



Business Strategies and Firm Approach to the Natural Environment: Case of Indonesia

Dian Ekowati^{a,*}

^a *Department of Management, Faculty of Economics, Airlangga University, Indonesia*

Abstract

The issue of natural environment has attracted serious concerns from the world business people and became a crucial part of international trade issues. Therefore, companies which intend to enter into global trade, are challenged to comprehend relationships between pollution prevention, ISO 14000 program, government regulations, environmental performances, and work opportunities. In addition to this, a lot of environmental violation cases in Indonesia indicate that there are only a few companies have environmental concerns. This is not only because of company negligence on environmental problems but also because of lack of law enforcement from the government. In order to avoid these problems, companies have to realize that they must consider natural environment as a potential aspect to enhance their competitive advantages. Related to those issues, companies need to adopt approaches to face strategic, structural, and contextual problems which one of those is environmental problem (Aragon-Correa, 1998). Aragon-Correa (1998) provides a solution alternative by attaching natural environment issue with a proactive view as a consideration in changing firm's strategic model. In his research, Aragon-Correa (1998) argues that there is a relationship between business strategy proactivity with firm approach to the natural environment. A strategy application itself could influence firm's viewpoint in having approach to the natural environment. Moreover, business strategy tendencies correlate with company's objective achievement (Porter, 1980). This research aims to analyze relationships between business strategy and firm approach to the natural environment. Besides that, this study also intends to examine whether industrial differences influence on firm approach to the natural environment. This study employed Hierarchical Regression Analysis to answer question on whether there is any relationships between business strategy and firm approach to the natural environment. It can be concluded that the scale of the organizations can be perceived as a significant factor in shaping the relationship between business strategies and firms' approach to the natural environment especially with traditional environmental operations approach. However, it should be noted that the process of accommodating natural environmental aspects into management function would not only be determined by organization scale but also by company's business strategy. This result was aligned with study by Aragon-Correa (1998) on business strategies proactivity and firm approach to the natural environment. Related to business strategies issues, it seems that factor significantly affecting firm intention to pursue approaches to the natural environment was differentiation business strategy. By focusing on cost leadership business strategies, firms are more possible to minimize their social responsibilities toward natural environment and assume that natural management practices will be a costly effort. It can be understood as firms with tendency to conduct cost leadership strategy will be more sensitive to the effect of price changes of the product that make them more cautious in financial related decision making related to their operational activities. However, companies should also consider that there was an increasing level of customers' awareness toward how companies should conduct their businesses. This would relate to the notion of company social responsibility toward its environment and its contribution to balance the interest of financial profit consideration with sustainable environmental protection as public and social issue. Furthermore, although this study was not aimed to find the causes of the differences, result of ANOVA test revealed that there were differences in firms' approaches to the natural environment based on the industrial typology. This result supported Aragon-Correa's (1998) that the typology of industry should be involved to determined whether there are significant differences in the green management practices across industries.

Keywords: Environmental management; Approach to the natural environment; Business strategies; Industrial typology

1. Introduction

Globalization has brought about issues such as human rights, democratization, and natural environments issues. Along with the decreasing quality of the environment, the increasing level of public awareness toward natural environment conservation results in the numerous environment related actions and campaigns. These actions are also affecting on how today's business organizations conducts

their business operations. Iwami (2001) stated that although successfully performed, the development of economic was come together with various problems, such as environmental degradation issue. Moreover, Iwami (2001) quoted an example of Southeast Asian countries that experienced remarkable economic growth until the outbreak of the currency around 1997-1998, while at the same time, these countries were criticized that their natural and living environment has been seriously damaged. Aligned with this, Chavan (2005) stated that "although the causes of environmental degradation are well known, the business logic for environmental improvement has been largely

* Corresponding Author. E-mail: d.ekowati@fe.unair.ac.id, didien_e@yahoo.com

operational and technical. Few firms have incorporated sustainability into their strategic thinking.” In Indonesia, numerous cases of natural environment violations represented the facts that there were only small numbers of companies that concerned about natural environment. This lack of concern might not only be results from companies’ ignorance toward environmental issues but also because lack of law enforcements from the government.

Related to this condition, Greeno (1994) stated that natural environment creates driving forces that are able to influence organization in reshaping its strategies competitive advantages. Such driving forces are potential punishment, financial liabilities (fines and cleanup cost), as well as the decreasing company’s reputation because of rules breaching and natural environmental crisis (Greeno, 1994). Related to this, some authors (Aragon-Correa, 1998, Buzzelli, 1991; Greeno and Robinson, 1992; Newman and Breeden, 1992) argued that organization need to implement or adopt consistent approach in facing strategic, structural, and contextual problems, such as natural environment problem.

The question of whether companies’ concern on environmental issue has become an integral part of companies’ strategies and policies is crucial considering that there are not many organizations really implement the philosophy of “*environmentally friendly*” in their operations. This creates an issue of relationship between business strategies and firm approach to the natural environment. A number of studies have addressed that the environmental issues has become a key determinant of their bottom line and performance in the marketplace (Henrique and Sadorsky, 1999; Banerjee 1998; Berry and Rondinelli, 1998; Hutchinson and Hutchinson, 1997; Petts, Herd, and O’Heocha, 1998; Gullifer, 1999). Specifically, study by Aragon-Correa (1998) showed positive relationship of strategic proactivity and firm approach to the natural environment. From this background, this study tried to explore relationships between business strategy and firm approach to the natural environment.

Meanwhile, characteristics of companies in certain industry are potentially different from other industries. The differences of character might influence incumbent companies’ attitude and behaviors toward certain competitive issues, such as its business strategies, as well as green management practices. Aragon-Correa (1998) stated that industrial characteristics relates to companies’ business strategies proactivity and firm approach to the natural environment. Thus, based on these thinking, this research would like to explore whether there are differences of firm approach to the natural environment across industries.

2. Literature Reviews and Research Questions

2.1 Firms’ Approach to the Natural Environment

In the study conducted by Isnaini (2000), the main considerations of Indonesian companies’ responds toward natural environment have been about compliance to government regulations and policies. According to Buchholz (1998), “most environmental problems cannot be responded to in a market economy. Where there is no money to be made, incentives are lacking. If any one company in a given industry does choose to clean up its environmental problems, it will only place itself at a competitive disadvantage, because those cost will have to be reflected somewhere, most likely in the price of its product.” Buchholz (1998) also stated that unless economic incentives are built into the problem, companies have no incentive to deal with environmental problems unless forced to do so by laws and regulations. It can be seen that organizations’ strategic choices toward natural environment have been also shaped based on this reason. This reflects the differences in firms’ responsibilities between those companies that set their responsibilities based on the rules and companies with respects to social obligation and motivation to preserve the environment (Friedman, 1962).

Referring to table 1, related to the organizations’ social responsibilities to the natural environment, Roome (1994) provided an *Excellence Model*. This model was based on the organizational change to transform and establish organizational culture that lead to “*sustainability ethic*” along with improvements on efficiency and effectiveness of organizations’ operations in an integrated natural environment system.

Roome (1994) developed a model of environmental strategies postures that reflects a continuum ranging from the most reactive posture to the most proactive one. The latest development from Roome’s classification comprises of five categories of environmental management postures, which are:

1. *Non-Compliance*. Organizations in this category is usually cost-constrained and cannot react (or choose not to react) in changing environmental standards (Henriques and Sadorsky, 1999).

Table 1. Environmental Strategies and Organizational Change

	Excellence	Compliance Plus	Compliance
<i>First Order</i>			
Techniques and greener technology	x	X	x
<i>Second Order</i>			
Management System and Structures	x	x	
<i>Third Order</i>			
Organization and Individual Values/Culture	x		

Source: Roome (1994)

2. *Compliance*. In this category, organizations positively react to rules or public pressures. Furthermore, organizations are not in the position of using the environmental issues to develop their competitive advantages (Henriques and Sadorsky, 1999). Related to this notion, Bonifant, Anold, and Long (1995) argued that companies might be able to build their competitive advantages by doing some investments in environmental management practices.

3. *Compliance-Plus*. This category reflects organizations' proactive position in implementing environmental management. Compared to compliance category, this category indicates company's willingness to support organizational change (Henriques and Sadorsky, 1999). *Compliance-plus* category represents companies that not only comply with rules but also have their own environmental management systems.

4. *Commercial and Natural Environment Excellence*. This category comprises of companies that systematically implementing preventive methods based on the *Total Quality Management* (TQM) principles in all of companies' managerial and environmental management practices (Aragon-Correa, 1998). Berry and Rondinelli (1998, as cited in Huang, 2005) argued that "environmental management requires strategies to reduce waste and pollution by predicting the environmental impact of operations in order to seek positive ways to enhance the strengths of these industries through total environmental quality management". Quoted the study of Berry and Rondinelli (1998) and Hanna and Newman (1995), companies such as 3M, Kodak, Sony, Alcoa, Volvo, Procter & Gamble have adopted total quality environmental management. These companies aimed to improve their competitive status in order to convince their external stakeholders that they are models of environmental excellence.

5. *Leading Edge*. This category represents companies with postures that lead to future development (Aragon-Correa, 1998). Moreover, along with the fourth category, this category also views environmental management as good management practices and companies try to become the leader of environmental management practices in their related industries (Henriques and Sadorsky, 1999).

Post (1994) provided approaches that guide environmental management in most industrialized nations as shown in table 2. The first approach, which is government regulation, was based on the logical thinking that government can control the environmental management practices in many ways such as imposing tight standard of the environmental practices. The second approach relates to the market incentives, was based on a popular theme in the environmental politics that is "the polluters pays" principles, which means that organizations that

generate pollution and waste must pay fees or fines to the government as cost of doing business in the related industry. This approach was subject to criticism because the polluters' pays principle will make it easier for organizations in generating pollutions and environmental waste. An example for incentive type mechanism was the use of deposit refund systems to recapture CFCs in refrigerator coils (Kahn, 1995). The third approach is education-oriented that was based on the thinking that people tend to conduct responsible actions if they have knowledge and information about environmental issues, or, in the other words, if they have enough education.

There were other authors providing classifications on firm approaches to the natural management, such as Hunt and Auster (1990) with five categories, which are (1) Beginner, (2) Firefighter, (3) Concerned Citizens, (4) Pragmatist, and (5) Proactivist. Other authors approach.

This matter with social responsibilities, such as Carrol (1979) and Wartick and Cochran (1985). Wartick and Cochran (1985) categorized companies based on their social-ecological responsibilities into four different categories, which are (1) Reactive, (2) Defensive, (3) Accommodative, and (4) Proactive. Table 3 is the summary of conceptual classification of firm approaches to the natural environment (Henriques and Sadorsky, 1999).

2.2 Business Strategies of the Organizations

Every organization has its own strategies, which are needed to stay in the industry and win the competition. According to David (1999), "Strategy is sometimes defined as the match an organization makes between its internal resources and skills and the opportunities and risks created by its external forces". For this purpose, the strategy implemented by the organization might be dif-

Table 2. Approaches to Environmental Management

Government Regulation	Market Incentives	Education – Orientation
Pollution is an externality problem	"carrots" are more effective than "sticks"	People will act in environmentally responsible ways if educated
Government must set rules for all to follow	Incentive systems can be treated within regulatory frameworks	Knowledge and information are the key tools to changing behavior
Approaches		
<ul style="list-style-type: none"> Set quality standards Set emissions standards Bubbles and other aggregate concepts Pollution taxes 	<ul style="list-style-type: none"> Pollution charges Carbon taxes on fuel use Buying and selling pollution rights 	<ul style="list-style-type: none"> Right-to-know information programs Green seals, ecologos, or other designations of preferred products Environmental awards, citations, or other recognitions

Source: Post (1994)

Table 3. Conceptual Classification of Firm Approaches to the Natural Environment

Environmental Management Literatures		Social Responsibilities Literatures	Characteristics
Roome (1994)	Hunt and Auster (1990)	Wartick and Cochran (1985); Carrol (1979)	
Non Compliance	Beginner	Reactive	<ul style="list-style-type: none"> ▪ No support or top management involvement ▪ Environmental management is not important ▪ No reports on environmental management practices ▪ No trainings on environmental training and employees involvement in environmental management practices
Compliance	Firefighter	Defensive	<ul style="list-style-type: none"> ▪ There is a limited top management involvement in the issues. ▪ Environmental issues are only concerned if the organization thinks that it is necessary ▪ Only tries to comply to environmental rules and policies ▪ Only small numbers of employees involve and join environmental trainings.
Compliance Plus	Concerned Citizen	Accommodative	<ul style="list-style-type: none"> ▪ There are increasing numbers of top management involvement ▪ Environmental management is perceived as part of organizational functions ▪ There is internal reporting mechanism, but the external one is limited ▪ Some of the employees involve and join environmental trainings
Commercial and Natural Environmental Excellence	Pragmatist	Proactive	<ul style="list-style-type: none"> ▪ There are top management supports and involvement in the environmental issues ▪ Environmental management is perceived an important business function ▪ There are external and internal reporting mechanisms ▪ Employees are encouraged to involve and join environmental trainings.
Leading Edge	Proactivist		

Source: Henriques and Sadorsky (1999).

ferent and unique from one to another. Business strategy can be offensive or defensive in nature, but both are aimed to sustain organizations’ strategic position in the industry as well as to face forces that shape the intensity of competition, which are *suppliers, potential entrants, industry competitors, buyers, and substitutes* (Porter, 1980).

This condition requires organizations to put more effort in constructing their business strategy competently. Then, organization’s business strategies are used to be guidelines in forming organization’s functional strategies, such as marketing, finance, operation, and human resource development. The business strategies categories are adopted from Porter’s generic strategies, which are differentiation, or innovation strategy, focus or quality enhancement strategy, and cost leadership or cost reduction strategy. The application of each strategy highly depends on the nature of business environment (Morgan, 1997), the nature of competition and customers’ characteristics and interest (Schuler & Jackson, 1987).

The first type of strategy is differentiation or innovation strategy. Differentiation or innovation strategy focuses on the ability of organization to develop product or service different from those of competitors (Schuler & Jackson, 1987; Wheelen & Hunger, 2000). It means that organizations should search for ways to differentiate its products and provide “uniqueness” of products/service to their customers, which can be design, technology, features, or customer service. According to Porter (1980), differentiation is “a viable strategy for earning above-average returns in an industry because it creates a defensible position for coping with the competitive forces”. This type of strategy will enable organization to win the competition because the uniqueness of its product will lead to brand loyalty from its customers with low price-sensitivity and in turn, will create a barrier to entry for its competitors (Porter, 1980; Wheelen & Hunger, 2000). Common organizational requirements for this strategy to work are strong coordination among functions in the organization . It need “subjective measurement and incentives” as well as facilities to attract, retain, and sustain good quality people in the organizations (Porter, 1980)

Table 4. Porter’s Generic Strategies

	Strategic Advantage	
	Uniqueness Perceived by the Customer	Low Cost Position
Strategic Target	Industry wide	Overall Cost Leadership
	Particular Segment Only	Focus

Source: Porter (1980)

The second type of generic strategy is cost reduction strategy, in which organizations try to achieve their competitive advantage by designing, manufacturing, and distributing a comparable product/service more efficiently than its competitors do (Wheelen & Hunger, 2000). According to Porter (1980), this strategy was quite popular in the era of 1970 in the light of the concept of experience curve. Furthermore, according to Porter (1980), this type of strategy requires “aggressive construction of efficient-scale facilities, vigorous pursuit of

cost reduction from experience, tight cost and overhead control, avoidance of marginal customer accounts, and also cost minimization in areas like R&D, service, sales force, and so on". However, it should be noted that having this type of strategy, would not mean that organizations ignore the quality of the products or services they provide. Besides having an advantage of low cost position in the industry, this strategy requires "favorable access" to physical resources and adequate capital abilities (Porter, 1980). As for this strategy, the implementation of this strategy would require tight cost control in every aspect of the organization, frequent control mechanisms, as well as incentives that are based on quantitative targets (Porter, 1980)

The third type of strategy is focus or quality enhancement strategy, which is a strategy of enhancing product and/or service quality (Schuler & Jackson, 1987). This type of strategy is almost similar with the innovation strategy. The difference is on the focus on the uniqueness of quality enhancement while on the innovation strategy the focus is on the uniqueness of products' features that can take any forms, such as focusing on particular customer group as well as geographic markets. This strategy is based on the premise that organization will be able to fulfill certain strategic targets if more effectively and efficiently compared to companies with broader scope of targets (Porter, 1980). For the result, organization might be able to gain better ability to achieve certain target through differentiation, or, reduce its cost of production in serving its target market, or gaining both advantages (Porter, 1980).

2.3 The Relationship between Business Strategy and Firms' Approach to the Natural Environment

Related to the notion of relationship between business strategy and firms' approach to the natural environment, Aragon-Correa (1998) provided evidence that there is a relationship between firm approaches to the natural environment with business strategy proactivity. While this research is going to employ Porter's Generic Strategy, Aragon-Correa (1998) used Miles and Snow's typology of strategy. The typology of strategy proposed by Miles and Snow (1978) are quite similar in characteristics with Porter's Generic Strategy (1980). According to Miles and Snow (1978), business strategy is comprised of three dimensions, which are *entrepreneurial*, *engineering*, and *administration* (Aragon-Correa, 1998). The dimension of entrepreneurship refers to the choices of products, markets, and means of competition (Miles and Snow, 1978). Reengineering dimension refers to the employability of technology to develop organizational competitiveness (Miles and Snow, 1978 as cited in Aragon-Correa, 1998). Each dimension is a continuum ranging from the most proactive strategy (prospector) to the most reactive one (defender).

According to Miles and Snow (1978, as cited in Aragon-Correa, 1998), prospector analyses all aspects of organizational context and grow by developing new products and markets (Aragon-Correa, 1998). The characteristic of prospector is aligned with the characteristics of Porter's differentiation strategy. Moreover, prospector is more able to apply all capabilities in modifying its products and market for the reason of natural environment (Aragon-Correa, 1998). By considering that similar characteristics of prospector and differentiation strategy, it is possible to assume that companies with differentiation strategy tend to be able to concern about natural environment issues rather than companies with cost leadership strategy.

The defender's focus is on solving engineering problem by looking at ways of how to produce and distribute goods or services as efficiently as possible through highly cost-efficient core technology and highly efficient administrative systems (Miles & Snow, 1978 in Jusoh, Ibrahim, and Zainuddin, 2006). Moreover, Walker and Ruekert (1987, as cited in Jusoh, et al, 2006) stated that the focus of defender is on close attention to operational details resulted in low cost, which include robust consideration of cost economies and productivity improvements through standardization of components and processes, routinization of procedures and the integration of functional activities across business units. Defenders seem to focus on measures related to cost control, price-cutting, capacity utilization, and production efficiency (Miller, 1991). Moreover, Aragon-Correa (1998) stated that defender might conduct natural environment-oriented improvement on its technological process to reduce cost and improve its efficiency, but prospector will be more likely to achieve the objective of natural environment from the perspectives of technology and production. With the focus on cost reduction, the characteristics of defender are quite alike with Porter's cost leadership strategy.

Meanwhile, the third strategy-structure configuration, the analyzed, pursues an intermediate strategy, which combines aspects of the defender and prospector strategies (Bedeian and Zammuto, 1991). "The analyzer attempts to maintain a stable, limited line of products or services, while at the same time moving out quickly to follow a carefully selected set of the more promising new developments in the industry. The organization is seldom "first in" with new products or services. However, by carefully monitoring the actions of major competitors in the areas compatible with its stable product-market base, the organization can frequently be "second in" with a more cost efficient product or service" (Miles and Snow, 1978 as cited in Bedeian and Zammuto, 1991).

Based on those discussions, this research will try to answer the first questions of whether there is a significant

relationship between business strategy and firm approach to the natural environment.

2.4 The Differences of Industrial Typology

In a broad sense, the environment is infinite and includes everything outside the organization (Daft, 2004). Furthermore, Daft (2004) defined organizational environment as “all elements that exist outside the boundary of the organization and have the potential to affect all or part of the organization”. One of the types of environment that directly affect the organization is called as task environment (Daft, 2004). According to Daft (2004), “Task environment includes sectors with which the organization interacts directly and that have a direct impact on the organization’s ability to achieve its goals. The task environment typically includes the industry raw materials, and market sectors and perhaps the human resources and international sectors”.

Both industry and organization have capacity to influence each other. Industry can affect the behaviors of an organization because each industry requires different arrangements as there are differences in customer’s characteristics, product behaviors, and many other characteristics. In turn, organization –at certain point—can also affect the pattern of competition in the industry, and will certainly affect the industry composition. Porter (1980) gives special attention on the analysis process of competitors and industry in term on business strategy development. Thus, the industry and its characteristics are important aspects in the strategic analysis process (Porter, 1980). Moreover, Porter (1980) stated that each industry has its own degree of competition, which thus, the analysis cannot be assumed to be in similar conditions across industries.

Related to natural environmental aspect, the industrial differences have been given some concerns. Huang (2005) based on study by Gladwin, Kennelly and Krause (1995), Hart (1995), and Shrivastava (1994) stated that “traditionally, organizational theorists have regarded the environment from social, economic, political and technological perspectives, neglecting the interaction between natural environment and industrial organization. Moreover, Kao (1994, as cited in Huang, 2005) stated that this condition is now changing, as public is increasingly placing an ever greater emphasis on environmental issues that “hardly group dares to publicly oppose the topic of natural conservation and environmental protection”. Related to the differences in industrial characteristics, firm approach in the natural environment might be different from the organization in the certain industry with the one in other industries. In South East Asian, agriculture sector occupies a major part of the economy in these countries, the growth of the agricultural sector, namely food production, is a key in the development strategies. Iwami (2001) quoted the result of study by Egaitu (1994) which stated that agri-

cultural activities are closely combined with environmental degradation as large amounts of fertilizer and cattle breeding pollute soil and underground. Moreover, Iwami (2001) stated that although modernizing the traditional agricultural technique such as the slush-and-burn farming in Indonesia will help to preserve the tropical forests, Southeast Asia as a whole seems to be facing a problem of preserving the natural environment, because of its success in raising productivity. On the other hand, manufacturing industry might face different problems that need different solutions. For that purpose, this research would like to represent the industrial differences in the research model.

Greeno (1994) stated that driving *forces* that come from natural environment (*environmental driving forces*) influence the endeavour of the organization to reshape its strategy and business competitive advantages. According to Greeno (1994), such environmental driving forces are “the threat of significant legal and financial liability and resulting loss of personal or corporate reputation – as the result of regulatory infringements, or a major environmental, health, and safety cost”. Another thing that might occur as environmental driving force is the growing pressure of regulations on the company, and the cost resulted from complying with related regulations (Greeno, 1994). It means that if government regulations become more rigorous, organization is required to commit to more stringer standards, and thus, the level of compliance is higher, which result in higher compliance cost. Furthermore, intense public and media attention toward organization environmental policies as well as corporate environmental, health, and safety (EHS) posture vis-à-vis the competition are also becoming more crucial matters of consideration in reshaping organization’s business strategy. Related to this notion, Henriques and Sadorsky (1996) argued that environmental plans of the organization are positively influenced by pressures from customer, shareholder, government regulatory, neighborhood, and community group. These pressures might not be similar in one industry to the other. Aligned with Henriques and Sadorsky (1996), Lawrence and Morell (1995) argued that there are five factors that motivate organization in conducting proactive environmental management practices (regulations, competitive advantages, stakeholders’ pressures, critical event, and pressures from top management). Moreover, Lawrence and Morell (1995, in Henriques and Sadorsky, 1999) also developed a MORP model (*motivation, opportunity, and resources, process*) as a determinant of the natural environmental management practices.

Based on those discussions, this research tried to answer the second questions on whether there is an impact of the industrial differences across industry on the firm approach to the natural environment in Indonesia’s cases.

3. Research Methods

3.1 Subjects

The research questionnaires were comprised of two parts. The first part was about firm approach to the natural environment. This part employed the principle of *Subject Matter Expert* (SMEs), so that it was aimed to that in-charge and be competent in the area of environmental management (such as environment manager) as the questionnaire's items were about organization's policies on environmental management practices, both operationally and strategically. Thus, the questionnaires handling by using *Subject Matter Expert* was expected to be able to reduce the comprehension bias that could be happened if competent individual in organization fulfilled this questionnaire. This research found out that some companies did not have a separated division or a department that was in-charge of environmental management practices, or in other cases, although some of the companies had environmental management divisions/departments, yet, those divisions were not separately structured. Items used in the questionnaires for the firm approach to the natural environment were adopted from Aragon-Correa (1998) and was elaborated with several items developed by Handoko et al., (1997).

The second part of the questionnaires was about company's business strategies. It is believed that each of the companies would have its own strategy that is perceived to be fitted with its characteristics of competition. In this research, the nature of the questions was only showing a tendency of the strategy employed in the company. This was based on the thinking that there might be no companies that employing only one business strategy in conducting its operational activities. This part was intended to be fulfilled by top management level of the organization to reduce bias on the fulfillment of data. Items of the questionnaire that deal with business strategy of the companies were adopted from Porter (1980).

For the industrial differences, Aragon-Correa (1998) argues that each industry has its own characteristics that might affect firm's approach to the natural environment. Based on this thinking, this research employed the industrial differences by using industry classification index from Bureau of Statistics. The industry was categorized into 11 sub industries, which were consisted of nine manufacturing industries and 2 non-manufacturing industries as shown in the table 5. As for non-manufacturing industry, based on general technical justification, this industry is categorized into two types of industries, which are financial and non-financial industry.

The firm size is also considered as an important factor. At this research, firm size is functioned as a control variable that might represent capabilities of the firm to conduct approach to the natural environment.

Table 5. Classification of Indonesian Manufacturing Industries

Manufacturing Industries
Food, beverages, and tobacco
Textile, Garment, and Leather
Wood, Bamboo, Rattan, Willow, and kinds, including furniture
Paper and Paper product, printings, and publishing
Chemical material, oil, coal, rubber, and plastic product
Non Metal Minerals, except oil product and coal
Basic Metal
Metal Product Manufacturing, Machinery, and Tools
Other Manufacturing

Source: Indonesian Bureau of Statistic

3.2 Model Development

The value of the firm approach to the natural environment was developed from the result of factor analysis. At this research, this variable was functioned as a dependent variable that was hypothesized to be influenced by business strategies and firm size. In this research, it was assumed that company would not only pursue one exact strategies, company might combine its strategy to fit with its environment. However, each company might have a tendency to focus more on one strategy compare to the other. This research used two types of business strategies, which are cost leadership strategy and differentiation strategy (Porter, 1980). Both strategies were included in the model as independent variables.

Meanwhile, this research also employed a control variable, which was firm size. The justification to include this variable was based on the study by Aragon-Correa (1998) that also used firm size as a control variable in the research. This research employed firm size classification as shown in table 6.

Table 6. The Classification of Firm Size

No.	Scale of Organization	Number of Employees
1.	Small Scale Enterprises	0-500 employees
2.	Medium Scale Enterprises	501-1000 employees
3.	Large Scale Enterprises	More than 1000 employees

Based on those thinking, model developed for this research can be presented in two equations, as follows:

$$\text{Step 1: } FA_n = \alpha + \beta_n FS \quad (1)$$

$$\text{Step 2: } FA_n = \alpha + \beta_n FS + \beta_n DF + \beta_n CL \quad (2)$$

In which:

- FA_n is firm approach to the natural environment based on n factor
- DF is firm's differentiation business strategies
- CL is firm's cost leadership business strategies
- FS is Firm Size

3.3 Methods of Analysis

For initial step, this research employed factor analysis device that was aimed to find a way of condensing the information contained in a number of original variables

into a smaller set of variates (factors) with a minimum loss of information (Hair, Anderson, Tatham, and Black, 1998). Data in factor analysis should have the characteristics of normal bivariate distribution for each pair of variable with independent observation (Hair et al., 1998). Besides, it is assumed that tested factors do not correlate one another as well as do not correlate with its common factor. This factor analysis was conducted as an initial step to explore the relationship between business strategies and firm approach to the natural environment.

Having defined factors for firms approach to the natural environment, the next statistical process was to employ hierarchical regression analysis. This analysis was conducted to control variables that might affect *dependent variable*. In hierarchical regression analysis, besides observing coefficient and its level of significance, this research also monitored the changes in the R² value. If ΔR^2 showed positive result, it means that the independent variables are able to explain the equation variances better than control variable in explaining the variance in the initial equation.

In order to find out the differences of firm approach to the natural environment across industry, ANOVA test was employed. ANOVA was used to test whether means of observations are similar (Cooper and Emory, 1995). The assumption is that sample was randomly selected from population with normal distribution and similar variances (Cooper and Emory, 1995).

3.4 Data Collection

Data used in this research were primary data taken from the companies through questionnaires. Besides primary data on business strategy and firm approach to the natural environment, this research also employed the questionnaires to reveal data on the numbers of employees in the current year. Questionnaires distribution was conducted by employing non-probability sampling to all 800 firms across manufacturing and non-manufacturing industries that were registered in the database of Indonesian go-public companies. This research was only able to get 86 respondents. The final response rate was 10.75 per cent, which was a quite low response rate for survey questionnaires. This might be caused by the fact that the issue of environmental management has been always a sensitive issue for company to be exposed into external parties.

4. Analysis of Data

From 800 questionnaires distributed to companies across industries in Indonesia, total respond rate were only around 10.75 % with only 86 questionnaires can be included in the statistical processes. Related to industrial typology, all industries were represented although were not equally represented in numbers. The category of other manufacturing industry was represented by 22.05% of the respondents while the lowest participation came from

basic metal industry with only one respondent submitting the questionnaire. As for the firm size, it can be noted that 50% of the sample were large-scale enterprises. The numbers of firms based on the organizational size are presented in table 7.

Table 7. Numbers of Firms based on Firm Size

<i>Organizational Size</i>	<i>Numbers of firms</i>
• Small Scale Enterprises	: 32
• Medium Scale Enterprises	: 11
• Large Scale Enterprises	: 43

Table 8. Reliability Test

• Total Questionnaires (36 items, 86 cases)	: 0.9150
• Part 1 - Firms' approach to the natural environment (16 items, 86 cases)	: 0.9343
• Part 2 – Business Strategies (20 items, 86 cases)	: 0.8663

Based on the reliability test showed that the entire Alpha Cronbach's were higher than 0.6, and also supported by the result of validity test showing that all items were valid, it can be stated that all of the items can be included in the next statistical analysis process.

5. Discussion

5.1 Firm Approach to the Natural Environment

Factor analysis was conducted to analyze interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions or factors (Hair et al., 1998). *Standardized varimax rotation* was conducted and resulted in three significant factors with *eigenvalues is bigger than one* which simultaneously explain variance of 67.036%. From the table, it can be seen that 15 variables have *factor loading* greater than 0.50, which means that all of 15 variables are significant.

From the table, it can be seen that factor analysis had resulted in three different factors. For the first column, the highest loading item were B10 (Natural environmental management manual for internal use) and B11 (Filters and controls on emissions and discharges). Other items with high loading value in this column were related to how firm reacts in the basic level. Based on the observation, this factor represented *traditional environmental operations*, which in the environmental management literature is known as *'end pipe solutions'* method. This method would deal with environmental management problem through implementations of procedures and compliance to regulations.

In the second column, the highest loading value were shown by item B3 (Natural environmental aspects in ad-

ministrative work) and B13 (Using recyclable material and component). Items categorized in this second factor besides referring to how companies voluntarily accommodate the natural environment aspects into management function in the organizations, items also represented signs that companies conduct prevention action toward environmental hazards by understanding its sources. Thus, the second factor was named as *modern/voluntarily prevention*.

Table 9. Factor Loading for Items of Firm Approach to the Natural Environment

	Label	Factor 1	Factor 2	Factor 3
B1	Sponsorship of natural environmental events	-0.053	0.154	0.841
B2	Use of natural environmental issues in marketing	0.198	0.679	0.242
B3	Natural environmental aspects in administrative work	0.244	0.745	0.367
B4	Periodic natural environmental audits	0.330	0.266	0.732
B5	Residue/waste recycling	0.435	0.413	0.247
B6	Natural environmental seminars for executives	0.603	0.104	0.618
B7	Natural environmental training for firm's employees	0.641	0.140	0.538
B8	Total quality program with natural environmental aspects	0.384	0.526	0.472
B9	Pollution damage insurance (company willingness to take the responsibility of any environmental impact caused by production activities)	0.602	0.479	0.347
B10	Natural environmental management manual for internal use	0.669	0.413	0.364
B11	Filters and controls on emissions and discharges	0.896	-0.065	0.138
B12	Participation in government-subsidized natural environment programs	0.158	0.459	0.565
B13	Using recyclable material and component	0.120	0.811	0.128
B14	Selecting process to minimize waste/pollution	0.645	0.597	-0.018
B15	Using the environment-friendly technology	0.628	0.595	-0.047
B16	Keeping the workplace and its environment clean	0.517	0.252	0.175
<i>Eigenvalue</i>		8.241	1.289	1.196
Percentages of explained variances		51.504	8.056	7.477

Meanwhile, for the third factor, item B1 (Sponsorship of natural environmental events) and item B4 (Periodic natural environmental audits) represented two of four items with high loading factors. By implementing those kinds of activities, companies might be able to attract public attention about environmental management practices of the companies. These activities were expected to support the effort of the companies to build better public image, especially related to environment conservation. Related to public image building, every company would be eager to have and sustain good images. By having good

reputation, companies would be able to attract more customers. As the companies are able to manage the customers, it would mean that companies are able to deal with one of the driving forces in the industry (Porter, 1980), that in turn, would lead to achieve better competitive position in the industry. Related to this factor, study by International Institute for Sustainable Development (1993, as cited in Hanna and Newman, 1995) stated, "Certainly the voluntary environmental reporting initiatives undertaken by some of the companies discussed in *Coming Clean* are profoundly changing (and raising) society's expectations on corporate disclosure". Moreover, Hanna and Newman (1995) argued that manufacturing organizations would have to become more and more sensitive to these expectations to remain competitive in the years to come. They also stressed that because of this increased customer demand for higher environmental quality, present reactive techniques and in-plant environmental practices centering primarily on compliance are now, or soon will be, outmoded. Table 10 is the summary of the items per factor.

Table 10. Items for Each Factor

Approaches	Items
<i>Traditional Environmental Operation</i>	<ul style="list-style-type: none"> Residue/waste recycling Natural environmental training for firm's employees Pollution damage insurance (company willingness to take the responsibility of any environmental impact caused by production activities) Natural environmental management manual for internal use Filters and controls on emissions and discharges Selecting process to minimize waste/pollution Using the environment-friendly technology Keeping the workplace and its environment clean
<i>Modern / Voluntary Prevention</i>	<ul style="list-style-type: none"> Use of natural environmental issues in marketing Natural environmental aspects in administrative work Total quality program with natural environmental aspects Using recyclable material and component
<i>Green Image Building / Information)</i>	<ul style="list-style-type: none"> Natural environmental seminars for executives Sponsorship of natural environmental events Periodic natural environmental audits Participation in government-subsidized natural environment programs

5.2 Relationship between Business Strategies and Firm Approach to the Natural Environment

As firm approach to the natural environment has been found to have three factors, the next stage of analysis was to find out the correlation between business strategies and firm approach to the natural environment. The result of the correlation analysis is presented in Table 11 as follow.

Table 11. Correlation Analysis for Business Strategies and Firms' Approach to the Natural Environment

		CL	DF	TEO	MVP	IBI
Cost Leadership	Corr	1,000				
	Sig	.				
	N	86				
Differentiation	Corr	0,434	1,000			
	Sig	0,000	.			
	N	86	86			
Traditional Environmental Operations	Corr	0,318	0,394	1,000		
	Sig	0,003	0,000	.		
	N	86	86	86		
Modern/Voluntary Prevention	Corr	0,175	0,347	0,714	1,000	
	Sig	0,106	0,001	0,000	.	
	N	86	86	86	86	
Image Building/Information	Corr	0,205	0,249	0,676	0,587	1,000
	Sig	0,059	0,021	0,000	0,000	.
	N	86	86	86	86	86

Based on the table, it can be seen that there were some significant correlations between business strategies and firm approach to the natural environment. The correlation between cost leadership strategy with traditional environmental operation was significant (0.318; $p < 0.01$). This result was aligned with the implication of Porter's generic strategies. Porter (1980) argued that companies with cost leadership strategy tend to be prudent in taking actions related to operational expenditures. It would mean that companies with tendency to conduct cost leadership strategy would pay more attention to posts/departments that are subject to potentially high expenditures. Thus, it can be understood that is why cost leadership strategy only correlated positively with traditional environmental management practices, which tend to fulfill internal interest of the company. Moreover, Porter (1980) also stated that companies with this type of strategy also focus on capabilities to conduct process engineering. At this case, process reengineering can be represented by items in the first approach such as selecting process that minimize waste or pollution, using environmentally friendly technology, as well as conducting filtering and controlling on emission and waste.

The correlation result also showed that differentiation strategy correlated positively with all of firms' approaches to the natural environment, which are traditional management operation (0,394; $p < 0.01$), (2) modern/voluntary approach (0,347; $p < 0.01$), and (3) image building/information (0,249; $p < 0.05$). This result was aligned with the notion that companies with differentiation strategies tend to be looser toward cost control. This type of companies would be likely to think more creatively and try to improve companies' capabilities in marketing efforts., conducting product reengineering, improve companies' reputation in quality and of the product and technology as well as intensively conducting horizontal linkage and coordination between R&D divi-

sion, product development division, and marketing division (Porter, 1980).

Besides the fact that this fitted to the traditional management operation, for example by conducting training for employees, this was aligned with modern or voluntary preventive approach and image building/information approach as well. It can be inferred from the positive correlation between differentiation strategies with modern/preventive voluntary approach that companies could take advantages of environmental management issues in companies' marketing endeavors. This is supported by Kotler (1997) argued that differentiation strategy would lead to the development of market niche so that companies with differentiation business strategy would be able to employ natural environmental issues to expand the markets. This positive correlation was also supported by the item of accommodating natural environmental aspect into *total quality program as argued by Porter (1980)* that companies with differentiation business strategy would try to improve and maintain companies' reputations in both quality and technology.

As for the image building/information approach, positive correlation could be represented by the efforts of the companies in conducting or sending executive to join seminars on natural environment as well as being sponsors for activities related to natural environmental conservation. Besides potentially lifting up companies' reputations, these items were expected to be able to attract new customers, especially customers interested or sensitive to green management practices or programs.

5.3 The Impact of Business Strategies on Firm Approach to the Natural Environment

In order to find out how business strategies influencing firm approach to the natural environment, this research employed hierarchical regression analysis. This regression was run in two steps (refer to equation 1 and equation 2). The statistical result of this analysis is presented in table 12.

5.4 General Description

Generally, the result showed that business strategies have impacts on firm approach to the natural environment, although there are differences in significance level. This was quite aligned with the study of Aragon-Correa (1998) that there is a significant relationship between business strategic proactivity with firms' approach to the natural environment. Business organizations do have to include environmental considerations into their strategic planning.

Table 12. Hierarchical Regression Analysis

Variable	Traditional Environmental Operation		Modern/ Voluntary Preventive		Image Building / Information	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Constant	3.405 (p=0.000)	1.574 (p=0.039)	3.538 (p=0.000)	1.868 (p=0.025)	3.159 (p=0.000)	1.559 (p=0.109)
Control Variable: Firm Size	0.521 (p=0.000)	0.333 (p=0.027)	0.258 (p=0.092)	0.088 (p=0.587)	0.295 (p=0.092)	0.131 (p=0.494)
Variable independents						
• Cost Leadership Strategy		0.139 (p=0.320)		0.015 (p=0.918)		0.140 (p=0.434)
• Differentiation Strategy		0.328 (p=0.022)		0.417 (p=0.008)		0.266 (p=0.145)
R²	0.144	0.229	0.034	0.125	0.033	0.079
ΔR²		0.85		0.091		0.046
F	14.124 (p=0.000)	8.127 (p=0.000)	2.914 (p=0.092)	3.893 (p=0.012)	2.950 (p=0.092)	2.340 (p=0.079)

Quazi (2001) stated that to achieve sustainable development, companies need to integrate environmental issues into their strategic planning. Furthermore, Quazi (2001) quoted Tsai and Child (1997) stated that “92 per cent of CEOs and board members agreed that the environment should be one of their top three management priorities. Moreover, 85 per cent of them claimed that one of their major goals should be to integrate environmental considerations into business strategy. Environment issues are forcing many senior corporate executives to rethink how they should conduct their businesses. This process involves not only an evaluation of the environmental impact of existing products and production processes, but also an assessment of environmental liabilities and opportunities”. In this research, the impacts of business strategies on firms’ approach to the natural environment were shown by traditional environmental operation approach and modern/voluntary prevention approach. In this research, it can be shown that differentiation strategy has important role in influencing firm approach to the natural environment.

Related firm size, Aragon-Correa (1998) stated that large organization scale has impact on the relationship between business strategic proactivity and firm approach to the natural environment, especially if traditional approach is employed. This research also revealed the similar relationship. It can be seen that firm size as a control variable had an impact on the relationship between business strategies with traditional environmental operation approach. It can be inferred from that statistical result that this significant relationship would refer to the necessity to integrate natural environmental issue in the organizational contexts. The positive effect of the relationship between business strategies and firm approach to the natural environment would define new potential area of competitive advantages that could be built based on the consistency between business strategies, firms’ approach to the natural environment, and other organizational

characteristics.

5.4.1 Traditional Environmental Operations

Based on the first function in the relationship between business strategies and traditional environmental operations, it can be seen that the coefficient variable of the firm size is 0,521 (p<0.001). It can be inferred from this function that the bigger the organization scale, the more possible for the organization to be able to conduct traditional environmental operations. Traditional environmental operations conducted by the organization can be in forms of its responsibility toward environmental impact resulted from production activities, waste recycling, filtering and controlling emission and *discharges up to the smallest thing, such as keeping the workplace clean*. All of these activities showed that firm would take the reactive actions as part of firm’s responsibility on any impacts resulted from production activities.

The second function on this model showed that traditional environmental operations approach was influenced significantly by firm size (0,333;p<0.05) and differentiation business strategy (0.328;p<0.05) while cost leadership business strategy did not significantly influence the approach. Furthermore, from change in R² (0,085), it shown that independent variables could explain variances in dependent variable of traditional environmental operations approach more than those could be explained by the control variable (firm size at the first function).

Based on the result, it can be inferred that by implementing differentiation strategy, firms would be more likely to think about conducting approach to the natural environment. Meanwhile, firms’ tendency to focus on cost leadership strategy would play no significant impact on how firms should approach the natural environment. By focusing on cost leadership strategy, it was possible for firms to minimize their social responsibility to the environment. According to Porter (1980), firms with cost

leadership strategy have clear expectation for their expenditure posts so that firms' operational cost –which would be a part of product price – could be reduced so that the companies would be able to achieve their competitiveness in the industry.

5.4.2 *Modern / Voluntary Prevention*

In general, for the second approach, modern/voluntary prevention, the result showed that modern/voluntary prevention approach was significantly influenced by firms' focus on differentiation strategy (0.417; $p < 0.01$) while cost leadership strategy was proved not to be significantly influencing modern/voluntarily approach. By focusing on cost leadership strategy, firms would be unlikely to consider their extra roles in sustaining the quality of environment. Things that become primary consideration for cost leadership strategy is how to minimize cost of operations so that firms might be able to compete in the industry based on price. This modern/voluntarily prevention approach requires organization to do several things, such as using materials that can be recycled, employing processes with minimal pollution, as well as using environmentally friendly technology. The consequence of these actions is that the installment cost would be higher that if company choose to have regular technology. As there were no considerations to pursue consideration toward environmental management practice as extra roles, it might explain why there was no significant effect of firm's cost leadership strategy. Moreover, the result of the regression model and t test showed that firm size did not significantly influence firm approach to the natural environment (0.258; $p > 0.05$). Although it can be assumed that the t value was significant at $p < 0.1$, but this would lead to the consequence that the there would be greater bias in the interpretation. In addition, it can be seen from the function that although there were significant change in the value of R² (0.091), the t value showed that firm size did not have significant effect on modern/voluntarily prevention if there was a focus on differentiation strategy in organization. It implied that the accommodation of natural environmental aspect into management function was more determined by firms' ability to choose and take advantages of environmental issues in the strategic operations, such as how to use the environmental issue in the marketing efforts as well as in the administrative works and not by other factors such as firm size. Furthermore, this result might lead to the inference that even small-scale enterprises were able to attract customers through marketing effort using environmental management practices as one of the issues in the promotion or by using total quality program with natural environmental aspects in its operations. Hanna and Newman (1995) quoting the study of Ohio Environmental Protection Agency (1992), stated that "even small operations report impressive benefits from using component that were environmentally friendly, such as City Machine and Wheel Co. of Stow, Ohio which invested \$500,000 on

such a system, with a two-year payback from savings in raw materials, utility costs and productivity gains. The company also gained annual savings of \$52,000 by eliminating the need to dispose of approximately 85,000 pounds of hazardous material." This condition was supported by the fact that customers are now more aware about environment conservation as well as environmental hazard practices than before, thus, customers were more willing to choose and use products that are environmentally friendly. This was aligned with the development of market niche, which any sizes of firms are able to do it (Kotler, 2006). Related to this notion, Kotler (2006) also argued that firms operating in the market niches, usually well comprehend the needs and wants of the customers, that might lead to the condition of which the customers are more willing to pay for the premium prices for the fulfillment of their interest by the firms. Related to company's environmental performance, an integration of environmental and total quality as a part of product management is helping companies reassess environmental performance as a contribution to productivity and innovation (Aboulmaga, 1998).

5.4.3 *Green Image Building / Information*

Similar to the second approach, in the third approach, which is Green Image Building / Information, it can be seen that firm size had an insignificant impact on firm approach to the natural environment (0.295; $p < 0.1$). Furthermore, in this model, both of strategy types did not significantly influence firms approach to the natural environment ($p > 0.1$), yet, these two variables were able to increase the percentage of explained variance (4.6%).

Taken a look at the items of this approach such as natural environmental seminars for executives, sponsorship of natural environmental events, as well as participation in government-subsidized natural environment programs and periodic natural environmental audits, the existences of these activities might not be determined by whether the strategy was differentiation and/or cost leadership.

The similar study on this subject using the same respondents revealed that respondent firms consider the pressure to comply for government regulations as the primary factor that leads them to conduct such approach. In the case of Indonesia for example, companies are subject to government regulations to involve in periodic environmental audit regardless their business strategies (Isnaini, 2000).

6. Analysis on Firms' approach to the Natural Environment Based on Industrial Typologies

This research employed ANOVA test to find out the second question of the research, which is whether there significant differences on firm approach to the natural environment based on the industrial typologies as each

industry, is assumed to have different characteristics from one to another. The statistical result of ANOVA test are comprised of 4 outputs, which are (1) Group Statistic (Descriptive), (2) Test of Homogeneity of Variances, to find out whether all samples are having same variance, (3) Analysis of Variances to find out that samples are having same averages, and (4) Post Hoc Test to find out which groups or subsets that have means with insignificant differences (Hair, et al., 1998).

Table 13. Test of Homogeneity of Variances

Levene Statistic	Df1	df2	Sig.
2.648	10	22	0.027

It can be seen from table 13 that the value of *Levene Test* was 2.648 with probability value of 0.027. It can be inferred that all samples have same variances so that the analysis can be continued to the ANOVA test (refer to table 14).

Table 14. Analysis of Variances (ANOVA)

Analysis of Variances	Sum of squares	df	Mean square	F	Sig.
Between groups	15684.810	10	1568.481	60.521	0.000
Within groups	570.155	22	25.916		
Total	16254.964	32			

Table 14 shows that F value is 60.521 (Sig = 0.000). It can be inferred from that result that there is a significant differences on firms' approach to the natural environment across industries. This result is also supported by the result of Post Hoc Test as shown in the table 15 below.

Table 15. Mean Differences across Industries

	1	2	3	4	5	6	7	8	9	F	N F
1	-	-									
2	-	-	-								
3	-	-	-	-							
4	-	-	-	-	-						
5	-	-	-	-	-	-					
6	-	-	-	-	-	-	-				
7	-	-	-	-	-	-	-	-			
8	-	-	-	-	-	-	-	-	-		
9	-	-	-	-	-	-	-	-	-	-	
F	-	-	-	-	-	-	-	-	-	-	-
NF	-	-	-	-	-	-	-	-	-	-	-

Note:

1. Food, beverages, and tobacco,
2. Textile, Garment, and Leather
3. Wood, Bamboo, Rattan, Willow, and kinds, including furniture
4. Paper and Paper product, printings, and publishing
5. Chemical material, oil, coal, rubber, and plastic product
6. Non Metal Minerals, except oil product and coal
7. Basic Metal
8. Metal Product Manufacturing, Machinery, and Tools
9. Other Manufacturing

10. Financial Sector
11. Non Financial Sector

Based on the homogenous subset table, it can be seen that there were significant differences on firms' approach to the natural environment based on industrial typologies. The differences might be caused by the differences in the perspectives as well as attitudes of the firms in certain industrial groups. Porter (1980) argued that the existences of a firm in an industry is also determined by the industrial environment where the company conducting its strategic operations. The condition of the industrial context also affects how company perceived and set up its competitive strategies. Thus, Porter (1980) implied that company in certain industry will have different perspective on how it manage its environment, both task and general environment. Based on this result, it can be inferred that the differences in industrial characteristics might also affect how company deals with environmental management practices. The level of social pressures in certain industries might not be similar to those in other industries.

7. Conclusion

Based on the analysis, it can be concluded that the scale of the organizations can be perceived as a significant factor in shaping the relationship between business strategies and firms' approach to the natural environment especially with traditional environmental operations approach. However, it should be noted that the process of accommodating natural environmental aspects into management function would not only be determined by organization scale but also by company's business strategy. This result was aligned with study by Aragon-Correa (1998) on relationship between business strategies proactivity and firm approach to the natural environment.

Related to business strategies issues, it seems that factor significantly affecting firm intention to pursue approaches to the natural environment was differentiation business strategy. By focusing on cost leadership business strategies, firms are more possible to minimize their social responsibilities toward natural environment and assume that natural management practices will be a costly effort. It can be understood as firms with tendency to conduct cost leadership strategy will be more sensitive to the effect of price changes of the product that make them more cautious in financial related decision making related to their operational activities. However, companies should also consider that there was an increasing level of customers' awareness toward how companies should conduct their businesses. This would relate to the notion of company social responsibility toward its environment and its contribution to balance the interest of financial profit consideration with sustainable environmental protection as public and social issue. On the other hand, this study also found out that different with tradi-

tional environment management operation, the items of natural environmental management practices that are categorized in the third approach are more about providing information to external parties that aimed to build better company's image. The development of company's green image does not require the importance of organization scale as well as business strategies in its implementation.

Furthermore, although this study was not aimed to find the causes of the differences, result of ANOVA test revealed that there were differences in firms' approaches to the natural environment based on the industrial typology. This result supported Aragon-Correa's (1998) that the typology of industry should be involved to determine whether there are significant differences in the green management practices across industries.

8. Limitations of the Study

This research tried to be as detail as possible to accommodate important variables in the research. However, there were still several limitations of this study. Firstly, the sample size was relatively small that it might not represent the actual condition of natural environment practices. As for the respond rate, the willingness of companies to reveal its practices through the questionnaires was relatively low. This might be caused by the fact that up to today, the natural environment practices and conducts are one of strategic and sensitive issues both for the organizations and for the community. Furthermore, related to result generalization, the comparison of the sample based on organizational scale and industrial typology might not be appropriately represented, which might influence the analysis.

9. Suggestions

Based on the limitations and difficulties found in the study, it might be necessary for the future studies to accommodate broader arrays of data, both primary and secondary. Related to the sample size, it will be better for the future study to broaden the sample size, which will be helpful also to enhance the result representativeness. It will be also beneficial if the future research can manage its sample distributions by employing proportional sampling so that each category will be proportionally represented in all of the industrial typology. It will be also more comprehensive to include other control variables such as the type of company ownerships, from family business up to the most complex ownerships type that can affect how the company set up its business strategy as well as its strategic decision-making.

Related to what should be done by the government, the implementation of sound rules and environmental practices standards should be enforced. It might be beneficial for the government to accommodate the importance of different industrial characteristics in enforcing

the law. Government should build systemic approaches to reduce the tendencies to conduct moral hazard into a more responsible natural environmental management practices. One of the ways to do this is by using market incentive approach. Market incentive approach is based on the environmental politics in natural environment management that is called as "the polluters pays", which means that pollutant producers must pay fines that might be able to be set as severe as possible.

For companies, results showed that focusing on differentiation business strategy tend to give companies greater possibility in conducting approaches to the natural environment. Related to that issue, the changing paradigm of public awareness toward green management practices should be able to change how organizations perceive the business competition. With companies' ability in employing natural environment management issues and integrate them to their business strategies, there will be several advantages for the business. At least, public now are more aware to use and buy environmentally friendly products. By putting some efforts to this issue, companies will be able to enlarge its market. However, in order to implement this, the commitment of top management level to engage and involve in the green management conduct is unquestionably crucial.

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