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**Walking the Walk Vs Talking the Talk: An Evaluation of Social
Responsibility Strategies and Firm Performance**

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ABSTRACT

Today, companies face intense pressure from stakeholders to be more socially responsible. Firms could choose to respond to these pressures in two ways – either ‘communicating’ their goals and beliefs or by implementing ‘actions’ within the organization to promote social responsibility. In this study, we specifically compare corporate responses to labor and environmental issues. We find that corporate ‘communication’ impacts market valuation while ‘actions’ impact operational performance. However, the payoffs for responses related to labor and environmental practices are significantly different. We develop theoretical rationale based on decoupled communication, issue salience and conformity-based actions and articulate how they play a significant role in determining the outcome of socially responsible practices.

INTRODUCTION

In the current business environment corporations face intense pressures from various external actors and stakeholders to be more ‘socially responsible’. These pressures could originate from multiple stakeholders namely the government, media, investors and supply chain partners. For example, a movement launched in 1990’s against Nike led the firm to significantly improve its codes of conduct for labor in developing countries (Zadek 2004). Similarly, Wal-Mart’s announcement for supplier conformance to environmental practices (MSNBC 2007, Washington Post 2007) led to noticeable changes with its supply chain partners. Although the above examples are set in completely different contexts, they are indicative of the pressures faced by corporations to be more ‘socially responsible’. While one is indicative of pressures faced by companies to develop socially responsible labor practices, the other suggests pressures

originating from supply chain partners to alter environmental practices. How companies respond to such pressures determines their ability to exchange resources with key stakeholders thereby affecting firm performance (Freeman 1984, 1994). For companies, therefore, it is essential to effectively address these issues in order to ensure long-term survival and success. Companies could choose to respond to external pressures in one of two ways - through 'communication' (information dissemination) or by undertaking 'actions' (implementing programs). 'Communication' is associated with providing relevant information to stakeholders through various channels such as news media, press releases as well as financial statements. 'Actions' are associated with implementing internal programs that benefit the corporations, stakeholders or both. Each of these responses could potentially have significant and varying impact on firm performance. This sets up an important managerial question – 'walking the walk (acting) versus talking the talk (communicating); what matters most for corporate performance?'

To investigate this question we focus on two dimensions of social responsibility – labor and environmental practices - for the following reasons. First, both these dimensions occupy an important place within a company's overall social responsibility agenda. An external validation of this would be the presence of these two dimensions on all prominent social responsibility metrics such as United Nations Global Compact (UNGC) and Dow Jones Sustainability Indexes (DJSI). Second, there is substantial evidence in the literature suggesting potential instrumental impact that these practices on firm performance. Previous studies have examined the impact of progressive labor practices (Huselid 1995, Black and Lynch 1996, Bartel 2000, Lamm et al. 2007) and environmental practices (Klassen and Whybark 1999, Bansal and Roth 2000, Christmann 2000) on firm performance. Additionally, these two dimensions have also been shown to be associated with operational as well as market performance (Huselid 1995, Klassen

and Whybark 1999, Christmann 2000). Third, significant institutional differences underlie labor and environmental issues which brings into consideration various exogenous factors that could determine the outcome of firm investments in labor and environmental practices. Labor Relations as a field of enquiry has its origins in the industrial revolution. Over the last century labor practices have been influenced by political, institutional as well as normative understanding of the underlying instrumental relationships (Kaufman 2004). In contrast, the area of environmental management has only emerged during the last 20 years (Berchicci & King 2008). As we will show below, differences in the institutional structures surrounding these two dimensions of social responsibility significantly affect the direction and magnitude of instrumental relationships between corporate responses and firm performance measures. In summary, our paper compares and contrasts the labor and environmental practices (communication and actions) and their potential impact on firm performance.

The objective of our study is twofold. First, we attempt to understand how corporate responses in the form of ‘communication’ and ‘actions’ impact firm performance. In doing so we answer important questions regarding the effects of not only implementation of practices but also information dissemination. Second, we attempt to compare the impact of firm practices related to labor and environmental issues. In doing so, we explore and identify key institutional factors that influence the practice-performance relationships. Our results indicate that depending on the context, various firm responses might have entirely different outcomes. Our first set of results indicates that while corporate communication primarily impacts market valuation, actions impact the firm’s operational performance. Second, labor actions are more strongly associated with operational performance compared to environmental practices. We also find indications of possible trade-off decisions related to investments in communication and practices. We elaborate

on these findings in the final section of the paper. The next section develops the theory and hypotheses. Then we present the methods and the findings. Finally, we discuss the implications of our findings to academics, practitioners and policymakers.

THEORY & HYPOTHESES

In this section, we present the theoretical arguments relating communication and actions on firm performance. However, before we present the hypotheses, we briefly discuss the two dimensions of firm performance considered because our hypotheses argue for a differential impact of communication and actions on these specific dimensions of performance.

Two dimensions of Firm Performance

Most previous studies examining the Corporate Social Responsibility – Financial Performance (CSR-FP) relationship have applied some measure of ‘operational performance’ and ‘market valuation’ as dependent variables in their analysis (for a detailed meta-analysis see Margolis et al. (2007, working paper). However, very few studies have distinguished between these two measures of performance and their relation with social responsibility. While we implement the same two measures to assess firm performance, we take a more nuanced approach by outlining the different practices that impact them. Market valuation (measured by Tobin’s q) represents a forward-looking assessment of the company which is less prone to changes in accounting practices (Montgomery and Wernerfelt 1988) while Operational performance (measured as profitability) is an accounting measure of the past performance. Previous studies have proposed different types of firm investments affecting different measures of firm performance (Aral and Weill 2007, Demsetz and Villalonga 2001). Demsetz and Villalonga (2001) suggest that profitability and tobin’q differ in two aspects: time and assessment. While tobin’s q is a forward

looking measure, profitability is a backward-looking measure of firm performance. Secondly, profitability is assessed based on standard accounting procedures while tobin's q is impacted by investor forecasts of multiple events within and outside a firm's supply chain. Our stance in this paper, therefore, is to differentiate two distinct firm performance measures and the drivers that impact them. We theorize that corporate communication will strongly impact market valuation of the firm since it represents a firm's intents and beliefs about certain key issues. On the other hand, corporate practices will have a more direct impact on the firm's operational performance as a result of distinct firm capabilities.

Corporate Communication & Market Valuation

Communication regarding social responsibility initiatives is looked upon favorably by investor groups as an indication of the firm's ability to respond to institutional demands. Earlier studies have confirmed that communication regarding firm initiatives related to quality (Hendricks and Singhal 2001), human resource management (Lin and Rozeff 1993, Palmon et al. 1997) and environmental management (Klassen and McLaughlin 1996, Jacobs et al. 2010) affect investor sentiment observed as an impact on market valuation of the firm. Since market valuation indicates the general perception of a firm's ability, it should be directly impacted by what the firm communicates. Also, corporate communication in the form of media and interpersonal communication is associated with changes in corporate reputation (Dowling 1986). Corporate reputation has been shown to carry intangible value which often acts as a strategic asset to the firm (Dierickx and Cool 1989, Rumelt 1987, Weigelt and Camerer 1988). It is therefore not surprising that many previous studies have confirmed the benefits associated with good reputations (Fombrun and Shanley, 1990; Herremans et al. 1993; Landon and Smith, 1997).

Fombrun and Shanley (1990) posit that people construct reputations on the basis of broad information categories by using market, accounting and institutional signals. Corporate communication is an important channel for information dissemination since it is a direct source of internal corporate information. Therefore it plays an important role in building corporate reputation and firm value. The type of communication could be related to both labor issues as well as environmental issues. Hence, we hypothesize that corporate communication would impact market valuation of the firm.

***H1:** Corporate communication related to labor issues will be positively associated with market valuation of the firm*

***H2:** Corporate communication related to environmental issues will be positively associated with market valuation of the firm*

Decoupling versus Issue salience?

We present alternative theoretical perspectives for the relative strength of corporate communication related to labor issues vis-vis corporate communication related to environmental issues on their impact on market performance.

Although corporate communication can potentially have an impact on reputation and subsequently market valuation, the relation is highly dependent on the contextual and institutional factors. We propose that two key issues associated with environmental corporate communication are ‘decoupling’ and ‘issue salience’. Decoupling is the process by which companies dissociate their formal policies from actual implementation (Meyer and Rowan 1977, Westphal and Zajac 1994, 2000). Decoupling behavior has been shown to take place in case of CEO incentive plans (Westphal and Zajac 1994) and stocks repurchase programs (Westphal and

Zajac 2001). Due to the weak institutional structures and uncertainty associated with environmental management, we expect there to be evidence of a high degree of decoupling behavior. In the literature, Klassen and McLaughlin's (1996) findings indicated 'market skepticism' regarding environmental announcements in certain industries. More recently, Jacobs *et al.* (2010) also found that only specific actionable categories of environmental announcements were found to be associated with market performance over the long term. These empirical studies might indicate accumulated 'uncertainty' in the minds of investors about corporate environmental communication. In practice, such decoupled behavior is also evident from the number of products, standards and marketing claims that have flooded the 'green' marketplace. For example, www.ecolabelindex.com (2010) confirms almost 400 different ecolabels from 215 countries, many of which are single company owned and promoted while many others lack any kind of external validation. Along similar lines, the FTC (Federal Trade Commission 2009) recently announced that it intends to investigate the 'virtual tsunami' of green advertising campaigns that have flooded the marketplace. We hypothesize that under such conditions of extreme decoupled behavior, the level of information asymmetry (Stiglitz 2000) in the market would be considerably high. Under these circumstances we expect that investors would largely neglect the signals sent out by firms when they are unable to discern between firms exhibiting decoupling and those sending honest signals about their environmental practices. Based on this we do not expect the relationships hypothesized for stable institutional settings to hold in the case of high degree of decoupling.

H3a: *Corporate communication related to labor issues will have a stronger impact on market valuation compared to corporate communication related to environmental issues*

An alternate line of reasoning is based on the argument of salience of the environmental issues. Over the last twenty years, the importance given to environmental issues has increased dramatically. Bansal and Roth (2000) define issue salience as the ‘extent to which an issue holds importance for the organization’. Environmental concerns can carry much more media ‘value’ to a firm simply due to the number institutional constituents being interested in them (Gonzalez-Benito and Gonzalez-Benito 2006). Many environmentally concerned investor groups and institutions have been formed such as CERES initiated Investor Network on Climate Risk (INCR) which as of 2010 managed almost \$9.5 trillion in investor assets. Similarly, the Securities and Exchange Commission (SEC) recently mandated the disclosure of risks related to climate change. Such institutional reforms brought about by media, investor institutions and regulatory bodies can enhance the salience of an issue leading to heightened investor interest and reaction. Earlier studies in sociology (Epstein and Segel 2004), psychology (Griffin and Tversky 1992) and finance (Barberis *et al.* 1998) have accounted for the fact that certain issues and concerns hold significantly greater importance at a given point in time. Barberis *et al.* (1998) develop a model of investor sentiment to account for under and over-reaction of stock prices to certain good or bad news. Griffin and Tversky (1992) show that people give much more importance to the ‘strength’ (referring to salience and extremity) compared to the ‘weight’ (referring to statistical evidence) when making forecasts about future events. These studies provide evidence for the presence of strong biases when making investment and firm valuation decisions owing to salience of the issue. Based on the above discussion, we could expect that environmental issues would be of greater concern to investors compared to labor issues. Hence the impact of positive communication related to environmental practices on stock performance would be significantly greater. We therefore propose an alternate proposition:

***H3b:** Corporate communication related to environmental issues will have a stronger impact on market valuation compared to corporate communication related to labor issues*

Corporate Actions & Operational Performance

The positive impact of progressive labor and environmental practices on firm performance has been studied widely. HR scholars have shown that employee development (Bartel 2000), workplace practices (Huselid 1995), occupational health and safety (Lamm et al. 2007) and employee morale (Turban & Greening 1997, Waddock & Graves 1997) affect overall firm performance. Similarly environmental management scholars have assessed the impact of environmental practices (Klassen and Whybark 1999, Christmann 2000) on firm performance citing resource-based explanations for the relationships. Socially responsible practices directly impact a firm's ability to operate efficiently and elicit positive reactions from internal and external stakeholders (Freeman 1984). Favorable employee outcomes such as motivation (Huselid 1995), retention (Katz et al. 1985) and commitment (Guest 1999) are associated with improved operational performance and productivity. Similarly, progressive environmental practices induce complementary but often unexpected benefits such as reduced waste (King and Lenox 2001) and improved manufacturing performance (Klassen and Whybark 1999). In general previous studies which explicitly examined socially responsible actions (Waddock and Graves 1997, Berman *et al.* 1999, Ruf *et al.* 2001, Surroca *et al.* 2010) as opposed to communication have found significant association between such actions and operational performance. The reasons cited for such association were the existence of a virtuous cycle (Waddock and Graves 1997), resource-based view (Ruf *et al.* 2001) and development of stakeholder relationships leading to effective competitive strategies (Berman *et al.* 1999). Therefore, in line with previous

research we propose that corporate practices associated with labor and environmental issues would impact the operational performance of the firm.

H4: Corporate actions related to labor issues will be positively associated with operational performance of the firm

H5: Corporate actions related to environmental issues will be positively associated with operational performance of the firm

Customization versus Conformity?

Over the last century labor practices has been influenced by various factors - political, institutional and normative (Kaufman 2004), leading towards a more sound understanding of the instrumental relationships that exist between HR practices, employee outcomes and firm performance. Alternately, environmental management as a research agenda has been evolving over the last 20 years (Berchicci and King 2008), which has meant that many instrumental relationships still remain ambiguous. As a result, we expect a high degree of conformance related to environmental actions of firms. In other words, firms would be highly cautious about the type of environmental actions and investments they make. We expect that the distribution of environmental actions would be much tighter and peaked around the mean indicating a general isomorphic tendency to mimic (Meyer and Rowan 1977, DiMaggio and Powell 1983) other firms' investments towards environmental issues. Firms therefore would seem to be adopting environmental practices for achieving legitimacy and conformance (Suchman 1995) rather than operational efficiency. Multiple studies have confirmed the presence of strong institutional factors when it comes to implementation of environmental initiatives (Bansal and Roth 2000, Darnall 2006, Delmas and Toffel 2008). However, conformance which is driven by a motive to

achieve legitimacy can lead to lower firm performance as empirically shown by Westphal *et al.* (1997). Westphal *et al.* (1997) demonstrate that hospitals adopting TQM practices that followed normative or mimetic patterns, exhibited high legitimacy but lower efficiency. Based on the above discussion, if environmental actions undertaken by firms are more conformance-oriented then firms implementing these programs would be unlikely to derive superior operational benefits. Hence we propose:

***H6:** Corporate actions related to labor issues will have a stronger association with operational performance compared with corporate practices related to environmental issues*

METHODS

Sample

The data for our sample come from a variety of sources -- 10-k annual statements obtained from SEC Edgar website, performance variables from Compustat, corporate social practices scores from KLD Analytics database and control variables obtained from U.S. census website. The sample size for this study was 146 firms which are a subset of publicly traded Fortune 200 companies according to the CNN Fortune rankings (2009). We identified companies that broadly represented 4 industry sectors: mining & utilities, manufacturing, warehousing & retail and other services. Other criteria for selection were the availability of annual reports and secondary reports of the companies' human resource and environmental practices for the 3 financial years 2006, 2007 and 2008. Larger corporations have been shown to face higher degree of external pressures. Also, their responses to socially relevant issues are often used as benchmarks by small and mid-sized companies. Hence an analysis based on a Fortune 200 sample was believed to be more appropriate for the research questions posed in our paper.

Dependent Variables

Market Valuation: We calculate market valuation of the firm as natural logarithm of tobin's q. Tobin's q has been used previously as an indicator of a firm's value (Hall 1993, Hirschey 1982, Bharadwaj et al. 1999). We approximate the value of tobin's q based on Chung and Pruitt's (1994) method. They use the following formula: $Tobin's\ q = (MVE + PS + DEBT) / TA$ where, $MVE = (\text{Closing price of share at the end of the financial year}) * (\text{Number of common shares outstanding})$; $PS = \text{Liquidating value of the firm's outstanding preferred stock}$; $DEBT = (\text{Current liabilities} - \text{Current assets}) + (\text{Book value of inventories}) + (\text{Long term debt})$, and $TA = \text{Book value of total assets}$. The data for calculating tobin's q was obtained from Compustat.

Operational Performance: We approximate operational performance by $(\text{Sales} - \text{COGS}) / \text{Sales}$ which is the gross margin for the firm in accounting terminology. Earlier studies have used 'cost of goods sold' as a measure of operational performance and organizational productivity (Corbett et al. 2005, Bharadwaj 2000). Also, internal workplace practices (as measured in our study) are more likely to impact COGS since it does not contain overhead and other administrative expenses. 'COGS' was therefore used to calculate operational performance using data obtained from Compustat.

Independent Variables

Corporate Communication: The variable for communication is derived from 10-k statements of the firms in the sample. A recent study shows how firms communicate the quality of their firms to stakeholders through the observable quality of their financial statements (Zhang & Wiersema,

2009). Similarly, we posit that firms communicate the quality of their labor and environmental management programs through their annual reports. Additionally, we believe that 10-K reports provide a good indication of how much importance a firm places on labor and environmental management within its overall business agenda. We developed and used a text search tool to measure the frequency of occurrence of specific keywords associated with labor and environmental management. The keyword list is provided in the appendix. We selected the keywords based on careful and detailed review of words included in the guidelines and principles provided by UNGC and DJSI – UNGC being an internationally accepted platform and DJSI representing an index for socially responsible business.

Corporate Actions: We measure corporate practices based on a secondary data source provided by KLD analytics. In the KLD database, firm practices are measured on various dimensions, two of them being employee relations and environment which have been used in this study. KLD assigns binary strengths and weaknesses scores to firms on various subcategories within these dimensions. We aggregate the scores for each firm on the two dimensions used in our study to get continuous variable for corporate practices. More details about the KLD rating criteria can now be found electronically on the MSCI website (www.msci.com).

Control Variables

To control for other effects that might impact firm performance, we include the variables firm size, industry concentration and capital intensity in our estimation models. Firm size was calculated as the natural logarithm of the firm's annual revenue. Industry concentration was calculated based on the Herfindahl index which is the ratio of market share of the 4 largest

companies divided by the total market. Also capital intensity was used to control for the differences in amount of asset investments. Finally, year and industry dummies were used to control for the varying average firm performance measures associated with a particular year or industry. Firm size and capital intensity were calculated from Compustat database. Industry concentration variable was obtained electronically from the U.S. census bureau website. Industry dummies (NAICS codes) were used for the 4 industry groups in our sample – 1) mining & utilities, 2) manufacturing, 3) warehousing & retail and 4) IT, banking and insurance services.

Evidence for Decoupling in Communication

Due to the weak institutional structures and uncertainty associated with environmental management, we expect to observe evidence of a high degree of decoupling behavior. To confirm this, we regressed corporate *Actions* on *Communication* for both labor and environmental practices. Table 1 confirms the presence of high degree of decoupling in environmental practices. For labor practices the coefficient is positive ($\beta=0.0022$) and significant ($p<0.05$) suggesting lower level of decoupling while the coefficient for environmental practices is negative ($\beta=-0.0066$) and significant ($p<0.05$). This result provides preliminary statistical support for the reasoning behind proposition 3.

*****INSERT TABLE 1 HERE*****

Evidence for Conformance-based Actions

We expected a high degree of conformance related to environmental actions compared to labor actions. In other words, firms would be highly cautious about the environmental actions and investments. Figure 1 confirms the difference in the degree of conformance between labor and

environmental practices. We can observe that the distribution of environmental actions is much tighter and peaked around ‘zero’ which represents a greater tendency to implement environmental actions which represent bare minimum requirements. In other words our sample of Fortune 200 firms exhibits a general tendency for conformity-based actions when it comes to environmental issues. This result provides preliminary statistical support for the reasoning behind proposition 6.

INSERT FIGURE 1 HERE

Analysis and Findings

We test hypotheses 1-6 using a fixed-effects estimation model with year and industry fixed effects. Our dataset spans three years (2006-2008) and 4 industry categories (described above) according to the NAICS classification. Prior to analysis, we analyzed the variables and the bivariate relationships to check for any abnormalities in the dataset. For testing the model, we used the statistical analysis package STATA version 11.2. We conducted a Hausman specification test which suggested that a fixed-effects model was appropriate. The fixed-effects model implies that the differences across industry groups and different time periods are appropriately captured by the model (Greene 2008). From a modeling standpoint, it is important to acknowledge the differences that might exist between multiple years of data. For example, it would not be surprising to find that companies had reduced investments in socially responsible practices in the year 2008 as compared to year 2006 owing to the economic downturn. Also, certain sectors such as services might be inherently more employee-oriented. Such differences can be accounted for by using a Least Squares Dummy Variable (LSDV) approach (Greene 2008). Often in cases where the dataset contains multiple observations for firms across different

industry groups, the inferences made based on the OLS standard errors might not robust due to heterogeneity in the data. The conventional OLS estimator assumes independence across individual firms as well as across observations for a given firm. To this end, we model heterogeneity using the Huber/White (Huber, 1967; White, 1982; Greene, 2000). Although there could be various potential sources of heteroscedasticity, the White estimator allows us to make appropriate inferences without actually specifying the type of heteroscedasticity (Greene 2008). Although previous studies have used variance inflation factors (VIFs) of 10, we ensured that all VIFs in our models were below 3. Table 2 shows the descriptive statistics - means and standard deviations and pair-wise correlations of the variables in our models. The significant correlations between the dependent and independent variables of interest provide preliminary support to our propositions.

*****INSERT TABLE 2 HERE*****

Results from Fixed-effects Regression

Table 3 displays the results of the Fixed-effects regression models for market valuation and operational performance. After controlling for time, industry and firm specific effects, we find support for our hypotheses 1, 2, 4, 5 and 6. Column 1 shows that communication related to labor (LAB) and environmental (ENV) management is positively associated with market valuation of the firm which supports propositions 1 and 2. Column 2 shows that practices related to labor (LAB) and environmental management (ENV) are positively associated with operational performance of the firm which supports propositions 4 and 5. We tested hypotheses 3 and 6 using F-tests for inequality of two coefficients. The results provide statistical evidence for hypothesis 6 ($F=9.33$; $p<0.00$) but not for hypothesis 3a or 3b ($F=0.36$; $p>0.50$). We therefore

find in general that communication positively impacts market valuation while practices positively impact operational performance. Our results indicate that labor practices yield higher operational performance compared with environmental practices. We also find two surprising relationships suggesting negative associations for environmental communication and practices for the opposite dimension of performance. We address these in the discussion section.

*****INSERT TABLE 3 HERE*****

DISCUSSION & CONCLUSIONS

Socially Responsible Practices and Firm Performance

Our study was aimed at examining the effects of corporate responses to sustainability. We posited that firms would respond to stakeholder pressures in two ways - communication and practices. Identifying two key dimensions of social responsibility allowed us adopt a more comparative approach which revealed important insights. The data confirmed our hypotheses that communication related to labor and environmental management would positively impact the firm's market valuation and that corporate practices would positively impact operational performance. No previous study has proposed CSR responses being a combination of corporate communication and actions which has led to earlier inconsistent findings about CSR-financial performance link. Our study therefore makes an incremental contribution to this field by examining two dimensions of firm responses and their impact on two dimensions of firm performance. What a firm's response should be depends on the performance measure that is of highest concern and issue being faced.

Secondly, our results indicated that labor practices are more strongly related with operational performance than environmental practices. We show that the investments in

environmental practices indicate a conformance-based approach by firms which is likely to choose legitimacy over efficiency. Successful environmental practices at times require supporting frameworks and alliances with supply chain partners. Although initiatives such as energy efficiency improvement might be more ‘internal’ in nature, larger programs such as recycling might inherently be more ‘external’ in nature requiring a strong network and coordination with downstream supply chain partners. Along the same line, King and Lenox (2000) found that self-regulatory institutions and industry alliances suffer from opportunism and adverse selection as in the case of the chemical industry’s responsible care program. Our results confirm this notion that given the early stage of environmental management, such complex structural and managerial challenges are often difficult to implement and sustain. As a result many environmental practices fail to provide significant operational benefits. We did not find statistically significant difference between the impact of environmental communication and labor-related communication. However, this might have been a result of the two factors affecting environmental communication. Our competing hypotheses suggested the potential presence of external factors which affect the strength of the relationship between environmental communication and market performance. It could be possible that at this point issue salience and decoupling might both be playing a role in determining the impact of environmental communication. Hence treating all communication as having equal media value might not be the ideal strategy for firms.

Possible Trade-offs

Although not hypothesized upfront, we find 2 interesting results which are indicative of a trade-off at higher levels of communication and practices. Firstly, environmental practices were found

to be negatively associated with market valuation. This finding might actually be in line with previous studies (Jacobs et al. 2010) who find that voluntary emission reductions are associated with negative market reaction. Our finding suggests that markets might not value environmental ‘practices’ as much as they value ‘communication’. Perhaps corporate actions might be perceived as reactions to internal operational problems (Makower 2009) rather than as proactive measures. Secondly, environmental communication was found to be negatively associated with operational performance. This is a surprising finding as one would assume that communication lends voice to the practices being implemented. One explanation could be that excessive communication might lead to reduced focus on environmental practices which might potentially reduce firm performance at some stage. Although this trade-off is explicit in environmental management, it is more subtle in case of labor issues. This might again be suggestive of a subtle but evident trade-off where high communication and high practices might not result in the best possible performance in respective performance dimensions. A potential cause for this could be ‘misalignment’ between the content of the communication and the type of practices implemented. When the degree of communication and practices are both high, there is greater potential for disconnect between what companies say and do – not in terms of the magnitude but more in terms of the context. Multiple internal departments such as legal, operations and marketing might impact a firm’s disposition towards social responsibility (Delmas and Toffel 2008). These internal processes and their interactions could be highly complex in cases with high communication and practices leading to some degree of trade-off. To what extent the trade-off might exist might have to do with institutional forces as well as internal processes. The issue of communication-practices misalignment is considerably more severe in case of environmental management due to greater propensity of firms to indulge in false claims and advertising. Our

paper does not exactly measure the specific context of communication and actions and therefore does not provide any empirical results for the effect of such misalignment. However, this could certainly be a useful and critical research topic to pursue in the future.

In summary, we find that ‘walking’ and ‘talking’ both have their own associated performance benefits. What combination of the two a firm chooses is an executive decision depending on various factors internal and external to the company. We hope that our assessment of the performance impacts of different responses provides managers with an understanding of what is the most reasonable and feasible strategy for them to pursue. It is highly advisable that companies select appropriate (and often dissimilar) strategies for each individual dimension of social responsibility. Finally, there are multiple stakeholders to please and multiple performance dimensions to care for. Each strategic response might be a means to an altogether different end. In such circumstances, it is essential that firms align their corporate goals with their CSR strategy.

Future Directions

A question environment management scholars must seek to answer is how can we address and eliminate this paradox? For this it is imperative to understand the reasons for this paradox. One potential cause is information asymmetry associated with environmental management information. Many studies have started to address this issue of information and transparency (Bansal and Clelland 2004, Toffel and Short 2010, Working Paper). Another potential cause cited above is high level conformity associated with environmental practices. Although Christmann (2000) and to some extent Klassen and Whybark (1999) explore this concept, this issue in our opinion is much deeper and will benefit from future case-based and empirical

studies. The role of supporting frameworks – informal and formal institutions is also a fruitful area of research for future studies. King and Lenox (2000) have however highlighted the potential for opportunistic behavior in voluntary associations. It would therefore be useful to study effective institutional structures which will support broader ‘external’ environmental initiatives such as reusing and recycling programs and facilitate strong alliances between corporations. Other potential areas for improvement on this study would be to test the propositions over longer period of time. Other forms of media such as announcements and environmental reports could also be used in future research to measure ‘communication’. Another useful stream of research could be assessment of potential causes of trade-offs associated with a balanced approach to social responsibility. Evidently, there is more to social responsibility than meets the eye. It would be beneficial to drill down into individual CSR dimensions and identify the problems and challenges that underlie the broader framework.

References:

- Ahmad, S. and Schroeder, R.G. (2002) ‘The Importance of Recruitment and Selection Process for Sustainability of Total Quality Management’, *International Journal of Quality and Reliability Management*, 19(5): 540– 50
- Anderson, J., Rungtusanatham, M., Schroeder, R., Devaraj, S., 1995. A path analytic model of a theory of quality management underlying the Deming management method: preliminary empirical findings. *Decision Sciences* 26 (5), 637–658
- Aral, S. & P. Weill. 2007. "IT Assets, Organizational Capabilities & Firm Performance: How Resource Allocations and Organizational Differences Explain Performance Variation." *Organization Science*, 18(5), September-October: 1-18.
- Arthur, J. (1994), ‘Effects of Human Resource Systems on Manufacturing Performance and Turnover’, *Academy of Management Journal*, Vol.37, pp.670-87
- Arlow, P., & Gannon, M. J. 1982. Social responsiveness, corporate structure and economic performance. *Academy of Management Review*, 7: 235-241.

Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. 1985. An empirical examination of the relationship between corporate social responsibility and profitability. *Academy of Management Journal*, 28: 446-463.

Banker, R. D., Field, J. M., Schroeder, R. G., & Sinha, K. K. 1996. Impact of work teams on manufacturing performance: A longitudinal field study. *Academy of Management Journal*, 39: 867-890.

Bansal P. (2005). 'Evolving sustainably: a longitudinal study of corporate sustainable development'. *Strategic Management Journal*, 26: 197-218

Bansal P, Clelland I. (2004). Talking trash: legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Acad. Manage. J.* 47:93–10

Bansal P, Roth K. (2000), 'Why companies go green: a model of ecological responsiveness'. *Academy of Management Journal* 43(4): 717-737

Bartel, A. (2000). Measuring the Employer's Return on Investments in Training: Evidence from the Literature. *Industrial Relations*, 39(3), 502-524.

Berchicci, L. & King, A.A. 2007. Postcards from the edge: A review of the business and environment literature. *Academy of Management Annals*, 1(1): 513-547.

Bharadwaj, A. S. 2000. A resource-based perspective on IT capability and firm performance: An empirical investigation. *MIS Quarterly*. 24(1) 169–196.

Bharadwaj, A. S., S. G. Bharadwaj, B. Konsynski. 1999. Information technology effects on firm performance as measured by Tobin's q. *Management Science*. 45(7) 1008–1024.

Black, S. , & Lynch, L. (1996). Human-capital Investments and Productivity. *The American Economic Review*, 86(2), 263.

Campbell, J. L. 2007. Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review*, 32: 946–967.

CFO Magazine (2010). A Force to Be Reckoned With., 26(1), 16.

Christmann P. 2000. Effects of 'Best Practices' of environmental management on cost advantage: the role of complementary assets. *Academy of Management Journal* 43(4): 663-680.

Chung, Kee H, Stephen W, Pruitt. 1994. A simple approximation of Tobin's q. *Financial Management* 23(Autumn) 70-74

CNN Fortune Companies List (2009). Retrieved from (http://money.cnn.com/magazines/fortune/fortune500/2009/full_list/)

- Cooper, S. 2004. Corporate Social Performance: A Stakeholder Approach. Burlington, VT: Ashgate.
- Corbett, C., Montes-Sancho, M., Kirsch, D., 2005. The financial impact of ISO 9000 certification in the United States: an empirical analysis. *Management Science* 51, 1046–1059
- DeCanio, S. J. 1998. The efficiency paradox: bureaucratic and organizational barriers to profitable energy-saving investments. *Energy Policy*, 26(5): 441-454.
- Delmas MA, Toffel MW. 2008. Organizational responses to environmental demands: opening the black box. *Strategic Management Journal* 29(10): 1027–1055
- Demsetz, H., and B. Villalonga (2001), “Ownership structure and corporate performance”, *Journal of Corporate Finance* 7:209–233
- Devaraj, S., and Dhanorkar, S. (2010) ‘Do as I say not as I do: An empirical examination of corporate sustainability signals and environmental performance’, Working Paper
- Dierickx I, Cool K. 1989. Asset stock accumulation and sustainable competitive advantage. *Management Science* 35: 1504–1511.
- Dow Jones Sustainability Indexes (DJSI 2010). Retrieved from (<http://www.sustainability-index.com/>)
- Federal Trade Commission (FTC 2009): retrieved from (<http://www.ftc.gov/os/2009/06/P954501greenmarketing.pdf>)
- Flynn, B.B., Schroeder, R.G. and Sakakibara, S. (1994) ‘A Framework for Quality Management Research and Associated Measurement Instrument’, *Journal of Operations Management*, 11(4): 339– 66
- Fombrun C, Shanley M. 1990. What’s in a name? Reputation building and corporate strategy. *Academy of Management Journal* 33: 233–258.
- Friedman, M. (1962) *Capitalism and Freedom*. University of Chicago Press, Chicago.
- Freeman R.E., *Strategic Management: A Stakeholder Approach*, Pitman, Boston (1984).
- Freeman R.E., The Politics of Stakeholder Theory: Some Future Directions. *Business Ethics Quarterly*, Vol. 4, No. 4 (Oct., 1994), pp. 409-421
- Greene W. H. 2000. *Econometric analysis* (4th ed.). Prentice Hall, Upper Saddle River, N.J.
- Greene W. H. 2008. *Econometric analysis* (6th ed.). Prentice Hall, Upper Saddle River, N.J.

Guest, D. (1999). 'Human resource management: the workers' verdict'. *Human Resource Management Journal*, 9: 5–25.

Hall, B. H. 1993, The stock market's valuation of R&D investment during the 1980's. *AEA Papers and Proceedings* 70(2) 259-264

Hendricks, K. B., V. R. Singhal. 2001a. The long-run stock price performance of firms with effective TQM programs. *Management Science*. 47(3) 359-368.

Herremans IM, Akathaporn P, McInnes M. 1993. An investigation of corporate social responsibility reputation and economic performance. *Accounting Organizations and Society* 18: 587–604.

Hirschey, M. 1982. Intangible capital aspects of advertising and R&D expenditures, /, *Indust. Econom.* 30(June) 375-390.

Huber P. The behaviour of maximum likelihood estimates under non-standard conditions. In: Le Cam LM, Neyman J, editors. *Proceedings of the Fifth Berkeley Symposium in Mathematical Statistics and Probability*. Berkeley, CA: University of California Press; 1967. p. 221-233

Huselid, M. (1995). The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. *Academy of Management Journal*, 38(3), 635.

Jacobs, B. W., Singhal, V. R., & Subramanian, R. (2010). An empirical investigation of environmental performance and the market value of the firm. *Journal of Operations Management*, 28 (5), 430–441.

Katz, Harry C., Thomas A. Kochan, and Mark A. Weber. 1985. "Assessing the Effects of Industrial Relations Systems and Efforts to Improve the Quality of Working Life on Organizational Effectiveness." *Academy of Management Journal*, 28: 509-526.

Kaufman, Bruce E. (2004). *The Global Evolution of Industrial Relations: People, Ideas, and the IIRA*. Geneva: International Labor Organization

Kaufman, B. (2007): The Core Principle and Fundamental Theorem of Industrial Relations. *International Journal of Comparative Labour Law and Industrial Relations*, 23(1): 5–33

King, A. 1995. Innovation from differentiation: pollution control departments and innovation in the printed circuit industry. *IEEE Transactions on Engineering Management*, 42(3): 270-277.

King, A., M. Lenox. 2001. Lean and green? An empirical examination of the relationship between lean production and environmental performance. *Production Oper. Management* 10(3) 244–256.

King, A. A., and M. J. Lenox 2000 "Industry self-regulation without sanctions: The chemical

industry's responsible care program." *Academy of Management Journal*, 43: 698–716

King, A. W. 2007. Disentangling interfirm and intrafirm causal ambiguity: A conceptual model of causal ambiguity and sustainable competitive advantage. *Academy of Management Review*, 32: 156–178.

King, A. W., & Zeithaml, C. P. (2001). Competencies and firm performance: Examining the causal ambiguity paradox. *Strategic Management Journal*, 22, 75–99.

Klassen, R. D., C. P. McLaughlin. 1996. The Impact of Environmental Management on Firm Performance. *Management Science*. 42 (8), 1199-1214.

Klassen, R. , & Whybark, D. (1999). The Impact of Environmental Technologies on manufacturing Performance. *Academy of Management Journal*, 42(6), 599-615.

Kreps, D. M., & Wilson, R. 1982. Reputation and imperfect information. *Journal of Economic Theory*, 27: 253-279.

Lamm, F. , Massey, C. , & Perry, M. (2007). Is There a Link Between Workplace Health and Safety and Firm Performance and Productivity?. *New Zealand Journal of Employment Relations*, 32(1), 72-86.

Landon S, Smith CE. 1997. The use of quality and reputation indicators by consumers: the case of Bordeaux wine. *Journal of Consumer Policy* 20: 289–323.

Lin, J. C., & Rozeff, M. S. (1993). Capital market behavior and operational announcements of layoffs, operation closings, and pay cuts. *Review of Quantitative Finance and Accounting*, 3, 29-45.

MacDuffie, J.P., 1995. Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review* 48 (2), 197–221.

Makower J. (2009). *Strategies for the Green Economy*. McGraw Hill Company

Margolis J, Elfenbein H, Walsh A. 2007. Does it pay to be good? A meta-analysis and redirection of research on corporate social and financial performance. Harvard University Working Paper

McGuire. J. B., Sungren, A., & Schneeweis, T. 1988. Corporate social responsibility and firm performance. *Academy of Management Journal*, 31: 854-872.

Montgomery, C., B. Wernerfelt. 1988. Diversification, Ricardian rents, and Tobin's q. *RAND J. Econom.* 19 623–632.

Nameroff, T. J., Garant, R. J., & Albert, M. B. 2004. Adoption of green chemistry: an analysis based on US patents. *Research Policy*, 33(6-7): 959-974.

Nehrt, C. 1996 "Timing and intensity effects of environmental investments." *Strategic Management Journal*, 17: 535-547.

Nike (2009). Press Release. Retrieved from :
(http://www.nikebiz.com/media/pr/2009/07/22_AmazonLeatherPolicy.html)

Palomino, F , Renneboog, L, Zhang, C, (2009) *Journal of Corporate Finance*. Volume 15 (3): 368-387

Palmon, O., Sun, H. and Tang, A. P., 1997. Layoff announcements: Stock market impact and financial performance. *Financial Management* 26, pp. 54–68.

Pfeffer, J., & Veiga, J.F. (1999). Putting people first for organizational success. *Academy of Management Executive*, 13, 37-48.

Reichers, A. E., Wanous, J. P., & Austin, J. T. 1997. Understanding and managing cynicism about organizational change. *Academy of Management Executive*, 11(1): 48- 59.

Rumelt RP. 1984. Toward a strategic theory of the firm. In *Competitive Strategic Management*, Lamb R (ed.). Prentice-Hall: Englewood Cliffs, NJ; 556–570.

Stafford, E. R., Polonsky, M. J., & Hartman, C. L. 2000. Environmental NGO-business collaboration and strategic bridging: a case analysis of the Greenpeace-Foron Alliance. *Business Strategy and the Environment*, 9(2): 122-135.

Stiglitz, J. E. 2000. The contributions of the economics of information to twentieth century economics. *Quarterly Journal of Economics*, 115: 1441-1478.

Stiglitz, J. E. 2002. Information and the change in the paradigm in economics. *American Economic Review*, 92: 460-501.

Suchman, M. C. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20: 571-610.

Teece, D. 1986. Profiting from technological innovation: Implications for integration, collaboration, licensing, and public policy. *Research Policy*, 15: 295-305.

Toffel, M., and J. Short. 2008. Coming Clean and Cleaning Up: Is Voluntary Disclosure a Signal of Effective Self-Policing? Discussion Paper 08-98. Cambridge, MA: Harvard Business School.

Turban, D.B, & Greening, D.W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40, 658-672.

United Nation Global Compact (2010). The Ten Principles.
(<http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples/index.html>)

Waddock, SA & Graves, SB. The Corporate Social Performance-Financial Performance Link. *Strategic Management Journal*, Vol. 18, No. 4 (Apr., 1997), pp. 303-319

Wal-Mart pushes suppliers to 'go green'. Retrieved from MSNBC.com
(http://www.msnbc.msn.com/id/18056716/ns/business-going_green/t/wal-mart-pushes-suppliers-go-green/)

Wal-Mart Aims To Enlist Suppliers In Green Mission. Retrieved from Washingtonpost.com
(<http://www.washingtonpost.com/wp-dyn/content/article/2007/09/24/AR2007092401435.html>)

Weigelt K, Camerer C. 1988. Reputation and corporate strategy: a review of recent theory and applications. *Strategic Management Journal* 9(5): 443–454.

Wheeler, D., H. Fabig and R. Boele: 2002, Paradoxes and Dilemmas for Stakeholder Responsive Firms in the Extractive Sector: Lessons from the Case of Shell and the Ogoni, *Journal of Business Ethics* 39, 297–318.

White H. A heteroskedasticity-consistent covariance matrix estimate and a direct test for heteroskedasticity. *Econometrica* 1980;48:817-830.

Zadek, S. 2007. *The Civil Corporation*, Earthscan. London, UK

Zadek, S. 2004. The path to corporate responsibility. *Harvard Business Review*, (December): 125-132.

Zhang, Y., & Wiersema, M. (2009). Stock market reaction to CEO certification: The signaling role of CEO backgrounds. *Strategic Management Journal*, 30(7), 693—710.

Figure 1. Degree of Conformity of Actions: Distributions of Actions of ENV and LAB (N=438 firm-years)

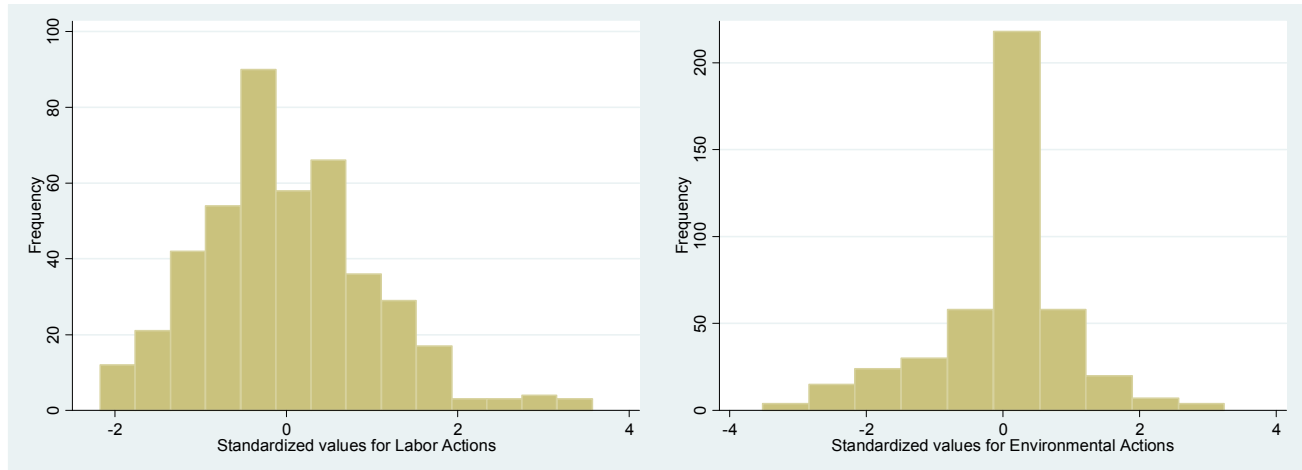


Table 1. OLS Regression for Decoupling between policies and implementation

VARIABLES	(1) ENV Actions	(2) LAB Actions
ENV Communication	-0.00667*** (0.00110)	
LAB Communication		0.00229** (0.00112)
Constant	-0.0856 (0.0773)	1.582*** (0.156)
Observations	438	438
R-squared	0.078	0.010

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 2. Descriptive Statistics

Variables	Mean	Std. Dev	1	2	3	4	5	6	7	8	9
Tobin's Q	1.145	2.238	1.0000								
GrossMargin	0.333	0.221	-0.0464	1.0000							
Firm Size	0.814	6.425	-0.0243	-0.0208	1.0000						
Capital Intensity	2.206	3.698	-0.0689	0.2795*	-0.0097	1.0000					
Industry Concentration	0.432	0.236	-0.0371	-0.1008*	0.1945*	-0.0311	1.0000				
Communication HRM	92.893	104.536	0.0776	0.0074	0.0999*	0.0796*	0.0059	1.0000			
Communication ENV	33.365	61.833	0.2668*	-0.0961*	-0.0723	0.1467*	-0.1213*	0.3012*	1.0000		
Practices HRM	1.795	2.446	0.0019	0.4350*	0.2286*	0.1476*	-0.0642	0.0978*	0.0239	1.0000	
Practices ENV	-0.308	1.480	-0.1990	0.1997*	-0.1005*	0.0567	0.1295*	-0.0828*	-0.2788*	0.2725*	1.0000

Table 3. Fixed-effects Regression Analysis

VARIABLES	(Column 1) Market Valuation	(Column 2) Operational Performance
Year Dummy 2007	0.00945 (0.0668)	-0.000596 (0.0212)
Year Dummy 2008	-0.114* (0.0624)	-0.0246 (0.0231)
Industry Dummy 1	0.539*** (0.189)	0.0958* (0.0560)
Industry Dummy 2	0.316*** (0.0705)	0.0598* (0.0316)
Industry Dummy 3	0.194*** (0.0727)	-0.0361 (0.0304)
Firm size	0.0208 (0.0236)	-0.0122 (0.00962)
Capital Intensity	-0.0127 (0.0174)	0.0576*** (0.0131)
Industry concentration	0.0387 (0.0247)	-0.0136 (0.00881)
Communication LABOR	0.0514*** (0.0181)	0.00392 (0.0107)
Communication ENVIRONMENT	0.0811* (0.0417)	-0.0435*** (0.0121)
Practices LABOR	-0.00191 (0.0315)	0.0756*** (0.0109)
Practices ENVIRONMENT	-0.0792** (0.0342)	0.0205* (0.0107)
Constant	0.330*** (0.0690)	0.315*** (0.0271)
Observations	438	438
R-squared	0.187	0.309
F-test for Inequality of Coefficients		
1) Communication ($\beta_{ENV} > \beta_{LAB}$)	0.36 (0.550)	
2) Practices ($\beta_{LAB} > \beta_{ENV}$)		9.33 (0.0024)

*** p<0.01, ** p<0.05, * p<0.1; Robust standard errors in parentheses for Regression coefficients; p-values in parentheses for F-tests for Inequality of coefficients; (N=438)