

The Impact of Environmental Accountant's Ability on CSR Disclosure and Profitability of the Listed Companies in The Stock Exchange of Thailand

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Abstract

The objective of this study is to explore the impact of accountants' ability to recognize environmental aspect on CSR declaration and profitability of the listed companies in the Stock Exchange of Thailand (SET). This model adopted two kinds of variables: two unobserved variables and two observed variables and utilized Form 56-1 data and notes to financial statement year 2016 of 150 listed companies in SET. By use a statistical method of descriptive analysis, causal relationship model and LISREL 8.80 Student Edition Program.

The result shows that environmental accountant's ability to recognize environmental items EARE) has positive impact on corporate social responsibility Report (CSRD) with a statistical significance level of .01 and coefficient of influence at 0.33 for corporate social responsibility report (CSRD) has positive impact on profitability (PFBL) with coefficient of influence is at 1.00 and a statistical significance level of .01. The implication of this research is that environmental accountant's ability can enhance opportunity of firm in improving profitability through the use of CSR disclosure.

Keywords: Recognition, Environment, Accountant Ability

Introduction

The world today gives importance to and raises awareness of disasters from polluted environments as they have direct impact on the quality of life and wellbeing of human being and all living creatures. Therefore, every country has made great attempt to find methods to prevent and relieve environmental issues while helps promote and encourage corporate environmental management, in addition to rules and regulations that all companies have to strictly comply with, so as to reduce social pressure and build trust and increase confidence among consumers who require company products and services to be environmentally friendly (Jamil et al., 2015: 619). In the meantime, companies have to disclose empirical information about environmental management practices to create competitive advantage to their companies (Tilt, 2006: 4). The findings from various research studies showed that companies with corporate social responsibility programs and strictly follow environmental management practices had better firm performance though operation related to environmental management had effect on the increase of their operational cost (Farouk, Cherian & Jacob, 2012: 36; Hernadi, 2012: 23; Darnall & Edwards, 2006: 317; Wallage, 2000: 53). With reference to disclosure on financial statement-related costs and expenses from environmental management that might be incurred or already incurred, recording of environmental accounting most likely fails to meet the recognition criteria of financial accounting regulations. Practically, businesses often disclose information about environmental accounting in annual report. Consequently, some businesses may have to modify the system of financial report to be in harmony with environmental management (Srijanpetch, 2009: 23).

Thailand environmental management is mainly based on command and control approach

under the Constitution of the Kingdom of Thailand B.E.2550 (2007), Section 67. Furthermore, there are many applicable laws concerning environmental management in Thailand such as the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992), Factory Act B.E.2535 (1992), and other related laws. Most of the environmental problems are caused by utilizing products and services to satisfy needs without awareness of effect on environment. Those products or services are essential for daily life or generate revenue to the country, so the amount of use and their quantity are huge accordingly. Such of this effect results in the large tons of polluted waste to be dumped. Meanwhile, some production processes have impact on environment but cannot be stopped due to high consumer demand of products (Damanpour, 1991: 555; Damanpour & Gopalakrishnan, 2001: 301). Nevertheless, new generation of consumers are increasingly aware of environmental problems and prompt to support environmentally friendly products though they have to pay more than usual. Consequently, companies conduct their business with attentive approach and have readiness to continually improve environment (Zutshi & Sohal, 2004: 399). The application of environmental accounting is an important strategic management tool to use this information to support corporate policies (Rout, 2010: 46). Despite all these attempts, the recognition of recording of environmental accounting has sometimes restriction on measuring in numbers because the measurement of costs, benefits of environment, expenses and revenue is quite difficult (Llodra, 2006: 393). Therefore, the recognition of recording of environmental accounting is mainly focused on disclosure of information on environmental impact (Srijanpatch, 2009: 21).

Concept of environmental accounting is directly associated with businesses as environmental damage incurred from pollution has great impact on economy, society and politics globally. Then, businesses have to disclose information on environment so as to indicate their attention and concern about the importance of environmental problems as well as conduct their business activities. Such of this action results in benefits to several useful approaches such as morale and motivation of employees, tax benefits, and reduction of operating costs, or even reduction of machinery in manufacturing process (Masanet & Llodra, 2006: 393). Those benefits bring about increasing manufacturing productivity and sales volume that are supported by good image of organizations (Fresner, 2000: 127). It is an important role in driving to sustainability (Murray et al., 2006: 228).

This research study aims to explore the success of environmental accountant's ability to recognize environmental items used to support corporate social responsibility disclosure for public perception of corporate awareness of environmental management. Those companies are aware of reducing environmental problems and attentive for having certified accounting practices so that investor groups and stakeholders can recognize, accept and support companies for having a good corporate image and sustainable growth. The researcher used empirical study by questioning corporate accountants and executive groups who were associated with corporate social responsibility reporting so as to be certain that accountant's ability to recognize environmental items would have impact on appropriate corporate social responsibility disclosure and profitability of companies listed on the Stock Exchange of Thailand.

Research Objective

The objective of this research study is to analyze causal relationship of environmental accountant's ability to recognize environmental items that has impact on corporate social responsibility disclosure and profitability of companies listed on the Stock Exchange of Thailand.

Research Framework, Literature Review and Research Hypotheses

Major theories used to determine research framework include the following 3 theories:

1. Stakeholder Theory is a theory continuously developed since 1970 (Freeman, 1984). The theory focuses on organizational policies that affect stakeholders who are involved with organizations by considering Need, Interest, and Effect caused by policies and operational performance of the organizations. The way that organizations can survive or collapse depends on righteousness between stakeholders and organizations (McWilliams & Siegel, 2001: 117). The study of stakeholder theory has a point that stakeholders lead to accounting practices for environmental management and innovation process of environmental accounting (Fassin, 2009: 113; Mainardes et al., 2011: 226). The consequences were competitive advantage and organization sustainability (Chenhall & Langfield-Smith, 1998: 361). As a result, the researcher used this theory to support the research study with regards to stakeholders, accounting practices for environmental management, and innovation process of environmental accounting that lead to competitive advantage and organization sustainability (Lamberton, 2005: 8).

2. Resource-based View (RBV) or opinion towards fundamental resources of business, it is a managerial framework used to determine the strategic resources with the potential to deliver comparative advantage to a firm. It has effect on efficient long-term performance of organizations with this advantage can be last in a sustainable manner. Yosyingyong (2006) stated that outstanding resources that could create competitive advantage were resources that other organizations did not have. Resources that are unique and valuable are (1) tangible resources have a physical form, are visible, touchable, and countable (Apisakkul and Boonkwan, 2006) such as factory, equipment, land, tool, goods, debtor, deposit, etc., (2) intangible resources mean resources (that are not physical in nature, cannot be touched and difficult to assess the fundamental value such as patents, trademark, brand, reputation, company networking, and data base. In this research, RBV was used to describe organization capability which considered intangible resource (Itami, 1987) and used to describe environmental accounting policies of management executives, profitability, the size of business, ownership structure, debt structure, and innovation process of finance. Such of this method is deemed as ability of organizations to use resources to accomplish their goals. It is organizational coordination. Ability can be shown at all times in tangible and intangible resources, especially competitive advantage in financial competition that ability often relies on fundamental of development and information exchange about management accounting practices.

3. Contingency Theory is a concept of management that it all depends upon the situations at hand as to what will be the best course of action. Fiedler (1967), the founder of the contingency theory claimed that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is dependent upon the internal and external situation. The contingency theory has been used in environmental activities since situations these days have been changed continually at all times. Additionally, those changes are stimulated to enforce by social system having broader boundary in operation (Parker, 1997: 145). In addition Christ & Burritt (2013) conducted a study about environmental management accounting within situational framework and found that the contingency theory had capability in enhancing knowledge and understanding about accounting practices and development of environmental management accounting. Therefore, this theory was used to describe perception in internal and external factors of business that had impact on environmental management accounting practices. Internal factors included corporate social responsibility on environment, accountant specialization, environmental accounting policies of management executives (Gordan & Miller, 1976: 59; Anderson & Lanen, 1999: 379) and external factors were environmental accounting policies from the

government (Guthrie, 1993: 101).

Based on literature review, conceptual framework, theories, and related research studies, the research conceptual framework was determined as seen in the figure 1.

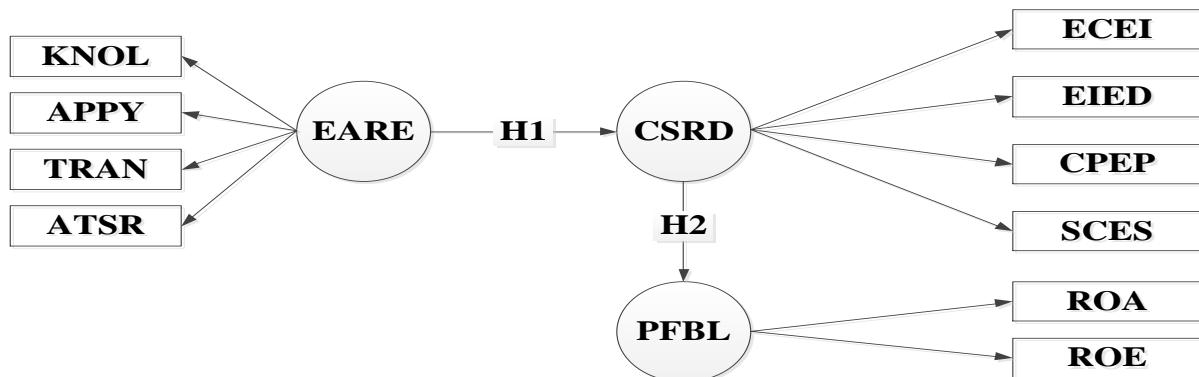


Figure 1 Indicated research conceptual framework

Table 1 Abbreviation of variables and indicators

Variables	Symbol	Types of variable	Measurement
Environmental accountant's ability to recognize environmental items.	EARE	Latent variable	Number of items disclosure
Accountant with knowledge and understanding of environmental accounting practices.	KNOL	Observed variable	Number of items disclosure
Accountants have the ability to apply environmental accounting practices to operations from professional knowledge.	APPY	Observed variable	Number of items disclosure
Accountants are trained to continuously improve their professional knowledge.	TRAN	Observed variable	Number of items disclosure
Accountants are accountable, transparent, and socially responsible. They can also report on issues that affect stakeholders in a reliable way.	ATSR	Observed variable	Number of items disclosure
Corporate Social Responsibility Disclosure	CSRD	Latent variable	Number of items disclosure
The company encourages people to collaborate on environmental issues.	ECEI	Observed variable	Number of items disclosure
The Company encourages personnel to see the importance of environmental development.	EIED	Observed variable	Number of items disclosure
The Company promotes environmental performance in a transparent manner.	CPEP	Observed variable	Number of items disclosure
The company has set a concrete environmental standard.	SCES	Observed variable	Number of items disclosure
Performance	PFBL	Observed variable	Number of items disclosure

Table 1 (Con.)

Variables	Symbol	Types of variable	Measurement
Return on assets	ROA	Observed variable	Return on Asset
Return on Equity	ROE	Observed variable	Return on Equity

Research Hypotheses

H1: environmental accountant's ability to recognize environmental items had direct positive impact on corporate social responsibility reporting.

H2: corporate social responsibility reporting had direct positive impact on profitability.

Methodology

Population and sample

The population used in this study is executives from accounting department of companies with ISO 14001 certification in Thailand in the year 2016, 240 companies (Thai Industrial Standards Institute, 2016).

Sample Size

The sample size was determined by using the Yamane (1973)

$$\text{Formula} \quad n = \frac{N}{1 + Ne^2}$$

Where n = the sample size

N = the size of population (240 companies)

e = margin of error (0.05).

Therefore, the sample size was

$$n = \frac{240}{1 + 970(0.05)^2}$$

The researcher calculated the required sample size and it came up with 150 companies. So, the sample size for this study was equal to 150 companies.

Research Format

The format of this study was quantitative research to develop causal relationship model of environmental accountant's ability to recognize environmental items that had impact on corporate social responsibility disclosure and profitability of companies listed on the Stock Exchange of Thailand. Structural equation model (SEM) was employed to analyze data. The researcher collected data by submitting questionnaires to the samples to respond all questions.

Results

Confirmatory Factor Analysis

Confirmatory factor analysis based on hypotheses that were used to analyze latent variables so as to test construct validity and test parametric statistics approach in structural equation modeling can be explained as follow:

Table 2 Confirmatory factor analysis of variables in environmental accountant's ability to recognize environmental items.

Variables	Factor			R²
	b	SE	t	
KNOL	0.32	-	-	0.10
APPY	0.37	0.11	2.63	0.14
TRAN	0.50	0.14	2.73	0.25
ATSR	0.32	0.09	2.48	0.11

$\chi^2 = 0.21$, df = 10, $\chi^2/2 = 0.21$, p-value = 0.64, RMSEA = 0.00

Note: |t| > 1.96 means that p < .05; |t| > 2.58 means that p < .01

The analysis results of the measurement model with confirmatory factor analysis of variables in environmental accountant's ability to recognize environmental items (EARE) found that the model was consistent with the empirical data after adjusting model without cutting out any indicators. The Chi-square statistical test result was 0.21, the statistical probability (p) was, degree of freedom (df) was 10, $\chi^2/2$ was 0.21, RMSEA was 0.00, SRMR was 0.006, GFI was 1.00, CFI was 1.00, and AGFI was 1.00.

In other words, environmental accountant's ability to recognize environmental items (EARE) was composed of 4 elements; accountants have knowledge and understanding of environmental accounting practices (KNOL), accounts have ability to apply environmental accounting practices to operations from professional knowledge (APPY), accountants are trained to continuously improve their professional knowledge (TRAN), accountants are accountable, transparent, and socially responsible and they can also report on issues that affect stakeholders in a reliable way (ATSR). The findings showed that accountants are trained to continuously improve their professional knowledge (TRAN) was the most important, followed by accounts have ability to apply environmental accounting practices to operations from professional knowledge (APPY), accountants have knowledge and understanding of environmental accounting practices (KNOL), and accountants are accountable, transparent, socially responsible and they can also report on issues that affect stakeholders in a reliable way (ATSR) respectively.

Table 3 Confirmatory factor analysis of variables in corporate social responsibility

Variables	Factor			R²
	b	SE	t	
ECEI	0.56	-	-	0.31
EIED	0.47	0.06	4.71	0.22
CPEP	0.50	0.07	4.42	0.25
SCES	0.48	0.07	4.42	0.23

$\chi^2 = 1.23$, df = 1, $\chi^2/2 = 1.23$, p-value = 0.27, RMSEA = 0.024

Note: |t| > 1.96 means that p < .05; |t| > 2.58 means that p < .01

The analysis results of the measurement model with confirmatory factor analysis of variables in corporate social responsibility disclosure (CSRD) indicated that the model was consistent with the empirical data after model modification without cutting out any indicators. The Chi-square statistical test result was 1.23, the statistical probability (p) was 0.27, degree of freedom (df) was 1, $\chi^2/2$ was 1.23, RMSEA was 0.024, SRMR was 0.0015, GFI was 1.00, CFI was 1.00, and AGFI was 0.98.

In other words, corporate social responsibility disclosure was composed of 4 elements; the company encourages people to collaborate on environmental issues (ECEI), the company

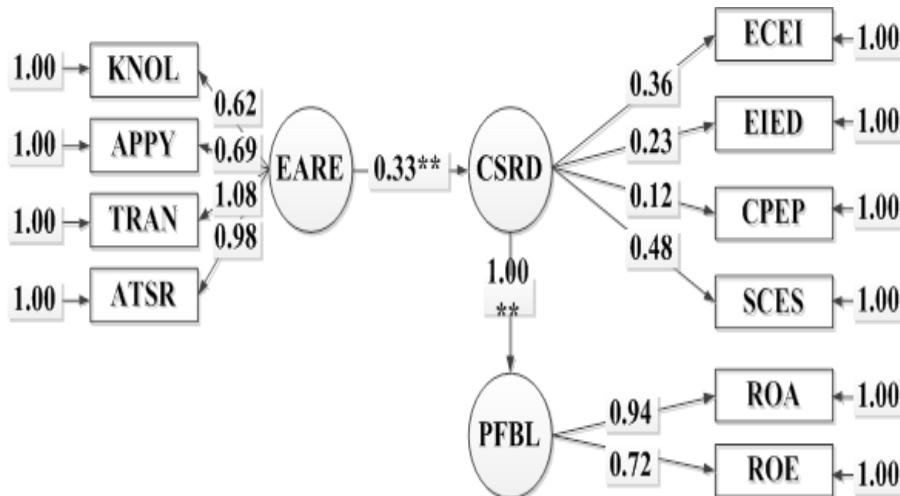
encourages personnel to see importance of environmental development (EIED), the company promotes environmental performance in a transparent manner (CPEP), and the company has set a concrete environmental standard (SCES). The findings revealed that the company encourages people to collaborate on environmental issues (ECEI) was the most important, followed by the company promotes environmental performance in a transparent manner (CPEP), the company has set a concrete environmental standard (SCES), and the company encourages personnel to see importance of environmental development (EIED) respectively.

Table 4 Confirmatory factory analysis of variables in profitability

Variables	Factor			R^2
	b	SE	t	
ROA	1.00	-	-	1.00
ROE	0.12	0.03	2.42	0.01

$\chi^2 = 0.00$, df = 0, p-value = 1.00, RMSEA = 0.00

Note: |t| > 1.96 means that $p < .05$; |t| > 2.58 means that $p < .01$



Chi-Square=24.41, df=21, P-value=0.27353, RMSEA=0.033

Figure 2 the analysis results of measurement model

Table 5 Result of Direction of Influence Analysis

Dependent variables	CSRD			PFBL		
Independent variables	TE	DE	IE	TE	DE	IE
EARE	0.33** (0.11)	0.33** (0.11)	-	-	-	-
PFBL	-	-		1.00** (0.32)	1.00** (0.32)	-

$\chi^2 = 24.41$, df = 21, $\chi^2/2 = 1.16$, p-value = 0.27, RMSEA = 0.033

Note: p* < .05; p** < .01, Total effect (TE), direct effect, (DE), indirect effect (IE)

The analysis results of the measurement model with confirmatory factor analysis of variables in profitability (PFBL) indicated that the model was consistent with the empirical data after model modification without cutting out any indicators. The Chi-square statistical test result was 0.00, the statistical probability (p) was 1.00, degree of freedom (df) was 0, RMSEA was 0.00, SRMR was 0.00, GFI was 1.00, CFI was 1.00, and AGFI was 1.00.

In other words, profitability was composed of 2 elements; return on assets (ROA) and return

on equity (ROE). The findings revealed that return on assets (ROA) was the most important, followed by return of equity (ROE).

Table 6 Hypothesis testing results

Hypothesis	Testing results	
	Hypothesis	Direction
H1: Environmental accountant's ability to recognize environmental items had direct positive impact on corporate social responsibility reporting	Accept	+**
H2: Corporate social responsibility reporting had direct positive impact on profitability.	Accept	+**

Conclusions

Based on the study results, it can be concluded that environmental accountants' ability can enhance opportunity of companies to disclose corporate social responsibility to public more and more as corporate social responsibility disclosure can help companies improve profitability. Regarding the study results, it can be noticed that a company should give importance on recruiting accountants how have unit of knowledge and ability because competent accountants can help a company obtain correct and reliable information as marginal benefit. It is also found that performing social responsibility activities and disclosure in a suitable degree can help a company enhance profitability in a reliable manner.

Research Discussion

The research study about the causal relationship of environmental accountants' ability to recognize environmental items that has impact on corporate social responsibility disclosure and profitability of the listed companies in the Stock Exchange of Thailand indicated that environmental accountants' ability had a direct positive impact on corporate social responsibility disclosure which consistent with the research study conducted by Bouten & Hooze (2013) who found that accounting practices for environmental management would have influence on establishing a green organization. Namely, when an accountant performs accounting practices to efficiently manage environment would have a positive impact on environmental corporate social responsibility report to public in a suitable manner. While Ferreira et al (2010) found that environmental accounting practices could help a company learn about environmental effect on different activities in a positive direction with process innovation that lead to organization sustainability. Singh, Jain & Sharma (2015) found that accounting practices for environmental management had a positive impact from motivation and a company expected that the environmental management accounting practices could bring competitive ability which nowadays such of this component results in sustainability report. This study also reveals that when a company discloses more environmental information, it can enhance opportunity of a company to improve its profitability. This study result is consistent with that of Tilt (2006) who found that the higher degree of company's strict policy towards corporate social responsibility could enhance company performance accordingly.

Suggestions

Suggestions for practical implications

1. A company should give importance to recruiting competent accountants so as to acquire reliable information.
2. A company should disclose corporate social responsibility information according to the

length and degree that accountants provide so that stakeholders can use the information for their decision-making. Corporate social responsibility disclosure can improve company profitability.

Suggestions for further research

1. Further research should be conducted to use this conceptual framework with population who are the companies listed in foreign stock exchange to confirm research results.
2. Further research should be conducted by using this conceptual framework with population who are the listed companies in MAI group in the Stock Exchange of Thailand to confirm research results and expansion of research results.
3. Further research should be conducted on expansion of the cost of environmental accounting that has effect on profitability and corporate social responsibility disclosure.

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