

## ENVIRONMENTAL AND SOCIAL PERFORMANCE DISCLOSURE AND SHAREHOLDERS' WEALTH- A PERSPECTIVE FROM MALAYSIAN COMPANIES

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### ABSTRACT

*Since sustainability reporting is a mean to communicate with a wide range of internal and external stakeholders and also reflect the companies' sustainability performance, which inspires sustainable growth and development, consequently increasingly more and more stakeholders including shareholders ask for sustainability disclosures. In some Countries CSR reporting has become mandatory by legislation and companies have to disclose their environmental and social activities. Sustainability reporting has become mandatory for Malaysian public listed companies (PLC) since 2007. There a declarative about CSR activities in all Malaysian companies but number of sustainability indicators and the quality of disclosure are different among different companies. Since the main goal of each business is to maximize its shareholders' wealth, and CSR practices would occur costs for companies, this paper amis to find any significant relationship between level of CSR disclosure and companies share price and net profit. The result. The paper studied through 45 Malaysian public listed companies in three years (From 2008-2010). The results indicated that companies with higher level of sustainability disclosure have higher share price and have higher net profit.*

**Keywords:** *CSR and Net Profit and CSR and Share Price*

### 1. INTRODUCTION

A classic definition of sustainability is: "meet the needs of the present without compromising the ability of future generations to meet their own needs". Companies not only try to perform in such a way to not have a negative impact on environment and society, but also try to affect positively on community and environment. Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development. (GRI- Sustainability Reporting Guideline, 2011). Leibs (2007) defined sustainability reporting as "the practice of publicizing a company's environmental and social risks, responsibilities, and opportunities". In old days, prosper business considered as a business that contributes to community by generating profit, which covered employment salaries, purchases, and investments. But nowadays, a community needs a successful business to provide jobs and wealth creation opportunity for its citizens (Porter and Kramer, 2011). But nowadays the story is different. During the last few decades, enormous number of companies has started to practice corporate social responsibility and disclose those activities. Businesses have realized that sustainable natural environment, healthy community, inspiring workplace, and right competitive market underpin continuous profitability. As Porter and Kramer (2011) cited, a business needs a successful society, not only to make demand for its products, but also to make critical assets and supportive environment.

There are three major potential benefits of sustainability reporting: 1) more demand for the company's products and/or services, 2) a higher price for its shares, and 3) better internal reporting (Baumunk, 2009). The main goal of each company is maximizing its shareholders wealth. Thus it is not uncommon that there is increasing number of shareholders that ask for sustainability reporting. On the other hand sustainability reporting would assure investors about lower risk. Potential investors tend to continuous and sustainable profitability, higher profit, and lower risk.

As a conclusion environmental and social performance disclosure would impact on share value and shareholders wealth. Consequently sustainability performance and disclosure would be advantageous to communities, businesses, and shareholders.

### **1.1. Statement of the problem**

Companies are becoming more and more aware of CSR practice importance. People consideration about environmental and social impacts of businesses performance would be simultaneous with companies' consideration about continuous profitability and sustainable development. Sustainable development for businesses is congruent with sustainable environment, economic growth, and societal well-being. Consequently long-term profitability and success lie down on the caring about natural environment and meeting societies' exact needs.

Porter and Kramer (2011) cited that companies continue to view value creation narrowly, optimizing short-term financial performance in a bubble while missing the most customers' needs and ignoring the broader influence that determine their longer-term success. Also Porter and Kramer (2011) argued about how companies overlook the well-being of their customers, the depletion of natural resources vital to their businesses, the viability of key suppliers, or the economic distress of the communities in which they produce and sell? Wide range of stakeholders asks businesses to perform in such a way to protect environment and give back to communities. Companies' performance and stakeholders' perception are intertwined. Practice of CSR would alter stakeholders' perception and subsequently this alteration would impact on companies' financial performance. Revenue, net profit, return on asset, return on equity, etc. can represent the financial performance. Growth in any of financial indicators would increase share value. Consequently practice of CSR and sustainability reporting would increase financial performance and ultimately increase share price.

CSR issue can come into management decision making process and formulating strategy, when it comes to numbers and quantitative variables, in the other words, its effect must be measurable in order to decide about it, for example; management must know about benefits of sustainability performance, when they want to analysis cost and benefits of CSR practices.

## **2. LITERATURE OF REVIEW**

### **2.1 CSR and Net Profit**

There is significant number of studies on the impact of corporate social responsibility and financial performance. Also many scholars investigated the relationship between CSR disclosure and companies share value and shareholders wealth. Stanwick and Stanwick (1998) discussed that there is a positive relationship between low emission level and high profitability for firms with excellent reputation for social responsibility. Russo and Fouts (1997) found that there is a positive relationship between environmental performance and return on assets. Also Hart and Ahuja (1994) determined that emission reduction and pollution prevention initiatives have a positive impact on return on asset, return on equity, and return on sale.

Nehrt (1995) investigated among specific industry, paper pulp, and found that manufacturers that invest on pollution reducing technology, faced significant profit growth, and the results showed that companies with invested in new technologies faced positive and profound growth, and also the results indicated that, firms which invest in new technologies in the first years of availability out performed those which invested in last years of the research observation. Financial accounting measures, such as return on equity (ROE) and return on assets (ROA), have been shown to improve with improved environmental performance, while the inadequate disclosure of environmental liabilities has been found to have a compounding negative effect on the financial results of poor environmental performers (Murphy, 2002). As Murphy (2002) mentioned in fact there is a profitable correlation between superior environmental stewardship and financial performance.

Since cost reduction is a fuel for profitability machinery, so cost reduction and efficiency through using of resources and human capital can play a vital role in order to make higher profit. UNEP and SustainAbility (2001) cited that " Strong empirical support exists for the argument that superior environmental performance

reduces costs over time. UNEP and SustainAbility (2001) cited that “Companies reporting on environmental performance note that significantly improved awareness of environmental costs and opportunities increase efficiency”. Jacob, Singhal, and Subramanian (2008) cited that “Environmental practices reduce waste and consumption of various production inputs, including energy (Rothenberg, Pil, and Maxwell 2001), material usage (Sroufe 2003), and numbers of components in products (Ashley 1993)”.

Pollution prevention may not only reduce disposal and mitigation costs but also avoid the cost of installing and operating pollution control devices (Hart and Ahuja 1996). Jacob, Singhal, and Subramanian (2008) cited that “Other cost avoidance benefits of effective environmental management include mitigation of risks of losses from crises or regulation (Reinhardt 1999), and preventing the expenses associated with lawsuits and legal settlements (Karpoff et al. 2005)”. Both revenue growth and cost reduction can be enhanced by innovations spurred by demands from regulators, consumers, and other stakeholders (Porter and van der Linde 1995).

Sale increasing also can increase net profit, and it would be achieved through making brand reputation and increasing a customer’s attraction. UNEP and SustainAbility (2001) indicated that in business-to-business sphere there is positive relationship between environmental performance and number of companies that looking for green supplier and partner, and for Business-to-customer sphere, customers look for greener products. Brand recognition and corporate reputation, can also be enhanced through “strategic Philanthropy” (Seifort, Morris, and Bortkus 2003). Revenue growth can be achieved by improved execution in current market or access to new market (Jacob, Singhal, and Subramanian, 2008). Klassen and McLaughlin (1996) mentioned that improvement in existing market can be realized through the reputational benefits of positive environmental performance, also they argued that reduction in environmental effects of companies’ products and performances, and well established environmental management system, can improve the reputation. Similarly, other environmentally conscious initiatives, such as alternative energy purchases or investments required to reduce emissions below regulatory requirements, can signal a firm’s concern for the environment and could have a positive impact on corporate reputation and brand recognition (Jacob, Singhal, and Subramanian, 2008). Businesses can achieve sale increase and cost reduction not only through the environmental performances and products, but also through caring about employees and making appropriate workplace. In addition to revenue gains and cost reductions, innovation can moderate the effects of environmental performance on revenue gains and cost reductions (Porter and van der Linde 1995).

## 2.2 CSR and Share Price

Also there is significant number of studies that found positive association between sustainability reporting, corporate social responsibility and investors’ perception, and effects on the companies share value. Feldman, Soyka, Ameer (1996) indicated that firms that improve their environmental management system and their future environmental performance will be able to increase their shareholders wealth perhaps five percent. As mentioned by Dowell, Hart, Yeung (1998), there were three studies during 90s that link proactive environmental management to superior stock performance.

Hamilton (1995), Klassen and McLaughlin (1996), and White (1995) all demonstrated that 1) there is a positive relationship between news of toxic emission and negative abnormal return, 2) Firms with strong environmental management practices have greater stock price returns compare to firms with weak practices after major environmental disasters, 3) also they mentioned that there is positive relationship between environmental performance awards and positive abnormal returns. Konar and Cohen (2001) cited that there is association between reduction in toxic emission release and greater firm value. As indicated by Gottsman and Kessler (1998) portfolios of firms with good environmental performance return more than portfolios of poor environmental performers.

Cohen et al (1995) indicated that industry-balanced portfolios of low-pollution firms earned greater stock returns than portfolios of high-pollution firms. White I (1995) found that portfolio of firms which are well-known for their environmental practice earn greater than both portfolio of firms with abortive environmental reputation and portfolios of firms with bad reputation. Ziegler, Rennings, Schroder (2002) found that growth of environmental performance by companies have a positive impact on average monthly share returns. UNEP and SustainAbility (2001) argued that employee-friendly work practice and good workplace condition have a positive effect on share value. It seems that investors look for sustainable growth in addition to only financial returns. As mentioned earlier so many scholars proved that increasing in environmental and social performance would result in increase in share price and return. Since naturally investors look for lower risk, higher return, and continuous profitability, and probably sustainability reporting gives them an evidence of risk reduction and inspires continuous performance by companies. So

CSR disclosure would attract more investors to a business, and as mentioned in previous part, sustainability reporting also increase revenue and generate more profit, so sustainability reporting also provide higher return, which all investors look for. Consequently sustainability reports would show investors main criteria, which would assure them by demonstrating lower risk among long-term performance, and by increasing revenue, which would affect share value directly.

Meanwhile, from the other view investors do not want to see loss of performance, and regarding to this aspect Kempf and Osthoff (2006) discussed that performance of portfolios, which are socially responsible are never profoundly negative, or on the other word social responsible investors do not suffer a performance loss by reaching their ethical aims. On the other hand, sustainability reporting would increase share value by increasing market value, and simultaneously by increasing tendency in potential investors, whom are looking for lower risk and more return. Murphy (2002) found that there is a positive association between innovative pollution prevention technology and stock returns, also mentioned that chemical leaks, and oil spills have a negative impact on stock price.

### **3 RESEARCH METHODOLOGY**

#### **3.1. Population and Sample**

Since the research aims to measure financial performance and one of the criteria as share price, thus all companies must be listed as a public company. The research has selected sample companies through main market if Bursa Malaysia. Level of environmental and social performance varies from sector to sector, so the research must focus on specific sectors to make an appropriate and reliable platform for comparing two countries. In the other hand reliability of findings is related to size of data pool. So the research has selected three different major sectors, which are listed in Bursa Malaysia. The three selected sectors are; 1) property developers and constructors, 2) manufacturers, and 3) traders and service sector. Since it is not possible to study all companies in the mentioned sectors, so the research selects the sample of those sectors. A selected sample is a sub-set or sub-group of a population. Since the research is going to survey companies environmental and social performance and disclosure, and financial performance. So the research must select sample companies and sample fiscal year. The research selected last three years as a sample, 2008, 2009, and 2010. By studying this sample, the finding and results can be generalized to the population. Regarding to time and cost constraint, it is quite impossible to select a large number of sample. So the selected sample is 45 companies. The selected sample would be adequate since the research studies among three fiscal year of each company. It means in total the research surveys among 45 companies for three years, in the other words the research will surveys through 135 fiscal periods.

Samples have been chosen randomly, among companies which have following criteria: 1) Listed in the main market of Bursa Malaysia or Singapore Exchange. 2) Availability of three years annual reports in the stock market website or company's website. 3) Disclosed their financial data in Malaysian Ringgit.

#### **3.2. Measurement**

The research selects environmental indicators for sustainability reporting from GRI-Sustainability Reporting Guidelines (2011). The research selects these indicators because most companies focused on those criteria and also because of theses criteria can have profound effect on the environment. The selected indicators are; energy, water, biodiversity, EMS (Environmental Management System), and product and service (To be in line with environmental friendly standards). The research selects five indicators for social aspect of sustainability reporting. The selected social indicators for measuring sustainability reporting are; employment, occupational health and safety, training and education, community involvement, and customer health and safety.

The research considers all ten sustainability indicators and calculates a single index for sustainability reporting. The research put the single index as an amount of independent variable. To calculate sustainability index there is two steps. First the research consider occurrence of indicators, and in the second step consider

quality of disclosed data. In the first step if a companies disclosed about the indicators the research put 1 for that indicator, and if a company has not disclosed about specific indicator, the research put zero for the occurrence of that indicators. For the second part of index calculation, the research considers quality of disclosure. If a company just mentioned about occurrence and not specific detail, the research puts 1. If a company disclose about quality of indicators the research puts 2. If a firm disclose about quantitative sustainability disclosure, then the research puts 3. Lastly if a company disclosed both quantitative and qualitative aspect of sustainability reporting for a specific indicator, the research put 4. Generalization number into sustainability reporting is shown in table 1.

**Table 3.1:**  
Assigning Score to Sustainability Disclosure

Sustainability Disclosure	Score
Not-Qualitative & Not-Quantitative	1
Qualitative & Not-Quantitative	2
Not-Qualitative & Quantitative	3
Qualitative & Quantitative	4

The table 2 demonstrates the example of assigning score to indicators disclosure, which represents the level of disclosure.

**Table 3.2**  
Example of Assigning Score to the Level of Sustainability Reporting

Disclosure Level	Score
The company held a training course for its staff.	1
The company held an accounting course for its accountants.	2
The company assigned \$ 20000 for its staff-training course.	3
The company assigned \$ 20000 for running accounting courses for its staffs..	4

Here is a table of bivariate correlation analysis among variables. The Spearman test has been conducted.

<i>Bivariate Correlation</i>			
	Sustainability Index	Net Profit	Share Price
Sustainability Index	1		
Net Profit	0.319*	1	
Share Price	0.284*	0.430*	1
*.Correlation is significant at the 0.01 level (2-tailed).			

The research calculates the sustainability index in two steps. First sum all qualitative disclosure score. Secondly by divide the result of first step by sum of occurrence scores. Here is an example of sustainability index calculation for this research:

**Table 3.3**  
Example of Sustainability Index Calculation

KYM Holding Berhad- Year 2008				
Environmental Indicators	Disclose	Score	Level of Disclosure	Score
Energy	YES	1	Qualitative and Quantitative	4
Water	YES	1	Just Qualitative	2
Biodiversity	NO	0		
EMS	YES	1	Just Qualitative	2
Products and Services	NO	0		
Social Indicators				
Employment	YES	1	Just Qualitative	2
O.H.S *	YES	1	Qualitative and Quantitative	4
Training and Education	YES	1	Qualitative and Quantitative	4
Community Involvement	YES	1	Not Qualitative & Not Quantitative	1
C.H.S **	YES	1	Not Qualitative & Not Quantitative	1
Sum		8		20
Sustainability Index = 20 / 8 = 2.5				
* Occupational Health and Safety				
** Customer Health and Safety				

**4. ANALYSIS AND RESULT**

Since the sustainability reporting is mandatory in Malaysia, so as the table 4.1 shows totally 97.6% [(100+100+93)/3] of sample companies disclosed about environment and social performance.

**Table 4.1**  
Malaysian Companies that Disclosed their CSR Activities

Industry	Sample	Period	Total Sample	E.S.D*	Percentage
Property Development	15	3	45	45	100%
Manufacturing	15	3	45	45	100%
Trade and Services	15	3	45	42	93%

\* Environmental and Social Disclosure

Here is a table. (4.2) of bivariate correlation analysis among variables. The Spearman test has been conducted.

**4.2: Correlation Analysis**

Bivariate Correlation			
	Sustainability Index	Net Profit	Share Price
Sustainability Index	1		
Net Profit	0.319*	1	
Share Price	0.284*	0.430*	1

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

The correlation coefficient table shows that there is a significant relationship between sustainability reporting and net profit among Malaysian companies, and also there is a significant relationship between sustainability reporting and Malaysian Companies’ share price.

In the next step, the research has conducted the simple regression analysis among variables to test hypothesis. First, regression analysis has been conducted through sustainability reporting index and share price, and then between sustainability reporting index and net profit among Malaysian companies.

**H1: There is a positive relationship between level of sustainability reporting and companies share price.**

**Table 4.3**  
Result of Regression Analysis between Sustainability Reporting Index and Share Price-Malaysia

DV	R	Adj	Unstandardized		Standardized	t	Sig
	Square	R sq	Coefficient		Coefficient		
			B	Std. Error	Beta		
C	.081	.074	0.018	0.302		0.058	.953
SH.P			0.509	0.149	0.284	3.415	.001

Note. C= Constant and SH.P= Share Price.

Table 4.3 demonstrates there is a positive significant relationship with coefficient beta of .284 and significant level of 0.001 (p<0.01), between sustainability reporting index and share price among Malaysian companies. Meanwhile, the coefficient of determination (R Square) is 0.081, and adjusted R square is 0.074. This means 7.4% of total variation in share price in Malaysia can be explained from sustainability reporting index. Magnitude than those from the comprehensive income regression. Hence, a positive and significant Z-statistic indicates that comprehensive income is the model of choice (Dechow, 1994).

Equation between Share Price and Sustainability Reporting Index- Malaysia

**Share Price= 0.018+0.509 (Sustainability Reporting Index).**

**H2: There is a positive relationship between sustainability reporting and net profit.**

**Table4.4**  
Result of Regression Analysis Between Sustainability Reporting Index and Net Profit-Malaysia

DV	R	Adj	Unstandardized		Standardized	t	Sig
	Square	R sq	Coefficient		Coefficient		
			B	Std. Error	Beta		
C			-165627204	62160846		-2.66	.009
N.P	.102	.095	118847621	30627559	0.319	3.88	.000

Note. C= Constant and N.P= Net Profit.

Table 4.4 shows the correlation coefficient between sustainability reporting index and net profit is 0.319 with significant level of 0.000 (p<0.01). So there is a positive and significant relationship between sustainability reporting index and Malaysian companies’ net profit. The R square of linear regression analysis is 0.102, and adjusted R square is 0.095. This means 9.5% of total variation in net profit can be explained from sustainability reporting index.

Equation between Net Profit and Sustainability Reporting Index- Malaysia

**Net Profit= -165627204+118847621 (Sustainability Reporting Index)**

## 5. SUMMARY AND CONCLUDING REMARKS

The Results of the study do not show that comprehensive income is superior to net income for firm performance evaluation, based on stock return. The same results prevailed at total sample and some industrial group level. Also, the result at total sample level do not show the superiority of comprehensive income to net income for firm performance evaluation, based on stock market price.

About "Other Comprehensive Income items" our results show that in state companies, adjusting net income for fixed assets revaluation and foreign currency adjustments, improves the ability of income to summarize firm performance. It is also appropriate for predicting operating net income. In companies listed in Tehran Stock Exchange, except for investment industry group, we found no evidence that comprehensive income for firm performance evaluation on the basis of cash flows prediction to be superior to net income. We found better results for the state companies (only in other companies group), i.e., firm performance evaluation on the basis of cash flows prediction using comprehensive income, to be superior to net income.

Collectively, our results provide some weak evidence that show, comprehensive income adjustments improve ability of income for reflecting firm performance. We propose further study of the issue in another research with the same methodology applied in this research, except that, first, the estimation of the best models that fit the data to be done, and second, using the best competing models to investigate the superiority of comprehensive income to net income.

## REFERENCES

1. Ashley, S (1993). Designing for the Environment'. *Mechanical Engineering*. 115 (3), 52-56.
2. Baumunk Jon A. (2009). Sustainability Reporting and XBRL' Retrieved from: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1620567](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1620567).
3. Cohen, Mark A., Scott A. Fenn, and Jonathan S. Naimon. (1995). Environmental and Financial Performance: Are They Related? *Investor Responsibility Research Center: Environmental Information Service*. April.
4. Dowell, G., Hart, S. and Yeung, B. (2000). Do corporate global environmental standards create or destroy market value? *Management Science*, 46: 1059–1074
5. Feldman, S.J.; Soyka, Peter A. and Ameer, Paul, G. (1996). Does Improving Environmental Management Systems and Performance Result in Higher Stock Price? *Journal of Investing*, 6(4): 87-97.
6. Gottsman, Laura and Kessler (1998). Smart Screened Investments: Environmentally-screened Equity Funds that Perform. *Journal of Investing*. 7(3) 15-24.
7. Hamilton, J.T. (1995). Pollution as News: Media and Stock Market Reaction to the Toxic Release Data. *Journal of Environmental Economics and Management*, 28 (1): 98–113.
8. Hart, S.L. and G Ahuja (1996). Does it Pay to Be Green? An Empirical Examination of the Relationship Between Emission Reduction and Firm Performance. *Business Strategy & Environment*, 5 (1).
9. Jacobs, Brian W., Vinod R. Singhal and Ravi Subramanian (2008). An Empirical Investigation of Environmental Performance and the Market Value of the Firm. *College of Management. Georgia Institute of Technology*.
10. Karpoff, J. M., J. R. Lott, E. Wehrly. (2005). The Reputational Penalties for Environmental Violations: Empirical Evidence. *Journal of Law and Economics*. 48 (2), 653-675.
11. Kempf, A. and Osthoff, P. (2006). The Effect of Socially Responsible Investing on Financial Performance, May.
12. Klassen R.D. and C.P. McLaughlin (1996). The Impact of Environmental Management on Firm Performance, *Management Science*, 42 (8).
13. Leibs, S. (2007, December 1). Sustainability reporting: Earth in the balance sheet. CFO.
14. Retrieved from <http://www.cfo.com/article.cfm/10234097>.
15. Murphy, C. (2002). The profitable correlation between environmental and financial performance: a review of the research. Seattle, WA: Light Green Advisors.
16. Nehrt, Chad (1996). Timing and Intensity Effects of Environmental Investments' *Strategic Management Journal*, 17: 535-47.
17. Porter M., and M. Kramer. (2011). The Big Idea: Creating Shared value. *Harvard Business Review*, January-February.

18. Porter, M. and van der Linde, C. (1995). Green and competitive: ending the stalemate. *Harvard Business Review*, September – October, 120–134
19. Reinhardt, F. (1999). Market Failure and the Environmental Policies of Firms. *Journal of Industrial Ecology*. 3 (1), 9-21.
20. Rothenberg, S., F. K. Pil, J. Maxwell (2001). Lean, Green, and the Quest for Superior Environmental Performance. *Production and Operations Management*. 10 (3), 228-243.
21. Russo M.V. and P.A Fouts (1997): 'A Resource-Based Perspective on Corporate Environmental Performance and Profitability', *Academy of Management Journal*, 40 (3).
22. Sroufe, R. (2003). Effects of Environmental Management Systems on Environmental Management Practices and Operations. *Production and Operations Management*, 12(3), 416-431.
23. Stanwick, Peter A. and Stanwick, Sarah D (1998). The Relationship Between Corporate Social Performance and Size, Financial and Environmental Performance. *Journal of Business Ethics* 1998 17(2): 195-204
24. Sustain Ability, UNEP (2001). Uncovering the Business Case for Corporate Sustainability'. Buried Treasure.
25. White, M.A (1995). The Performance of Environmental Mutual Funds in the United States and Germany: Is there Economic Hope for Green Investors? *Research in Corporate Social Performance and Policy*, Suppl, 1, 323-344.
26. Ziegler, A., K. Rennings, and M. Schröder. (2002). The Effect of Environmental and Social Performance on the Shareholder Value of European Stock Corporations', *Centre for European Economic Research, Discussion Paper No.02-32*. November