

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH AND STUDIES

www.ijcrs.org

ISSN-0249-4655

INFLUENCE OF GREEN INTELLECTUAL CAPITAL TO SUSTAINED COMPETITIVE ADVANTAGES THROUGH MEDIATION OF ENVIRONMENTAL CONSCIOUSNESS

Solihin

Postgraduate Student, Trisakti University

Sukrisno Agoes, Muhammad Nuryatno & Juniati Gunawan
Trisakti University

Abstract

The purpose of this research is to examine the influence of green intellectual capital which includes three components specifically green human capital, green structural capital and green relational capital towards sustained competitive advantages by mediated of environmental consciousness in manufacturing industries. has the impact of environmental risks that have been listed on the Indonesia Stock Exchange. This research is a quantitative study, number of samples used 216 of 316 high profile sensitive industry populations listed on the Indonesia Stock Exchange, survey respondents was conducted of managerial level with minimum experiences of 3 years. This study uses a questionnaire instrument with a purposive sampling method and data analysis using structure equation modeling (SEM). The empirical results of this research showed that, two of the three components of Green Intellectual Capital in the form of green human capital and green relational capital proved to have a significant effect on Sustained Competitive Advantages, while green structural capital not significant effect on sustained competitive advantages. Besides, this research verifies that environmental consciousness is a partial mediator between green intellectual capital and sustained competitive advantages. While testing through the mediation of environmental consciousness, showed that two components of green human capital and green relational capital, not significantly influence to Sustained Competitive advantages, but for green structural capital it was significant influence with Sustained Competitive Advantages.

Key words: Green Intellectual Capital, Environmental Consciousness, Sustained Competitive Advantages.

INTRODUCTION

Background of the Study

The information and knowledge era has changed the business environment to become more competitive, the focus of business development is no longer resting on industrial machines, but on the ability of knowledge-based human resources known as intellectual capital (IC) (Chen et al., 2005). Furthermore, it was explained that IC is intangible assets in the form of knowledge, information, experience and technology owned by the company. Currently IC has become the focus of attention in various fields, both management, information technology, and accounting (Petty and Guthrie, 2000).

One area of interest, both academics and practitioners, is the use of IC as an instrument for determining company value (Sveiby, 2010). But in reality, the management and reporting system that has been presented by the company so far has lost its relevance, because it has not been able to present information about IC comprehensively to manage knowledge-based processes (Liao et al., 2013).

According to the development of environmental issues Chen et al., (2008) developed ICs by incorporating green elements into intellectual capital. The importance of green intellectual capital which is associated with environmental issues can indirectly affect the sustained competitive advantage in electronics industry companies in Taiwan. Furthermore, Chen revealed that Green intellectual capital is an intangible asset of a company, including the knowledge, ability of employees, technology, experience, and the ability to apply innovation to achieve a sustained competitive advantage.

Furthermore, Chen revealed about the scope of components green intellectual capital consisting of green human capital, green structural capital, and green relational capital. The results of his study conclude that companies want to maintain a sustained competitive advantage through green intellectual capital, can be done by increasing the company's ability to environmental consciousness. It is therefore important for electronics industry companies in Taiwan to understand innovations related to environmental consciousness (Chen et al., 2008).

Statement of the Problem

The phenomenon that occurs in Indonesia, that the mining industry of the oil and gas sector, as well as coal mining provides economic benefits and enormous state revenue for Indonesia. However, on the other hand there is a risk that is the problem of environmental sustainability. The oil and gas industry is often a major problem in environmental pollution. Environmental pollution is a condition that occurs due to changes in environmental conditions including land, air and water that damage and harm the lives of humans, animals and plants, it is caused by the presence of foreign objects such as garbage, industrial waste, oil, dangerous metals and so on, as a result of human actions, so that the environment does not function as before (Haden, 2009).

Objectives of the Study

- i. To examine the direct effect of green human capital on environmental consciousness
- ii. To examine the direct effect of green structural capital on environmental consciousness
- iii. To examine the direct effect of green relational capital on environmental consciousness
- iv. To examine the direct effect of environmental consciousness on sustained competitive advantages
- v. To examine the direct effect of green human capital on the sustained competitive advantages
- vi. To examine the direct effect of green structural capital on the sustained competitive advantages
- vii. To examine the direct effect of green relational capital on the sustained competitive advantages.

Limitations of the Study

Source of data in this study is primary data using a questionnaire instrument that describes the opinions and perceptions of managers as respondents. Although in this study the respondents are managers who have worked relatively long in the company who should understand and comprehend the condition of the company, but this research still requires in-depth study, so it needs secondary data as supporting data to prove results that are close to the real situation. Weaknesses of primary data cannot be generalized, the results can only see events at the time of data collection. And in terms of time the primary data collection process is much longer than secondary data.

LITERATURE REVIEW

Resource-Based Theory

Resource-based theory (RBT), which is a further development of Ricardo's Economic Rent, and Structure-performance-conduct theory (Clulow et al., 2007). This theory arises because there are strategic questions about why a company can outperform other companies and have sustainable superior performance, companies that build their own resources and can control it will have the ability to maintain its superiority compared to if the company bought or obtained its resources from outside the organization.

Stakeholder Theory

Stakeholder theory describes the relationships between organizations, internal and external environments, and also describes how these relationships affect business activities. Stakeholders are people or groups who can influence or be influenced by an organization. Stakeholders can come from inside or outside the business. Examples include customers, employees, shareholders, suppliers, non-profit groups, the government, and the local community, including many (Slaba, 2017). In general, stakeholder theory includes a collection of policies and practices related to stakeholders, values, compliance with legal provisions, community and environmental awards, and the commitment of the business community to contribute to sustainable development.

Institutional Theory

The basic principle of institutional theory is that organizational survival requires adjusting to social norms of acceptable behavior in the internal and external sphere (Scott, 2004). Scott further explained that institutional theory can be applied in complex and dynamic situations. Specific practices and procedures are shown by organizations as symbols for external groups to show that organizations act in a very rational, stable and predictable way. This activity occurs to legitimize the organization and to get support from external parties. Institutional theory has the power to control and direct interactions between individuals and organizations, through formal rules such as laws, or laws, as well as non-formal rules such as culture, traditions and norms where its implementation will depend on existing social conditions and are related to practices, assumptions, value, the belief that individuals organize in time and space. and presents it as a meaning in social reality which is the link between individual agents and the practices and structure of institutional rules. Institutional logic makes the actors in the organization behave using rational considerations.

Research Framework

The framework of thought proposed in this study illustrates three components in green intellectual capital among others (green human capital, green structural capital and green relational capital) influencing on the sustained competitive advantages through mediating environmental consciousness.

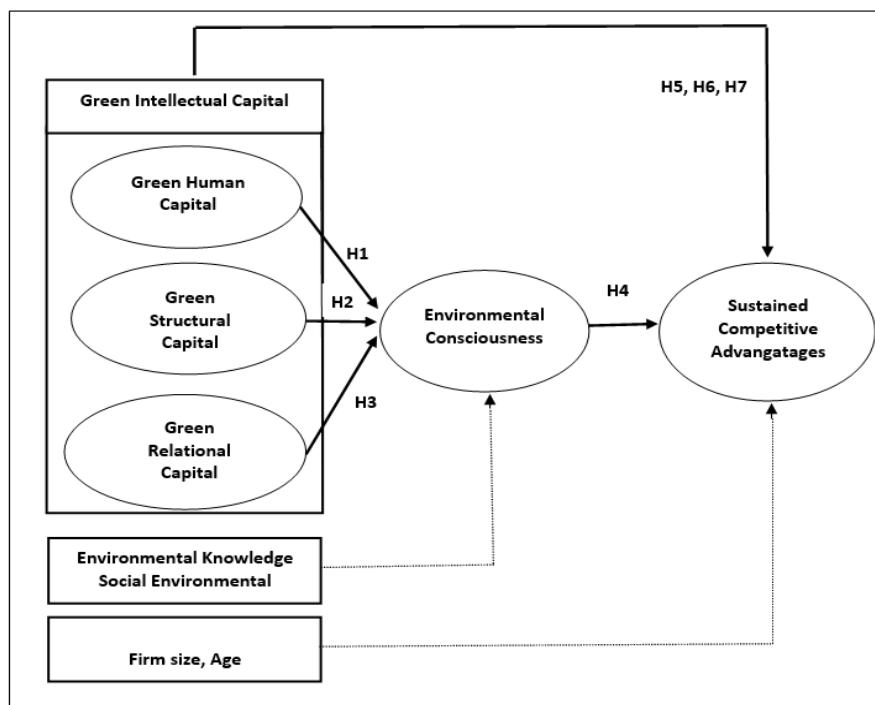


Figure 1: Research Framework

Research Hypothesis

Green human capital and Environmental Consciousness

Green human capital specifically presents individual knowledge that is embedded in the company's capabilities collectively to provide the best solutions from employees (Bontis, 2004), then green human capital is expressed as the ability of employees to include the amount of worker skills, experience, capabilities and knowledge that is implemented to achieve company goals (Murthy, 2011). Thus, green human capital which is a stock of knowledge, skills, abilities, experience, attitudes, policies, creativity, and commitment that can help the company's to achieve sustained competitive advantages through environmental consciousness. Based on the description above, the first hypothesis proposed is as follows:

H1: *Green human capital has a positive influence on environmental consciousness.*

Green Structural Capital and Environmental Consciousness

Green structural capital is a company resource that includes software, hardware, data base, organizational structure, patents, trademarks and all the capabilities of the company that support employee productivity (Bontis, 2001). Whereas CIMA (2005) defines green structural capital as knowledge within the company, including organizational routines, procedures, systems, culture and data bases such as documentation services, the existence of knowledge centers, the use of information technology, and organizational learning capacities. The results of research conducted by (Chen, 2011) stipulate that with innovative environmental technology, the production process and productivity carried out by the company will be able to reduce waste and pollution. The results of this study have similarities with research conducted by (Guglani, 2014) that, environmental consciousness can increase the ability of innovative technology companies. It was further revealed that environmental consciousness was positively related to green structural capital. Based on the description above, the proposed second hypothesis was as follows:

H2: *Green structural capital has a positive influence on environmental consciousness.*

Green Relational Capital and Environmental Consciousness

Green relational capital is all resources related to the company's relationship with stakeholders such as customers, suppliers, investors, creditors in their perception of the company, for example: image, customer loyalty, customer satisfaction, supplier relationships, negotiating capacity with financial entities and environmental activities (Moon and Kym, 2006). Meanwhile, according to (Bontis, 2001) the main theme of green relational capital is the marketing channel and customer relations. It was further revealed that green relational capital also presented the potential of the organization that was obtained from past intangible assets. Intangible assets include knowledge that is embedded in customers, suppliers, governments, or related industry associations, so that the essence of green relational capital is embedded knowledge related to the company's external relations. Thus, the proposed third hypothesis is as follows:

H3: Green relational capital has a positive influence on environmental consciousness.

Environmental Consciousness and Sustained Competitive Advantages

Corporate environmental awareness is beliefs, ethics, values, and norms about environmental policy issues in companies (Ahmed et al., 2008). Further explained that concerns about global environmental awareness, companies must invest resources to achieve sustainable development goals, environmental awareness to formulate corporate values and expectations of ethical behavior (Guglani, 2014). Environmentally friendly companies are new ideas, new ethics, and new opportunities (Chen, 2011), further explained that social and environmental responsibility has become an inevitable obligation for companies (Smith, 2007) suggests, one of the reasons that responsibility social and environment providing sustainable competitive advantages is that companies need a culture that is able to execute a combination of company activities and provide opportunities for employees to know the forces that shape the future of the industry. Based on the description above, the fourth hypothesis is proposed as follows:

H4: Environmental consciousness has a positive influence on sustained competitive advantages.

Green Human Capital and Sustained Competitive Advantages

Companies that are actively involved in environmental consciousness and green innovation can not only minimize production waste and increase productivity, but can also increase prices that are relatively high for green products, enhance the company's image, and thus can have a positive impact on the sustained competitive advantages (Huang and Jiuan, 2014; Chen et al., 2006). Further disclosure that, employees who have knowledge, skills, abilities, experience, attitudes, policies, creativity, and high commitment can help companies maintain a sustained competitive advantage. Based on the description above, the fifth hypothesis proposed in this study is:

H5: Green human capital has a positive influence on sustained competitive advantages.

Green Structural Capital and Sustained Competitive Advantage

The research of Jean-Pierre and Hugo, (2013) revealed that companies have a lot of attention and invest a lot in environmental consciousness and green innovation will not only avoid difficulties or threats about environmental protection, but can also improve company image, improve production efficiency, develop new market environment, and thus enhance the sustained competitive advantages. Therefore, green structural capital consists of: organizational capability, organizational commitment, management system knowledge, reward systems, information technology systems, databases, managerial institutions, operations processes, managerial philosophy, organizational culture, company logos, patents, copy rights, and trademarks, etc. whose use involves an association with the management environment or green innovation within a company can help to create a sustained competitive advantages. Based on the description above, the sixth hypothesis in this study is as follows:

H6: Green structural capital has a positive influence on sustained competitive advantages

Green Relational Capital and Sustained Competitive Advantage

Several previous studies have suggested that Relational Capital has a positive effect on the company's competitive advantage (Pedrini, 2007; Bontis, 2004). International regulations that emphasize the concern of industrial companies on environmental consciousness, not only minimize production waste, although the costs incurred are quite large, but the company can increase productivity through green products, enhance the company's image so that it can have a positive impact on the company's competitive advantage (Unine and Jean -Pierre, 2013; Chen, 2006). It was further explained that the exploration of green relational capital through environmental consciousness that includes interactive relationships with customers, suppliers and partners about the company's environmental consciousness can help companies in terms of a sustained competitive advantages. Based on the description above, the seventh hypothesis in this study is:

H7: Green relational capital has a positive influence on sustained competitive advantages.

METHODOLOGY

Research Design

This research is a quantitative study in the form of a causal study, which is designed to explain how a variable can affect other variables. According to Sekaran and Bougie (2013), causal research is a scientific approach to testing whether one variable causes a change in another variable. Causal research aims to describe one or more factors that cause problems, so it can be stated that the independent variable (X) is the cause of the dependent variable (Y).

Population and Sample

The population in this study is industrial companies that have the risk of environmental impacts that can pollute the composition of water and air. The industrial companies listed on the Indonesia Stock Exchange until December 2017 numbered 316 companies (www.bei.go.id). Research respondents are managers who work at the company and have had a minimum service period of 3 years, including operational managers, financial managers, marketing managers, production managers, IT managers, and HR managers. With a population of 316 industrial companies, the determination of the number of samples using the formula (Lemeshow, 2009) is as follows:

$$\begin{aligned} n &= \frac{(316) \cdot (1,96)^2 0,5(1-0,5)}{(316-1) \cdot (0,1)^2 + (1,96)^2 0,5(1-0,5)} \\ &= \frac{303,4}{3,16 + 0,961} \\ &= 72 \end{aligned}$$

Out of 72 companies classified as high profile, covering 22 coal sub-sectors, 7 oil and gas sub-sectors, 6 cement sub-sectors and 9 pulp and paper sub-sectors. The various industry sectors in the textile and garment sub-sector were 18 companies and the consumer goods sector in the pharmaceutical sub-sector were 10 companies. This study uses data analysis methods namely Structural Equation Modeling (SEM) with the help of linear structural relationships (LISREL) software Version 8.80. LISREL software version 8.80 is used to test the quality of data on each variable, as well as to test the research hypothesis. The reason why data analysis uses LISREL software is because LISREL is a program that can estimate various SEM problems.

FINDING AND DISCUSSIONS

Variable Measurement Model

The measurement of construct validity is carried out using the Confirmatory Factor Analysis (CFA) procedure. CFA is one of the two main approaches in factor analysis, one of which is the Explanatory Factor Analysis (EFA) approach. The use of CFA is to test how well the measured variable represents a small number of constructs. In this study, confirmatory factor analysis uses Structural Equation Modeling (SEM) with the help of the Liner Structural Relationships (LISREL) version 8.80. The results of testing the full model of the influence of green intellectual capital consisting of exogenous variables green human capital, green structural capital and green relational capital on endogenous variables sustained competitive advantages through mediation of environmental consciousness can be seen in figure 2.

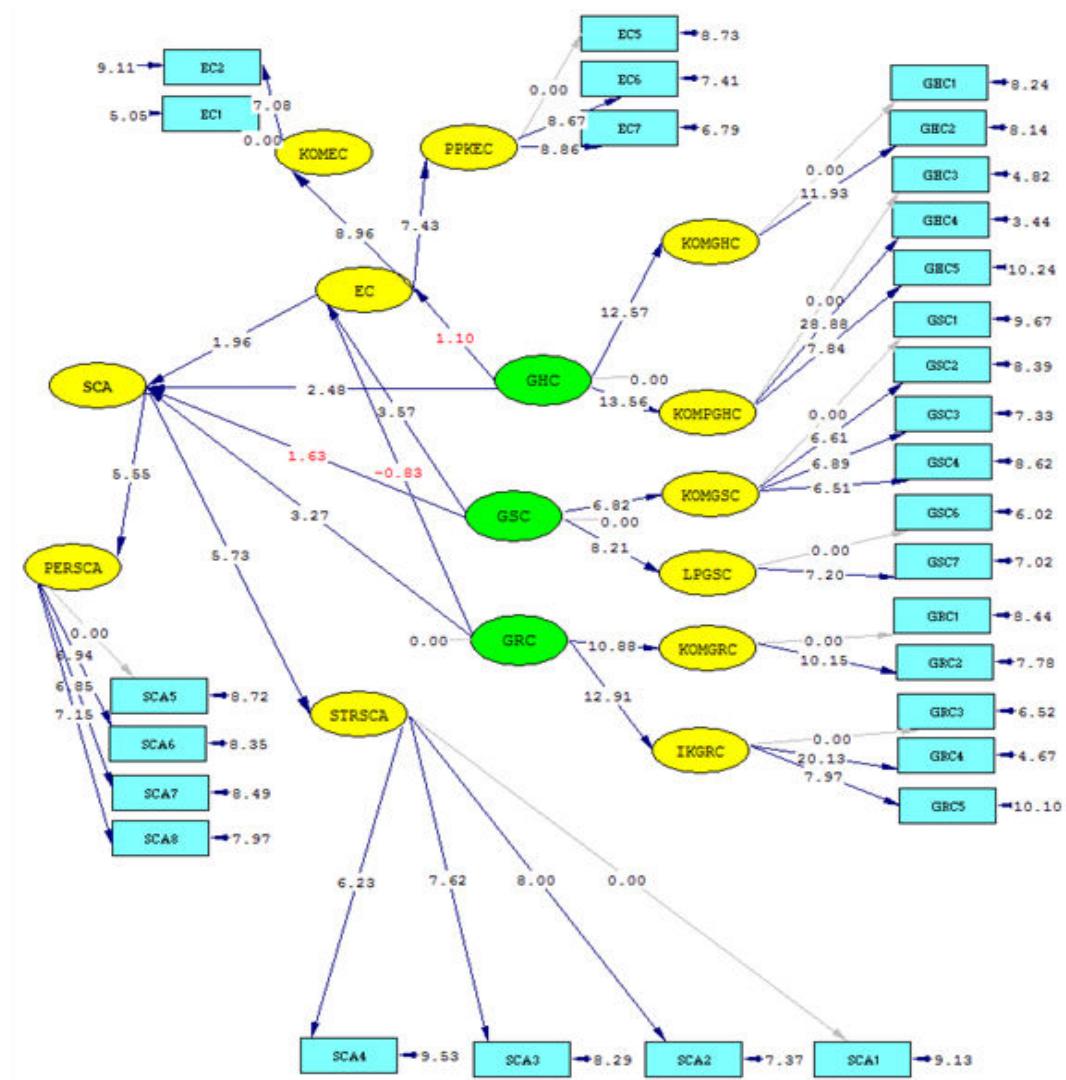


Figure 2: Full Model Measurement (Inner Model)

Table 1: Direct effect of independent variable to dependent variable

Hypothesis		t count	t table	results
H ₁	<i>Green human capital has a positive effect to environmental consciousness</i>	1,10	1,96	Not significant
H ₂	<i>Green structural capital has a positive effect to environmental consciousness</i>	3,57	1,96	Significane
H ₃	<i>Green relational capital has a positive effect to environmental consciousness</i>	-0,83	1,96	Not significant
H ₄	<i>Environmental consciousness has a positive effect to sustained competitive advantages</i>	1,96	1,96	Significane

Based on table 1, the result examine direct effect shows, that the green structural capital has a positive effect to environmental consciousness, because t-count > t-table ($3,57 > 1,96$). While the variable of green human capital and green relational capital has not positive effect to environmental consciousness, because t-count < t-table ($1,10 < 1,96$) and ($-0,83 < 1,96$). Furthermore the variable of environmental consciousness has a positive effect to sustained competitive advantages, because t-count \geq t-table ($1,96 \geq 1,96$).

Table 2: Direct effect of independent variable to dependent variable

Hypothesis		t count	t table	Results
H ₅	<i>Green human capital has a positive effect to sustained competitive advantages</i>	2,48	1,96	Significane
H ₆	<i>Green structural capital has a positive effect to sustained competitive advantages</i>	1,63	1,96	Not Significant
H ₇	<i>Green relational capital has a positive effect to sustained competitive advantages</i>	3,27	1,96	Significane

Based on table 2, the result examine direct effect shows, that the green human capital has a positive effect to sustained competitive advantages, because t-count > t-table ($2,48 > 1,96$). While the variable of green structural capital has not positive effect to sustained competitive advantages, because t-count < t-table ($1,63 < 1,96$). Further the variable of green relational capital has a positive effect to sustained competitive advantages, because t-count > t-table ($3,27 > 1,96$).

Table 3: Indirect effect of independent variable to dependent variable By mediation of Environmental Consciousness

Indirect effect by Mediation	t count	t table	Results
<i>Green human capital has a positive effect to sustained competitive advantages by mediation of environmental consciousness</i>	1,42	1,96	Not significant
<i>Green structural capital has a positive effect to sustained competitive advantages by mediation of environmental consciousness</i>	3,51	1,96	Significane
<i>Green relational capital has a positive effect to sustained competitive advantages by mediation of environmental consciousness</i>	-1,07	1,96	Not significant

Based on table 3, the result examine indirect effect between variable green structural capital to sustained competitive advantages by intervening variable of environmental consciousness, shows that variable green structural capital has a significant, because t-count > t-table ($3,51 > 1,96$). While the green human capital and green relational capital has not significant to sustained competitive advantages by intervening variable of environmental consciousness, because t-count < t-table ($1,42 < 1,96$) and ($-1,07 < 1,96$).

Sensitivity measurement

The examines of sensitivity model is carried out by distributing research questionnaires to managers in a low profile industrial environment with the aim of confirming the findings on the results of the research of 216 sample company managers. The following are the results of tests on low profile industry data totaling 100 respondents.

Table 4: Sensitivity Result
Direct effect of independent variable to dependent variable

Hypothesis		t count	t table	Results
H ₁	<i>Green human capital has a positive effect to environmental consciousness</i>	1,52	1,96	Not significant
H ₂	<i>Green structural capital has a positive effect to environmental consciousness</i>	3,69	1,96	Significane
H ₃	<i>Green relational capital has a positive effect to environmental consciousness</i>	-0,85	1,96	Not significant
H ₅	<i>Green human capital has a positive effect to sustained competitive advantages</i>	2,42	1,96	Significane
H ₆	<i>Green structural capital has a positive effect to sustained competitive advantages</i>	2,00	1,96	Significane
H ₇	<i>Green relational capital has a positive effect to sustained competitive advantages</i>	3,66	1,96	Significane
H ₄	<i>Environmental consciousness has a positive effect to sustained competitive advantages</i>	2,69	1,96	Significane

Based on table 4, the result examine direct effect independent variable to intervening variable shows that green structural capital has a positive effect to environmental consciousness, furthermore green human capital and green relation capital has not influence to environmental consciousness. Hereinafter three component of green intellectual capital among others green human capital, green structural capital and green relational capital has influences on the sustained competitive advantages, then environmental consciousness so has a positive effect to sustained competitive advantages.

CONCLUSION

The empirical study has several conclusions, which can be presented as follows:

Green human capital has no influence on environmental consciousness, it is because there are still many industry players in Indonesia who realize the importance of implementing environmentally friendly concepts in manufacturing activities. Green structural capital has an influence on environmental consciousness, because the application of environmental consciousness in the industry will have a positive impact on productivity, commitments related to environmental consciousness elements will make employees and stakeholders realize that the use of natural resources is more economical and supports environmentally friendly products. Green relational capital has no influence on environmental consciousness, related to the demand for environmentally friendly products not yet evenly distributed in various market segments, therefore industry players are required to communicate environmentally friendly products. Environmental consciousness has an influence to sustained competitive advantages, it is caused by environmental consciousness is an important factor that is a

concern for the manufacturing industry, industries that are active in environmental treatment can not only minimize production waste, but can have an impact on the creation of green products.

Green human capital has a positive effect on sustained competitive advantages. It can be concluded that trained employees, timely services, competencies, reliable teamwork, and support from company managers are key factors that must be attached to green human capital to carry out activities with capabilities and intellectuals, these resources can be maintained to maintain the sustained competitive advantages. Green structural capital does not affect sustained competitive advantages, it can be concluded that the emergence of consumer awareness trends and the existence of strict international regulations on environmental protection causes all components included in green structural capital are demanded to increase environmental consciousness. Green relational capital has a positive effect on sustained competitive advantages, it can be concluded that efforts to promote environmentally friendly products, customer satisfaction is the company's interactive relationship with customers, suppliers, network members and strategic partners.

Environmental consciousness does not mediate the effect of green human capital on sustained competitive advantages, it can be concluded that the low awareness of the environment is indicated by the low implementation of green human capital in the industrial sector in Indonesia, environmental consciousness mediates the effect of green structural capital on sustained competitive advantages, this can be concluded that investments made by companies in terms of environmental awareness not only aim to avoid legal issues concerning environmental protection, but further aim to improve the company's image. Environmental consciousness does not mediate the effect of green relational capital on sustained competitive advantages, it can be concluded that government regulations related to the environment include Law No.24 of 2007, Law No. 40 of 2007, Government Regulation of the Republic of Indonesia No.47 of 2012. This government regulation is still limited in its application to Limited Liability Companies relating to natural resources only.

Recommendations for Further Research

For future researchers, especially those discussing green intellectual capital and sustainable competitive advantage and environmental consciousness, the results of this study can be used as a reference for further research to develop statement items in respondents' questionnaires that are more comprehensive, especially those concerning the three components of green intellectual capital among others green human capital, green structure capital and green relational capital. So that, further research can also use more samples and respondents to prove the influence of the three components of green intellectual capital on sustained competitive advantages. In addition to using primary data, researchers can then use secondary data as supporting.

REFERENCES

- Ahmed, N.U.; Montagno, R.V.; and Firenze, R.J. (2008). Organizational performance and environmental consciousness: an empirical study. *Management Decision*, Vol. 36. No. 2, pp 57-62
- Alhadid, Anas Y. & Rumman Abu As'ad, (2014). "The Impact of Green Innovation on Organizational Performance, Environmental Management Behavior as a Moderate Variable; An Analytical Study on Nuqul Group in Jordan." *International Journal of Business and Management*; Vol. 9 No. 7; 2014 ISSN 1833-3850- ISSN 1833-8119 Published by Canadian Center of Science and Education, 2014;51-58.

Artie, W. Ng. (2006). Reporting intellectual capital flow in technology-based companies, Case studies of Canadian wireless technology companies. *Journal of intellectual capital*. Vol. 7, No. 4, pp 492-510. Emerald Group Publishing Limited 1469-1930

Barney, Jay B The Ohio State University, (2001) Is the Resources Based-View a Useful Perspective for Strategic Management Research, *Journal Academy of Management Review*, Vol. 28 pp 34-45

Bintang, Ceicilia, H.Y; dan Santi .C.J. (2011). Intellectual capital dan ukuran fundamental kinerja keuangan perusahaan. *Jurnal akuntansi dan keuangan*, Vol. 13. No. 2, pp 57-66

Bontis, N. (2004), Intellectual Capital and Business Performance in Malaysian Industries, *Journal of Intellectual Capital* 1(1) pp 215-226

Bozollan, S.; O'Regan, P.; and Ricerri, F. (2006), Intellectual Capital Disclosure (ICD): A Comparision of Italy and the UK. *Journal of Human Resource Costing and Accounting*, 10(2), 92 – 113

Buyssse, K; and Verbeke, A. (2003), "Proactive environmental strategies: a stakeholder management perspective", *Strategic Management Journal*, Vol 24 No. 5, pp 453-70

Bruce, Clemens; and Lynn Bakstran. (2010). A framework of theoretical lenses and strategic purposes to describe relationships among firm environmental strategy, financial performance, and environmental performance. *Management Research Review*. Vol. 33, No. 4, pp 393-405. Emerald Group Publishing Limited. 2040-8269.

Carter, Timothy; and Laurie Fowler. (2008). Establishing green roof infrastructure through environmental policy instruments. *Springer Science + Business Media*. The online version of this article environmental management 151-164

Chang, CH.; And Chen YS. (2012). The Determinants of green intellectual capital. *Journal of Emerald Management Decision*, Vol. 50 No.1, pp 74-94

Chahal, Hardeep; Ramesh Dangwal; and Swati Raina.(2014). Antecedents and consequences of strategic green marketing orientation. *Journal of Global Responsibility*. Vol. 5, No. 2, pp 338-362. Emerald Group Publishing Limited. 2041-2568

Chen, M.C., S.J.; and Cheng, Y. Hwang. (2005). An Empirical Investigation of The Relationship Between Intellectual Capital and Firm's Market Value and Financial Performance. *Journal of Intellectual Capital*, Vol. 6 N0. 2. pp. 159-176.

Chen, YS. (2008). The Positive Effect of Green Intellectual Capital on Competitive Advantages of Firms. *Journal of Business Ethics*, Vol. 77 No. 3, pp 271-286

Chen, YS. Lai, SB.; And Wen, CT. (2006). The Influence of Green Innovation Performance on corporate advantage in Taiwan. *Journal of Business Ethics*, Vol. 67 No. 4, pp 331-9

Chien, MK.; and Shih, I.H. (2007). Relationship between management practice and organization performance under European Union directives such as RoHS: a case-study of the electrical and electronic industry in Taiwan. *African Journal of Environmental Science and Technology*, Vol. 1 No. 3, pp 37-48

Doloi, Hemanta. (2012). Assessing stakeholders' influence on social performance of infrastructure projects. *Emerald Group Publishing Limited*. Vol. 30, No. 11, pp 531-550.

D'Sauza, C. Taghian, M. Lamb, P & Peretiatkos, R. (2008). "Green Product and Corporate Strategy an Empirical Investigation, *Society and Business Review*, Vol. 4, No. 1. Pp 94-102

Ehnert, I. (2009), Sustainable Human Resources Management: A Conceptual and Exploratory Analysis from a Paradox Perspective, *Springer, Heidelberg*.

Elshaer. A, Ibrahim; and Marcjanna M. Augustyn. (2014). Direct effects of quality management on competitive advantage. *International Journal of Quality & Reliability Management*. Vol. 33, No. 9, pp 1286-1310. Emerald Group Publishing Limited. 0265.671X

Ghozali, (2012), Structure Equation Modeling, Teori, konsep, dan aplikasi dengan program *LISREL 8.80*. Badan penerbit Universitas Diponogoro.

Hafeez, K.; Zhang, Y.B.; and Malak, N. (2002). Core competence for sustainable competitive advantage: a structured methodology for identifying core competence. *IEEE Transaction on Engineering Management*, Vol. 49 No. 1. Pp 28-35

Huang, CL.; and Kung F.H, (2011). Environmental consciousness and Intellectual capital management: Evidence from Taiwan's Manufacturing Industry. *Journal of Emerald Management Decision*, Vol. 49 No. 9, pp 1405-1425

Huang, CL.; and Kung F.H, (2010). Drivers of environmental disclosusre and stakeholder expectation evidence from Taiwan. *Journal of Business ethics*, Vol. 96 No. 3, pp 435-51

Jackson, Susan E & Janghoon Seo (2011) "The Greening of Strategic HRM Scholarship." *Organization Management Journal*. 278-290 & 210 Eastern Academy of Management All Rights Reserve 1541-6518.

Jonna, Kapyla; Paula Kujansivu; and Antti Lonnqvist. (2012). National intellectual capital performance: A strategic approach. *Journal of Intellectual Capital*. Vol. 13, No. 3, pp 343-362. Emerald Group Publishing Limited. 1469-1930.

Jonna, Kapyla. (2012). Towards a critical societal knowledge management. *Journal of intellectual capital*. Vol. 13, No. 3, pp 288-304. Emerald Group Publishing Limited 1469-1930

Kamukama, N., Ahiauzu, A.,and Ntayi, J.M. 2011. Competitive Advantage: Mediator of Intellectual Capital and Performance. *Journal of Intellectual Capital* 12(1), 152 – 164

Kaplan, R.S. and Norton, D.P. (2004), *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*, Harvard Business School Press, Boston, MA.

Knott, Anne Marie; David J. Bryce; and Hart E. Posen. (2003). On the Strategic Accumulation of Intangible Assets. *Organization Science*. Vol. 14, No. 2, pp 192-207.

Lev, Baruch.; and Stefano Zambon (2001). Intangibles & Intellectual Capital: Accounting & Managing Issues for The new Economy. *European Accounting Review-Call for Papers*, Vol.9, Issueno.4, <http://www.rutgers.edu/accounting/raw/aaa/market/monograph33.htm>

Liao, P.C.; Ann Ling-Ching Chan; and Jia-Lang Seng. (2013). Intellectual Capital disclosure and accounting standards. *Industrial Management & Data Systems*. Vol. 113, No. 8, pp 1189-1205. Emerald Group Publishing Limited. 0263-5577

Mandip, Gill. (2012). Green HRM: People Management Commitment. *Research Journal of Recent Science*, Vol. 1 (ISC-2011), 224-252 (2012), ISSN 2277-2502, 2012: 244-252

Margaretha, F., Rahman, A.,2006. Analisis pengaruh intellectual capital terhadap market value dan financial performance perusahaan dengan metode value added intellectual coefficient. *Jurnal Bisnis dan Akuntansi* 8(2), 199 – 217

Mavis, Yi-Ching Chen; Yung Shui Wang; and Vicky Sun. (2012). Intellectual capital and organizational commitment, Evidence from cultural creative industries in taiwan. *Personnel Review*. Vol. 41. No. 3, pp 321-339. Emerald Group Publishing Limited.

Molina, Azorin, J.F., Claver-Cortes, E. Lopes-Gamero, M.D. and Tari, J.J. (2009), "Green management and financial performance a literature review", *Management Decision*, Vol. 47, No. 7, pp 1080-100

Murthy, Vijaya; and Jan Mouritsen. (2011). The performance of intellectual capital, mobilizing relationships between intellectual and financial capital in a bank. *Accounting, Auditing & Accountability Journal*. Vol. 24, No. 5, pp 622-646. Emerald Group Publishing Limited 0951-3674

Naffziger, D.W.; Ahmed, N.U.; and Montagno, R.V. (2003). Perceptions of environmental consciousness in US small business: an empirical study. *SAM Advanced Management Journal*, Vol. 68, No. 2, pp 23-32

Nielsen, Christian; and Hendrik Dane-Nielsen. (2010). The emergent properties of intellectual capital: a conceptual offering. *Journal of Human Costing & Accounting*. Vol.14, No. 1. pp 6-27. Emerald Group Publishing Limited. 1401.338X

Nixon, Kamukama. (2013). Intellectual capital: company's invisible source of competitive advantage. *Competitiveness Review. An International Business Journal*. Vol. 23. No. 3, pp 260-283. Emerald Group Publishing Limited. 1059-5422

Pedrini, Matteo. (2007). Human capital convergences in intellectual capital and sustainability reports. *Journal of Intellectual Capital*. Vol. 8, No. 2, pp 346-366. Emerald Group Publishing Limited. 1469-1930

Petty, P.; and J. Guthrie. (2000). Intellectual Capital Literature Review: Measurement, Reporting and Management. *Journal of Intellectual Capital*, Vol. 1 No. 2. pp. 155-75.

Pietro De Giovanni, (2014). "Environmental Management an Economically Sustainable Business" *Journal of Environmental Management*. Vol. 144. Nov 2014 pp 73-82

Pulic, A. (2000). VAICTM – an Accounting Tool for IC Management". www.measuring-ip.at/Papers/ham99txt.htm. Diakses 5 Juli 2013

Porter, M.E.; and Kramer, M.K. (2006). Strategy and society; The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, Vol. 84 No. 12, pp 78-92

Prasad, Suresh; Dinesh Khanduja; and Surrender K. Sharma. (2016). An empirical study on applicability of lean and green practices in the foundry industry. *Journal of Manufacturing Technology Management*. Vol. 27, No. 3, pp 408-426. Emerald Group Publishing Limited 1741-038X

Prescott, Michael E. (2016). Big data: Innovation and competitive advantage in an information media analytics company. *Journal of Innovation Management*. JIM 4, 1 (92-113) ISSN 2183-0606

Raineri, Nicolas; and Pascal Paille. (2016). Linking corporate policy and supervisory support with environmental citizenship behaviors: the role of employee environmental beliefs and commitment. *Springer Science + Business Media Dordrecht*. J Bus Ethics. 137: 129-148

Rotherberg, S (2003). Knowledge content and worker participation in environmental management at NUMMI. *Journal of Management Studies*, Vol. 40 No. 2, pp 1777-1796

Sandra, M.; Sanchez Canizares; Miguel Angel; Ayuso Munoz; and Tomas Lopez Gusman. (2007). Organizational culture and intellectual capital: a new model. *Journal of Intellectual Capital*. Vol. 8, No. 3, pp 409-430. Emerald Group Publishing Limited

Sekaran, Uma. And Roger Bougie (2013) , *Research Methods for Business*. Sixth edition, John Wiley & Sons.

Silva, Manuela; Luiz Mountinho; and Arnaldo Coelho. (2007). Market orientation and performance: modelling a neural network. *European Journal of Marketing*. Vol. 43, No. 3/4, pp 421-437. Emerald Group Publishing Limited. 0309-0566

Singh, Ramendra; Madhupa Bakshi; and Prashant Mishra. (2015). Corporate social responsibility: Linking bottom of the pyramid to market development. *Springer Science + Business Media Dordrecht*. J Bus Ethics 131:361-373

Scott, R. W. (2004). Reflections on Half a Century of Organistaional Psychology. Annual Review of Sociolgy, 30, 1–21.

Shaikh, MW. (2010). “Green HRM, A Requirement of 21st Century.” *National Monthly Refereed Journal of Research in Commerce & Management*, Vol. No.1, Issue No.10 ISSN 2277-1166 pp 122-127.

Shi, S.J.; and Kane, J.M. (2005). Growing a green marketing strategy. *Business and Society Review*, Vol. 93. No. 1, pp 51-63

Shiu, H. 2006. The application of the value added intellectual capital coefficient to measure corporate performance: Evidence from technological firms. *International Journal of Management*, 23(2), 356 -365

Schwartz, M.S.; and Carroll, A.B. (2003). Corporation social responsibility a three-domain approach. *Business Ethics Quarterly*, Vol. 13 No. 4, pp 503-30

Sharma, S; and Henriques I. (2005). Stakeholder influence on sustainability practice in the Canadian forest products industry”, *Strategic management Journal*, Vol. 26 No. 2, pp 159-80

Skinner, D.J. (2008). Accounting for Intangibles: A Critical Review of Policy Recommendations. *Accounting and Business Research*, 38(3), 191 -204

Smith, A.D. (2007). Making the case for the competitive advantage of corporate social responsibility. *Business Strategy Series*, Vol. 8 No. 3, pp 186-95

Sveiby, K.E. (2001). Method for Measuring Intangible Assets. www.sveiby.com/articles. Diakses 6 Agustus 2013

Val, Clulow; Carol Barry; and Julie Gerstman. (2007). The Resource-based view and value: the customer-based view of the firm. *Journal of European Industrial Training*. Vol. 31, No. 1, pp 19-35. Emerald Group Publishing Limited. 0309-0590

Wan-Chen Wang; Maria Manuela Santos Silva; and Luiz Mountinho. (2016). Modelling Consumer responses to advertising slogans through artificial neural networks. *International Journal of Business and Economics*. Vol. 15, No. 2, pp 89-116

Wirtenberg, J.; Harmon, J.; and Fairfield , K.D. (2007). HR’s role in building a sustainable enterprise: insights from some of world’s best companies. *Human Resource Planning*, Vol. 30 No. 1, pp 10-20

Xiaohong, Chen; Han Hong; and Denis Nekipelow. (2011). Nonlinear models of measurement errors. *Journal of economic literature* 49:4 pp 901-937

Yang, C.H, (2004). European environmental-protection directive cast challenge to Taiwan’s electronics industry. *Sustainable Industrial Development Bimonthly*, Vol. 16 pp 10-27.

Yi-Chun, Huang; Ying-Jiuan Wong; and Min-Li Yang. (2014). Proactive environmental management and performance by a controlling family. *Management Research Review*. Vol. 37, No. 3, pp 210-240. Emerald Group Publishing Limited 2040.8269

Yu-Hsien Lin; Yu Shan Chen. (2017). Determinants of green competitive advantage; the roles of green knowledge sharing, green dynamic capabilities, and green service innovation. *Springer Science + Business Media Dordrecht*. Qual Quant 51: 1663-1685.

Yu-Shan, Chen. (2011). Green Organizational identity: sources and consequence. *Journal of Management Decision*. Vol. 49, No.3, pp 384-404. Emerald Group Publishing Limited 0025-1747

Yu-Shan, Chen; Ching-Hsun Chang. (2011). Enhance environmental commitments and green intangible assets toward green competitive advantages: an analysis of structural equation modelling (SEM). *Springer Science + Business Media*. Qual Quant. 47: 529-543