



A Study of Multinational Companies:  
The Use of Mediation Paradigm on CSR

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### **Abstract**

In this study, the researchers had analyzed how input factors relate to CSR patterns. The finding found that there was no relationship established between input factors and CSR patterns (benefitting community) because responses are constant. CSR Budget and number of years performing CSR relates to the CSR findings (benefitting environment). In addition, when analyzing how the CSR patterns accounted for the effect of input factors to the CSR finding. There was no relationship and mediation established as far as CSR findings (benefitting community) is concern because responses on CSR Patterns (benefitting community) are constant. Number of years rating in Thailand and CSR patterns (benefitting environment) relates significantly to the CSR findings (benefitting environment). Therefore, mediation is tested. CSR patterns (benefitting environment) is a mediator variable as far CSR findings (benefitting community) is concern. Finally, identifying which among the input factors relates to the CSR findings. The research found that number of years performing CSR and CSR budget are the significant factors that relates to CSR findings both benefitting community and environment.

The logo of TNI (Thaichulalongkornrajavidyalaya University) is centered at the bottom of the page. It features the letters 'TNI' in a large, red, serif font. The logo is superimposed on a large, light blue gear-like circular background. The gear has teeth pointing outwards. Inside the gear, the text 'THAI - NICHU INSTITUTE OF TECHNOLOGY' is written in a light blue, sans-serif font, following the curve of the gear's inner circle. The Thai text 'มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี' is also visible, following the outer curve of the gear.

# **A Study of Multinational Companies: The Use of Mediation Paradigm on CSR**

## **Introduction**

Everyday, we wake up in the morning to consume varieties of products and services, for instance, getting up in the morning we use Oral-B for tooth brush and tooth paste, eating breakfast in the morning with Kellogg cereal, driving Toyota car to work, wearing H&M brand, eating Subway sandwiches for lunch, or even taking substitute vitamins from Amway company. All of these we have no idea what effect side we would get after we consumed or used those goods, if the businesses do not have ethics or business social responsibility, and look for just the profit, what would be happened to the consumers. Moreover, consumers also aware of this factor, they are concerning with their safety, environmental, social responsibility and so on. These issues have been requested from customers, and businesses are adjusting to do more corporate social responsibility (CSR) in order to have sustainability businesses. Therefore, in this study, the researchers' objectives were (1) Analyze how input factors relates to CSR patterns; (2) Analyze how the CSR patterns accounted for the effect of input factors to the CSR findings; and, (3) Identify which among the input factors relates to the CSR findings.

## **Literature Review**

Many research studies have been conducted under this topic which indicated the need for helping community and people. Holliday et al., (2002) found that "Integration of CSR" into a companies' strategy system is imperative for setting into action "corporate sustainable development." Simply, helping the company to enhance local relationship and customer loyalty. According to Canlas and et. al. (2010), the finding found the positive outcomes to shareholders. There are some differences were on the corporate social responsibility such as the companies against the report of the community. This particular program inhibited a pattern as low, moderate and extensive as well as the patterns of CSR programs account for the relationship between the firm's profile and CSR' findings

According to Assistant Prof. Dr. Phipatana, who wrote the book called, “Corporate Social Responsibility Management: Building the competitive advantage for sustainability,” he states the four reasons for doing the CSR; first, moral obligation, second, sustainability, third, license to operate, and lastly to build reputation.

In doing CSR, there are many people we must concern such as employees, customers, suppliers, shareholders, communities, investors, and so on. Therefore, we can divide the group of people the company need to aware for doing CSR as the following picture.

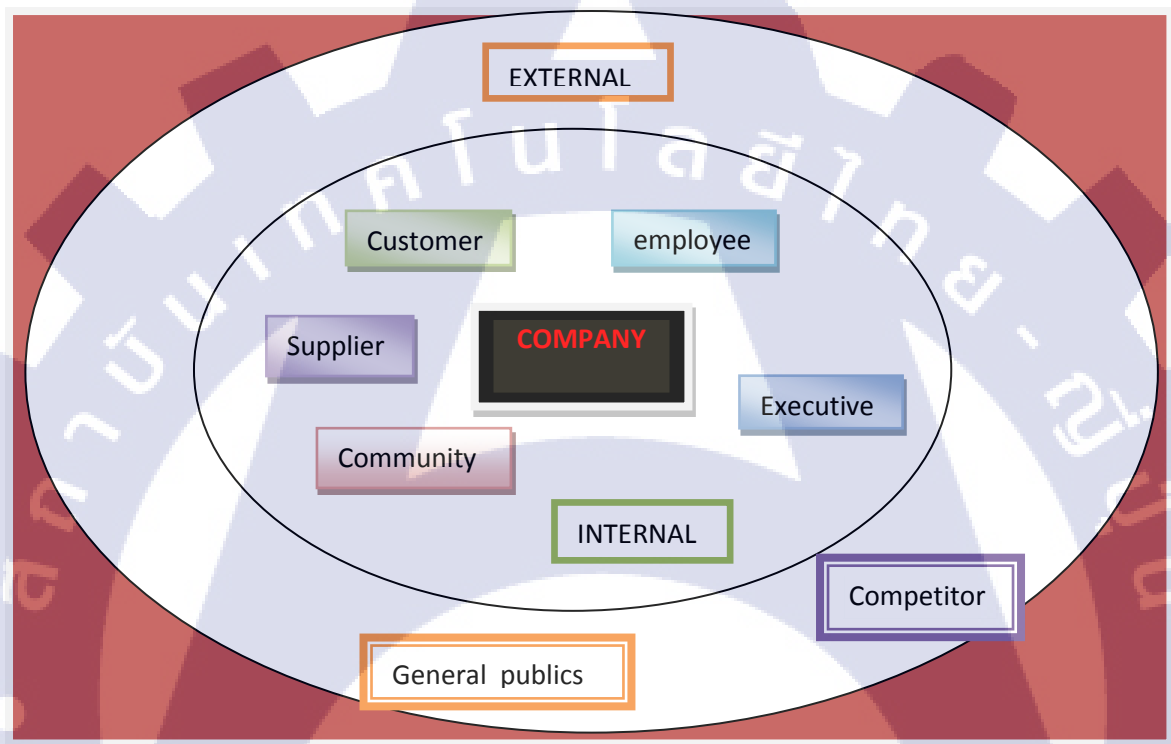


Figure 1 Company Stakeholders

Furthermore, Owazuaka and Obinna (2014) state from their findings that “corporate social responsibility cannot be discussed without a purview on community relations which is an area of public relations.”

### **Mediating Variable**

In Baron and Kenny’s (1986) research, a variable may function as a mediator when it accounts for the relation between the independent variable (predictor) and the dependent variable (outcome). Mediating variables explain how or why effects on the dependent variable occur. Below is a path diagram as a model for depicting a causal chain to clarify the meaning of mediation.

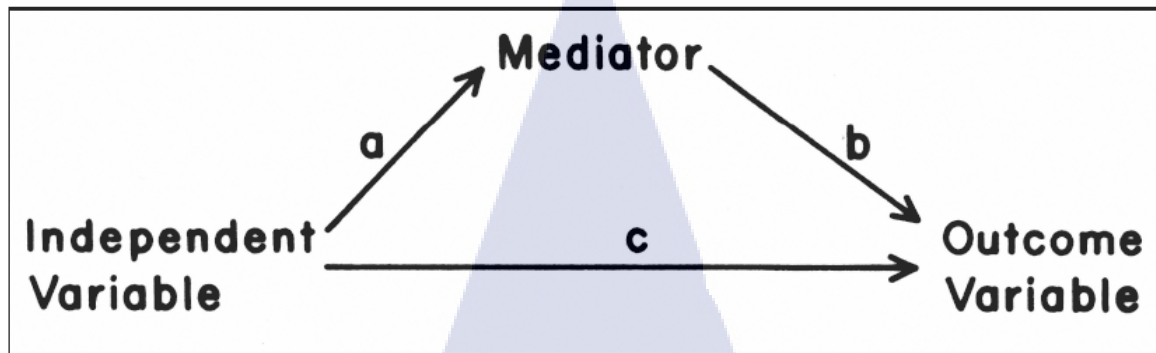


Figure 2 Path Diagram showing the basic causal chain involved in mediation

Source: *Journal of Personality and Social Psychology* Copyright 1986 by the American Psychological Association, Inc. 1986, Vol. 51, No. 6, 1173-1182

This model assumes a three-variable system such that there are two causal paths feeding into the outcome variable: the direct impact of the independent variable (Path c) and the impact of the mediator (Path b). There is also a path from the independent variable to the mediator (Path a).

Baron and Kenny stated that for a variable to function as a mediator, it must meet the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator, (b) variations in the mediator significantly account for variations in the dependent variable, and (c) when a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant.

According to Baron and Kenney, with regards to the last condition we may envisage a continuum. When Path c is reduced to zero, we have strong evidence for a single, dominant mediator. If the residual Path c is not zero, this indicates the operation of multiple mediating factors. Because most areas of psychology, including social, treat phenomena that have multiple causes, a more realistic goal may be to seek mediators that significantly decrease Path c rather than eliminating the relation between the independent and dependent variables altogether. From a theoretical perspective, a significant reduction demonstrates that a given mediator is indeed potent, albeit not both a necessary and a sufficient condition for an effect to occur.

### **Patterns of CSR activities as Mediating Variable**

Previous studies showed that CSR has mediating effects on the input factors (independent variable) and stakeholders' effects (outcome or dependent variable). For example, employees of a utility company said that corporate responsibility programs make them feel better about where they work resulting in higher output and improved interaction with customers and clients (Higginbottom, 2005).

CSR activities improved company image and thereby encourage customer patronage and increased sales. David, et. al., (2005) evaluated the relationships among corporate social responsibility practices, corporate identity, and purchase intention. Results of their study indicated that discretionary CSR practices and moral/ethical CSR practices emerged as significant predictors of the corporate social values dimension of corporate identity while relational CSR practices contributed mainly to the expertise dimension of corporate identity. The study also showed that familiarity with CSR practices of a corporation had a significant effect on corporate identity, which in turn affected purchase intention.

On the downside, some consumers had doubts on the intention of companies in their CSR activities. Scholder Ellen, P., Webb, D., and Mohr L. (2006) studied consumers' attributions for corporate socially responsible programs. Results of their study indicated that most consumers attributed CSR to self-centered motives, such as tax write-offs or a suggested "pocketing" of donations, others perceived companies to be truly caring while others perceived CSR as expected business practice, such as building customer loyalty, getting more customers and sales, and improving a company's image.

The researchers did not encounter any similar study done on companies. It will be interesting to find out if the same will be true. In this study, the researchers will explore how the input factors influence the company's CSR activities; how the CSR activities affect their stakeholders; and how input factors affects the stakeholders.

### **Dependent Variable (CSR findings)**

One research group, KLD Research & Analytics, a Boston-based social research firm, uses a combination of surveys, financial statements, articles in popular press and academic journals (especially law journals), and government reports to assess social performance along eleven dimensions: military contracting, nuclear power, gambling, tobacco, alcohol,

community relations, diversity, employee relations, environment, and product quality (innovation/R&D), and non-U.S. operations (usually environment and labor relations. They use these data to assess “strengths” and “concerns” regarding these dimensions of social performance, in order to determine if a company is worthy of being judged socially responsible. (Retrieved from <http://mba.tuck.dartmouth.edu/mechanisms/pages/Papers/CSRSiegelVitaliano101105.pdf>).

On the other hand, the Business Ethics Magazine, the only US-based business magazine focusing on ethics and corporate social responsibility in a media landscape ranks companies using eight categories namely total return to stockholders, community, governance, diversity, employees, environment, human rights and product to come up with The 100 Best Corporate Citizens. Although their survey is based on a database maintained by KLD Research & Analytics and considers all companies listed on the Russell 1000 Index – the 1000 largest publicly-traded companies in the United States.. The KLD data is then statistically analyzed by Sandra Waddock and Samuel Graves of Boston College, and companies receive rankings in eight categories mentioned above. Each company then receives an overall score based on their scores in the eight different issue areas. (Retrieved from <http://www.nike.com/nikebiz/nikebiz.jhtml?page=59&item=tppr&year=2005&release=04a>).

Another company, MHC International Ltd (MHCI), based in Geneva and London which offers advisory and auditing services to businesses and multinational organizations in the field of Corporate Social Responsibility utilizes the measures and indicators shown below:

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Figure 3 CSR Measurement - Elements, Indicators, and Measures  
Outcomes of Social Responsibility

Stakeholder Groups (assumed)	Indicator	Measure
<b>Internal Stakeholders</b> - Owners	<ul style="list-style-type: none"> <li>- Profitability/value</li> <li>- Corporate Irresponsibility or illegal activity</li> <li>- Community welfare</li> <li>- Corporate philanthropy</li> <li>- Code of Ethics</li> </ul>	<ul style="list-style-type: none"> <li>- Share value, Return on Investment, etc.</li> <li>- Fines, number of product recalls, pollution performance measured against some industry standard</li> <li>- Amount of giving, programme as % of earnings</li> <li>- Amount of pre-tax giving as % of earnings</li> <li>- Published, distributed, trained</li> </ul>
- Managers	<ul style="list-style-type: none"> <li>- Code of Ethics</li> </ul>	<ul style="list-style-type: none"> <li>- Trained in code of ethics and apply in demonstrable and measurable ways</li> <li>- Rank of manager responsible for applying code</li> </ul>
-Employees	<ul style="list-style-type: none"> <li>- Union/staff relations</li> <li>- Safety issues</li> <li>- Pay, Pensions and benefits</li> <li>- Layoffs</li> <li>- Employee ownership</li> <li>- Women &amp; minorities policies</li> </ul>	<ul style="list-style-type: none"> <li>- Evidence of controversy, good relations</li> <li>- Litigation, fines</li> <li>- Relative ranking to similar firms (measuring % spent on employee benefits, programme, etc)</li> <li>- Percentage, frequency, individuals chosen</li> <li>- Amount by per cent</li> <li>- Existence, rank with similar firms, litigation and fines</li> </ul>
<b>External Stakeholders</b> - Customers/Consumers	<ul style="list-style-type: none"> <li>- Code of Ethics</li> <li>- Product Recalls</li> <li>- Litigation</li> <li>- Public product or service controversy</li> <li>- False advertising</li> </ul>	<ul style="list-style-type: none"> <li>- Evidence of application to products or services</li> <li>- Absolute number, seriousness demonstrated by litigation or fines, percentage of total production</li> <li>- Amount of fraud, price fixing, antitrust suits</li> <li>- Seriousness, frequency</li> <li>- Litigation, fines</li> </ul>
Natural Environment	<ul style="list-style-type: none"> <li>- Pollution</li> <li>- Toxic waste</li> <li>- Recycling and use of recycled products</li> <li>- Use of eco-label on products?</li> </ul>	<ul style="list-style-type: none"> <li>- Performance against index, litigation, fines</li> <li>- Performance against index, litigation, fines</li> <li>- Percentages</li> <li>- Yes/No?</li> </ul>
Community	<ul style="list-style-type: none"> <li>- Corporate giving to</li> </ul>	<ul style="list-style-type: none"> <li>- Amount, percentage</li> </ul>

	community programmes - Direct involvement in community programmes - Community controversy or litigation	- Number, outcomes, costs, benefits - Number, seriousness, outcomes
Suppliers	- Firm's Code of Ethics - Supplier's Code of Ethics - Litigation/fines - Public controversy	- Applied to all suppliers - Applied - Number, amount, outcomes - Amount, outcome

Source: <http://www.mhcinternational.com/measurement.htm>

The researchers conducted survey and document analyses utilizing some of the indicators and measurements mentioned above to examine the outcome of CSR activities. The study focused on the company's community, natural environment, and their managers and employees. The outcomes or effects were measured.

### External Effects on Community

Corporate social responsibility (CSR) occurs when firms engaged in activity that benefits the society beyond that which is required by law, without anticipating benefits in return. Some mainstream approaches to corporate social responsibility underestimate the importance of power in the relationship between corporations and the communities in which they invest. There are numerous cases when communities have attempted to hold corporations to account for their social and environmental responsibilities (Garvey, 2005).

The giant drinks maker, Coke, sets the example. It has been criticized for obstinacy in the past for taking too long to accept responsibility for several social issues thrown their way. Boycott of Coke movements on university campuses throughout North America and parts of Europe and the barrage of negative headlines that threatened to tarnish its brand put pressure on the company to adopt a proactive approach to social issues (Ward, 2006).

As demonstrated in the Coke case, various advocacy organizations, otherwise known as non-government organizations (NGOs) have an influence on consumers' attitudes. Research by a global communications consultancy found that NGOs are significantly more trusted overall than business. CEOs and corporate managers may approve or disapprove of

the growing role of activist NGOs, but it is perilous to ignore their growing influence and ability to shape public perceptions of a company (Deri, 2003). It is therefore imperative on companies to balance their shareholders' expectations of profits and growth and the demands of these activist organizations.

This phenomenon is also true in the Philippines. Non-government organizations in our country play important intermediary and bridging functions crucial for the success of multi-stakeholder partnerships. NGOs in the Philippines are well-equipped for this because of their middle-class and professional nature and because of various characteristics like autonomy, flexibility, and the ability to mobilize resources (Aldaba, 2004).

Another case in point is the JPEPA<sup>1</sup> issue. Concerned citizens made this an issue during the 2007 Senatorial Election. At the start of the campaign period, Greenpeace Asia Pacific and EcoWaste Coalition circulated questionnaires, which aims to know the 'greenness' of senatorial candidates through their position on key environmental issues. The campaign encourages voters to cast their vote for a green future by choosing candidates who are committed to protect the environment once elected to office. In celebration of Earth Day, the Philippine Daily Inquirer in its weekly Talk of the Town section tackled the issue on Japan-Philippines Economic Partnership Agreement (JPEPA) among other environmental related issues (Sun Star Iloilo, April 2007).

With the prodding of concerned citizens and the watchful eyes of NGOs, hopefully every corporation will do their business responsibly, earning profit without harm to any of their stakeholders.

### **External Effects on Environment**

One of the advocacies of NGOs is the preservation of the natural environment. Concerned individuals are always on the look-out for companies that pollute the environment. There are a number of companies that have ingrained the social responsibility in their businesses and are quite successful in it. One of them is Interface, a leading carpet

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<sup>1</sup>Japan-Philippines Economic Partnership Agreement (JPEPA) is a bilateral trade treaty between Japan and the Philippines that seeks to remove barriers to investments and the trade of goods and services between the two countries. But once JPEPA is ratified by the Philippine Senate as a treaty between Japan and the Philippines, our local government units will be pushed to handle the requirements of this treaty especially in the accommodation of wastes for it will not be dumped in the National Capital Region but in other regions like Region VI. (<http://www.sunstar.com.ph/static/ilo/2007/04/24/oped/ted.aldwin.ong.misreadings.html>)

company. Ray Anderson, its founder and chairman, claimed in 2004 that the company's sales and profits double since it dedicated its business to sustainability in 1994. Their goal is zero footprints<sup>2</sup> by 2020.

In this study, we will focus on the environmental impact of the manufacturing operations of companies, particularly their effluents<sup>3</sup>. The different fabrication processes of the companies generate a wide variety of wastewater compositions. These are acid and alkaline waste; metals-bearing wastes and organic wastes.

Environmental concerns and wastewater management have been a perennial problem in the country. The government is moving in the right direction with the enactment of Republic Act 9275. It is an act providing for a comprehensive water quality management and for other purposes, also known as the "Philippine Clean Water Act of 2004". This defines effluent standards for industries and its manner of disposal. However, effective implementation of the Clean Water Act of 2004 would require at least P25 billion a year for the first ten years of implementation according to a World Bank study. The study doubted whether the law would be fully implemented due to budget constraints. *(Retrieved from [http://www.manilatimes.net/national/2005/04/yehey/top\\_stories/20050804top9.html](http://www.manilatimes.net/national/2005/04/yehey/top_stories/20050804top9.html))* /aug

The Clean Water Act of 2004 is only the first step. The government has laid down the standards; but the government on its own cannot monitor the activities of each and every company. We have to rely on the sense of social responsibility of the corporations. A study of the websites of these selected companies indicate the presence of CSR at different levels.

For example, Beta was awarded Excellence in Ecology and Economy (E3) by the Philippine president in 2005 besting Toyota Motors Philippines, San Miguel Corporation and Republic Asahi Glass in the large enterprise category.

### **Internal Effects on Employees**

Another possible benefit of being recognized as a socially responsible company is the ability to attract qualified applicants. A study showed that prospective employees will be drawn to companies with good corporate social performance (Turban and Greening, 1997).

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<sup>2</sup> Footprints refer to measures of environmental or ecological impact (York, R., et. al., 2003)

<sup>3</sup> Effluent, as defined in R.A. 9275, means discharge from known sources which is passed into a body of water or land, or wastewater flowing out of a manufacturing plant, industrial plant including domestic, commercial and recreational facilities.

It is also argued that CSR will lead to higher productivity. In a study conducted in a utility company, employees said that corporate responsibility programs make them feel better about where they work (Higgin bottom, 2005). This might translate to higher output and improved interaction with clients. Coco-Mat, a mattress-maker with a factory in Greece produces almost no waste which it attributes to the company's commitment to social responsibility. The company places great emphasis on employee involvement, which it couples with an incentive program. As a result, the company's sales have grown 300% and their profitability increase in 2001 by a massive 754% from 1995 figures (Mudd, 2002).

### **Internal Effects on Managers**

Barnea and Rubin (2005) theorized that the increase in CSR expenditure in the recent years may be due to insiders (managers and large block holders who are affiliated with the firm) who may want to improve their reputation as being good global citizens. They tested this hypothesis by investigating the relation between firms' CSR ratings and their ownership and capital structure of the largest 3,000 US corporations categorized as being either socially responsible or socially irresponsible. They found that insiders' ownership and leverage are negatively related to the social rating of firms, while institutional ownership is uncorrelated with it. These results support the hypothesis that CSR is a source of a conflict between different owners.

### **Input factors as Independent Variable**

#### **Number of years in service**

Companies in operation for a longer period of time will have enough resources to fund their CSR activities as opposed to start-up companies. A study on corporate social performance supported the theory that slack resource availability, which a well-established company has, and CSP are positively related. This study also showed that corporate social performance is positively associated with prior financial performance. In the same study, CSP is also found to be positively associated with future financial performance, supporting the theory that good management and CSP are positively related. (Waddock and Graves, 1996).

#### **Equity**

More and more companies take on social responsibility seriously as extensive market research has demonstrated that effective CSR management positively impacts business

economic performance and is not detrimental to shareholder value. According to the social Investment Forum, institutional investors are now using social screens as criteria for investment negating the notion that investors are unwilling to pay a premium for corporate behavior. Barnea (2005) found the presence of socially responsible investors that would not place investments in polluting firms to compel them to change their technology.

Schnietz and Epstein (2004) found in their study that the allegedly environmentally damaging and labor abusing industries – suffered a decline in market capitalization of over three percent if the firms were not known for social responsibility. However, firms in these same industries suffered no statistically significant decline if they were also perceived by investors to be socially responsible firms. This research postulated that investors prefer socially responsible companies.

#### **Asset size**

Regardless of the size of the company, business executives in the Thailand view corporate citizenship as a fundamental part of business with certain number of percent of the respondents saying that good corporate citizenship helps the bottom line say these practices improve the image and reputation of the company and some participants believe it is important to their customers. Maximiano (2004) state that it will be a good study to validate above perception with the current CSR practices of the companies. How many of these respondents walk the talk?

In a study comparing big givers and small givers the researchers find a positive relationship between a firm's cash resources available and cash donations as they hypothesized (Seifert, et. al., 2003). Similarly, a study in Canada showed significant relationships between corporate social performance (CSP) and profitability, CSP and size of the company and an inverse relationship between CSP and pollution emissions, which has been used in other studies as a proxy for CSP (Foster and Meinhard, 2002). Peter and Sarah Stanwick (1998) in their study also found that a firm's corporate performance is indeed impacted by the size of the firm, the level of profitability of the firm, and the amount of pollution emissions released by the firm.

#### **Country of origin**

A study of Corporate Social Responsibility (CSR) in Asia concludes that CSR does vary considerably among Asian countries and that multinational companies (MNCs) are more likely to adopt CSR than those operating solely in their home country but that the profile of

their CSR tends to reflect the profile of the country of operation rather than the country of origin (Chapple & Moon, 2005). This may be because of the differences in the laws of the country where these MNCs are located and their country of origin. But then, a true CSR should go beyond the legal requirements.

Research done to analyze the location of multinationals' global operations and the extent to which firms are global with regard to corporate social responsibility showed that the location and the extent of international operations influence corporate social responsibility. However, the findings regarding international corporate social responsibility were not straightforward. Firms with operations in developing countries tended to have positive associations in terms of community and diversity CSR ratings, but negative associations with product and human rights CSR ratings. Furthermore, positive relationships were established between the globalization of operations and corporate social responsibility in terms of environment, product and community ratings. Nonetheless, negative relationships surfaced for globalization of operations and human rights and corporate CSR ratings (Mackey, 2005).

Another study of CSR in Australia and Bangladesh, two dissimilar cultures, concludes that CSR is universal in nature and that differing cultural and market settings in which managers operate may have little impact on the ethical perceptions of corporate managers (Quazi and O'Brien, 2000). However, perceptions may be far from what is actually happening.

In another study that investigated the antecedents and outcomes of corporate responsibility stakeholder practices in China and US provided partial support to the proposition that the divergence of CR stakeholder practices across nations is dependent on the institutional environments of business as well as organizational culture. The study showed that customer and community stakeholder practices were more prevalent in US companies while supplier stakeholder practices were more prevalent in Chinese companies (Lo, et. al., 2005). Indeed, CSR is globally accepted concept but the extent of corporations' involvement varies across cultures.

The differences in culture and values among different nationalities will somehow have an impact on the CSR activities of the companies. This study will test this hypothesis, if indeed such is present.

## **Net Income**

Owners realized that CSR pays off in the long run. In a study assessing the rate of return of the adoption of corporate social responsibility initiatives by Marina (2005), 70% of the studies reviewed showed a positive and statistically significant relationship between CSR and financial performance.

Professors Geoffrey Heal and Paul Garret (2004) postulated in their paper that a CSR program can be a profitable element of corporate strategy, contributing to risk management and to the maintenance of relationships that are important to long-term profitability.

However, this positive relationship between CSR and financial performance was questioned in the study undertaken by Arthur Laffer, the man widely hailed as the "father of supply side economics, and two other economists, Andrew Coors and Wayne Winegarden. Their research showed that the performance of 28 companies cited by Business Ethics magazine as being among its top 100 "Corporate Citizens" between 2000 and 2004 showed "no significant positive correlation between CSR and business profitability as determined by standard measures." Dr. Laffer said, "There are some indications from our study that CSR activities lead to decreased profitability." He also said that a profitability comparison of compound annual net income growth, net profit margin, and stock price appreciation showed that "only a minority of the 28 CSR-leading companies in each comparison outperformed their peers.

## **Synthesis**

The studies presented showed that limitation of this research is the failure to capture the CSR activities of local companies. It will be an interesting subject of future research to determine how the local companies compare to the multinational companies in the area of social responsibility,

Also this study does not compare the effectiveness of CSR activities when these are classified as state enterprise imposed, company initiated or as a result of public pressure. This can also be the topic of future study on CSR.

## **Methodology**

### **Research Design**

The following research designs were employed in this study:

- Descriptive research. The study described the input factors; CSR activities; patterns of CSR activities; and outcomes of CSR activities of companies.
- Causal/Explanatory research. The study analyzed the effects of the input factors and patterns of CSR activities to CSR findings. It further identified which among the factors greatly influenced the outcomes. The study employed both quantitative and qualitative methods in explaining the effects of the factor to the CSR findings.
- Triangulation Method. This method described the combining of several qualitative methods or combining qualitative with quantitative methods. This is to increase the quality of research especially when a quantitative study follows a qualitative one and provides validation for the qualitative findings.
- Correlational research. The study will determine how the factors/variables are associated with each other in affecting the CSR findings. Below is taken from the research of Baron and Kenney (1986)

### **Testing Mediation**

According to Baron and Kenney (1986), an analysis using ANOVA provides a limited test of a mediational hypothesis as extensively discussed in Fiske, Kenny, and Taylor (1982). Rather, as recommended by Judd and Kenny (1981 b), a series of regression models should be estimated. To test for mediation, one should estimate the three following regression equations: first, regressing the mediator on the independent variable; second, regressing the dependent variable on the independent variable; and third, regressing the dependent variable on both the independent variable and on the mediator. Separate coefficients for each equation should be estimated and tested. There is no need for hierarchical or stepwise regression or the computation of any partial or semi partial correlations.

These three regression equations provide the tests of the linkages of the mediational model. To establish mediation, the following conditions must hold: First, the independent variable must affect the mediator in the first equation; second, the independent variable

must be shown to affect the dependent variable in the second equation; and third, the mediator must affect the dependent variable in the third equation. If these conditions all hold in the predicted direction, then the effect of the independent variable on the dependent variable must be less in the third equation than in the second.

Perfect mediation holds if the independent variable has no effect when the mediator is controlled. Because the independent variable is assumed to cause the mediator, these two variables should be correlated. The presence of such a correlation results in multicollinearity when the effects of independent variable and mediator on the dependent variable are estimated. This results in reduced power in the test of the coefficients in the third equation. It is then critical that the investigator examine not only the significance of the coefficients but also their absolute size. For instance, it is possible for the independent variable to have a smaller coefficient when it alone predicts the dependent variable than when it and the mediator are in the equation but the larger coefficient is not significant and the smaller one is.

### Population and Respondents

The research was conducted in the community where the selected companies (branch) are located. The study required two (2) sets of respondents: Internal (managers/employees of the companies) and external (community)

Sample size of the community respondents was determined using the formula utilized by the Social Science Council Survey Series (Publication Number 2), shown below:

$$n = \frac{NZ_{a/2}^2 * p(1-p)}{NE^2 + Z_{a/2}^2 * p(1-p)}$$

where: N

= population size

$Z_{a/2}$  = 1.65 at 90% confidence level

p = 0.5 assumed proportion

E = 0.10 sampling error

$n$  = sample size

Internal respondents were designated by the companies.

### **Sampling Design**

There were two sets of respondents in the study, namely:

1. Internal sources. These consisted of the company's managers / employees as respondents. The objective was to measure both internal and external effects of CSR. Purposive sampling technique was employed. Internal source were managers occupying positions in the following departments: Human Resource, Facilities, Production and External Affairs.
2. External sources. These comprised the community where the companies are located as respondents. The objective was to measure the external effects of CSR. Quota sampling was employed. External source met the following criteria: (a) Must be at least 19 years old; and, (b) resident or working in the specified locality.

### **Measurement and Instrumentation**

The instrument used in this research is composed of four (4) parts, namely:

1. Introduction – This part of the instrument identifies the researchers, the educational institution where they are connected, a brief explanation of the research objective, a request for cooperation, assurance of confidentiality, and a note of gratitude.
2. Direction - This part of the questionnaire explains what the respondents are expected to do with the questionnaire.
3. Classification Information – This part pertains to the demographic profile of the respondent.
4. Information Sought – This is the body of the questionnaire.

The instrument was finalized following the procedures as follows:

1. Initial Draft of the Instrument. Based on the related literature on outcome measurement of CSR activities, the research team constructed the instrument to be used in this study.
2. Selection of Panel to Review the Instrument. A panel of thirty (30) academicians and practitioners were selected to perform qualitative review and quantitative assessment of the instrument.

3. Qualitative Review. This aimed to give feedback regarding the directions, instrument items, and overall instrument. Initial changes were made on the instrument.
4. Quantitative Assessment. The panel independently assessed each item in the instrument as 1) essential; 2) useful but not essential; and 3) not necessary (Cooper, Schindler. 2003).
5. Content Validity. The instrument was tested for content validity using the content validity ratio (CVR) formula given below. Minimum CVR value of 0.75 was considered statistically significant. The researchers' objective was to determine the ability of the research instrument to measure what it is purported to measure.

$$CVR = (n_e - N/2)/(N/2)$$

where:  $n_e$  = number of essential

$N$  = total number of panel

Table showed the responses of the panels and the CVR values. Only items with CVR of not less than 0.75 were retained in the instrument.

**Summary of CVR Values**

Item	SUM			CVR
	Essential	Useful but not essential	Not Necessary	
<b>O.1</b>	27	2	1	.80
<b>O.2</b>	22	8	0	.47
<b>O.3</b>	16	12	2	0.07
<b>O.4</b>	27	0	3	.80
<b>O.5</b>	27	2	1	.80
<b>O.6</b>	27	2	1	.80
<b>O.7</b>	21	6	3	.40
<b>E.1</b>	25	1	4	.67
<b>E.2</b>	27	2	1	.80
<b>E.3</b>	27	1	2	.80
<b>E.4</b>	17	7	6	.13

<b>E.5</b>	27	0	3	.80
<b>E.6</b>	19	3	8	.27
<b>E.7</b>	16	5	9	.07
<b>N.1</b>	21	6	3	.40
<b>N.2</b>	27	0	3	.80
<b>N.3</b>	27	0	3	.80
<b>N.4</b>	27	1	2	.80
<b>N.5</b>	27	3	0	.80
<b>N.6</b>	21	7	2	.40
<b>N.7</b>	27	1	2	.80
<b>N.8</b>	19	6	5	.27
<b>N.9</b>	20	7	3	.33
<b>N.10</b>	27	1	2	.80
<b>CO.1</b>	21	6	3	.40
<b>CO.2</b>	27	0	3	.80
<b>CO.3</b>	27	3	0	.80
<b>CO.4</b>	23	3	4	.53
<b>CU.1</b>	22	5	3	.47

6. Pretest. The instrument was pre-tested to thirty (30) respondents who are employed in companies which are not part of this study.

A pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. It should, therefore, draw subjects from the target population and simulate the procedures and protocols that have been designated for data collection. The size of the pilot group may range from 25 to 100 subjects, depending on the method to be tested, but the respondents do not have to be statistically selected. (Cooper, Schindler. 2003)

The following companies participated in the pre-test: Integrated Microelectronics Inc. (IMI), Microchip Technologies, Inc. and Toshiba Information Equipment Inc.

The objective of this pre-test was to test the reliability of the construct and the scaling used in the instrument.

7. Reliability Test. Reliability of the instrument was tested using Cronbach's alpha to measure the degree to which the instrument items are homogenous and therefore, assure the researchers that the items in the instrument reflect the same underlying construct. (Cooper, Schindler. 2003). The significant alpha values must be equal or greater than 0.70. The table below showed the summary of the Cronbach's alpha values for each construct which showed that all the items included in the instrument were reliable.

**Summary of the Cronbach's Alpha Data Results:**

ITEM PER STAKEHOLDER	ALPHA  ( $\alpha \geq 0.70$ )	REMARKS
Owner	.8394	Reliable
Employee	.9111	Reliable
Natural Environment	.9555	Reliable
Community	.8941	Reliable

8. Test of the Likert scale. Item Analysis was conducted to test the reliability of the use of the Likert Scale used in the instrument. The responses were analyzed per construct by computing the significant differences between the 25% high scores and the 25% low scores.

In item analysis, after administering the test, a total score was calculated for each scale. Individual items (a scale or part of a scale) were then analyzed to determine which best discriminate between persons with total scores and low total scores (Cooper, Schindler. 2003).

Table 7 showed the paired samples test results. All items were reliable since the t-values were significant.

**Paired Samples Test Result**

		t	df	Sig. (2-tailed)
Pair 1	OH1 - OL1	9.000	7	.000
Pair 2	OH4 - OL4	4.333	7	.003
Pair 3	OH5 - OL5	5.227	7	.001
Pair 4	OH6 - OL6	4.245	7	.004
Pair 5	EH2 - EL2	7.638	7	.000
Pair 6	EH3 - EL3	4.965	7	.002
Pair 7	NH2 - NL2	6.065	7	.001
Pair 8	NH3 - NL3	6.065	7	.001
Pair 9	NH4 - NL4	8.104	7	.000
Pair 10	NH5 - NL5	4.432	7	.003
Pair 11	NH7 - NL7	6.251	7	.000
Pair 12	COH2 - SMEAN(COL2)	10.693	7	.000
Pair 13	COH3 - SMEAN(COL3)	10.693	7	.000

- Each of the questions that passed the validity and reliability tests were translated in Thai to make it more understandable to the intended respondents. There were 15 retained items and 14 were culled out.

### **Research Procedures**

Following were the research procedures employed in this study:

- Pretest of the instrument for content validity and reliability tests.

2. In-depth interviews (IDI) using structured questions were conducted to internal source. This was done by panel interviews to arrive at the consensus answers. The results were called employees' assessment.
3. Researchers' Assessment was obtained by reviewing the public communications such as the companies' websites, brochures, and journals. Pertinent data were also gathered from related government agencies.
4. Community Assessment was gathered from survey/questionnaires.

#### **Research Objectives:**

1. Analyze how input factors relates to CSR patterns;
2. Analyze how the CSR patterns accounted for the effect of input factors to the CSR findings; and,
3. Identify which among the input factors relates to the CSR findings.

#### **Research Finding: Data Analysis**

The following are the statistical treatment and analytical methods employed in this study:

1. Frequency Distribution. This was used to summarize the results of the survey concerning internal and external respondents.
2. Percentages. This method determined the portion of the population responding to specific areas under consideration.
3. Weighted Mean. This was used to measure central tendencies of the responses obtained using the five-point scale.
4. Five-point Scale. The response on the questionnaires was measured by the degree of seriousness CSR activities are done by semi-conductor companies. The responses are categorized as follows: Strongly Agree, Agree, Neither, Disagree, and Strongly Disagree.

The mean values were be interpreted as:

SCALE	MEAN VALUE	INTERPRETATION
1	1.00 - 1.50	Did Not Reported Positive Outcome
2	1.51 - 2.50	Did Not Reported Positive Outcome
3	2.51 - 3.50	Did Not Reported Positive Outcome
4	3.51 - 4.50	Reported Positive Outcome
5	4.51 - 5.00	Reported Positive Outcome

5. Elaboration Method (Cross-tabs). This was used in determining the relationships such as: (a) input factors with patterns of CSR programs; (b) input factors and patterns of CSR programs with CSR findings; and, (c) input factors with CSR findings. This study examined how the criterion variable (independent variable) accounts for the predicted criterion variable (dependent variable).

Paul Lazarsfeld developed the Elaboration Model at Columbia University in 1946. The elaboration model begins with an observed relationship between 2 variables – with the possibility that one is causing the other. The Elaboration Model then examines the impact of other variables on the relationship. This can demonstrate a causal link between the original 2 variables or not.

Pearson product moment of correlation coefficient  $r$  is a measure of the strength of the linear relationship between two variables  $x$

The relationships were determined by Pearson's Correlation " $r$ ." The interpretations were as follows:

CORRELATION VALUE	INTERPRETATION
below 0.20	Extremely Low Relationship
0.20 - 0.39	Low Relationship
0.40 - 0.59	Moderate Relationship
0.60 - 0.79	High Relationship
0.80 - 1.0	Very High Relationship

#### INPUT FACTORS:

##### 1. Company profile

Company profile of Selected Thai Companies

**Number of years in business in Thailand.** Data were extracted from the records from the General Information Sheet provided by the internet or website.

**Country of origin.** Data were extracted from the records from the General Information Sheet provided by the employees. Three companies originated from Thailand.

**Number of years performing CSR.** Data were based on the responses of the employees of the companies. The longest in performing CSR is more than 20 years.

However, the respondents were not sure when exactly the CSR programs have been started, some might say it started for a long time but not in the name of CSR. If we counted under the name of CSR, time of the programs are shorter than we have expected.

**Asset size.** Data were extracted from the records from the information that they provide to the public on the internet or website.

**Average annual budget for CSR.** It not easy to determine the exact allocation for CSR projects. One of the three companies had the budget directly from the government because of the business is called State Enterprise business.

Most of the selected companies have the CSR drivers as ethical considerations, economic considerations, reputation or brand, innovation and learning, risk management or risk reduction, strengthened supplier relationship, access to capital or increased shareholder value, market positioning and improved relationships with governmental authorities.

## CSR PROGRAMS

There were three major beneficiaries such as Internal (Managers and Employees). Natural Environment and Community. The gathered data were classified in order to get the summary of CSR programs.

The said activities were categorized with the main types and number of activities for each type shown in the table below as:

1. Cause promotion
2. Cause related marketing
3. Corporate social marketing
4. Corporate philanthropy
5. Community volunteering
6. Socially responsible business practices
7. Developing and delivering affordable products and services

### Categories of CSR Programs of Selected Philippines and Thailand Companies

Types of CSR	E	F	G
1.Cause promotion	/		
2.Cause related marketing			
3.Corporate social marketing	///	//	//
4.Corporate philanthropy			
5.Community volunteering	/		
6.Socially responsible business practices	//	/	/
7.Developing and delivering affordable products and services			

### PATTERNS OF CORPORATE SOCIAL RESPONSIBILITY PROGRAMS

The reported CSR projects were categorized based on beneficiaries as internal, natural environment and community. Then the patterns were established according to the manner of performance and as observed by the community as follows:

- 3 - Extensive – on-going, regular, w/ most number of CSR projects, have enough resources (manpower, materials, machine, money), always with partner (NGOs or any organization), follow government law, conduct evaluation for every program, have a defined structure (company organization)
- 2 - Moderate – CSR project performed more than once but not regular, occasional or as the needs arise, limited resources, sometimes with partner, sometimes follow laws, conduct evaluation for some program, form the structure when needed
- 1 - Low – CSR project done once (0-1 projects), lack resources, no partner, never mind the law, conduct evaluation when needed, never mind of the structure

The patterns of CSR programs will be categorized based on the benefits whether: (a) benefitting the internal (owners/employees); (b) benefitting the environment; (c) benefitting the community.

The activities stated above were categorized according to beneficiaries and then the mean values were determined. The table below shows the patterns of CSR activities. Scores of 1-1.5 were considered low; 1.51-2.5 were considered moderate; and, 2.51-3 were considered extensive.

#### Patterns of CSR Programs

##### COMPANY E

CSR PROGRAMS	PATTERNS
<b>1. BENEFITTING EMPLOYEES</b>	
1.1 Employee volunteerism programs	2
<b>2. BENEFITTING ENVIRONMENT</b>	
2.1 community safety with PEA	2
2.2 PEA with grown, cared, and reserved	2
2.3 PEA with caring all life	2
<b>3. BENEFITTING COMMUNITY</b>	
3.1 PEA with medical mission	2
3.2 community safety with PEA	2
3.3 PEA reserve water and build dike	3
3.4 PEA with school electricity improvement	3

##### COMPANY F

CSR PROGRAM/ ACTIVITIES	PATTERNS
<b>1. BENEFITTING EMPLOYEES</b>	
1.1. Mentoring Program	3
1.2. Sports Development	2
<b>2. BENEFITTING ENVIRONMENT</b>	
2.1. Tree Planting Program	3
2.2 Back to the Mangroves Program	3
2.3 Zero waste campaign	2
<b>3. BENEFITTING COMMUNITY</b>	
3.1 Gas tank check-up	3
3.2 Repairing local road	2
3.3 Seminar/Training	3
3.4 PTT with medical mission	2
3.5 Zero Waste campaign	3

## ]COMPANY G

CSR PROGRAM/ ACTIVITIES	PATTERNS
<b>1. BENEFITTING EMPLOYEES</b>	
1.1. Mentoring Program	<b>3</b>
<b>2. BENEFITTING ENVIRONMENT</b>	
2.1. Tree Planting Program	<b>3</b>
2.2. Protecting tree from the natural fire	<b>2</b>
<b>3. BENEFITTING COMMUNITY</b>	
3.1. Protecting tree from the natural fire	<b>3</b>
3.2. Seminars/Trainings	<b>3</b>
3.3. Scholarship	<b>3</b>
3.4. Livelihood/Business Opportunities Program	<b>2</b>
3.5. Supporting OTOP product for community	<b>2</b>
3.6. Supporting supplier program	<b>2</b>

## CSR FINDINGS

There were three assessments done such as: (a) employee's assessment; (b) researcher's assessment; and, (c) community assessment.

The responses were interpreted as:

- Reported Positive Outcome – for those who responded strongly agree and agree (mean value of above 3.51).
- Did Not Report Positive Outcome – for those who responded neither agree nor disagree, disagree and strongly disagree (mean value of 3.51 or lower).

### Employees' Assessment

The table below showed the means of the responses of employees. The responses were based on the Likert scale. These responses were further defined and interpreted in the succeeding discussions.

### Summaries of Means Based on Employees Assessment

CSR Activities	Benefitting Employees	Benefitting Environment	Benefitting Community
E	4	4	4
F	4.67	3.8	5
G	5	5	5

The table below showed the summary of the CSR outcomes to various stakeholders. The responses of the employees were interpreted as:

### Summary of CSR Outcomes To Stakeholders (Employee Assessment)

CSR Activities	Benefitting Employees	Benefitting Environment	Benefitting Community
E	Reported Positive Outcome		
F	Reported Positive Outcome		
G	Reported Positive Outcome		

All Three companies reported positive outcome to the stakeholders.

### Community Assessment

The table below showed the means of the responses of the community. The responses were based on the Likert scale. These responses were further defined and interpreted in the succeeding discussions.

### Summaries of Means Based on Community Assessment

CSR Activities	Benefitting Environment	Benefitting Community
E	3.54	3.99
F	4.42	4.61
G	4.17	4.68

Based on the community assessment, three companies (E, F and G, all from Thailand) reported positive outcome to the environment and community.

CSR Activities	Benefitting Environment	Benefitting Community
E	Reported Positive Outcome	
F	Reported Positive Outcome	
G	Reported Positive Outcome	

### TRIANGULATION METHOD OF ANALYSIS

The triangulation method was done to validate the employees' assessment. The employees' assessment was compared with community assessment of the outcomes to external stakeholders. Following were the categories used:

- Consistent Evidence – if the means of the community assessment was equal or greater than the means of employees that reported positive outcome or equal or lower than the means of employees that did not report positive outcome.
- Uncorroborated Evidence – if the condition in the consistent evidence was not satisfied.

### CSR OUTCOMES TO EXTERNAL STAKEHOLDERS

#### OUTCOMES TO NATURAL ENVIRONMENT

The table below showed the CSR outcomes to the natural environment. Only Company F (in Thailand) was validated to have consistent evidence.

The rest of the companies were validated to have uncorroborated evidence in reporting positive outcome. The community had lower means than the employees' assessment. These companies were tranquil in looking at standards. The community observed the CSR programs of the company but not the same extent as how the company claimed. Possibilities were: companies adopted stricter standards; and, communities were never aware of the CSR programs performed benefiting the environment.

### CSR Outcomes to Natural Environment

COMPANIES	EMPLOYEES	OUTCOMES	COMMUNITY		VALIDATION
E	4	Reported Positive Outcome	3.54	Reported Positive Outcome	UNCORROBORATED EVIDENCE
F	3.8	Reported Positive Outcome	4.42	Reported Positive Outcome	CONSISTENT EVIDENCE
G	5	Reported Positive Outcome	4.17	Reported Positive Outcome	UNCORROBORATED EVIDENCE

### OUTCOMES TO COMMUNITY

The table below showed the CSR outcomes to the community. All companies were validated as having uncorroborated evidence in reporting positive outcome. The community hardly observed the CSR programs done benefiting the community.

### CSR Outcomes to Community

COMPANIES	EMPLOYEES	OUTCOMES	COMMUNITY	COMMUNITY	VALIDATION
E	4	Reported Positive Outcome	3.99	Reported Positive Outcome	UNCORROBORATED EVIDENCE
F	5	Reported Positive Outcome	4.61	Reported Positive Outcome	UNCORROBORATED EVIDENCE
G	5	Reported Positive Outcome	4.68	Reported Positive Outcome	UNCORROBORATED EVIDENCE

## FACTORS RELATING TO THE CSR FINDINGS

The factors relating CSR Findings were determined using Linear Regression. As part of the objectives, it was intended to determine if there is mediation by the Patterns of CSR on the relationship between the Input Factors and the CSR Findings.

The following were the analysis done:

1. Two separate mediation analysis was done considering independent variables such as CSR findings benefitting community and benefitting environment one at a time.
2. Each mediation analysis involved three regression to test mediation such as:
  - a. Regressing the mediator on the independent variable - The first step in testing mediation was regressing the Patterns of CSR for change on the Input Factors.
  - b. Regressing the dependent variable on the independent variable - The second step in testing mediation was regressing the Findings of CSR for change on the Input Factors.
  - c. Regressing the dependent variable on both the independent variable and on the mediator - The third step in testing mediation was regressing the Findings of CSR for change on the Input Factors and Patterns of CSR.

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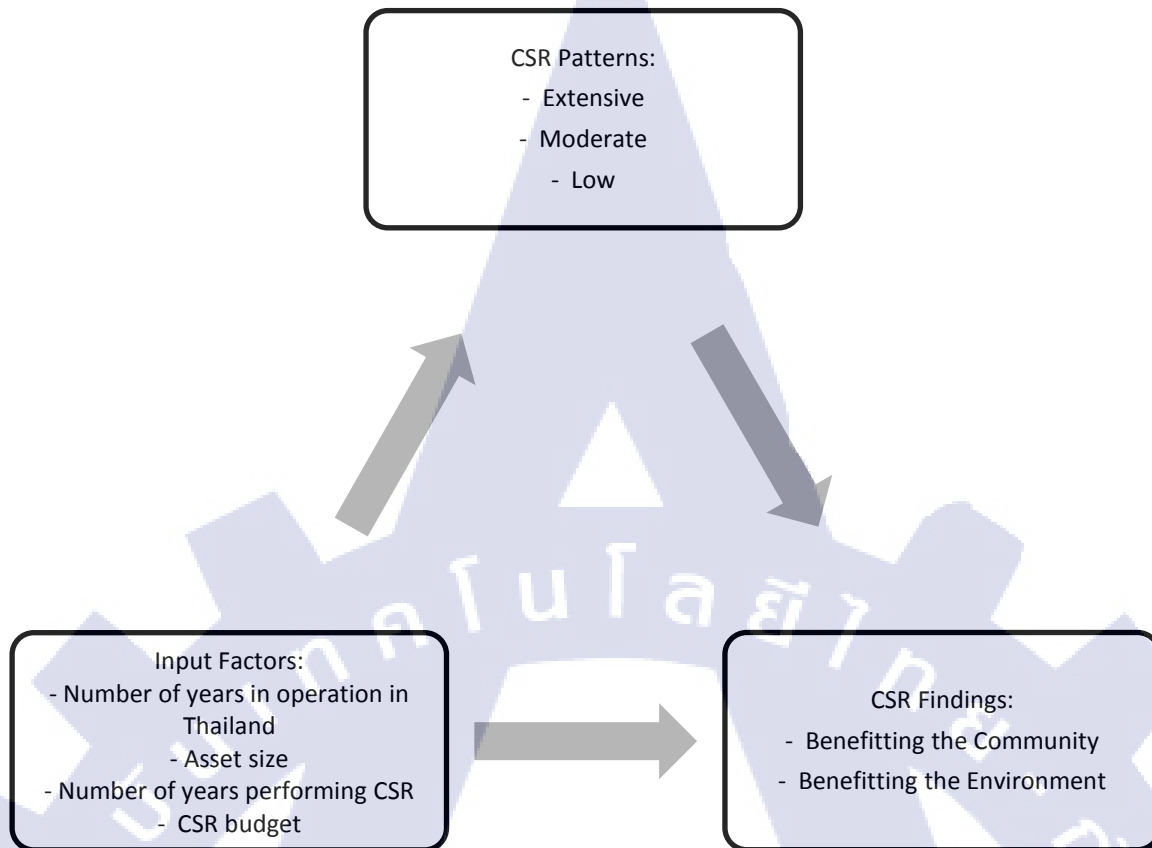


Figure 5: Mediation Paradigm to be tested

The variables included in the analysis were shown in Fig. 1. The input factors were number of years operating in Thailand, asset size, number of years performing CSR and CSR budget. The country of origin was removed since all 3 companies have mother companies in Thailand.

#### **FACTORS RELATING TO THE CSR FINDINGS (BENEFITTING COMMUNITY)**

##### Regressing the Mediator on the Independent Variable

The first step in testing mediation was regressing the Patterns of CSR for change on the Input Factors. The Patterns of CSR (benefitting community) was the dependent variable while the Input Factors was the independent variable. There was no relationship established between the factors considered in this analysis because the values on the Patterns of CSR (benefitting community) was constant. Statistical analysis is done to check variations in responses thus no processing result output when responses are constant.

### Factors of the Input Factors Greatly Influence the CSR Findings (Benefitting Community)

The second step in testing mediation was regressing the CSR Findings (benefitting community) for change on the Input Factors. Table 1 indicates the results of the analysis. The CSR Findings(benefitting community) was the dependent variable while the Input Factors was the independent variable.

#### Regressing the Dependent Variable on the Independent Variable

There were two variables that turned to have an influencing effect on the dependent variable. In regressing the CSR Findings (benefitting community) on the Input Factors, considering 0.05 as the level of significance, the significant factors influencing the CSR Findings (benefitting community) on with positive relationship were: (a) Number of years doing CSR; and, (b) Budget for CSR.

Table 1: Regression of the CSR Findings for change on the Input Factors

MODEL	STANDARDIZED COEFFICIENTS	T	SIG.
	BETA		
(CONSTANT)		31.320	.000
NUMBER OF YEARS DOING CSR	.288	3.831	.000
BUDGET FOR CSR	.261	3.478	.001

Adjusted R-square= .108

F Value = 11.023

Significance = .000

The positive relationship established simply implies that the CSR Findings (benefitting community) is most likely reported by companies that: (a) have higher CSR budget; (b) have more than number of years performing CSR projects. These indicators explain the CSR Findings(benefitting community) as indicated by the adjusted R square of 10.8% with F-value of 11.023 at .000 significance. Effect of Patterns of CSR and Input Factors on CSR Findings (benefitting community). Regressing the Dependent Variable on Both the Independent Variable and on the Mediator.

The third step in testing mediation was regressing the CSR Findings(benefitting community) for change on the Patterns of CSR (benefitting community) and Input Factors.

There is no established relationship nor mediation because responses on the Patterns of CSR (benefitting community) were constant.

#### **FACTORS RELATING TO THE CSR FINDINGS (BENEFITTING THE ENVIRONMENT)**

##### Regressing the Mediator on the Independent Variable

The first step in testing mediation was regressing the Patterns of CSR for change on the Input Factors. Table 2 indicates the results of the analysis. The Patterns of CSR (benefitting environment) was the dependent variable while the Input Factors was the independent variable.

Table 2: Regression of Patterns of CSR for change on the Input Factors

MODEL	STANDARDIZED COEFFICIENTS	T	SIG.
	BETA		
(CONSTANT)		3.807E8	.000
NUMBER OF YEARS DOING CSR	.586	7.491E7	.000
BUDGET FOR CSR	.947	1.210E8	.000

Adjusted R-square= 1.00

F Value = 8.567E15

Significance = .000

Of the total four variables, two are significant. In regressing the Patterns of CSR (benefitting environment) on the Input Factors, considering 0.05 as the level of significance, the significant indicators of Patterns of CSR (benefitting environment) with positive relationship were: (a) Number of years doing CSR; and, (b) Budget for CSR.

The positive relationship established simply implies that the CSR program is most likely extensive when companies spend more number of years performing CSR and when CSR budget is increased. These indicators explain the Patterns of CSR (benefitting environment) as indicated by the adjusted R square of 100.00% with F-value of 8.567 at .000 significance.

**FACTORS OF THE INPUT FACTORS GREATLY INFLUENCE THE CSR FINDINGS** (Benefitting environment)

The second step in testing mediation was regressing the CSR Findings (benefitting environment) for change on the Input Factors. Table 3 indicates the results of the analysis. The CSR Findings(benefitting environment) was the dependent variable while the Input Factors was the independent variable.

Regressing the Dependent Variable on the Independent Variable

There were two variables that turned to have an influencing effect on the dependent variable. In regressing the CSR Findings (benefitting environment) on the Input Factors, considering 0.05 as the level of significance, the significant factors influencing the CSR Findings (benefitting environment) on with positive relationship were: (a) Number of years doing CSR; and, (b) Budget for CSR.

Table 3: Regression of the CSR Findings for change on the Input Factors

MODEL	STANDARDIZED COEFFICIENTS	T	SIG.
	BETA		
(CONSTANT)		32.235	.000
NUMBER OF YEARS DOING CSR	.274	3.911	.000
BUDGET FOR CSR	.460	6.568	.000

Adjusted R-square= 22.3

F Value = 24.831

Significance = .000

The positive relationship established simply implies that the CSR Findings (benefitting environment) is most likely reported by companies that: (a) have higher CSR budget; (b) have more than number of years performing CSR projects. These indicators explain the CSR Findings (benefitting environment) as indicated by the adjusted R square of 22.3% with F-value of 24.831 at .000 significance. Effect of Patterns of CSR and Input Factors on CSR Findings (benefitting environment) Regressing the Dependent Variable on Both the Independent Variable and on the Mediator.

The third step in testing mediation was regressing the CSR Findings (benefitting environment) for change on the Patterns of CSR (benefitting environment) and Input Factors. Table 4 indicates the results of the analysis. The CSR Findings (benefitting environment) was the dependent variable while the Input Factors and CSR Patterns (benefitting environment) were the independent variable.

There were two variables that turned to have an influencing effect on the dependent variable. In regressing the CSR Findings on the Patterns of CSR and Input Factors, considering 0.05 as the level of significance, the significant determinants of CSR Findings, all with positive relationship, were: (a) number of years operating in Thailand; and, (b) Patterns of CSR (benefitting the environment).

Table 4 Regression of CSR Findings for Change on the Patterns of CSR and Input Factors

MODEL	STANDARDIZED COEFFICIENTS	T	SIG.
	BETA		
(CONSTANT)		-.684	.495
NUMBER OF YEARS IN THAILAND	-.010	3.097	.002
CSR PATTERN BENEFITTING ENVIRONMENT	.483	-.147	.883

Adjusted R-square= 22.3

F Value = 24.831

Significance = .000

The positive relationship established simply implies that the CSR Findings (benefitting environment) is most likely reported by companies that: (a) have greater number of years operating in Thailand; and, (b) performs low on CSR patterns. These determinants explain the CSR Findings on Practicum Program as indicated by the adjusted R square of 22.3% with F-value of 24.831 at .000 significance.

#### Mediation of the Patterns of CSRs

With Patterns of CSR(benefitting environment) becoming a significant variable, this satisfies the conditions of Mediation. This means that the Input Factors, independent variable, was assumed to cause the Patterns of CSR (benefitting environment), mediator.

This time, the significant independent variables were those that were significant on all the three regression models. Therefore, going over the three models, the significant variables were Number of years performing CSR, CSR budget and Number of years operating in Thailand.

One more requirement to validate mediation is that the effect of the independent variable on the dependent variable must be less in the third equation than in the second. The coefficients were as follows: Number of years performing CSR:  $\beta_3 = 0 < \beta_2 = .274$  CSR budget:  $\beta_3 = 0 < \beta_2 = .460$ .

The mediation further means that when the mediator is changed then the effect of the independent variable on the dependent variable will also change. Considering the paradigm of this study, the mediator can be controlled to have a perfect mediation and attain the objective of putting the CSR Program extensive.

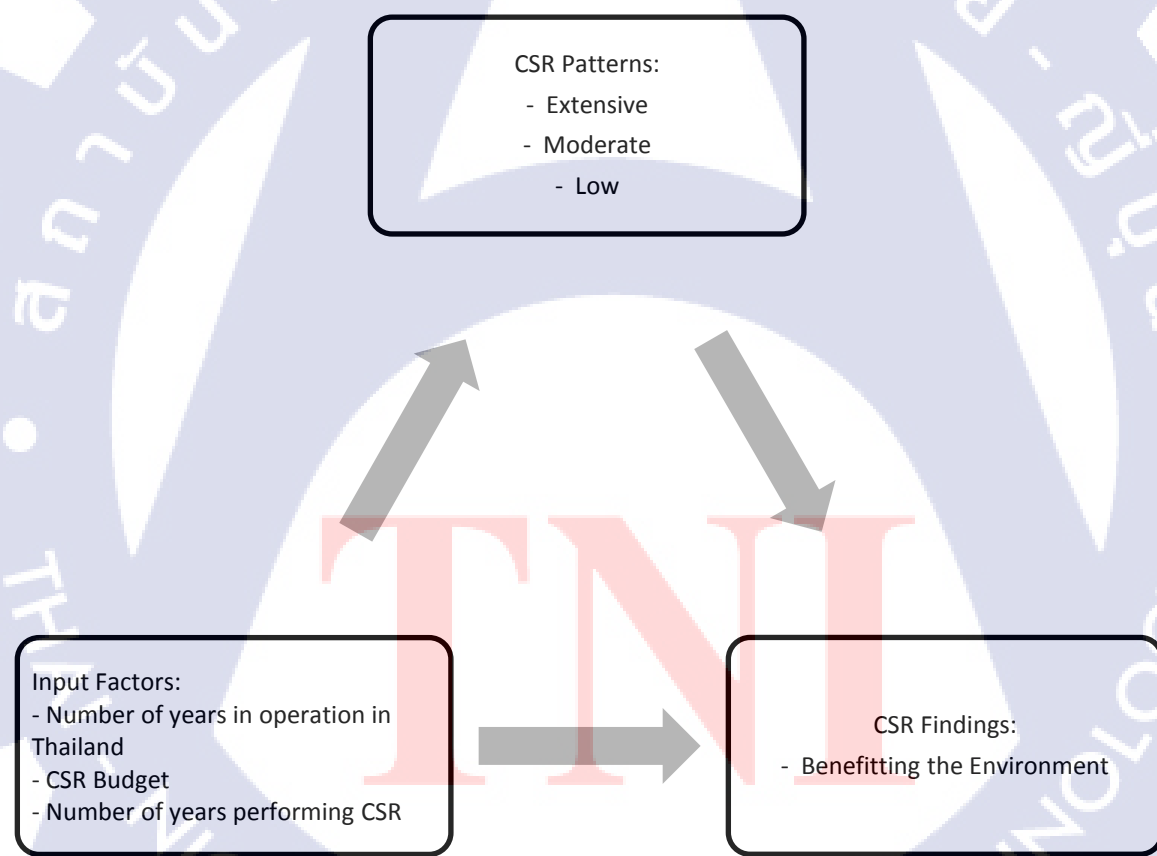


Figure 6: Resulting Mediation Paradigm

Further evaluation of the final model to satisfy the assumptions of regression: The ANOVA analysis in regression tests the acceptability of the model from a statistical

perspective. The significance value of the  $F=24.831$  significant at .000 is less than 0.05, which means that the variation explained by the model is not due to chance. Adjusted R Square= .223 which was computed from the coefficient of determination, the squared value of the multiple correlation coefficient. It shows that about 22.3% of the variation in the dependent variable is explained by the model. The remaining 77.7% comprises other variables not considered in this model. The t-statistics for each determinant exceeded the study's significance level of  $\alpha = .05$ , therefore the individual variables were significant. A residual is the difference between the observed and model-predicted values of the dependent variable. The residual for a given variable is the observed value of the error term for that variable.

A histogram in figure 7 (shape approximately follows the shape of the normal curve or close to normal curve) indicates passing the test of normality.

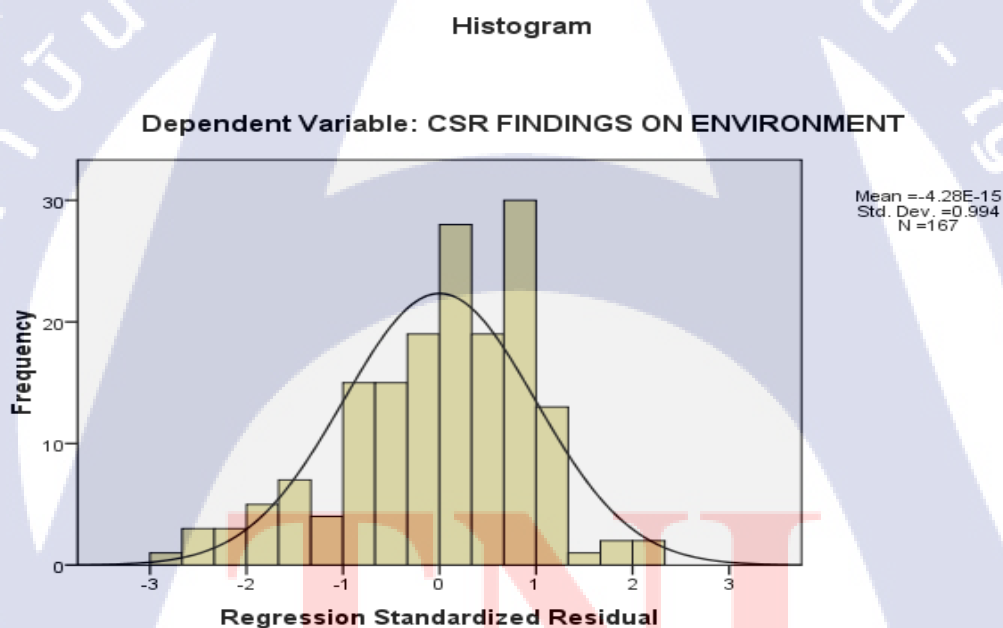


Figure 7: Histogram for the Final Regression Model

P-P plot of the residuals in the figure (following a  $45^0$  line) indicates passing the test of normality.

### Normal P-P Plot of Regression Standardized Residual

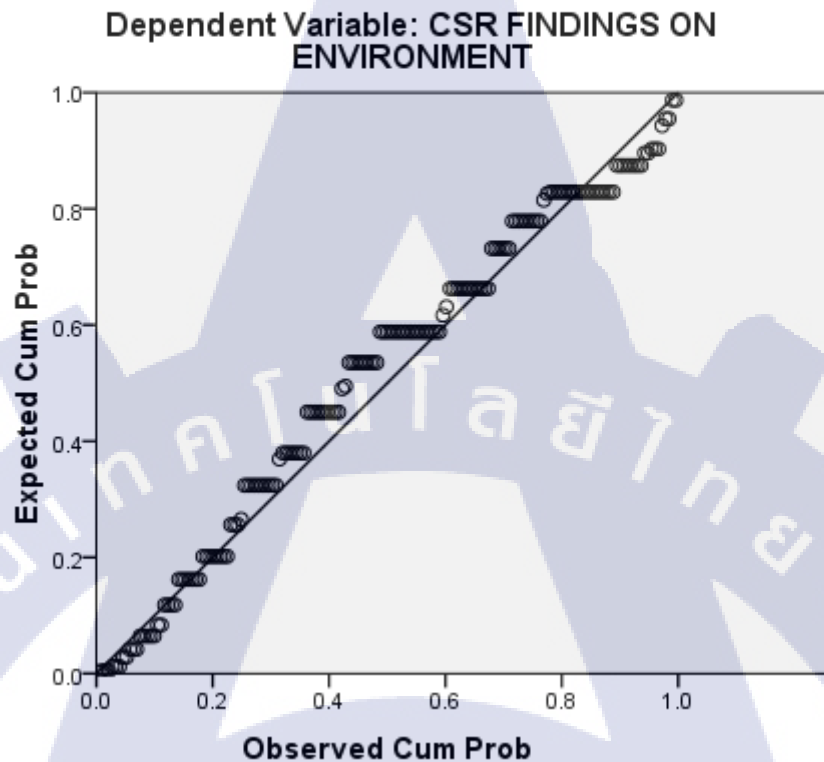


Figure 8: P-P plot of the Residuals

### Conclusion

In this study, the researchers had analyzed how input factors relates to CSR patterns. The finding found that there was no relationship established between input factors and CSR patterns (benefitting community) because responses are constant. CSR Budget and number of years performing CSR relates to the CSR findings (benefitting environment).

In addition, when analyzing how the CSR patterns accounted for the effect of input factors to the CSR finding. There was no relationship and mediation established as far as CSR findings (benefitting community) is concern because responses on CSR Patterns (benefitting community) are constant. Number of years rating in Thailand and CSR patterns (benefitting environment) relates significantly to the CSR findings (benefitting environment). Therefore, mediation is tested. CSR patterns (benefitting environment) is a mediator variable as far CSR findings (benefitting community) is concern. Finally, identifying which

among the input factors relates to the CSR findings. The research found that number of years performing CSR and CSR budget are the significant factors that relates to CSR findings both benefitting community and environment.



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The logo of the Thai-Nichi Institute of Technology (TNI) is centered on the page. It features the letters 'TNI' in a large, bold, red serif font. The letters are set against a light blue background that includes a large gear-like circular pattern. The words 'THAI-NICHI INSTITUTE OF TECHNOLOGY' are written in a smaller, white, sans-serif font along the inner edge of the gear. The entire logo is superimposed on a larger, faint blue gear-like pattern that covers the background of the page.



**APPENDIX A**  
SURVEYS FOR COMMUNITY AND COMPANY

**TNI**

# FINAL COMMUNITY SURVEY

Date:

Dear Sir/Madam:

Greetings!

We are faculty/researchers from Thai-Nichi Institute of Technology (Thailand) and Lyceum of the Philippines University. Currently we are doing a collaborative research entitled "A Study of Multinational Companies: The Use of Mediation Paradigm on Corporate Social Responsibility". We will greatly appreciate your cooperation. Rest assured that all information gathered will remain confidential. Thank you very much.

Sincerely,

Asst. Prof. Dr. Tiwa Park

*Research Project Leader (Thailand)*

## I. CLASSIFICATION INFORMATION FOR COMMUNITY

Direction: Please write on the spaces provided or choose from the options given.

AGE		SEX	<input type="checkbox"/> Male	<input type="checkbox"/> Female	
HIGHEST EDUCATIONAL ATTAINMENT					
<input type="checkbox"/> Elementary	<input type="checkbox"/> High School	<input type="checkbox"/> Associate/ Vocational	<input type="checkbox"/> College	<input type="checkbox"/> Masteral	<input type="checkbox"/> Doctoral
AFFILIATED WITH NGO (Non-Government Organization)?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	
RESIDENCE	<input type="checkbox"/> Cavite	<input type="checkbox"/> Laguna	<input type="checkbox"/> Tarlac	<input type="checkbox"/> Others _____	
EXISTING COMPANY WITHIN YOUR LOCALITY, please specify:					

## II. INFORMATION SOUGHT

**DIRECTION:** Encircle the number that best describes your company Answer the following questions honestly and openly. There is no right or wrong answer. Please do not leave any blank.

- 5 – Strongly Agree  
4 – Agree  
3 – Neither Agree nor Disagree  
2 – Disagree  
1 – Strongly Disagree

1.	The company above is engaged in giving to community programs.	5	4	3	2	1
2.	The company above is directly involved in community programs.	5	4	3	2	1
3.	The company have the technology for implementing environmental measures.	5	4	3	2	1
4.	The company above provides a detailed report of social and environmental performance.					

	State how _____ _____ _____						
5.	There are no complaints of the community against environmental hazards caused by the company above.  State any complaints the company receives from the community (locality where the manufacturing plant is situated) _____ _____ _____						
6.	What corporate social responsibility programs (examples are Outreach Programs, Community Assistance and Environmental Preservation Campaigns) of the above companies are you aware of? Please list them below:						

NATURE OF CORPORATE SOCIAL RESPONSIBILITY	Duration (number of days, months or years program is on-going)	Frequency (number of times program is undertaken in a year)	HAVE YOU BEEN A DIRECT BENEFICIARY? YES OR NO	NON-GOVERNMENT ORGANIZATIONS THE COMPANY IS IN PARTNERSHIP WITH

If there is anything you would like to see the company doing with regard to its CSR activities, please tell us. Thank you very much.

TNI

THAI - NICHI INSTITUTE OF TECHNOLOGY

Date:

Dear Sir/Madam:

Greetings!

We are faculty/researchers from Thai-Nichi Institute of Technology (Thailand) and Lyceum of the Philippines University. We are conducting a survey for our research entitled "A Study of Multinational Companies: The Use of Mediation Paradigm on Corporate Social Responsibility ". We will greatly appreciate your cooperation. Rest assured that all information gathered will remain confidential. Thank you very much.

Sincerely,

Asst. Prof. Dr. Tiwa S. Park

*Research Project Leader (Thailand)*

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Direction: Please write on the space provided.

#### I. CLASSIFICATION INFORMATION FOR EMPLOYEES

Name					
Gender		Age		Status	
Nature of the Job					
Position					
Company Name					
Industry					
No. of Years Working					
Contact No./s					
E-mail					

#### II. COMPANY PROFILE

Number of years the company is operating in the Philippines		
Asset Size		
Country of Origin		
Number of years performing CSR		
Average annual budget for CSR		

Below is the list of common Corporate Social Responsibility (CSR) drivers, kindly check all items that are relevant to your company's drive or motivation for conducting CSR:

<input type="checkbox"/>	1. Ethical considerations
<input type="checkbox"/>	2. Economic considerations
<input type="checkbox"/>	3. Reputation or brand
<input type="checkbox"/>	4. Innovation and learning

	6. Risk management or risk reduction
	7. Strengthened supplier relationships
	8. Access to capital or increased shareholder value
	9. Market position (market share) improvement
	10. Improved relationships with governmental authorities
	11. Cost savings
	12. others (please specify)

### III. INFORMATION SOUGHT

**DIRECTION:** Encircle the number that best describes your company Answer the following questions honestly and openly. There is no right or wrong answer. Please do not leave any blank.

- 5 – Strongly Agree  
4 – Agree  
3 – Neither Agree nor Disagree  
2 – Disagree  
1 – Strongly Disagree

#### CONCERNING OWNERS/MANAGERS:

1.	Our company provide a certain amount of giving (for CSR)in terms of % of earnings.	5	4	3	2	1
2.	Our company publishes and distributes materials about Code of Ethics.	5	4	3	2	1
3.	Our company trains employees on the code of ethics.	5	4	3	2	1
4.	Our company is able to apply Code of Ethics in demonstrable and measurable ways.	5	4	3	2	1

#### CONCERNING EMPLOYEES:

1.	Our company spent a certain percentage for employees' benefits?	5	4	3	2	1
2.	Employees' benefits, in this company is according to industry standard.	5	4	3	2	1
3.	State the benefits given to employees: _____ _____ _____					

#### CONCERNING NATURAL ENVIRONMENT:

1.	This company practice recycling.	5	4	3	2	1
2.	This company use recycled materials.	5	4	3	2	1
3.	Our company measure pollution performance against some industry standards.	5	4	3	2	1
4.	This company follows government environment-related policies.	5	4	3	2	1
5.	This company provide a detailed report of social and environmental performance.	5	4	3	2	1
6.	The environment policies that our company adheres to are					

	<hr/> <hr/> <hr/>
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CONCERNING COMMUNITY:

1.	This company practice corporate giving to community programmes.	5	4	3	2	1
2.	This company practice direct involvement in community programs.	5	4	3	2	1

DETAILS ON CSR:

1. List the corporate social responsibility programs that your company is undertaking; indicate its duration, frequency, resources utilization and partners (Use extra sheet if necessary).

CSR CODE	CSR Programs	Duration (number of days, months or years)	Frequency(num ber of times program is undertaken in a	Resource Utilization(amount allotted for manpower, materials, machines,	Partners  (non-profit organizations)
A					
B					
C					

CSR CODE	CSR Programs	Beneficiaries	Governing Government Laws	Program Evaluation	Structure
A					
B					
C					

2. Rank the CSR programs from 1-10 in terms of

CSR PROGRAMS (as listed above)	WITH MOST EMPLOYEE PARTICIPATION	WITH MOST BENEFICIARIES	MOST FUNDED
A			
B			
C			
D			

If there is anything you would like to see the company doing with regard to its CSR activities, please tell us. Thanks.

TNI

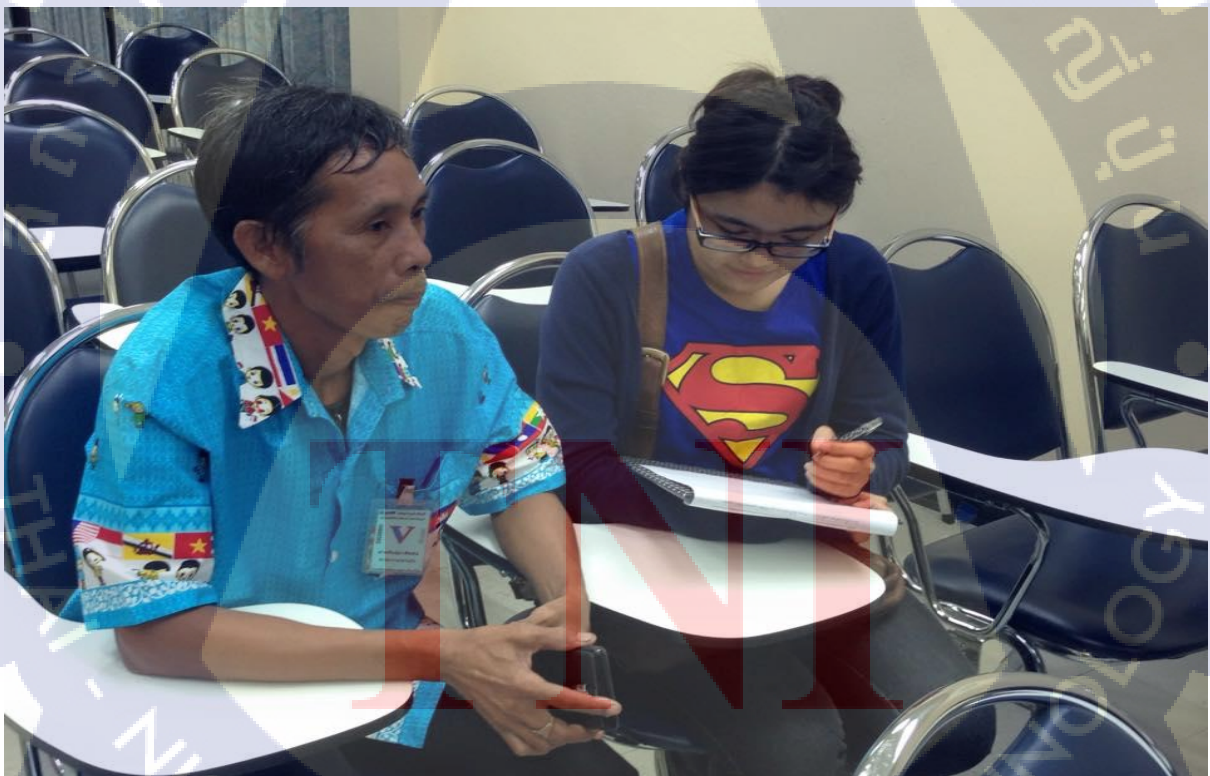
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**APPENDIX B**  
PICTURES FROM ALL FOUR COMMUNITIES

**TNI**





WUJIRI INSTITUTE OF TECHNOLOGY





















