THE INFLUENCE OF NON-FINANCIAL, FINANCIAL AND CORPORATE GOVERNANCE FACTORS ON THE PRACTICE OF GLOBAL REPORTING INITIALTIVE (GRI) ENVIRONMENTAL DISCLOSURE

อิทธิพลของปัจจัยที่ไม่เกี่ยวกับการเงิน การเงิน และการกำกับดูแลกิจการ ที่มีต่อแนวปฏิบัติในการเปิดเผยข้อมูลด้านสิ่งแวดล้อม ตามกรอบการรายงานระดับโลก(Global Reporting Initiative ; GRI)

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Abstract

Evidence from research conducted on corporate accounting indicates that the interaction of environmental factors influences disclosure practices companies in the developed countries consider noncompliance with sustainability reporting standards as an important source of risk to their reputations with stakeholders. The study aims to examine financial, non-financial, and corporate governance factors that influence the extent of GRI sustainability reporting. The sample is 61 companies that are publicly listed under the Thailand stock exchange (set trade). This study uses secondary data from the annual reports and sustainability reports 2016-2019. The result shows that non-financial factors, economic performance, Audit quality, and liquidity have a positive and significant association with GRI environmental disclosure in Thailand listed companies. While the financial leverage, company size, growth opportunity, and profitability have no and negative impact on GRI environmental disclosure. Furthermore, the study concludes that the environmental concern companies in Thailand disclose more information.

Keywords: Non-financial factors, Corporate governance, Global Reporting Initiative

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บทคัดย่อ

หลักฐานจากงานวิจัยได้ชี้ว่าการเปิดเผยข้อมูลทางบัญชีในด้านสิ่งแวดล้อม มีผลต่อปฏิสัมพันธ์ของปัจจัยด้านสิ่งแวดล้อมกับแนวปฏิบัติด้านการเปิดเผยข้อมูลบริษัท ในประเทศที่พัฒนาแล้วถือว่าการไม่ปฏิบัติตามมาตรฐานการรายงานความยั่งยืนเป็นความเสี่ยงต่อชื่อเสียงของบริษัทและผู้มีส่วนได้ส่วนเสีย งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาอิทธิพลของปัจจัยที่ไม่เกี่ยวกับการเงิน การเงิน และการกำกับดูแลกิจการที่มีต่อแนวปฏิบัติในการเปิดเผยข้อมูลด้านสิ่งแวดล้อมที่กรอบการรายงานระดับโลก(Global Reporting Initiative ; GRI) กำหนดไว้ กลุ่มตัวอย่างในการศึกษา คือบริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยที่มีรายชื่อหลักทรัพย์ในดัชนี SET และเปิดเผยรายชื่อจำนวน 61 บริษัท โดยใช้ข้อมูลทุติยภูมิจากรายงานประจำปีของแต่ละบริษัท ในช่วงปี ค.ศ. 2016 - 2019 ผลการวิจัยพบว่า ปัจจัยที่ไม่ใช่การเงิน ได้แก่ ประสิทธิภาพด้านเศรษฐกิจ การประเมินคุณภาพ และสภาพคล่อง มีอิทธิพลทางบวกอย่างมีนัยสำคัญ ในขณะที่ปัจจัยที่เกี่ยวกับการเงิน ขนาดขององค์กร การเติบโตของบริษัทในภาพรวม และ ผลกำไร มีอิทธิพลทางลบต่อแนวปฏิบัติในการเปิดเผยข้อมูลด้านสิ่งแวดล้อมที่กรอบการรายงานระดับโลกกำหนด นอกจากนี้ผลการศึกษายังสรุปได้ว่า บริษัทที่เกี่ยวข้องกับสิ่งแวดล้อมในประเทศไทยควรเปิดเผยข้อมูลมากกว่านี้

คำสำคัญ : ปัจจัยที่ไม่ใช่การเงิน การกำกับดูแลกิจการ กรอบการรายงานระดับโลก

Introduction:

As the world is facing its green revolution period with globalization coupled with the increase in the complexity in the world business market, as well as the higher effect of climate change and global warming forces the businesses to operate in dynamic and challenging environments (Frendy & Kusuma,I.W., 2011). The research problem of this study is to identify the impact of the environmental factors on GRI achievements and objectives by their continuous development of the sustainability reporting guidelines. Since 2000, GRI reporting practice has grown in Thailand corporates and globally because of the green revolution and various challenges that the business markets are facing now (Poowadin , Prasertsri & Nilapornkul, 2018). Due to the huge impact of the green revolution and climate change issues on the performance of the companies which indirectly affect the company reputation and its primary goal to make a profit which influence the businesses to focus on the suitability reporting by the third parties (Kılıç & Kuzey, 2017). Now a day many investors and stakeholders are demanding to publish transparency information of

companies' environmental and social practices. Many companies use GRI reporting as a strategical tool to increase their competitiveness and reduce the pressure from the external parties. The general public also well aware of the issue, it pressures the companies to increase their sustainability standards to maintain their legitimacy.

While on the other hand, many managers not yet convinced as it is not necessary by the law. They believe that investing in GRI sustainability reporting will increase costs in the short term. Numerous numbers of studies are done in developed countries to prove that the external and internal factors of management have a strong impact on the development of GRI environmental practice in a company. However, very little researches are done in Thailand using external and internal management factors. Therefore, this study fills the knowledge about the relationship between the non-financial, financial, and corporate governance factors that influence the company to disclose GRI environmental disclosure which also gradually increases the value and financial performance of a company. This study will be point out the gap and be an example and reference for management and researches to understand the GRI environmental disclosure in Thailand listed companies.

GRI guidelines are considered superior and international standards in comparison to other sustainability guidelines, at the same time fulfilling the expectations of the stakeholders (Poowadin, Prasertsri & Nilapornkul, 2018). This study uses the recently upgraded reporting framework G4 sustainability version which is updated from G3.1 also referenced by companies in Thailand that have produced sustainability reports or CSR reports in accordance with the GRI framework. The sustainability report provides information about the company's corporate governance, operation management, and strategies, economic, social, and environmental activities of an organization. More than 5000 companies are following the GRI framework globally.

Research question:

How does the financial, non-financial, and corporate governance factors impact the extent of GRI environmental disclosure in Thailand listed companies?

The research comes into the conclusion that both positive and negative relationships with the companies practice and the extent of GRI environmental disclosure.

The Empirical Studies

Many previous studies have been analyzed the factors impacting the extent disclosure level of GRI disclosures of companies in Sweden, Australia, UK, Indonesia, Taiwan, Malaysia, Turkey, New Zealand, and Saudi Arabia (see, for example, Kılıç, & Kuzey. 2017; Fuadah, Safitri & Yuliani (2019); Frendy & Kusuma. (2011); Issa. (2017) Datt. (2016), etc). The thesis paper of Datt. (2016), investigated the impact of corporate governance and firm-level characteristics on the company environmental sustainability reporting behaviour of the highest top listed companies worldwide. (Kılıç & Kuzey, 2017) analysed 229 companies' largest companies in Turkey based on market capitalization they found firm size, industry sensitivity, and profitability has a positive influence on sustainability reporting, but are not significant financial leverage and current ratio. Some previous research that examines the relationship between the characteristics of public companies with the extent of disclosures reveals that the level of social disclosure of sampled public companies in Indonesia and Saudi Arabia is significantly correlated with the level of the companies' practice and performance (Frendy & Kusuma, 2011; Issa, 2017) this concluded the results evidence the high adaptation of the GRI framework of or ganization form all developed and developing countries.

Legitimacy theory: Management legitimacy can be considered as a resource, which many companies are dependent upon. (Datt, 2016) legitimacy theory stems from the notion of a hypothetical agreement social contract between companies and society. A failure to accommodate society's expectations can, per the legitimacy theory, have implications for the survival of a corporation. Legitimacy theory maintains that firms may voluntarily disclose Environmental information to gain legitimacy by the way of improvements in their CSR responsibilities, thereby legitimizing their long-term operations (Fuadah, Safitri & Yuliani, 2019).

Agency Theory: According to Issa (2017) in order to minimize the conflicts between the agents and company management companies start to practice voluntary sustainability information which automatically reduces the agency interest

and principal interest cost of an organization. However, the main perspective of agency theory is to state that agency costs related to the stakeholders and creditors have a strong relationship with the development of sustainability reporting (environmental disclosure CSR) in terms of creditors' leverage and investments (Datt ,2016 ; Issa ,2017; Frendy & Kusuma , 2011)

Stakeholder Theory: According to Kılıç & Kuzey (2017) states that major objectives of the organization to reduce the imbalance of information demanded by the various stakeholders. This stakeholder theory maintains a statement that the various demands of inner and outer management stakeholders will remain variable by voluntary sustainability reporting (CSR environmental disclosure).

The variables of this study are classified into three categories as Non-Financial, Financial and Corporate Governance.

1. Non- Financial Variables Leading global corporations are questionnaires on the risks and opportunities from climate change, greenhouse gas emissions, emission reduction plans, targets, and strategies, emission intensity, and corporate governance, (Datt, 2016). The risks to financial stability caused by the physical risks, liability risks, and transition risks linked to climate change (Datt, 2016) which increased the climate change management related activities of sustainability reporting in a company, shows a positive relationship between climate change management and environmental sustainability disclosure.

Waste management: Maleka, Nyirenda, and Fakoya (2017), state that solid waste generation and its implications for society and environment are global issues, with the complexity of waste composition and ever-increasing per capital waste generation becoming a challenge for managers, particularly in developing countries. Therefore, companies use the strategy disclosure environmental and social disclosure-based Waste management issue to build trust among various target groups. Maleka, Nyirenda and Fakoya (2017), found a positive relationship with environmental disclosure.

Industry Sensitivity: Companies that are from energy-intensive sectors have more exposure to environmental risk than companies from non-energy- intensive sectors. A number of prior studies have established that industry sensitivity is

positively significant with the extent of voluntary environmental and social disclosure (Kılıç & Kuzey, 2017; Fuadah., Safitri, & Yuliani, 2019 ; Frendy & Kusuma, 2011)

Firm Age: Some previous studies documented that the age of firms influences the extent of social disclosure and that long-established firms are more likely to provide voluntary environmental disclosures, Issa (2017) supported this finding arguing that higher company age is associated with its long history of sustainability involvement and reputation.

Business Complexity: Structural complexity has been suggested as significant in explaining variability in the extent of sustainability voluntary disclosure (Haniffa & Cooke, 2000; Frendy & Kusuma, 2011 ; Haniffa &Cooke, 2000) states that companies with many subsidiaries tend to have a more efficient business sustainability information system to support their business.

Media Coverage: The enormous influence of the media which affects the legitimacy of the company through external forces such as public opinion, interest, and behaviour ultimately plays a major role in the reporting of sustainability based on environmentally sensitive industrial sectors (Haniffa & Cooke, 2002). High media exposure strengthens the communication environmental activities between the company and its stakeholder.

Environmental Committee: The argument that the environmental committee can increase the extent of voluntary disclosure is based on agency and resource dependency theory, in which Committees have more power to drive the management to disclose more voluntary environmental information (Haniffa & Cooke, 2002) which has both positive and negative relationships (Datt, 2016) with the environmental disclosure of the company.

Resource Management: Significant improvements in resource efficiency management will be necessary to meet the requirement expressed by the increase in the sustainability disclosure of companies (Awan & Muneer, 2014). Some prior studies stated that resource management boosts environmental sustainability and lower climate change effects (Awan & Muneer, 2014).

Biodiversity: Infrastructure and urbanization are among the major drivers of fragmentation, degradation, or loss of habitats, leading to significant biodiversity. Thus, in order to be sustainable, infrastructure investments support the conservation

and sustainable use of biodiversity. This indicates that biodiversity is one of the factors for investments. It concludes that biodiversity influences sustainable development.

2. Financial variables

Company Size: The size of companies tends to affect companies' strategic response to stockholder demands (Kılıç & Kuzey, 2017 and Issa, 2017). The tendency to disclose more information in their sustainability report is because large companies are more concerned about legitimacy. Regarding this independent variable, larger companies have an impact on sustainability reports using the GRI guidelines documented by Issa (2017).

Economic performance: Economically wealthy companies disclose more environmental disclosure to the various target groups to legitimize their existence (Fuadah, Safitri & Yuliani, 2019). A positive correlation between voluntary disclosure and profitability was hypothesized in prior research (such as Kılıç & Kuzey (2017), Fuadah, Safitri & Yuliani (2019) , Frendy & Kusuma (2011), Issa (2017), etc). In the Thailand context, previous research on the association between profitability and voluntary disclosure offers positive results (Poowadin, Prasertsri, & Nilapornkul, 2018).

Liquidity: For growing companies, liquidity is the most effective tool to meet the short term financial obligations so it is considered one of the important internal factors of the company that influences sustainability reporting (Kılıç & Kuze. 2017). However, companies with higher liquidity tend to have a higher interest in the extent of GRI environmental disclosure.

Growth Opportunity: Growth opportunity is one of the most important factors in sustainability disclosure (Frendy & Kusuma, 2011) defines a high level of growth opportunity that is likely to encourage a company strategy to incorporate sustainability business. Sustainability reporting could play a legitimizing role in the operations of growing firms. In other terms, economic sustainability must be supported by environmental sustainability as a condition of going concerned with various target groups. This study argues that growing firms tend to publish GRI environmental disclosure.

Profitability: Profitable firms disclose more environmental disclosure to the audience to legitimize their existence (Issa, 2017). A positive correlation between voluntary disclosure and profitability was hypothesized in prior. The managers use

sustainability as a strategy to maintain their legitimacy, it make their firms profitable also have the knowledge and understanding of environmentaly responsibility. This might clarify the higher levels of environmental transparent information disclosure by profitable firms.

Financial Leverage: Financial Leverage of a company has been long used as one of the determinants of sustainability disclosure and has revealed mixed results. Higher agency costs are susceptible because of the company's higher debt in the capital structure (Frendy & Kusuma, 2011). In disclosing environmental information, expenditures affect income negatively. Leverage is a bad sign for stakeholders and investors. Hence, they will choose to reduce the voluntary disclosure rate of reports, such as sustainability, environmental reporting. Previous research shows negative and significant relationships (Frendy & Kusuma, 2011).

3. Corporate Governance:

Audit Quality: The effect of audit quality is higher on the investor's decision-making process in the financial market for the past few prior years. According to Haniffa & Cooke (2002) based on previous research studies, Organization follows current trends to secure profitability, financial performance, and general public perception. To maintain a high audit quality of a company among the investors compared with competitors, companies disclose GRI environmental and social disclosure. Previous research shows a positive relationship between the audit quality with the extent of financial report disclosure (Haniffa. & Cooke, 2002).

Methodology

Hypothesis

H1: Non-financial factors have a significant positive association with the extent of GRI environmental disclosure.

H2: Economic performance has a significant positive association with the extent of GRI environmental disclosure.

H3: Company size has a significant negative association with the extent of GRI environmental disclosure.

H4: Growth opportunities have a significant negative association with the extent of GRI environmental disclosure.

H5: Audit quality has a significant positive association with the extent of GRI environmental disclosure.

H6: Financial leverage has a significant negative association with the extent of GRI environmental disclosure.

H7: Profitability has a significant negative association with the extent of GRI environmental disclosure.

H8: Current ratios have a significant positive association with the extent of GRI environmental disclosure.

Population and Sample: This research utilized the annual report, sustainability report, and Form 56-1 of publicly listed companies in the Thailand Stock Exchange (Set trade) for the period of 2016- 2019. The population size is measured by the secondary data source available on the SET trade website. According to the Stock exchange of Thailand (SET) and Market of alternative investment (MAI) 2019, there are total of 792 companies are listed. Thailand sustainability investment 2018 stated that there are 79 companies under SET published CSR reporting. So the main target population of the research is79 companies and it is categorized into 8 industry and 28 sectors. This case study excluded financial companies from the sample due to their significantly different financial reporting practices. Further, companies that were not disclosed GRI environmental index in their sustainability report which listed in trade between 2016 and 2019 were also rejected from the sample. Therefore, the final sample comprised 61 companies and its categories into 7 industry and 21 for a period of four years from 2016 to 2019. Thus, the final panel consisted of 201 company year observations of data sets.

Dependent Variables: For the analysis, the study uses a binary coding technique. This approach is consistent with a GRI environmental disclosure score that is unweighted to maintain objective and consistent results across samples of each listed company to lower quality and quantity of information disclosed. There is a total of 36 environmental disclosure attributes followed by GRI G4 environmental disclosure

Where, d = 1 point if the disclosed GRI environmental disclosure attributes

d = 0 point if the not disclosed GRI environmental disclosure attributes

The total number of GRI disclosure attributes computed with disclosed attributes based on the above formula and calculate the percentage of disclosure for analysis.

Independent Variables: The study uses 8 Independent variables such as non- financial factors, economic performance, company size, growth opportunity, audit quality, financial leverage, profitability and liquidity.

Table 1 Non-financial variables and its measurements:

No.	Variables	Measurement	Source	Scale
1.	Climate Change Management	0=No Climate Management 1=Climate Management	Sustainability Report	Dummy
2.	Waste Management	0=No waste and recycle management 1=waste and recycle management	Sustainability Report	Dummy
3.	Age	Company Age	Annual report	Number
4.	Industry Sensitivity	0 = Environmentally insensitive 1 = Environmentally sensitive		Dummy
5.	Media Coverage	Number of positive news and articles period (2016-2019)	Bangkok post Website	Number
6.	Biodiversity	0= No Biodiversity 1= Biodiversity	Sustainability Report	Dummy
7.	Committee	0=No environmental committee company 1=Environmental committee company	Annual Report	Dummy
8.	Resource Management	0=No resource management 1=Resource management	Sustainability Report	Dummy
9.	Business complexity	Number of Subsidiaries	Annual Report	Number

Table 2 Measurements of control variables - financial & corporate governance

No.	Variables	Measurement	Source	Scale
1.	Company Size	Total Asset	Financial Statement	Ratio
2.	Economic Performance	ROA	Financial Statement	Ratio
3.	Audit Quality	Audit fees/ Total asset	Annual Report	Number
4.	Growth opportunity	P/E ratio	Financial Statement	Ratio
5.	Leverage	D/E ratio	Financial Statement	Ratio
6.	Liquidity	Current Ratio	Financial Statement	Ratio
7.	Profitability	Net Profit Margin	Financial Statement	Ratio

This study based on the secondary data source of Thailand listed companies that are approved and published by the authorized companies online. The data course is from the company's website, Stock exchange of Thailand (SET) trade, SET SMART and Bangkok Post website databases which can be considered as authoritative and trustworthy fulfilling all the requirements for data validity and reliability. The financial data are collected from the SET trade and financial database of the companies in a standard format, which eliminates the probability of error and inaccuracy. The GRI environmental disclosure, non-financial, and Corporate governance data collected from the thrust worthy online website which is approved by each of the sample companies. Accordingly, the data source is consistent and accurate with fewer problems to use in this research.

Data Analysis: This study used factor analysis and fixed effect regression methods for main analysis. Factor analysis technique is used to extract the nine variables common variables such as Climate change management, waste management, Industrial sensitivity, Resource management, Biodiversity management, Environmental committee, Business complexity, Age and Media coverage and put them into one Non-financial factor (F1) that impact the extent of GRI environmental disclosure index of Thailand listed companies respectively.

The relationship between the GRI environmental sustainability disclosure with financial, non- financial, firm value, and corporate governance variables, and is tested by the following model.

$$GRI = \beta_0 + \beta_1 F1 + \beta_2 ROA + \beta_3 TA + \beta_4 NETP + \beta_5 AUD + \beta_6 P/E + \beta_7 D/E + \beta_8 CR + \varepsilon$$

While GRI - GRI quality, F1 – Factor analysis, ROA - Economic performance,
TA - Company size, NETP - Net profit margin, AUD - Audit quality,
P/E - Growth opportunity, D/E - Financial leverage, CR - Current Ratio

Results

Data Analysis and findings:

Table 3 Descriptive Statistics Summary of Non-Dummy Variables:

No.	Variables	N	Minimum	Maximum	Median	Mean	sd
1.	GRI	201	0.03	0.94	0.42	0.454	0.27
2.	F1	201	-1.709	1.729	0.012	0	0.883
3.	TA	201	5.676	14.726	0.417	10.506	1.958
4.	ROA	201	-32.32	36.2	7.56	7.962	6.52
5.	AUD	201	0	0.008	0	0.001	0.001
6.	P/E	201	5.54	140.75	16.73	22.99	18.67
7.	D/E	201	0.09	21	1.15	1.578	2
8.	NETP	201	-92.91	62.68	7.17	9.96	16.51
9.	CSP	201	0.09	64.88	0.97	1.512	4.927
10.	EPS	201	-5.52	46.74	0.93	2.221	5.55
11.	BVPS	201	0.31	276.87	8.86	18.37	35.55
12.	GRIEPS	201	-0.225	0.189	0.024	0.027	0.041
13.	GRIBV	201	0.003	3.029	0.245	0.333	0.391
14.	CR	201	0.29	8.35	1.51	1.91	1.41
17.	MED	201	0	352	20	49.55	81.74
18.	COMP	201	0	131	9	19.51	21.9
19.	AGE	201	3	141	32	33.12	20.66

Table 4 Descriptive Statistics Summary of Dummy Variables:

No.	Variables	Observed Frequency	Percentage
1.	CLIM- Climate Change Management - 1	116	57.71%
	No Climate Change Management - 0	85	42.29%
2.	WAS- Waste Management - 1	128	63.68%
	No Waste Management - 0	73	36.32%
3.	IND- Industrial Sensitive - 1	110	54.73%
	Industrial Insensitive - 0	91	45.27%
4.	COMM- Environmental Committee - 1	119	54.73%
	No Environmental committee - 0	82	45.27%
5.	RES - Resource Management - 1	148	73.63%
	No Resource Management - 0	53	26.37%
6.	BIO- Biodiversity Management - 1	109	54.23%
	No Biodiversity Management - 0	92	45.77%

The finding of non-dummy variables states that the economic performance means value is 7.962 which are higher than 5% so it indicates the good performance of companies that follow GRI. The average P/E ratio (22.99) denotes a higher-earning growth rate in the future of the Thailand listed companies. The D/E ratio average (1.57) appears to be to less risk to the company and shareholders. From the descriptive statistical Table result of dummy variables states the companies that practice GRI (environmental disclosure) have overall 59.78% environmental concerns, which means more than half of the companies are concerned about global warming and other climate change issues in Thailand listed companies of this study.

Table 5 Correlation Tables:

Correlations

Spearman rho Correlations

Var.	GRI	TA	F1	ROA	AUD	PE	DE	EPS	NETP	BVPS	CSP	GRIEPS	GRIBV	CR
GRI	1	-0.111	.492**	.165*	0.086	-.218**	-0.122	.189**	0.035	0.108	0.000	.724**	.707**	.150*
TA	-.168*	1	.369**	-0.076	-.737**	-0.122	.395**	.475**	-0.046	.572**	0.109	-0.035	-0.068	-.193**
F1	.465**	.346**	1	-0.025	-.177*	-.227**	0.131	.229**	0.003	.313**	0.020	.366**	.431**	-0.024
ROA	.146*	-0.033	0.017	1	-0.013	-.155*	-.396**	.508**	.740**	-0.014	0.138	.437**	-.145*	.285**
AUD	.261**	-.471**	0.098	0.011	1	0.104	-.156*	-.385**	-0.061	-.449**	-0.051	0.043	0.125	0.018
PE	-.276**	-0.097	-.232**	-.225**	0.120	1	0.098	-.323**	-0.024	-.273**	0.094	-.422**	-.382**	-.181**
DE	-.155*	.289**	0.104	-.264**	-0.087	0.057	1	-.201**	-.448**	-0.053	0.053	-.233**	-0.070	-.634**
EPS	0.106	.366**	.209**	.238**	-0.130	-.195**	-0.137	1	.447**	.653**	.154*	.503**	0.064	.277**
NETP	0.080	0.057	0.112	.772**	-0.074	-.154*	-.207**	.205**	1	0.008	.162*	.315**	-.148*	.289**
BVPS	0.117	.418**	.289**	0.030	-.151*	-.166*	-0.066	.683**	0.054	1	0.102	.209**	.343**	0.126
CSP	-0.029	-0.060	0.011	-0.019	0.006	.156*	0.049	-0.022	-0.020	-0.045	1	.217**	0.094	-0.022
GRIEPS	.492**	-0.031	.243**	.340**	0.041	-.240**	-.449**	.341**	.244**	.166*	.159*	1	.615**	.280**
GRIBV	.488**	-.162*	.237**	-0.082	.389**	-0.075	-0.048	0.001	-0.073	.149*	.162*	.203**	1	0.131
CR	0.137	-.287**	-0.116	.206**	0.052	-0.078	-.360**	0.069	0.105	0.061	-0.028	.159*	0.034	1

Pearson Correlations

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

In order to determine the bivariate, the results indicate that there was no high significant association among the independent variables. Moreover, there was a significant and medium level correlation between GRI environmental disclosure and non-financial factors in (Pearson r = .46, spearman = .49, p< .01), GRI_ESP (Pearson r = .46, spearman = .49, p< .01), GRIBV (Pearson r = .46, spearman = .49, p< .01). These results reveal a correlation between non-financial factors and the GRI environmental reporting which clearly states that the influence of external and internal levels of Thailand listed companies to have a GRI framework.

Table 6 Main Analysis

Model: $GRI = \beta_0 + \beta_1$ F1+ β_2 ROA +β_3TA+ β_4NETP+ β_5AUD+ β_6 P/E + β_7 D/E + β_8 CR +ε

	Coefficient			
	Estimate	Std.Error	t- value	Pr(>|t|)
F1	0.136	0.025	5.391	0.000
ROA	0.008	0.004	1.999	0.047
TA	-0.000	0.000	-1.653	0.100
NETP	-0.003	0.002	-1.760	0.080
AUD	41.089	14.569	2.820	0.005
P/E	-0.002	0.001	-2.1311-	0.034
D/E	-0.016	0.009	-1.812	0.072
CR	0.025	0.013	1.897	0.059
Adj. R-Squared: 0.17521				

Table 7 Additional Analysis

Additional Model: $CSP = \beta_0 + \beta_1$ GRI+ β_2 EPS+ β_3 GRIEPS + β_4BVPS + β_5GRIBV + ε

(GRI - GRI quality, CSP - Share price, EPS - earning per share, BVPS - Book value per share, GRIEPS - GRI quality * Earnings per share, GRIBV - GRI * Book value per share)

	Coefficient			
	Estimate	Std.Error	t- value	Pr(>|t|)
GRI	-0.799	0.205	-3.888	0.000
GRIEPS	4.618	1.300	3.552	0.000
EPS	0.028	0.011	2.455	0.015
BVPS	-0.006	0.002	-3.392	0.001
GRIBV	0.569	0.133	4.276	0.000
Adj. R-Squared: 0.16802				

The result shows a negative association with the extent of GRI environmental disclosure in Thailand listed companies due to the limitation of data observations. To prove that GRI sustainability has a positive impact on share price this study uses GRI multiple with EPS gives positive and significant results. Earnings per share with a share price of Thailand companies also has positive relationships. Thus, it states that such environmentally responsible companies can maintain its legitimacy and increase the share price. This result is consistent with the prior studies in china. This result is consistent with many prior studies.

Conclusion and Discussion

According to the result, the non-financial attributes which this study got from the factor analysis of nine non-financial factors have a positive relationship with the extent of the GRI environmental disclosure index of Thailand listed companies, which also indicate that the company under high environmental sensitive sector discloses more environmental related sustainability disclosure.

This is consistent from the previous study (see, for example, Kılıç & Kuzey. (2017); Fuadah, Safitri & Yuliani (2019); Frendy & Kusuma. (2011), Issa . (2017), etc). These findings may evaluate with legitimacy theory, stakeholder theory, Agency theory, and political theory. The companies that concern more about the environmental issues were more likely to have extensions of GRI disclosure.

The company size has a direct inverse relationship with the extent of GRI environmental disclosure of Thailand listed companies. This result is not consistent with the prior studies of Frendy & Kusuma. (2011), Issa. (2017). However, if the company size is bigger the economic scale will also be big and they have to control higher financial and human capital. But in this case company size negatively influences the GRI sustainability disclosure.

Financial attributes of this study are represented by the economic performance, profitability, financial leverage, growth opportunity, and liquidity of hailand listed companies. The economic performance of this study is analyzed based on the return on asset (ROA) of the sample companies and it has a positive linear relationship with the extent of the GRI environmental disclosure index. This consistent with the prior studies has a positive correlation between voluntary

disclosure and profitability was hypothesized in prior research (see, for example, Kılıç & Kuzey (2017); Fuadah, Safitri, & Yuliani (2019); Frendy, & Kusuma (2011) ; Issa (2017), etc). This analysis result relates with legitimacy theory and stakeholder defines that economically wealthy companies have more sustainability reporting which increases the legitimacy of the company among the public and stakeholders (Frendy & Kusuma , 2011).

The profitability of this study shows a negative relationship with the extent of GRI environmental disclosure in Thailand listed companies. It indicates that Thailand listed companies are making less money than they spend, so it does not influence the companies to the extent the sustainability disclosures.

The financial leverage of this study has an inverse negative relationship with the extent of GRI environmental disclosure in Thailand listed companies. This analysis result can be interpreted that the credits are not provided in Thailand based on the GRI environmental disclosure and it is consistent with the proposed hypothesis. The result has corresponded with the prior studies (Frendy & Kusuma, 2011, Kılıç & Kuzey, 2017; Fuadah, Safitri, & Yuliani, 2019). This research study is correlated with agency theory according to Kılıç & Kuzey (2017) disclosing environmental and social information, expenditures affect income negatively.

The growth opportunity has an inverse negative relationship with the extent of GRI sustainability reporting in Thailand. This study argues that growing firms are less likely to extend the GRI disclosure index. This analysis result is not consistent with prior studies as Kılıç & Kuzey (2017).

Current ratio has a positive and linear relationship with GRI sustainability reporting in Thailand listed companies. It suggests that the companies with higher liquidity tend to have a higher interest in the extent of GRI environmental disclosure and it also corresponds to the proposed hypothesis. This result is consistent with prior study Kılıç & Kuzey (2017).

Corporate governance attributes are represented by the audit quality of the firm. Audit quality has a linear positive relationship with the extension of GRI environmental disclosure in Thailand listed companies. This study argues this result with theoretical support with prior study Haniffa & Cooke (2002). Audit quality impacts

firms through a supervisory mechanism, it can have an effect on companies' decision-making processes regarding the transparency of GRI environmental disclosure.

Suggestion

This study concludes that Thailand listed companies are facing growing pressure to present more transparent disclosure by the stock exchange and government practices that increasingly promote environmental sustainability reporting. Even though the current level of adoption of sustainability reporting is low in Thailand in comparison with other developing countries, there is a growing interest among transparency in environmental disclosure in environmentally sensitive companies. As currently climate change is a huge topic around the world at the same time Thailand is facing a lot of environmental issues sustainability reporting is growing as a core mandate. Investors are in capital markets looking and demanding for more transparent environmental reporting standards like GRI from the companies. In this context, this study introduced nine non-financial variables.

Future Research: This study will extend to apply a longitude technique by analysis about more GRI Thailand listed companies with more years information and in the future might extend to comparing the result of GRI and non-GRI companies performance.

Academic Quality: It will be beneficial to researcher's analysis about Thailand listed companies to understand the gaps of companies' internal, external, and environmental society's important concepts. This is significant to progress future research by providing a better understanding of factors that influence the development of the GRI framework. Lastly, this study strongly confesses a higher demand for sustainability reporting such as GRI in Thailand in future due to the challenges and risks caused by environmental factors such as climate change and global warming.

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