

The Effect of Green Intellectual Capital and Organizational Environmental Management on Green Organizational Identity and Its Impact on Green Competitive Advantage

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ABSTRACT

This study aims to examine the effect of Green Intellectual Capital and Organizational Environmental Management on Green Organizational Identity and its impact on Green Competitive Advantage. This research also aims to prove Green Organizational Identity as an intervening variable. This study uses a questionnaire to managers, assistant managers, company staff using an online Google form via a distributed link. The number of respondents we used was 115 samples collected and analyzed using SPSS. The results showed: From the results of research and research discussion, the following conclusions can be drawn: that there is a direct significant effect of Green Intellectual Capital (GIC) on Green Organizational Identity (GOI). Directly there is a significant influence of Organizational Environmental Management (MLO) on Green Organizational Identity (GOI). Directly there is a significant effect of Green Intellectual Capital (GIC) on Green Competitive Advantage (GCA). Directly there is a significant effect of Organizational Environmental Management (MLO) on Green Competitive Advantage (GCA). Directly there is no significant effect Green Organizational Identity (GOI) against Green Competitive Advantage (GCA). Indirectly, GIC through GOI does not have a significant effect on GCA. Indirectly MLO through GOI has a significant effect on GCA. The limitations in this study are: this study only uses a small sample of 115 respondents, so that for the next research it can add more samples. The next researcher can use respondents in the managerial level who actually work for companies that produce waste. Implications: There is support from all parties, including government, government, and academia to raise awareness to play a role in sustainable development for the future. Through increasing insights to pay attention and consider the environment.

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INTRODUCTION

The rapid development of technology in the digital era requires companies to always keep up with changes dynamically. They will strive to carry out the strategies they have set to achieve their goals and competitive advantage. Competitive advantage is important for any company, because it determines the success or failure of a business. The problem of climate change has been growing for decades in developed countries, but little about climate change in developing countries. We need to encourage and present private and public sectors to immediately move and carry out mitigation and adaptation. This action will have an impact and stimulate the market to generate more investment to achieve sustainable energy in the future. (Sudibyo 2018)

Companies usually only look at the short-term aspect while ignoring the impact of their activities such as social and environmental impacts so that corporate leaders who have broad social responsibility act inconsistently with the wishes of shareholders (Astuti, Oktavianus, and Augustine 2019). Corporate social responsibility is a process of delivering the social and environmental impacts of a company's economic

activities on the surrounding community (Astuti et al. 2019). However, many companies state that environmental management for companies is not an important thing and is not an effective investment, even companies do not understand that environmental management is dangerous for company development (Firmansyah 2017a).

The studies conducted state that pollution occurs due to inefficient use of resources and companies that seek to carry out environmental management or make green innovations can have a major advantage that results in these companies enjoying higher benefits from their green products to improve green image, and to get a competitive advantage (Chen and Huang 2009). Thus, environmental management becomes an important area of management in the 21st century (Chen and Chang, 2013), if companies want to be sustainable and be able to compete in the future.

Formulation of the problem : 1. Does Green Intellectual Capital have a significant effect on Green Organizational Identity? 2. Does Organizational Environmental Management have a significant effect on Green Organizational Identity? 3. Does Green Intellectual Capital affect the Green Competitive Advantage? 4. Does Organizational Environmental Management have a significant effect on Green Competitive Advantage? 5. Does Green Organizational Identity have a significant effect on Green Competitive Advantage? 6. Does the effect of Green Intellectual Capital through Green Organizational Identity have a significant effect on Green Competitiveness Advantage? 7. Does Organizational Environmental Management through Green Organizational Identity have a significant effect on Green Competitiveness Advantage?

METHOD

This study applies a survey using a questionnaire. The questionnaire was distributed to respondents who have functional positions (lecturers) and those who have managerial positions in the company. The sample selection for lecturers is those who have influence and experience in their place of work. The measurement scale in the questionnaire uses a Likert scale from 1 to 6 from very disagree to very agree

The dependent variable in this study is green competitive advantage, while the independent variable in this study is green intellectual capital which is represented by green human capital, green structural capital and green relational capital. Another independent variable is the management of the organization's environment which is represented by an environmentally oriented organizational culture, environmentally oriented leadership and environmentally oriented abilities. This study also includes an intervening variable, namely green organizational identity. The construct measurements for the variables in the study are as follows

Data analysis technique Data analysis in this study used multiple linear regression to test the effect of the independent variable and the dependent variable by means of linear regression. The regression model in this study uses the following formula:

$$GOI = \beta_0 + \beta_1 GIC + \beta_2 MLO + \varepsilon$$

$$GCA = \beta_0 + \beta_1 GIC + \beta_2 MLO + \beta_3 GOI + \varepsilon$$

GOI = Green Organizational Identity

GCA = Green Competitive Advantage

GIC = Green Intellectual Capital

MLO = Manajemen Lingkungan Organisasi

E = error.

RESULTS AND DISCUSSION

Data and Sample Collection This study uses a survey of middle and upper level managers in manufacturing companies. This study uses a questionnaire distributed using google form. A number of questionnaires that were successfully collected were 115. From the data obtained for female respondents as much as 45.8%, 54.2% for men. For the level of education S1 = 86.4%, S2 8.5%, and 5.1% D3. Work experience 0-5 years 58.8%, 5-10 years = 23.7 and > 15 years 9.3%.

For the statistical reliability test, it was obtained that Cronbach's Alpha 0.987 > 0.70 (Reliable)

1. Variabel Green Human Capital

From the descriptive statistics above, it is known that the highest average is creating a reward program to encourage employees to generate ideas for new product innovations, processes, and environmentally sound problem solving. It can be seen that currently the company has involved employees to generate ideas for new product innovations, processes and problem solving by giving awards as a form of motivation.

2. Green Structural Capital

From the descriptive statistics above, the highest average is that companies have a high management system for environmental protection. This means that the company already has an awareness of the importance of an organization, especially a company for environmental protection. This is also supported by a fairly low standard of defiation. In its implementation the company has also formed a

committee to advance the main issues, make detailed rules, make investments in environmental protection facilities.

3. Green Relation Capital

From the descriptive statistics above, the highest average is that companies design products and services to meet the desires of their consumers for the environment. This means that the company is good at responding to consumer desires by paying attention to the quality of products or services that support environmentally friendly. However, not all companies in Indonesia care about this. This can be seen from the higher standard deviation for the green relation capital of the company as a whole on average is quite good and the average height is more than 4.

4. Green Competitive Advantage

Based on the results of descriptive statistics above, the quality of the green product or green service that the company offers is more than the green product or green service of the company's competitors is comparable to that of the company's growth in line with green products and green services than its main competitors. Overall, there are companies' efforts to implement competitive advantage strategies that accommodate environmental customers and consumers.

5. Environmentally oriented culture

From these descriptive statistics, it can be seen that in general the environmental culture of company organizations in Indonesia is good, where the company cares about environmental management knowledge and environmental protection and has included organizational vivi with attention to environmental management and environmental protection.

6. Environment Oriented Leadership

In the descriptive statistical table above, it can be seen that in general the leadership in the company has cared and paid attention to, created and maintained environmental values, collaborated with stakeholder organizations to resolve environmental problems and accepted the responsibility for carrying out environmental education to encourage employees to initiate environmental management.

7. Environmental Oriented Ability

From the descriptive statistical table above, the company is generally good and able to integrate, cooperate, build and configure competencies and resources to complete environmental management, environmental innovation. The company has considered it important to support the resources and competencies that the company has in making long-term strategies for the company's sustainability

From the statistical table, it can be seen that the company's top managers, middle managers and employees have a feeling of pride in the mission and objectives of the company environment. There has been harmony in the understanding of environmental management and environmental protection at all levels of the company.

Table 1. Test of Green Intellectual Capital, Organizational Environmental Management against Green Organizational Identity

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.902	1.351		-.668	.506
	GIC	.134	.042	.356	3.193	.002
	MLO	.257	.051	.563	5.042	.000

A . Dependent Variable: GOI

Referring to the regression output model 1 on the coefficient table, it can be seen that the significance value of the two GIC variables, namely 0.002 and MLO 0.00, is smaller than 0.05. These results conclude that the regression model 1, namely the GIC and MLO variables, has a significant effect on GOI. The RSquare value contained in the Model Summary is 0.817, this shows that the contribution of the influence of GIC and MLO to GOI is 81.7% while the remaining 18.3% is the contribution of other variables not included in the study. Meanwhile, the value of $e1$ can be found with the formula $e1 = \sqrt{1-0.817} = 0.4279$

Table 2. Testing of Green Intellectual Capital, Organizational Environmental Management and Green Organizational on Competitive Advantage

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.068	1.868		.036	.971
	GIC	.194	.061	.517	3.205	.002
	MLO	.170	.078	.374	2.185	.031
	GOI	-.076	.130	-.076	-.581	.563

a. Dependent Variable: GCA

Based on the regression output model 2, the simultaneous test results show that GIC, MLO, GOI together have a significant effect on the GCA variable. In the coefficient table section, it is known that the GIC value is 0.02 and the MLO value is 0.031 which is smaller than 0.05. This result concludes that the GIC and MLO variables have a significant effect on GCA. Meanwhile, the GOI variable has a value of 0.563 which is greater than 0.05. From these results it can be concluded that GOI has no significant effect on GCA. The magnitude of the R square value contained in the Model Summary is 0.653, this shows that the contribution of GIC, MLO, and GOI to GCA is 65.3% while the remaining 34.7% is the contribution of other variables not examined. Meanwhile, the value of $e2 = \sqrt{1-0.653} = 0.5891$.

DISCUSSION

Analysis of the effect of Green Intellectual Capital (GIC) on Green Organizational Identity (GOI): From the above analysis, the significance value of the Green Intellectual Capital (GIC) variable is $0.02 < 0.05$, so it can be concluded that there is a direct significant effect of Green Intellectual Capital (GIC) on Green Organizational Identity (GOI). From this analysis, it can be explained that the top managers of the company, middle and lower level have strong feelings, are proud that they can formulate a set of environmental goals and missions that can be applied in the environment very well, are strongly influenced by company employees who are involved in positive productivity and contribute, have sufficient competence and cooperation. a team on environmental protection, which is supported by high structural management and maintains relationships with consumers to maintain the quality of products and services.

Analysis of the influence of Organizational Environmental Management (MLO) on Green Organizational Identity (GOI): from the analysis above, the significance value of the Organizational Environmental Management (MLO) variable is $0.00 < 0.05$, so it can be concluded that there is a significant effect directly. Organizational Environmental Management (MLO) on Green Organizational Identity (GOI). From this analysis it can be revealed that the Green Organizational Identity of companies in Indonesia is strongly influenced by corporate culture and leadership and the ability to orientate the environment.

Analysis of the effect of Green Intellectual Capital (GIC) on Green Competitive Advantage (GCA): from the analysis data, the significance value of Green Intellectual Capital (GIC) is $0.02 < 0.05$, so it can be concluded that there is a significant effect of Green Intellectual Capital directly. (GIC) to Green Competitive Advantage (GCA). From this analysis it can be explained that in order to achieve the company's competitive advantage, the company needs to increase environmental knowledge and employee competence to increase environmental activities, have rules and always establish good cooperation with relationships and consumers.

Analysis of the Influence of Organizational Environmental Management (MLO) on Green Competitive Advantage (GCA): from the analysis data the significance value of Green Intellectual Capital (GIC) is $0.31 < 0.05$, so it can be concluded that there is a significant effect of Organizational Environmental Management. (MLO) to Green Competitive Advantage (GCA). From this analysis, it can be explained that if management has and thinks about sustainability and sustainability as the focus of the company's business, the company will be able to create a strong corporate environmental culture with environmental management and environmental protection.

Analysis of the Effect of Green Organizational Identity (GOI) on Green Competitive Advantage (GCA): from the analysis data, the Green Organizational Identity (GOI) significance value is obtained of $0.563 > 0.05$, so it can be concluded that there is no direct effect of Green Organizational Identity significance (GOI) against Green Competitive Advantage (GCA). From this analysis it can be explained that. From the results of the analysis, it can be revealed that in order to achieve competitive excellence, companies in Indonesia have not been fully supported by upper, middle or lower level managers who have a sense of pride in environmental missions and goals, have extensive knowledge of the company's environmental traditions and culture.

Analysis of the Effect of Green Intellectual Capital (GIC) through Green Organizational Identity (GOI) on Green Competitive Advantage (GCA): It is known that the direct effect of Green Intellectual Capital (GIC) on Green Organizational Identity GOI is 0.157 while the indirect effect of GIC on GCA through GOI is the multiplication between the GIC beta against the GOI and the GOI beta value against the GCA, namely: $0.356 \times -0.76 = -0.27056$. The total effect given by GIC to GCA is the direct effect plus the indirect effect, namely $0.517 + 0.356 = 0.873$. Based on the results of the above calculations, it is known that the direct effect is 0.517 and the indirect effect is 0.356 which means that the direct effect is greater than the indirect effect, this indicates that indirectly GIC through GOI does not have a significant effect on GCA. From this analysis, it shows that the variable Competitive advantage is more influenced by the Green Intellectual capital variable where the greater the company emphasizes social and environmental responsibility, the greater the company will invest in green intellectual capital so that the company can implement strategies for corporate sustainability that are able to compete with competing companies.

MLO analysis through GOI to GCA: It is known that the direct effect of MLO on GOI is 0.374, while the indirect effect of MLO on GCA through GOI is the multiplication between beta MLO and GOI with the value of GOI beta on GCA, namely: $0.563 \times -0.76 = 0.42788$. The total effect given by MLO on GCA is the direct effect plus the indirect effect, namely $0.374 + 0.563 = 0.937$. Based on the results of the above calculations, it is known that the direct effect is 0.374 and the indirect effect is 0.563, which means that the indirect effect is greater than the direct effect. This shows that indirectly MLO through GOI has a significant effect on GCA. From this analysis, it can be explained that in achieving competitive advantage the company has implemented environmental knowledge, environmental management and environmental protection by the organization or company leadership / manager have become a priority in the organization or company. In this case, there is concern in placing environmental management factors as outlined in the company's mission and objectives. Green strategy positively affects environmental performance and organizational competitive advantage. More specifically, green strategy leads directly to positive environmental performance in terms of utility consumption, waste management and environmental risk management, leading to cost competitiveness and competitive advantage through differentiation (Singjai, Winata, and Kummer 2018).

CONCLUSION

From the results of research and research discussion, the following conclusions can be drawn: that directly there is a significant effect of Green Intellectual Capital (GIC) on Green Organizational Identity (GOI). Directly there is a significant effect of Organizational Environmental Management (MLO) on Green Organizational Identity (GOI). Directly there is a significant effect of Green Intellectual Capital (GIC) on Green Competitive Advantage (GCA). Directly there is a significant effect of Organizational Environmental Management (MLO) on Green Competitive Advantage (GCA). Directly there is no significant effect of Green Organizational Identity (GOI) to Green Competitive Advantage (GCA). Indirectly, GIC through GOI does not have a significant effect on GCA. Indirectly MLO through GOI has a significant effect on GCA.

Research limitations: this study only uses a small sample of 115 respondents, so that for the next research it can add more samples. The next researcher can use respondents in managerial level who actually work for companies that produce waste.

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