social, and governance performance in Malaysian manufacturing companies. Meanwhile, Malik (2020)[16] found that Green Intellectual Capital and Green Resources Management have an impact on company sustainability.

Study Design: Non-Experimental Design that is exploratory and descriptive
Study Location: Manufacturing Company in basic and chemical industry sectors in Indonesia
Study Duration: 2015 to 2020
Sample size: 370 company years.
Sample size calculation: This study employs a saturated sample, with a total sample of 370 company years drawnfrom the population of the basic and chemical industries.

Subjects & selection method: Secondary data in this study comes from company sustainability reports listed on the IDX from 2015 to 2020, which is the transition period from voluntary to mandatory reports. Although a saturated sample is used in the sample selection, there are several criteria that must be met in order to become a research sample.
Inclusion criteria:
1. The sample entities are from the basic and chemical industries, which were listed on the Indonesian stockexchange from 2015 to 2016.
2. The company must report at least a sustainability report for two consecutive years
3. Companies that disclose PROPER from the Indonesian Ministry of Environment and Forestry.

Procedure methodology Hypothesis Development

A. The Effect of Green Strategy on Company's Environmental Performance

Previous studies have shown that implementing a green strategy improves environmental performance and that there is a significant relationship between a green strategy, environmental performance, and competitive advantage[18]. Meanwhile, according to Olson (2008)[23], various areas of strategy formulation (Strategic Pyramid) and tactical operations they manage are all influenced by a company-level green strategy, so green strategy must be sought to be integrated into a complementary business strategy.

H1: Green Strategy has a positive effect on Company's Environmental Performance

B. The Effect of Green Intellectual Capital on Company's Environmental Performance

Previous studies examined Green Intellectual Capital through the lens of three green indicators, namely green human capital, green structural capital, and green relational capital, all of which have a positive impact on competitive advantage[5]. Meanwhile, Aboramadan et al. (2021)[1] found that green human resource management can positively mediate the effect of green intellectual capital on environmental performance. Based on this, the following research hypothesis is proposed:

H2: Green Intellectual Capital has a positive effect on the company's environmental performance.

C. The Effect of Company's Environmental Performance on Sustainability Report Disclosure

According to the findings of Fontana (2015)[9], environmental performance has a positive effect on environmental disclosure, with companies providing more environmental information if they pollute the environment more. Previous studies have also found that legitimacy is important for companies when it comes to environmental disclosure. Companies frequently provide an incomplete picture of how their decisions and activities impact the environment. The findings point to the need to supplement voluntary environmental disclosures with mandatory requirements for sustainability reporting, as well as strong enforcement mechanisms, to encourage companies to be more accountable in terms of environmental performance[4].

H3: ***Environmental Performance has a positive effect on Sustainability Report Disclosure***

D. The Effect of Green Strategy on Sustainability Report Disclosure

Green strategy management is an experimental tool for evaluating long-term strategies that use the supply chain as a metric[24]. The need to protect the environment has been felt for a long time, but it did not become law until the introduction of terms like sustainability and eco-friendliness. Thus, many businesses are implementing Green Strategies to address environmental hazards[25].

H4: ***Green Strategy has a positive effect on the Sustainability Report Disclosure***

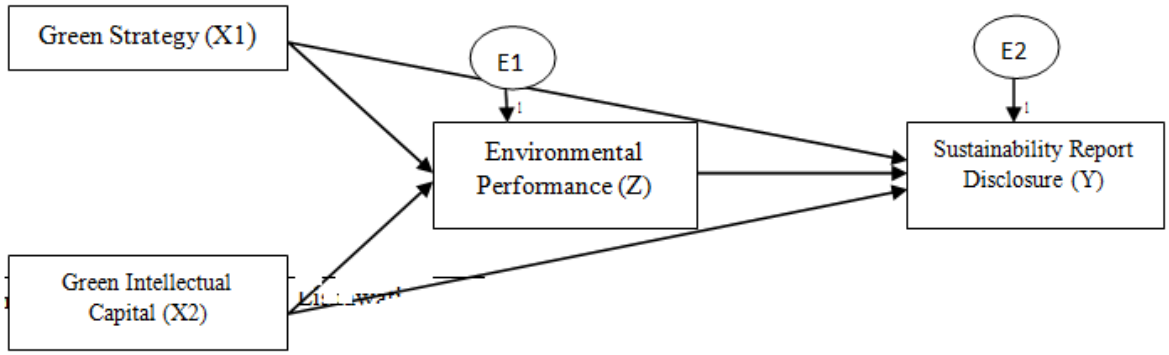
E. The Effect of Green Intellectual Capital on Sustainability Report Disclosure

Green intellectual capital has been empirically proven to have a positive effect on sustainability performance[29]. A previous study by Malik et al. (2020)[16] found that green intellectual capital and its indicators have a positive influence on long-term performance, with green relational capital playing a more dominant role than other intellectual capital. These findings contribute to a better understanding of the relationship between green intellectual capital and the Resource Based View (RBV) theory approach.

H5: Green Intellectual Capital has a positive effect on Sustainability Report Disclosure.Statistical analysis

The Amos program was used to analyze the data using the Path Analysis approach. The goal of this study is to look at the impact of Green Strategy and Green Intellectual Capital on Sustainability Report Disclosure using Environmental Performance as a mediating variable. Thus, path analysis is used to perform a quantitative analysis relevant to the research objective. The Effect of Green Strategy and Green Intellectual Capital on Sustainability Report Environmental Performance as a mediating variable consists of two substructures, namely substructure 1 and substructure 2. According to the path concept in Figure 1, substructure 1 Environmental Performance is influenced by Green Strategy and Green Intellectual Capital, whereas substructure 2 Sustainability Report Disclosure is influenced by Green Strategy, Green Intellectual Capital, and Environmental Performance:

Figure 1. Path Concept



The structural model between the three variables can be expressed as a structural equation, and this data can beprocessed using path analysis with the following equation.

$$SRDit = \alpha 0 + \alpha 1GSit + \alpha 2GICit + \varepsilon it EPit = \alpha 0 + \alpha 1GSit + \alpha 2GICit + \varepsilon 1it$$
$$SRDit = \beta 0 + \beta 1GSit + \beta 2GICit + \beta 3EPit + \varepsilon 2it$$

where:
GS = Green Strategy, GIC = Green Intellectual Capital, EPI = Environmental Performance, SRD = SustainabilityReport Disclosure

III. Result

Descriptive statistics

In this study, descriptive statistical analysis was used to illustrate the characteristics of the data by looking at the average value, standard deviation, maximum and minimum values.

Table 1. Descriptive Analysis of Green Strategy (GS) Variable

Criteria	2016	2017	2018	2019	2020
Maximum	100	100	100	100	100
Minimum	0	0	0	0	0
Average	27.97	27.03	28.75	30.34	31.70
Standard Deviation	30.61	30.13	30.84	31.25	32.91

The descriptive analysis of the Green Strategy (GS) variable from 2016 to 2020 can be seen in the table above. These results indicate that the highest average is in 2020, which is 31.70 with a standard deviation of 32.91. Meanwhile, the lowest average occurred in 2017 at 27.03 with a standard deviation of 30.13.

Table 2 Descriptive Analysis of Green Intellectual Capital (GIC) Variable

GIC * Crosstabulation Year

		Year					Total
		2016	2017	2018	2019	2020	
GIC	.00	25	21	17	14	13	90
	1.00	49	53	57	60	61	280
Total		74	74	74	74	74	370

The descriptive analysis of the Green Intellectual Capital (GIC) variable in 2016 to 2020 can be seen in the table above. According to these findings, the highest score of 0 occurred in 2016, with as many as 25 companies, while the lowest occurred in 2020, with 13 companies. The highest score of 1 was achieved by as many as 61 companies in 2020, while the lowest was achieved by as many as 49 companies in 2016.

Table 3 Descriptive Analysis of Environmental Performance Variables (KL)

Z * Crosstabulation Year

		Year					
		2016	2017	2018	2019	2020	Total
KL	Green	67	66	65	66	66	330
	Blue	5	7	6	5	6	29
	Red	2	1	2	2	2	9
	Black	0	0	1	1	0	2
Total		74	74	74	74	74	370

The descriptive analysis of the Environmental Performance (KL) variable in 2016 to 2020 can be seen in the table above. According to these findings, the highest blue group occurred in 2017, with 7 companies, while the lowest occurred in 2016 and 2019, with 5 companies. The highest number of companies in the red group occurred in 2016, 2018, 2019, and 2020, with two companies each, while the lowest number occurred in 2017, with one company. Meanwhile, only one company was part of the black group in 2018 and 2019.

Table 4. Descriptive Analysis of Sustainability Report Disclosure (SRD) Variable

SRD * Crosstabulation Year

		Year					
		2016	2017	2018	2019	2020	Total
SR	.00	67	67	66	64	60	324
	1.00	7	7	8	10	14	46
Total		74	74	74	74	74	370

The descriptive analysis of the Sustainability Report Disclosure (SRD) variable in 2016 to 2020 can be seen in the table above. According to these findings, the highest score of 0 occurred in 2016 and 2017, with 67 companies each, while the lowest occurred in 2020, with as many as 60 companies. The highest score of 1 was achieved by 14 companies in 2020, while the lowest was achieved by 7 companies in 2016 and 2017.

Normality test

Path analysis testing requires that the data be normally distributed. The Amos program was used to test the data's normality using univariate and multivariate skewness and kurtosis tests, yielding the following results.

Table 5. Normality Test Results

Variable	min	max	skew	c.r.	kurtosis	c.r.
GS	.000	100.000	.800	6.283	-.538	-2.114

Variable	min	max	skew	c.r.	kurtosis	c.r.
GIC	.000	1.000	-1.197	-9.399	-.567	-2.228
KL	.000	5.000	2.698	21.191	5.756	22.600
SRD	.000	1.000	2.277	17.882	3.185	12.507
Multivariate					6.658	9.243

According to Amos' output in the table above, the CR value of each variable is greater than 1.96, indicating that the data is not normally distributed. Because the data on the number of observations is a large sample with more than 30 observation members, it can be said that the data is normally distributed in accordance with the central limit theory, so internal testing is performed at the next stage.

Path Analysis Hypothesis TestSub Structure 1

According to the previous path concept, substructure 1 explains the impact of Green Strategy and Green Intellectual Capital on Environmental Performance. To determine the results of substructure 1 estimation, data processing was performed using the Amos program, yielding the following results:

Figure 2. Estimation Results of Sub Structure 1

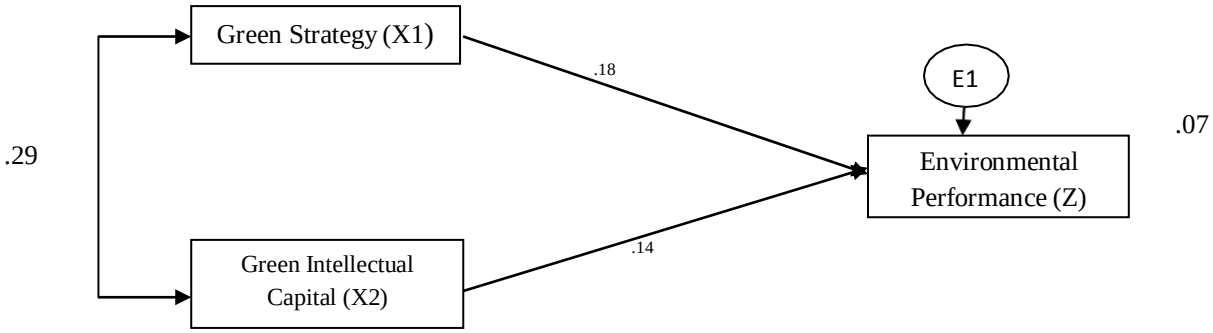


Table 6. Estimation Results of Sub Structure 1

Hypothesis	**Effect**	**Path Coefficient**	**P value (0.05)**	**Conclusion**
1	GS → KL	0.180	0.006	Significant
2	GIC → KL	0.144	0.000	Significant

Based on the estimation results in substructure 1 shown in the figure and table above, the hypothesis testing results are as follows:

1. With a path coefficient of 0.180, Green Strategy has a significant effect on Environmental Performance. The positive path coefficient indicates that an increase in the Green Strategy is followed by an increase in the Environmental Performance, and vice versa. Based on this, it can be concluded that H1 is accepted, implying that the Green Strategy has a significant positive and direct effect on Environmental Performance.

2. Green Intellectual Capital has a significant effect on Environmental Performance with a path coefficient of
0.144. The positive path coefficient indicates that as Green Intellectual Capital rises, so will Environmental Performance, and vice versa. Based on this, it can be concluded that hypothesis 2 is acceptable, implying that Green Intellectual Capital has a significant positive and direct effect on Environmental Performance.

Sub Structure 2

The second substructure explains the impact of Green Strategy, Green Intellectual Capital, and Environmental Performance on Sustainability Report Disclosure. To determine the results of substructure 2 estimation, data processing was performed using the Amos program, yielding the following results:

Figure 3. Estimation Results of Sub Structure 2

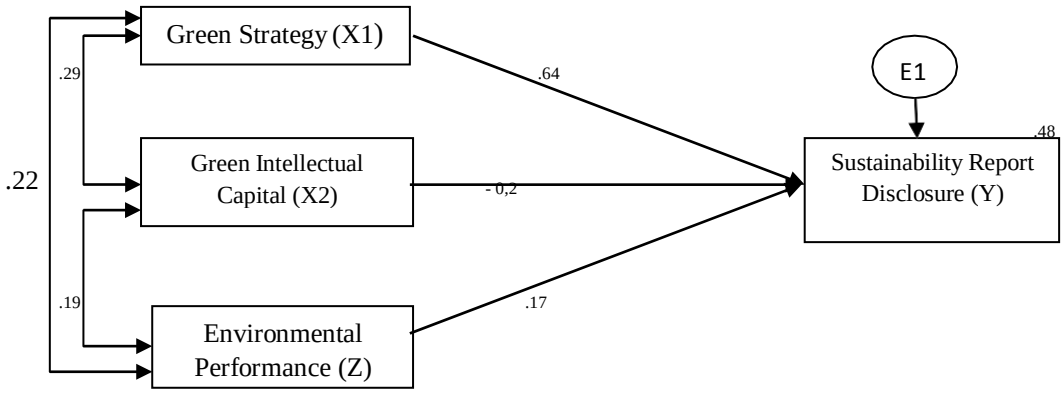


Table 7. Estimation Results of Sub Structure 2

Hypothesis	Effect	Path Coefficient	P value	Conclusion
3	GS → SRD	0.641	0.000	Significant
4	GIC → SRD	-0.022	0.582	Not Significant
5	KL → SRD	0.171	0.000	Significant

The following hypothesis testing results can be seen based on the estimation results in substructure 2 shownin the figure and table above:

1. With a path coefficient of 0.641, Green Strategy has a significant effect on Sustainability Report Publication. The positive path coefficient indicates that an increase in the Green Strategy will be followed by an increase in the publication of the Sustainability Report, and vice versa. Based on this, it can be concluded that H3 is accepted, implying that the Green Strategy has a significant positive and direct effect on Sustainability Report Publication.
2. With a path coefficient of -0.022, Green Intellectual Capital has no significant effect on Sustainability Report Publication. The negative path coefficient indicates that as Green Intellectual Capital increases, so does Sustainability Report Publication, and vice versa. Based on this, it can be concluded that H4 is rejected, implying that Green Intellectual Capital negatively and directly does not have a significant effect on Sustainability Report Publication.

3. With a path coefficient of 0.171, Environmental Performance has a significant effect on Sustainability Report Publication. The positive path coefficient indicates that as Environmental Performance improves, so will Sustainability Report Publication, and vice versa. implying that Environmental Performance has a significant positive and direct effect on the Sustainability Report Publication.

Decomposition of Sub Structure 1 and Sub Structure 2

After calculating the effect estimation results on sub structure 1 and sub structure 2, then the decomposition of the effect of sub structure 1 and sub structure 2 was conducted. The purpose of decomposition of the influence of sub structure 1 and sub structure 2 is to determine the indirect effect or mediating effect of Green Strategy and Green Intellectual Capital on Sustainability Report Disclosure through Environmental Performance. To determine the estimation results of the decomposition of sub structure 1 and sub structure 2, data was processed using the Amos program and the Calculation for the Sobel Test ((http://quantpsy.org/sobel/sobel.htm), yielding the following results:

Figure 4. Estimation Results of Decomposition of Sub Structure 1 and Sub Structure 2

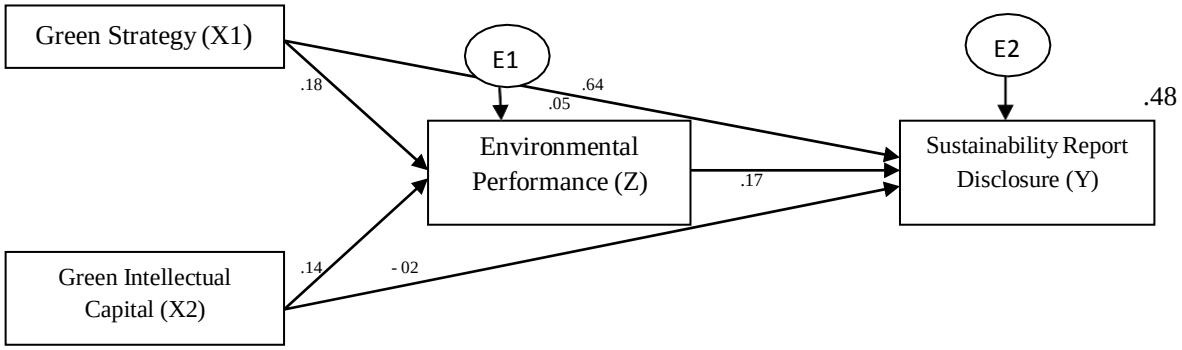


Table 8. Estimation Results of Decomposition of Sub Structure 1 and Sub Structure 2

Hypothesis	Effect	Path Coefficient	P value	Conclusion
6	GS → KL→ SRD	0.180 x 0.171 = 0.031	0.000	Significant
7	GIC → KL→ SRD	0.144 x 0.171 = 0.025	0.262	Not Significant

Based on the estimation results of the decomposition of substructure 1 and substructure 2 shown in the figure and table above, the hypothesis testing results are as follows:

1. With a path coefficient of 0.031, Green Strategy has a significant effect on Sustainability Report Disclosure through Environmental Performance. The positive path coefficient indicates that an increase in Green Strategy through Environmental Performance is followed by an increase in Sustainability Report Disclosure, and vice versa. Based on this, it is possible to conclude that H6 is accepted, implying that the Green Strategy has a significant positive and indirect effect on the Sustainability Report Disclosure through Environmental Performance.

2. With a path coefficient of 0.025, Green Intellectual Capital has no significant effect on Sustainability Report Disclosure through Environmental Performance. The positive path coefficient indicates that an increase in Green Intellectual Capital through Environmental Performance is followed by an increase in Sustainability Report Disclosure, and vice versa. Based on this, it can be concluded that H7 is rejected, which means that Green Intellectual Capital positively and indirectly has no significant effect on Sustainability Report Disclosure through Environmental Performance.

IV. Discussion

According to the results of the above statistical test, the Green Strategy has a significant positive effect on Environmental Performance. This is consistent with Hart and Dowell's (2011)[10] Natural Resources Based View (NRBV) theory, in which entities develop green strategies to improve environmental performance as a competitive advantage. These findings support the proposed hypothesis 1 and previous study from Masoumik et al. (2015)[18], which found that a green strategy can improve environmental performance as well as a company's competitive advantage.

Meanwhile, the statistical test results of Green Intellectual Capital show that it has a significant positive effect on environmental performance, so hypothesis 2 is accepted. This is consistent with the findings of Aboramadan et al.'s (2021)[1] study, which found that green intellectual capital has a positive effect on environmental performance and that, when used as a moderating variable, green human resource management can mediate the effect of green intellectual capital on environmental performance. According to the Natural Resources Based View Theory (NRBV), green intellectual capital is clearly one of the determinants of environmental performance within the company in order to maintain profit in the face of increasing environmental challenges.

When statistical tests on environmental performance and Sustainability Report Disclosure are performed, there is a positive and significant effect, which is consistent with hypothesis 3. These findings are consistent with previous research findings from Fontana (2015)[9] and Braam (2016)[4], which show that environmental performance has an effect on sustainability report disclosure even though regulations still

stipulate voluntarily due to stakeholder pressure to go above and beyond the mandatory provisions required in order to get a good assessment for the company's competitive advantage.

Natural Resource Based View (NRBV) measurement of Green Strategy consists of three indicators, namely Pollution Prevention, Product Stewardship, and Clean Technology, where these indicators are part of the Business Strategy that is influenced by Green Strategy in the pyramid strategy, such as product and service, Channels and Partners, Markets and Geography[23]. The results show that the green strategy has a significant positive effect on the Sustainability Report Disclosure, which is because the Green Strategy is part of the company's Sustainability Strategy. These findings support hypothesis 4 and previous research from Rathee and Rajain (2016)[25], which found that the green strategy has an effect on the disclosure of sustainability reports.

Green Intellectual capital does not have a significant effect in a negative direction on the Sustainability Report Disclosure. This is not in line with previous studies from Yusliza et al. (2019)[29] and Malik (2020)[16]. This is due to the fact that the Sustainability Report has become a requirement for entities in Indonesia to report it separately. Whether or not human capital has a green perspective, stakeholders will continue to put pressure on them to submit sustainability reports in order to meet the Indonesian Financial Services Authority's (OJK) obligations.

Meanwhile, when environmental performance is used as a mediating variable, the results show that environmental performance has an effect as a mediating variable between Green Strategy and Sustainability Report Disclosure. These findings suggest that environmental performance has a significant impact on the preparation and disclosure of a company's sustainability report, which begins with planning at the management level in the form of a green strategy. The findings of this study indicate that the green strategy prepared by Indonesian manufacturing companies from 2016 to 2020 is at the stage of developing the green strategy maturity models developed by Olson in 2008.

Statistical tests show that environmental performance has no effect on the relationship between Green Intellectual Capital and Sustainability Report Disclosure. This is not in accordance with the initial prediction that environmental performance is able to mediate the effect of GIC with SRD. This is most likely due to the fact that environmental performance is only one component of the Environment, Social, and Governance (ESG) that must be disclosed in the Sustainability Report, preventing environmental performance from becoming a mediating variable between Green Intellectual Capital and the Sustainability Report Disclosure. In addition, stakeholders play a significant role in the disclosure of sustainability reports in order to meet Indonesia's regulatory obligations.

V. Conclusion

The following are the conclusions that can be drawn from the above results and discussion:

1. Green Strategy has an effect on Company's Environmental Performance
2. Green Intellectual Capital has an effect on Company's Environmental Performance
3. Environmental Performance has an effect on Sustainability Report Disclosure
4. Green Strategy has an effect on the Sustainability Report Disclosure
5. Green Intellectual Capital has no effect on Sustainability Report Disclosure
6. Environmental performance has an effect as a mediating variable between Green Strategy and SustainabilityReport Disclosure
7. Environmental performance has no effect as a moderating variable between Green Intellectual Capital andSustainability Report Disclosure.

The following are the limitations of this study:

1. PROPER is used as a measure of environmental performance with the best criteria, so it does not reflect the company's performance evenly.
2. The properties with the lowest ratings, namely red and black, obtained by the company from the Ministry of Environment and Forestry's assessment were not disclosed in the AR and SR, clouding the evaluation of the company's performance.
3. In accordance with POJK No. 51 of 2017, the publication of a Sustainability Report has become mandatory for companies in Indonesia due to regulations and stakeholder pressure.

The **academic** research **implication** is the use of a sustainability strategy index that can be used to measure green strategy. At the development stage, green strategy indicators are also used. Meanwhile, for the study's **practical implications**, companies that have developed a green strategy must justify in the Sustainability Report at what stage they care about and implement a green strategy.

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