

## ENVIRONMENTAL ISSUES AND CORPORATE PERFORMANCE: A CRITICAL REVIEW

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**Abstract:** the link between the environmental issues of the corporations and their economic performance and competitiveness has become one of the most popular issues to be studied in the profession. However, previous studies that have attempted to relate environmental issues to economic performance have often led to conflicting results. This paper reviewed the previous environmental literature and suggested that the inconsistency is due to the absence of clear framework that explain what actually constitutes environmental practices and how their outcomes are to be determined and evaluated. Therefore, it becomes difficult to identify general relationships between different indicators of environment and economic performance. The paper concluded that there is a lack of study investigating the relationship between disaggregated environmental practices, corporate environmental performance, and environmentally related competitiveness.

**Key words:** environmental practices, corporate environmental performance, competitiveness, resource-based view theory.

### 1. Introduction

The relationship between the corporation's resources and competitiveness has been treated extensively in the concept of resource-based view theory (RBV) (Barney, 1991; Barney, 1995; Priem & Butler, 2001; Wernerfelt, 1984). The cornerstone of this thought is that the resources are not evenly distributed and developed across corporations, and help to clarify, to some extent, the ability of corporation to compete effectively (Duncan, et al., 1998). This concept contributes significantly to the role of the corporation's resources in the competitiveness in both academic and practical fields. For instance, the Wernerfelt's (1984) article was selected as one of the most influential paper published in the strategic management journal prior to 1990 (Priem & Butler, 2001). However, the RBV often has neglected or ignored critical factors imposed by the natural environment (Hart, 1995). Additionally, superior performance is required for multiple sources of competitiveness, because any single source is not always sufficient (Kazlauskaite & Buciniene, 2008). Thus, a need exists to examine other possible resources such as environmental issues' resources that influence corporate capabilities. Hart (1995) said that the neglect of the environmental issues has rendered RBV theory inadequate as basis for identifying the critical emerging sources of competitiveness. This can be due to the fact that the corporations nowadays have to consider several challenges such as extending its market share, improving the productivity, improving its technology, reducing the cost, and recruitment of new skilled employees (Kazlauskaite & Buciniene, 2008), which in turn, emphasize the importance of environmental resources and capabilities.

The effort to understand how corporations can deal effectively with environmental issues and minimize environmental impacts of their operations have guided this current study into understanding the term "environmental practices" which refer to the technical and organizational activities a corporation undertakes for the purpose of

reducing its environmental impacts on natural environment (López-Gamero, Molina-Azorín, & Claver-Cortés, 2009; Wagner, 2007). Such activities may include several practices, namely, conventional green practices, employees' involvements, management systems and procedures, organizational practices, and efforts made to reconfigure the strategic planning process (Hart, 1995; Buysse & Verbeke, 2003; Freeman, 2010; Surroca, et al., 2010). Etzion (2007) in his review of the relationship between the organization and natural environment (from 1992 to 2007) summarized four organizational resources, which he found to common within environmental studies. These were: innovativeness, employee involvement, effective communication practices, and stakeholders' integration. He emphasized that stakeholders' integration needs to be further researched. He said:

*This specific resource may well warrant further research, because it is likely that organizations will increasingly have to successfully balance competing societal interests to maintain their license to operate and their competitive viability. Studying how firms integrate stakeholder concerns may well be generalizable to broader theory on how firms understand and adapt to their strategic landscape; this can be a contribution of environmentally oriented research to more general organizational research themes (Etzion, 2007, p. 645).*

Additionally, some have argued that the way in which a corporation manages its stakeholders' interests helps the corporation avoid decisions that might promote stakeholders' incentives to undercut or thwart its objectives (Freeman, 2010; Freeman & Reed, 1983). Stakeholder theory in its instrumental approach suggests that enhancing the relationships with stakeholders and incorporating their concerns into corporation's strategy might lead to improve the competitiveness of the corporation (Barney 1991; Surroca, et al., 2010). Keeping manageable proportions and partnerships in the dialogue between (and among) corporations and environmental agencies has become a method of implementing extended stakeholders' management (Perry & Singh, 2001) and are expected to offer improvement in competitiveness, because these activities are difficult to replicate and socially complex (Vachon & Klassen, 2008). Such relationships can represent the stakeholders' integration level (Plaza-Úbeda, et al., 2010), which empirically has been demonstrated its ability to improve competitiveness (Delmas, 2001; Sharma and Vredenburg, 1998).

Despite several literature have argued that environmental practices can benefit the corporations in different aspects such as revenue growth and market access, access to capital, risk management and license to operate, human capital, and brand value and reputation (Figge, et al., 2002; Schaltegger & Wagner, 2006; Thorpe & Prakash-Mani, 2003; Weber, 2008). Yet, some indicators from prior related research suggests that, in reality, corporations may fail to gain full competitiveness from environmental practices (Jacobs, et al., 2010; Levy, 1995; Link & Naveh, 2006; Sarkis and Cordeiro, 2001; Watson, Klingenberg, Polito, and Geurts, 2004).

## **2. RESOURCE-BASED VIEW THEORY (RBV)**

The history of RBV dates back to the efforts of Wernerfelt (1984), who developed some simple economic tools for the purpose of analyzing corporations' resource positions and strategic options related to the relationship between profitability and the resource. Wernerfelt (1984) identified a corporation's resources as "anything which could be thought of as a strength or weakness of a given firm" (p.172). He said that the development of a strategy requires a balance between the exploitation of existing resources and the development of new ones. Barney (1991) redefined the RBV theory and assumed that there was a link between corporations' resources and sustained competitive advantages. He examined the role of idiosyncratic and immobile corporation resources in creating sustained competitive advantages. In Barney's theory, the corporations' resources were identified as, "The firm's resources including all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enables the firm to conceive and implement strategies that can improve its efficiency and effectiveness" (p.101).

According to Barney (1991), a corporation's resources can be classified into three groups: (1) organizational capital resources, which incorporate the reporting structure of the corporation, its formal and informal planning, coordinating and controlling systems, and the informal relations between the corporations' groups and between the corporation and other groups in its environment; (2) physical capital resources that incorporate the physical technology used in the corporation such as plants and equipments, the access to raw materials, and the location of the corporation; and (3) human capital resource, which refer to aspects such as the relationships between employees, training, experiences, and intelligence.

Barney assumed that corporations could gain sustained competitive advantage when adopting unique strategies, which are not adopted by other corporations. He added that the corporations' resources become sources of competitive advantage if they achieve the following principles: (1) they are valuable, which means that these resources give the corporation the ability to gain opportunities or avoid threats; (2) they are rare among the market or competitors; (3) they are imperfectly imitable, and (4) they have no strategic equivalent, which indicates that one resource cannot be used as an alternative to another resource.

This theory somewhat distinguishes between sustained competitive advantage and competitive advantage because it assumes that corporations having specific valuable resources are better than corporations needing to generate dynamism in an industry because these resources can generate competitive advantages. On the other hand, those with sustained competitive advantage hope that the other corporations do not obtain the corporations' resources. Therefore, corporations have a sustained competitive advantage when the resource is an imperfectly imitable resource. In other words, the resource must have one or more of the following characteristics: (1) obtaining the resource depends on some unique historical conditions; (2) an ambiguous link between the resource and the corporations' competitive advantage; and (3) be socially complex.

Using this theory in the fields of corporate social/environmental performance started with Hart (1995), who presented the first theoretical paper that addressed the RBV theory in the corporate environmental phenomena. Hart believed that the RBV ignored aspects of the natural environment in the competitive concept. Thus, the aim of his paper was to develop a natural-resource based view of the corporation by inserting the natural environment concept into the RBV theory. He argued that the natural environment posed constraints and challenges of development of new resources and capabilities. Hart's theory provided three interconnected strategies, namely, pollution prevention, product stewardship, and sustainability development. These three categories were linked to three key resources and three competitive advantages. The key resource of pollution prevention strategy was continuous improvement, which results in lowering cost. The key resource of product stewardship was stakeholder integration that results in preempts competition, and the key resource of sustainability development strategy was shared vision that improves the future position of the corporation

Although Hart did not test his proposition empirically, several studies have done so. For instance, Russo and Fouts (1997) empirically demonstrated that higher levels of corporate environmental performance (CEP) relate positively to superior financial performances. López-Gamero, et al. (2009) found that corporations' resources and competitive advantages mediated the relationship between environmental protection and financial performance, which can be interpreted as a support of the RBV theory. Moreover, Sarkis, et al. (2010) adopted the RBV and stakeholder theory as a complementary theoretical framework and demonstrated empirically that training is a critical mediator in the adoption of environmental practices and the pressure from stakeholders. Inoue and Lee (2010) used the RBV theory to investigate the relationship between the five dimensions of corporate social/environmental performance and future profitability of the tourism-related industries.

In general, RBV theory relies on the assumption that corporations' performances vary due to resources heterogeneity across corporations. Therefore, the ability to achieve competitive advantages often depends on the corporation's resources and capabilities. The theory suggests that only pro-active environmental governance is a source of firm performance, which is unique to the firm and difficult to obtain by competitors, and this pro-active environmental management can be represented by eco-efficiency (Guenster, et al., 2005). From this point of view, this study considers RBV theory as a cornerstone of utilizing the resources related to environmental issues as sources of competitiveness.

### **3. Literature review**

The link between the environmental issues of the corporations and their economic performance and competitiveness has become one of the most popular issues to be studied in the profession (e.g, Ahmed, Montagno, & Firenze, 1998; Christmann, 2000; Cohen, et al., 1995; Epstein, 2008; Konar & Cohen, 2001; Margolis & Walsh, 2001; McGuire, Sundgren, & Schneeweis, 1988; Ngwakwe, 2009; Russo & Fouts, 1997; Sims, 2003; Walsh, Weber, & Margolis, 2003).

Previous studies that have attempted to relate environmental issues to economic performance have often led to conflicting results. Some studies have found a positive relationship between engagement in environmental issues and economic performance. For instance, Sharma and Vredenburg (1998) found that proactive environmental strategies are positively related to improvements in competitiveness of corporations through their ability to provide specific and unique organizational capabilities. López-Gamero, et al. (2009) concluded that engaging in environmental protection practices can improve the competitiveness of the corporations, which in turn can lead to improved financial performance. Russo and Fouts (1997) concluded that efforts taken by corporations to protect the environment are positively related to their economic performances, and this relationship strengthens with the growth of the industry. Additionally, Shrivastava (1995) concluded that environmental technologies can give strong bases for improving the competitiveness' aspects related to improving the market share of the corporation. Ahmed, et al. (1998) investigated whether environmental consciousness as a strategy has any impact on corporate performance. They found that environmental friendly corporations reported better performance scores and were more inclined to incorporate various performance improvement strategies and techniques into their operations.

The findings are consistent with the study of Christmann (2000), which indicated that corporations which implemented environmental practices can improve their competitiveness compared to other corporations. The author said that chemical corporations with pre-existing capacities to innovate and which employed innovative prevention technologies realized significant cost saving. Additionally, Ngwakwe (2009) used three selected indicators of sustainability, namely, employee health and safety, waste management, and community development. The study found that the sustainable practices of the corporation's responsibility were positively related with its economic performance. The ability of the corporations to manage their environmental impacts is emerging as a strategic issue for the corporation (Henri & Journeault, 2008; Melnyk, Sroufe, & Calantone, 2003). The results of corporate environmental activities have extended to become a determinant of the long-term performance; Ringbeck and Gross (2008) noted that, to be successful in the long term, it would not be enough to opportunistically engage in green-branding campaigns. The authors said that corporations have to establish initiatives that have a measureable positive and long-lasting impact on the environment. In the same way, Epstein (2008) outlined the importance of developing environmental strategies, which would minimize environmental impacts through recycling, life-cycle assessments and waste reduction strategies. Wagner (2005) found that for corporations with pollution prevention-oriented corporate environmental strategies, the relationship between environmental and economic performance was more positive.

On the other hand, the relationship between environmental issues and economic performance in many cases seems to be negative. Levy (1995) observed a weak relationship between environmental practices and corporate performance represented by returns on assets and sales. Wagner (2005) found that, for the input-oriented environmental performance index, there was no significant relationship between environmental activities and corporate performance. Additionally, Link and Naveh (2006) found that the improvement in environmental issues represented by the implementation of ISO 14001 did not lead to improvement in corporate performance. This result is supported by Horváthová (2010), who noted that the adoption of environmental management systems was not necessarily correlated with better environmental performance. Moreover, Sarkis and Cordeiro (2001) found that there is negative relationship between the adoption of both pollution prevention and the end-of-pipe practices and "Return-on-Sales" as a measure of financial performance. In the same line with Sarkis and Cordeiro, Inoue and Lee (2010) found that the corporate attention to environmental issues did not improve either short-term nor future profitability of the corporation. González-Benito and González-Benito (2005) found that some environmental practices can effect negatively the competitiveness of corporations.

More interestingly, some studies have also found that there are no economic (either positive or negative) effects of environmental issues on competition and economic performance. For instance, Cohen, et al. (1995) found neither a penalty for investing in the green portfolios, or a positive return from a green investment. Watson, et al. (2004) had findings similar to those of Cohen, revealing that there were no differences between the levels of profitability and market value between the corporations that adopted the environmental management system and those that did not. They also added that the perceived cost of environmental management systems did not negatively affect financial performance. Therefore, the relationship between environmental issues and its economic performance is still unclear; such inconsistency creates a ground of additional studies about the role of environmental practices in improving the competitiveness of the corporations.

#### 4. SUMMARY OF THE LITERATURE REVIEW

Based on previous literature, it is clear that the relationship between environmental issues and corporate performance seems to be inconsistent. Studies' results can be classified into four groups: (1) a positive relationship (Ali, et al., 2010; Gamero, et al., 2009; Hart & Ahuja, 1996; King & Lenox, 2001; López-Gamero, et al., 2009; Ngwakwe, 2009; Russo & Fouts, 1997; Sharma & Vredenburg, 1998; Stanwick & Stanwick, 1998; Turban & Greening, 1997; Wagner, 2010; Yin, et al., 2009); (2) a negative relationship (Filbeck & Gorman, 2004; Inoue & Lee, 2010; Sarkis & Cordeiro, 2001); (3) mixed results (Christmann, 2000; Salama, 2005; Surroca, et al., 2010; Wagner, 2005); and (4) and no relationship between the two concepts (Cohen, et al., 1995; Sarumpaet, 2006; Watson, et al., 2004). Those inconsistency results are also supported by several Meta analyses (Horváthová, 2010; Margolis & Walsh, 2003; Orlitzky, et al., 2003).

The reasons for the inconclusiveness are due not only to the differences in the definitions of the term CEP itself, but also to the need to incorporate other related concepts such as corporate performance, time period of investigation, moderation in the variables, and adopted methodologies. The following section addresses those issues.

Some studies have considered the environmental related issues in different forms. One related issue is the integration of environmental issues into the corporate social performance concept. This to some extent corresponds with the term triple bottom line that is introduced by Elkington (1994), which refers to profits going side-by-side with environmental and social issues. However, for the purpose of reducing the complexity, it is argued that the social and environmental issues should be considered in separate forms when linking to economic performance (Bieker, Dyllick, Gminder, & Hockerts, 2001; Elkington, 1997).

Even though many studies considered environmental issues separately, the definition of environmental aspects still varies across studies. The literature showed that there are four types of the investigation previous environmental literature has adopted. First, some studies have investigated the relationships between environmental practices and CEP (e.g., Anton, et al., 2004; Baba, 2004; Denton, 1999; Daily, et al., 2011; Hanna, et al., 2000; Lin, 2011; May & Flannery, 1995; Russo & Fouts, 1997; Vachon & Klassen, 2008). Second, studies have investigated the relationship between environmental practices and economic and/or competitiveness (e.g., Christmann, 2000; del Brio, et al., 2007; Delmas, 2001; Darnall, et al., 2008; Florida & Davison, 2001; Gimenez, et al., 2003; González-Benito & González-Benito, 2005; Karagozoglu & Lindell, 2000; Klassen & Whybark, 1999; Melynk, et al., 2003; Ngwakwe, 2009; Rao & Holt, 2005; Shrivastava, 1995b; Saridogan, 2012; Sarkis & Cordeiro, 2001; Watson, et al., 2004).

Third, studies have considered the relationship between CEP and economic/or competitiveness (e.g., Cohen, et al., 1995; Elsayed & Paton, 2005; Hart & Ahuja, 1996; Jacobs, et al., 2010; Konar & Cohen, 2001; King & Lenox, 2001; Nakao, et al., 2007; Salama, 2005; Stanwick & Stanwick, 1998; Wagner, 2005). Fourth, studies have considered the relationships between environmental practices, CEP, and economic/or competitiveness (e.g., Chiou, et al., 2011; Henri & Journeault, 2010; López-Gamero, et al., 2009; Iraldo, et al., 2009). Thus, it becomes difficult to identify general relationships between different indicators of environment and economic performance (Wagner, 2003). This difficulty can be due to the fact that different practices of environmental issues have different effects on corporate performance (Christmann, 2000).

The fourth group incorporates a more comprehensive view of the relationships between environmental related variables. It based on the argument that better CEP can be achieved through different types of EP and not all these practices have the same effects on business performance (Christmann, 2000; González-Benito & González-Benito, 2005). Therefore, there is a need to distinguish between EP (activities or practices geared towards protecting the natural environment) and CEP (reducing the environmental damage caused by the company (Baba, 2004; López-Gamero, et al., 2009). This is due to the fact that the portfolio of practices of environmental issues plays a critical role in determining the relationship between being environmental proactive and corporate performance (González-Benito & González-Benito, 2005), and the type of environmental management rather than the level of environmental performance influenced economic performance (Schaltegger & Synnestvedt, 2002). Therefore, there is a need to use multiple measures of environmental performance to reflect the whole of CEP aspects (Delmas, 2001).

The same issue articulated previously with environmental concepts appears with the concept of economic

performance because studies use different measures to measure corporate performance resulting from environmental activities. Those measures are represented in many cases by either accounting or stock market-based measures. However, neither market nor accounting-based measures can represent the actual outcome of corporate environmental activities (Gomez-Mejia, 2008; Lankoski, 2000). For instance, Swift and Zadek (2002) have said that it remains plausible a company could find it profitable in the short-run to embrace aspects of environmental practices, while still suffering as a result from reduced competitiveness in the longer-term. Accordingly, depending on financial performance as a representative of the results of adopting environmental and/or social issues can be misguided (Crittenden, et al., 2011; Nu 2011; Wood, 2010). Therefore, it is not surprising to find different results of environmental activities using different measures of corporate performances.

Additionally, the results are sometimes inconsistent even using the same measures of corporate performance. For instance, Cohen, et al. (1995) used ROA, ROE, and stock market returns and found that those measures do not relate positively or negatively with CEP. However, scholars such as Hart and Ahuja (1996) found a positive relationship between CEP and ROS, ROA, and ROE, when others such as Wagner (2005) using the same measures of economic performance found mixed results of the relationship. This reflects the assumption that environmental aspects can be more than a cost, a constraint, or chartable work; it can be a source of opportunity, innovation, and competitiveness (Porter & Kramer, 2006; Sharma & Vredenburg, 1998). Therefore, it seems necessary to determine specific areas that can be affected by the environmental issues.

The type of analysis is also said to one reason for the inconclusiveness in the results of previous studies. For instance, studies using multiple regression analysis tend to find a positive relationship between environmental and economic performance (Hart & Ahuja, 1996; Konar & Cohen, 2001; Ngwakwe, 2009; Sharma & Vredenburg, 1998), when portfolios studies, for example, usually indicate a negative relationship (Cohen, et al., 1995; Filbeck & Gorman, 2004). Such considerations correspond with the findings of Salama (2005), who concluded that the type of analysis can affect the relationship between corporate environmental and economic performance of related studies.

In addition to the previous reasons, several studies have claimed that the variation of the results relating to the relationship between environmental and economic performance can be due to other reasons. These reasons include the lack of objective criteria (Cohen, et al., 1995; Konar & Cohen, 2001), the differences between countries' laws and regulations (Horváthová, 2010), stakeholder mismatching (Margolis & Walsh, 2003; Orlitzky, et al., 2003; Wood, 2010), and time coverage (Hart & Ahuja, 1996; Horváthová, 2010; Konar & Cohen, 2001). Therefore, conducting an environmental study in a given country may not be able to provide general conclusions that can be accepted in other country.

## 5. Conclusion

In general, the relationship between corporate environmental issues and corporate performance is inconclusive; studies provide mixed results with regard to this relationship. The majority of the studies represent corporate performance resulting from corporate environmental activities by variables related to economic performance that can be resulted from other non-environmental variables.

Although a few studies have isolated the outcomes of environmental issues from other outcomes and provide some aspects of the path between environmental practices, CEP, and competitiveness (Chiou, et al., 2011; Henri & Journeault, 2010; López- Gamero, et al., 2009; Iraldo, et al., 2009), these studies failed to incorporate whole environmental management practices. To the knowledge of the researcher, these studies have not covered practices such as employees' involvements, strategic planning process, organizational practices, and stakeholders' integration. Additionally, some practices have been suggested by previous literatures to be incorporated in the environmental practices due to their scarcity in the literature, such as employees' involvements (del Brío, et al., 2007; Jackson, et al., 2011; Renwick, et al., 2008) and stakeholders' relationships (Etzion, 2007; Florida & Davison, 2001; Jackson, et al., 2011).

Therefore, there is a lack of study investigating the relationship between disaggregated environmental practices, CEP and environmentally related competitiveness. This in line with the call that there is no single response for the question of whether environmental proactively has positive effects on business performance, and this relationship must be disaggregated into more specific and concrete relationships (González-Benito & González-Benito, 2005).

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