

To motivate management levels for better environmental performance, various studies have done to find correlation between environmental performance and financial performance of firm. Based on 187 manufacturing firms in Korea, I tested the correlation among Environmental Performance, Environmental and Financial Performance in Korea to find a meaningful incentive for more investments and interests in environment.

Introduction

- No penalty to corporate profitability for establishing environmental reporting and performance for green management
- Management believes that minimum environment requirements are valuable but should not be overwhelming for firm's performance
- Evidence linking leadership on environmental disclosure and performance to financial performance of profitability may motivate companies to take meaningful action on climate change

Literature Review

Environmental Disclosure & Environmental Performance

- Increase of Shareholder's interests in Environmental aspect of firm's activity. Companies are yet to report emissions from the most relevant part of their value chains
- One-third of S&P 500 discloses GHG emissions
- A quarter of S&P 500 link executive bonuses to environmental targets
- A quarter of S&P 500 are audited their environmental numbers by third parties. Investing into green companies led to 93% fewer emissions

Environmental Disclosure & Financial Performance

- S&P 500 industry leaders with environmental disclosure have generated 67% higher return on equity with 50% more earnings stability and 21% stronger dividend growth than industry average.

Environmental Performance & Financial Performance

- Different environmental actions can impact accounting metrics differently
- Environmental Performance has more impact on accounting metrics, for instance there is a strong causal link between environmental costs and revenue, than on market metrics, such as stock price.

Data

Environmental Performance

- Amount of Energy used
- Amount of GHG emitted
- Amount of Air Pollution emitted

Environmental Disclosure

- Green Company Certification
- ISO 14001 Certification
- Sustainable Management Report

Financial Performance

- Return on Asset
- Net Income
- Sales

Data Analysis

Table 1. Summary of correlation
(Environmental Performance and Disclosure)

■ When the average of the group (with SMR, ISO, Green Firms) is larger
■ When the average of the group (with SMR, ISO, Green Firms) is smaller
■ When p-value < 0.05
 Unit : Ton/Million Won

	Amount of Energy Used	Amount of GHG Emitted	Water Usage	Air Pollution	Water Pollution	Waste Generation	Toxic Chemicals
Publication of Sustainable Management Report	Submitted > Non-Submitted P < 0.05	Submitted > Non-Submitted P > 0.05	Submitted > Non-Submitted P < 0.05	Submitted > Non-Submitted P > 0.05			
ISO 14001 Certification	Certified > Non-certified P > 0.05	Certified < Non-certified P < 0.05					
Green Company Certification	Certified < Non-certified P < 0.05	Certified < Non-certified P > 0.05	Certified > Non-certified P > 0.05	Certified < Non-certified P > 0.05	Certified > Non-certified P > 0.05	Certified < Non-certified P > 0.05	Certified > Non-certified P > 0.05
Disclosure of GHG emission	Open > Close P > 0.05		Open > Close P < 0.05	Open > Close P > 0.05	Open < Close P > 0.05	Open > Close P > 0.05	Open > Close P > 0.05

Table 2. Summary of correlation
(Financial Performance and Disclosure)

■ When the average of the group (with SMR, ISO, Green Firms) is larger
■ When the average of the group (with SMR, ISO, Green Firms) is smaller
■ When p-value < 0.05
 Unit : Ton/Million Won

	Size		Return		Risk
	Sales	# of Employees	ROA	ROE	Debt/Capital
Publication of Sustainable Management Report	Submitted > Non-Submitted P < 0.05	Submitted > Non-Submitted P < 0.05	Submitted < Non-Submitted P > 0.05	Submitted < Non-Submitted P > 0.05	Submitted > Non-Submitted P > 0.05
ISO 14001 Certification	Certified > Non-certified P > 0.05	Certified > Non-certified P < 0.05	Certified > Non-certified P > 0.05	Certified > Non-certified P > 0.05	Certified < Non-certified P > 0.05
Green Company Certification	Certified > Non-certified P > 0.05	Certified > Non-certified P < 0.05	Certified > Non-certified P < 0.05	Certified > Non-certified P > 0.05	Certified < Non-certified P > 0.05
Disclosure of GHG emission	Open > Close P < 0.05	Open > Close P < 0.05	Open > Close P > 0.05	Open > Close P > 0.05	Open > Close P > 0.05

- Certification of Green Firms is effective enough to control some environmental performances
- Companies properly disclose environmental performance tend to have a bigger size
- Companies with green company certification have a higher ROA

Conclusion

- No direct relationship among 3 categories: Disclosure, Financial and Environmental Performance
- Environmental Information should be more quantitative to reveal strength and weakness of company's performance

References

- Simpson, Gary W., and Theodor Kohers, 2002, The link between corporate social and financial performance: Evidence from the banking industry, Journal of Business Ethics 35(2), 97-109.
- Chien, M. K., and Li-Hsing Shih. "An empirical study of the implementation of green supply chain management practices in the electrical and electronic industry and their relation to organizational performances." (2007).