ANALYSIS OF ENVIRONMENTAL PERFORMANCE, ENERGY CONSERVATION, AND EMISSION REDUCTION IN THE FINANCIAL PROSPECTIVE

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Abstract.
This article discusses the effect of environmental disclosure to financial performance (quantitative case study of company listed in Indonesia Stock Exchange in the year 2008). Empirical result of this study furthermore is being extended by qualitative research for exploring more deeply about implementation of green gas houses in Indonesia trough energy audit.

The quantitative research in this study is based on cross-sectional empirical applied research. Through a purposive judgment sampling technique, 31 companies listed in Indonesia Stock Exchange which also participated in *PROPER* (environmental program held by Indonesian Ministry of Environment) were included in this study. The first hypothesis is asserted as there is significant effect between environmental performance and financial performance. The second hypothesis is asserted as there is significant effect between environmental disclosure and financial performance. The method of data analysis is multiple linear regressions. The results for both first and second hypotheses indicated that environmental performance and disclosure were significantly affecting financial performance.

Further qualitative study in this article extends empirical result of above study. This study discusses about energy conservation and emission reduction in 16 steel industries and 5 pulp and paper industries. Based on result of audit energy that is converted to economical measurement, this study came up with the conclusion that many industries are still extravagant in consuming energy due to inefficient of old equipment process and lack of energy flow Metter measurement. By showing the comparison results of energy consumption in old and new equipment process that are converted to economical measurement, this study recommends to use new machinery for industrial life cycle to support green gas houses program.

Keywords: *environmental, energy conversion, emission reduction, financial performance*

Indonesia is recognized as one of the countries rich of fossil fuel such as natural oil and gas which have become the primary energy source to fulfill domestic need. As a matter of fact, continuous use with consumptive, uncontrolled and non-environment friendly model has caused rapid depletion of petroleum reserves. Many experts have predicted that Indonesia will, within 15-20 years to come, suffer energy crisis.

With annual production rate, respectively for natural oil and gas, of 500 million barrel, it is predicted that energy reserves will run out in 2022 for natural oil and 2065 for natural gas. The implication of energy crisis will bear adverse impact on all living sectors mainly economy and development. In addition, another vital issue related to oil energy and fossil fuel other than rapid depletion is the pollution of burning which may contaminate the air and atmosphere.

Amid the prediction and fact, energy issue has become crucial issue to be anticipated. For that purpose, it is necessary to ensure conservation for existing energy sources while diversifying energy as a mean to find and implement new energy alternative as substitute to oil and gas.

The studies of how to save or convert fossil fuel resources to other sources energy are absolutely needed in the current situation. The studies below describe the picture of current situation in Indonesia and other opportunities for the future.

The first study in this paper comes up with some questions: Is environmental performance significantly affects financial performance of companies listed in Indonesia Stock Exchange (IDX)? Is environmental disclosure significantly affects financial performance of companies listed in Indonesia Stock Exchange (IDX)?

Prior studies focused on the relationship between environmental performance and financial performances have been conflicting (some were significant and some were not). These studies came from developed countries, whereby environmental awareness is considered to be high. There were only a few researches in Indonesia focusing on the relationship between environmental performance and financial performance. There were still only a few researches that utilizing Global Reporting Initiative (GRI) Framework to measure environmental disclosure.

According to Clarkson, *et al*. (2007:7), the Global Reporting Initiative (GRI) Reporting Framework was first launched in 1997 as a joint initiative of Coalition for Environmentally Responsible Economies (CERES), a US Non-Government Organization (NGO) and the United Nations Environmental Program (UNEP). The main objective of the GRI Reporting Framework is to serve as a generally accepted framework for reporting on an organization's economic, environmental, and social performance to enhance the quality, rigor, and utility of sustainability reporting.

According to Global Reporting Initiative (2006:3), sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development. In other words, it is a broad term used to describe reporting on economic, environmental, and social impacts, such as triple bottom line, corporate responsibility reporting, and so on. The following figures the theory of Environmental Disclosure Incentive:

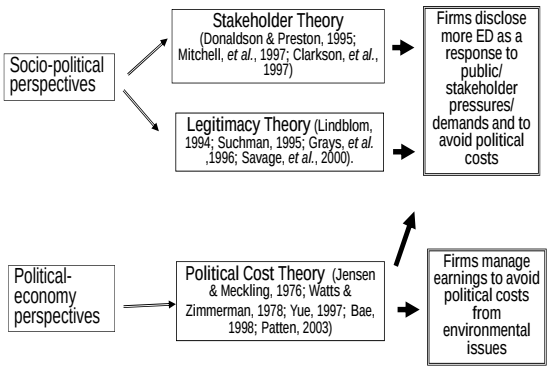

Figure 1: Environmental Disclosure Theoretical Perspectives

This study will be beneficial for several parties. Literature sources: to Social Accounting body of knowledge and to previous studies emphasized on related topics, and to modification of environmental disclosure index. Public Policy: to bring effectiveness of PROPER program (Indonesian Environmental Regulation) in improving the practice of environmental reporting in Indonesia. Practitioners: to enhance understanding that environmental issues affect company values, and to enhance understanding of the level and nature of environmental disclosure practices and standards in Indonesia.

There are some definitions of environmental performances. "*The total of a firm's impact on the natural environment, for example, its level of total resource consumption and emission*". (Wagner, 2001:5). And "*The measurement of the interaction between*

business and the environment". (Bennett and James, 1997 in Olsthoorn, 2000:6).

It is national-level public environmental reporting initiative and currently organized by Environmental Impact Management Agency (*Badan Pengelola Dampak Lingkungan*, BAPEDAL) of Indonesian Ministry of Environment. Main Objectives: to improve compliance and sustainable performance of corporate environmental management, and to promote an environmental management system through the use of incentives and disincentives as well as transparency. Scoring system: based on 5-color coded rating. Gold = 5, green = 4, blue = 3, red = 2, and black = 1.

Environmental Performance Measurement (*PROPER)* consists of: GOLD: the highest level and indicates the excellence of corporate factories' environment management procedures by going beyond required compliance level. GREEN: indicates that corporate factories' environment management procedures go beyond expected compliance level. BLUE: indicates compliance with national regulatory standards. RED: indicates poor performance level, in which efforts to control pollution were made but do not comply with the regulatory standards in absolute terms. BLACK: the lowest level and indicates no attempts made by companies to control pollution.

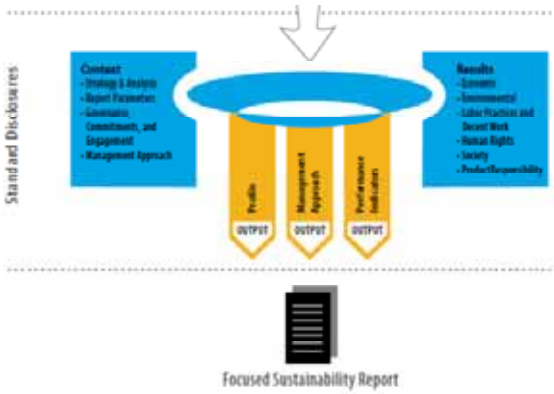

Figure 2: Global Reporting Initiative Framework

Sample on this research are the participants that fulfill the requirement such as Companies with significant impacts to the environment, or Companies with significant trading in export, or Companies publicly listed in domestic and/or foreign stock exchange. Based on that participants criteria, the company participant will be coming from the field of agriculture, mining, oil and gas, and manufacturing.

Environmental Disclosure is defined as *"Disclosing and supplying information in the corporate environmental report about certain companies' environmental-related activities and matters to the users. Corporate environmental report itself can*

be defined as publicly available, stand-alone reports issued voluntarily by companies on their environmental activities". (Brophy and Starkey, 1996 in Skillius and Wennberg, 1998:25)

Environmental Disclosure Measurement: Types includes Quantification of Environmental Disclosure: Quantifying the level of environmental disclosure in the annual report by number of documents/ words/ sentences/pages, and Content Analysis of Environmental Disclosure: Codifying qualitative and quantitative information into pre-defined categories to derive patterns in the presentation and reporting of information.

Environmental Disclosure Measurement under General Reporting Initiative (GRI) Framework mentions some definition of environmental disclosure. Main objective: to serve as a generally accepted framework for reporting on an organization's economic, environmental, and social performance to enhance the quality, rigor, and utility of sustainability reporting. Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development. GRI consists of: 10 Principles for defining report content (materiality, stakeholder inclusiveness, sustainability context, and completeness) and ensuring the quality of reported information (balance, clarity, accuracy, timeliness, comparability, and validity).

Following a study by Clarkson, *et al.* (2007), environmental disclosures are classified into: Hard disclosures, that measures information about corporate environmental management structure, credibility, investments, and performance. Soft disclosures measure information regarding statements about environmental commitments, profile and initiatives. In general: Hard disclosures require actual measures of environmental management, standards and performance, meanwhile Soft disclosures can be easily copied from other corporate reports.

Research Hypotheses are as follow:

First Null and Alternate Hypotheses:

$H_0 : \beta_1, \beta_3, \beta_4, \beta_5 \leq 0$

Environmental performance does not significantly affect financial performance that is controlled by unexpected earnings, growth opportunities, and profit margin.

$H_1 : \beta_1, \beta_3, \beta_4, \beta_5 > 0$

Environmental performance significantly affects financial performance that is controlled by unexpected earnings, growth opportunities, and profit margin.

Second Null and Alternate Hypotheses:

H_0 : $\beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7 \leq 0$

Environmental disclosure does not significantly affect financial performance that is controlled by unexpected earnings, growth opportunities, profit margin, environmental concern, and public visibility

H_2 : $\beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7 > 0$

Environmental disclosure significantly affects financial performance that is controlled by unexpected earnings, growth opportunities, profit margin, environmental concern, and public visibility.

Research Equation Models are as follow:

Model 1:

$$FINPERF = \alpha_0 + \beta_1 ENVPERF + \beta_3 UE + \beta_4 GROWTH + \beta_5 MARGIN + \varepsilon_1$$

FINPERF : Financial Performance, measured by Return on Assets

ENVPERF: Environmental Performance, measured by Indonesian environment (PROPER) rating

UE : Control Variable Unexpected Earnings, measured by annual change in Earnings per Share (EPS) scaled by beginning-of-period stock price

GROWTH: Control Variable Growth Opportunity, measured by Market-to-Book Value Ratio

MARGIN : Control Variable Profit Margin Ratio

Model 2:

$$FINPERF = \alpha_0 + \beta_2 ENVDISCL + \beta_3 UE + \beta_4 GROWTH + \beta_5 MARGIN + \beta_6 ENVCON + \beta_7 VISIBILITY + \varepsilon_1$$

FINPERF : Financial Performance, measured by Return on Assets

ENVDISCL : Environmental Disclosure, measured by index as developed by Clarkson, *et al.* (2007)

UE : Control Variable Unexpected Earnings, measured by annual change in Earnings per Share (EPS) scaled by

beginning-of-period stock price.

GROWTH : Control Variable Growth Opportunity, measured by Market-to-Book Value Ratio

MARGIN : Control Variable Profit Margin Ratio

ENVCON : Control Variable Environmental Concern, measured by the duration of sample companies implementing ISO 14001 certification

VISIBILITY: Control Variable Public Visibility, measured by either "0" (news related to environmental problems exist) or "1" (news related to environmental problems not exist).

Data sources in this research are derived from several sources as follow: Directory Listing of Indonesia Stock Exchange (IDX) Database, Official Web Site of Ministry of Environment, Official Corporate Web Site of each sample company, Official Web Site of WALHI (*Wahana Lingkungan Indonesia*).

Population are all companies listed in Indonesia Stock Exchange (IDX) during one fiscal year period, beginning from January 1st, 2008 to December 31st, 2008 (383 companies). Time horizon of research: cross-sectional (one-year data from January 1st, 2008 to December 31st, 2008). Sampling (purposive judgment) criterion: "the companies listed in IDX must be included in PROPER Evaluation Report for the Period of 2007-2008".

Samples in agriculture companies are PT Astra Agro Lestari Tbk, PT PP London Sumatera Tbk, PT SMART Tbk, PT Tunas Baru Lampung Tbk, PT Bakrie Sumatera Plantations Tbk.

Samples in mining, oil, and gas companies are PT Aneka Tambang (Persero) Tbk, PT International Nickel Indonesia Tbk, PT Medco Energy International Tbk, PT Pertambangan Batubara Bukit Asam (Persero) Tbk, PT Timah (Persero) Tbk.

Samples in manufacturing companies are PT Asahimas Flat Glass Tbk, PT Argo Pantes Tbk, PT Astra International Tbk, PT Citra Tubindo Tbk, PT Fajar Surya Wisesa Tbk, PT Indorama Synthetics Tbk, PT Indah Kiat Pulp & Paper Tbk, PT Indocement Tunggal Prakasa Tbk, PT Kimia Farma Tbk, PT

Kalbe Farma Tbk, PT Surabaya Agung Industry Tbk, PT Holcim Indonesia Tbk, PT Semen Gresik(Persero) Tbk, PT Suparma Tbk, PT Indo Acidatama Tbk, PT Sumalindo Lestari Jaya Tbk, PT Teijin Indonesia Fiber Corporation Tbk, PT Pabrik Kertas Tjiwi Kimia Tbk, PT Surya Toto Indonesia Tbk, PT Unggul Indah Cahaya Tbk, PT Unilever Tbk.

Data from all those industries are being adopted for figuring out result of this study. All data are processed statistically by using SPSS statistical program that requires normal distributed data (Leech, Nancy L., Karen C. Barrett, and George A. Morgan. "*SPSS for Intermediate Statistics: Use and Interpretation*". 2005). Processed data are presented in such table below.

		FINPERF	ENVPERF	ENVDISCL	UE	GROWTH	MARGIN	ENVCON	VISIBILITY
N	Valid	31	31	31	31	31	31	31	31
	Missing	0	0	0	0	0	0	0	0
Mean		.116871	3.19	14.94	.069981	6.351539	.109752	4.39	.35
Median		.076600	3.00	12.00	.018500	3.612900	.083500	4.00	.00
Std. Deviation		.1603355	.601	9.037	.1899682	13.2874977	.1391420	3.922	.486
Skewness		1.472	-.085	.757	1.423	4.732	.990	.328	n.a.
Std. Error of Skewness		.421	.421	.421	.421	.421	.421	.421	n.a.
Kurtosis		2.330	-.230	-.407	3.834	24.365	1.828	-1.291	n.a.
Std. Error of Kurtosis		.821	.821	.821	.821	.821	.821	.821	n.a.
Minimum		-.1204	2	4	-.3823	-1.6240	-.1714	0	0
Maximum		.6216	4	35	.6274	74.1678	.5043	12	1
Percentiles	25	.016700	n.a.	8.00	.002400	1.067900	.025700	.00	n.a.
	50	.076600	n.a.	12.00	.018500	3.612900	.083500	4.00	n.a.
	75	.143200	n.a.	21.00	.046300	5.940600	.184300	7.00	n.a.

Table 1: Descriptive Statistics

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.930[a]	.865	.844	.0633153

a. Predictors: (Constant), MARGIN, UE, ENVPERF, GROWTH

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.667	4	.167	41.595	.000[a]
	Residual	.104	26	.004		
	Total	.771	30			

a. Predictors: (Constant), MARGIN, UE, ENVPERF, GROWTH

b. Dependent Variable: FINPERF

Table 2: Result of regression analysis for Model 1

First multiple regression model was statistically ***significant***. Environmental Performance (ENVPERF), Unexpected Earnings (UE), Growth Opportunities (GROWTH), and Profit Margin (MARGIN) ***together significantly affected*** financial performance.

R = .930 implied very large effect size or very strong relationship between dependent variable Financial Performance (FINPERF), independent variable Environmental Performance (ENVPERF), and control variables Unexpected Earnings (UE), Growth Opportunity (GROWTH), and Profit Margin (MARGIN).

R^2 = .865 implied that 86.50% of dependent variable Financial Performance (FINPERF) was affected and can be explained by independent variable Environmental Performance (ENVPERF), and control variables Unexpected Earnings (UE), Growth Opportunity (GROWTH), and Profit Margin (MARGIN).

After studying statistically data collectively, then there was some statistical test for viewing each of control variable. Result of this analysis is in the following table.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	-.095	.063		-1.507	.144
	ENVPERF	.031	.020	.118	1.593	.123
	UE	-.005	.063	-.006	-.079	.937
	GROWTH	.003	.001	.278	3.018	.006
	MARGIN	.827	.106	.718	7.833	.000

a. Dependent Variable: FINPERF

Table 3: Coefficient Result of Model 1

Individually, only Growth Opportunity and Profit Margin significantly affected Return on Assets (Financial Performance).

Individually, Environmental Performance and Unexpected Earnings did not significantly affect Return on Assets (Financial Performance).

Second multiple regression model was statistically significant. Environmental Disclosure (ENVDISCL), Unexpected Earnings (UE), Growth Opportunity (GROWTH), Profit Margin (MARGIN), Environmental Concern (ENVCON), and Public Visibility (VISIBILITY) together significantly affected financial performance. Result of regression for Model 2 can be analyzed in Table 4 and 5.

R = .945 implied very large effect size or very strong relationship between dependent variable Financial Performance (FINPERF), independent variable Environmental Disclosure (ENVDISCL), and control variables Unexpected Earnings (UE), Growth Opportunity (GROWTH), Profit Margin (MARGIN), Environmental Concern (ENVCON), and Public Visibility (VISIBILITY).

R^2 = .892 implied that 89.20% of dependent variable Financial Performance (FINPERF) was affected and can be explained by independent variable Environmental Disclosure (ENVDISCL), and control variables Unexpected Earnings (UE), Growth Opportunity (GROWTH), Profit Margin (MARGIN), Environmental Concern (ENVCON), and Public Visibility (VISIBILITY).

Individually, only Growth Opportunity and Profit Margin significantly affected Return on Assets (Financial Performance). Individually, Environmental Disclosure, Unexpected Earnings, Environmental Concern, and Public Visibility did not significantly affect Return on Assets (Financial Performance).

Both first and second models showed that control variables Growth Opportunity (Market-to-Book Value ratio) and Profit Margin (Return on Sales) significantly affected dependent variable Financial Performance (Return on Assets). This finding was not surprising, since all 3 variables are the important measurements commonly utilized by investors to assess the fundamental and company's financial health.

In the first model, independent variable Environmental Performance (proxied by PROPER rating) did not significantly affect dependent variable Financial Performance (proxied by Return on Assets). This

indicated that more environmentally products or services that usually bring higher price are not in favor of most Indonesian consumers and therefore it is not likely to have effect on better financial performance.

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.688	6	.115	33.070	.000[a]
	Residual	.083	24	.003		
	Total	.771	30			

a. Predictors: (Constant), VISIBILITY, UE, GROWTH, ENVDISCL, ENVCON, MARGIN

b. Dependent Variable: FINPERF

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.945[a]	.892	.865	.0588850

a. Predictors: (Constant), VISIBILITY, UE, GROWTH, ENVDISCL, ENVCON, MARGIN

Table 4: Result of regression analysis for Model 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.049	.023		-2.165	.041
	ENVDISCL	.002	.002	.092	1.065	.297
	UE	-.032	.065	-.038	-.489	.630
	GROWTH	.003	.001	.273	3.163	.004
	MARGIN	.861	.108	.748	7.982	.000
	ENVCON	.006	.004	.145	1.556	.133
	VISIBILITY	.007	.024	.021	.289	.775

a. Dependent Variable: FINPERF

Table 3: Coefficient Result of Model 2

In the second model, independent variable Environmental Disclosure (GRI-based Environmental Disclosure Index) did not significantly affect dependent variable Financial Performance (Return on Assets). Again, this finding was not surprising since the GRI G3 Sustainability Reporting is a form of voluntary disclosure. Furthermore, by disclosing more non-financial information to public may be considered as risky action by the companies.

Learning from first study above, it was conducted second study to explore more detail regarding the environmental. Second study conducted by using qualitative research method through focus group discussion with participants in the chosen companies. All companies' management has been approached persuasively. This method is necessary to get better relationship with Participant Company for getting some companies data that may be considered as secret data.

This second study chooses steel industries and pulp and paper industries. Both of these industry fields are interested to be researched because of their high energy consumed in producing goods product. High

energy consumed may significantly contribute to pollute the environment.

Population of this study is all steel industries and pulp and paper industries in Indonesia. Sample of the population chosen are 16 steel industries and 5 pulp and paper industries in East and West Java Island of Indonesia. Sample pulp and paper industries are: PT Adi Prima Sura Printa, PT Pabrik Kertas Indonesia, PT Surya Zig-Zag, PT Pura Barutama, and PT Pura Nusa Persada. While sample of Steel Industries are categorized in the three methods of process. Melting and Rolling: PT Hanil Jaya Steel, PT Ispatindo, PT Gunawan Dianjaya Steel, PT Jaya Pari Steel, PT Maju Warna Steel, PT Inti General Jaya steel, PT Ria Sarana Putra Jaya, PT Abadi Jaya Manunggal. Casting and Machining: PT Yuan Tei Indonesia, PT Itokoh Ceperindo, Koperasi Insdustri Batur Jaya. Reheating and Rolling: PT Suraaya Wire, PT Jindal, PT Liang Ying Nuansa Indonesia, PT Bumisaka Steelindo, PT Surya Steel.

Data are obtained by collecting company's record during the last 5 years. All data collected were analyzed and averaged for each year. Final result of average data collected were cross checked by two up to 4 weeks energy observation in each of industry. Result of data collected and observed were being discussed through focus group discussion with each management of participant companies to get better alternative figure in saving energy. Results of this study are described in the following two tables of Potential of Emission Reduction and Economics Analysis of Equipment Investment.

No.	Name Of Company	Product	Sources of Energy	Emission Reduction (%)	Equipment Needed
	STEEL INDUSTRIES				
1	PT Bumisaka Steelindo	Steel Wire	Electricity	1	Energy Flow Metter Instalation, Usage Energy Instrument Control
2	PT Haneel Jaya Steel	Steel Bar	Electricity	5	Smelting Furnace Installation, Energy Flow Metter Installation
3	PT Inti General Jaya Steel	Steel Bar	Electricity	3	Smelting Furnace Installation, Energy Flow Metter Installation
4	PT Itokoh Ceperindo	Alloy Steel	Oil	5	Oil To Natural Gas Converter
5	PT Ispatindo	Steel Wire and Rod	Electricity and Oil	3	Oil To Natural Gas Converter
6	PT Jaya Pari Steel	Steel Plate	Electricity	3	Energy Flow Metter Instalation, Usage Energy Instrument Control
7	Cooperation Industri Batur Jaya	Break Pad	Electricity	5	Energy Flow Metter Instalation, Usage Energy Instrument Control
8	PT Liang Ying Nuansa Indonesia	Steel Wire	Electricity	5	Smelting Furnace Installation, Energy Flow Metter Installation
9	PT Madju Warna	Steel Equipment	Electricity	1	Energy Flow Metter Instalation, Usage Energy Instrument Control
10	PT Ria Sarana Putra Jaya	Concrete Steel	Electricity	5	Smelting Furnace Installation, Energy Flow Metter Installation
11	PT Surabaya Wire	Spike Steel	Electricity	1	Usage of Energy Instrument Control
12	PT Surya Steel	Concrete Steel	Electricity and Oil	6	Energy Flow Metter Instalation, Usage Energy Instrument Control, Oil to Natural Gas Converter
13	PT Yuan Teal Indonesia	Equipment	Oil	3	Energy Flow Metter Instalation, Usage Energy Instrument Control, Oil to Natural Gas Converter
14	PT Gunawan Dian Jaya Steel	Steel Plate	Electricity and Oil	5	Energy Flow Metter Instalation, Usage Energy Instrument Control, Oil to Natural Gas Converter
15	PT Abadi Jaya Manunggal	Concrete Steel	Electricity and Oil	4	Energy Flow Metter Instalation, Usage Energy Instrument Control, Oil to Natural Gas Converter
16	PT Jindal	Stainlesteel Plate	Electricity	5	Energy Flow Metter Instalation, Usage Energy Instrument Control
	PULP AND PAPER INDUSTRIES				
1	PT Adi Prima	News Print and Writing Printing Papers	Electricity and Oil	1	Gap Former Usage inWire, Oil to Natural Gas Converter
2	PT Pakerin	General Papers	Coal	5	Coal to Natural Gas Converter
3	PT Pura Baru Tama	General Papers	Electricity and Oil	5	Oil to Natural Gas Converter, Boiler Monitoring Instrument
4	PT Pura Nusapersada	General Papers	Coal	5	Coal to Natural Gas Converter, Gas Recovery
5	PT Surya Zig Zag	General Papers	Oil and Natural Gas	5	Oil to Natural Gas Converter, Boiler Monitoring Instrument

Table 6:

Potential of Emission Reduction and Necessary Equipment Needed

No.	Name Of Company	Yearly Saving Value (In Rupiah)	Total Investment (In Rupiah)	Predicted Interest Rate	Investment Term (Year)	Low Cost Term (Year)	No Cost Term (Year)
	STEEL INDUSTRIES						
1	PT Bumisaka Steelindo	64,053,000	300,000,000	13%	10	7	3
2	PT Haneel Jaya Steel	1,958,382,414	3,000,000,000	13%	10	2	8
3	PT Inti General Jaya Steel	1,918,000,000	3,500,000,000	13%	10	3	7
4	PT Itokoh Ceperindo	444,213,805	1,000,000,000	13%	10	4	6
5	PT Ispatindo	6,980,386,122	5,000,000,000	13%	10	0	10
6	PT Jaya Pari Steel	274,395,000	1,000,000,000	13%	10	6	4
7	Cooperation Industri Batur Jaya	197,645,000	1,000,000,000	13%	10	10	0
8	PT Liang Ying Nuansa Indonesia	184,000,000	1,000,000,000	13%	10	10	0
9	PT Madju Warna	214,701,472	310,000,000	14%	10	2	8
10	PT Ria Sarana Putra Jaya	954,800,000	3,580,000,000	14%	10	6	4
11	PT Surabaya Wire	18,788,000	100,000,000	13%	10	10	0
12	PT Surya Steel	59,750,000	300,000,000	13%	10	10	0
13	PT Yuan Teal Indonesia	193,800,000	1,000,000,000	13%	10	10	0
14	PT Gunawan Dian Jaya Steel	450,000,000	1,000,000,000	13%	10	3	7
15	PT Abadi Jaya Manunggal	525,000,000	1,000,000,000	13%	10	2	8
16	PT Jindal	475,000,000	1,000,000,000	13%	10	3	7
	PULP AND PAPER INDUSTRIES						
1	PT Adi Prima	255,096,600	1,000,000,000	13%	10	6	4
2	PT Pakerin	1,819,700,000	1,000,000,000	13%	10	0	10
3	PT Pura Baru Tama	4,275,000,000	1,800,000,000	13%	10	0	10
4	PT Pura Nusapersada	435,550,000	1,000,000,000	13%	10	3	7
5	PT Surya Zig Zag	4,276,060,000	4,100,000,000	13%	10	0	10

Table 7: Economics Analysis of Equipment Investment.

Conclusion

As the conclusion of this paper, for the first quantitative study in the company listed in Indonesian Stock Exchange shows that both environmental performance and environmental disclosure along with their variable control are significantly affected to Financial Performance. Since in both models (model 1 and Model 2) through individual statistical test for variable control shows only growth and profit margin that have had strong effect on financial performance, meaning other variables induvially are less affected of financial performance. This first study have encouraged to exploring more detail regarding the environment.

Learning from first study, there was conducted second study for discovering more information in how to find out better ways in respecting the environment. This second study was directed by using qualitative method research. Final result of this second study shows that there are some efforts to keep the environment clean and green. There are some necessary findings in this study that contributed to save the environment. Through this study can be determined that there are some possibilities to fix or convert current production systems to be in better systems. This study declares possibilities to reduce emission (CO2) and possibilities in cutting cost of energy in producing good products.

Finally both these studies come up with implication for several parties. For the companies, this research failed to contribute in providing a definite understanding that the companies concern to environmental issues will surely affects the company values. For the investors, this research succeeded in proving that information related to environmental issues are necessarily regarded as important matter of fact for the investors in Indonesia. For the regulators, this research convinced that the creation and legalization of relevant reporting standards for the needs of accounting authorized bodies as well as environmental supervision authorized bodies are necessary. For the other stakeholders, this research convinced that other stakeholders should raise and keep their awareness regarding to environmental issues, since they are at the disadvantaged side due to opportunity costs and externalities caused by companies.

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