

A Meta-Analysis of Corporate Sustainability: Scope, Level, Methodology, and Contributions of Previous Studies

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Abstract

Over the past decades, corporate sustainability has received considerable attention from business companies, governments, and non-profit organizations, and academics, particularly after the introduction of the Sustainable Development Report by the Brundtland Commission (World Commission on Environmental Development, 1987). Along with this growing awareness of environmental and social issues, considerable management literature has emerged on corporate sustainability. Yet there is still need for eloquent studies systemizing and classifying research on corporate sustainability. In this paper, we would like to address this issue by examining selected journal articles and offer a systematic and comprehensive assessment of corporate sustainability in a meta-analysis.

The purpose of this paper is to contribute to the ongoing efforts of understanding studies on corporate sustainability and offer insights into further research on the subject. For this purpose, we assessed and classified research publications on corporate sustainability from 2005 to 2011 according to their specific topical areas, levels of analyses, research methodologies, and major contributions as a result of comprehensive literature review on corporate sustainability. In doing so we examined numerous articles from major journals in the field of management and organizations. By this study, we expect to draw a map of research related to corporate sustainability in a systematic way. Moreover, we will conclude with suggestions for future research in the areas of theory building and managerial applications concerning corporate sustainability.

Introduction

Over the past decades the concept of sustainability has received considerable attention from various stakeholders as well as researchers, in particular, after introduction of the sustainable development report by the Brundtland Commission (World Commission on Environmental Development) in 1987. According to this report, sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED,1987: 3). The notion of sustainability has its origin in sustainable economy (Barbier, 1987) and its reflection to business practices, based on the Elkington’s (1997) ‘triple bottom line’ concept, the triple P of business (planet, people and profit). The ‘triple bottom line’ view represents an often-cited model in defining

corporate sustainability that aims improving the economic, environmental, and social performances of organizations.

Although considerable literature has emerged on corporate sustainability, there is still lack of longitudinal studies systemizing and classifying research on sustainability according to their specific research topics, level of analyses, and research methodologies shedding light on our understanding of corporate sustainability.

Literature Review

It is commonly agreed that corporate sustainability is associated with financial and economic performances of organizations (Al-Tuwaijri et al. 2004; Jaggi and Freedman 1992; Klassen and McLaughlin, 1996; Margolis and Walsh, 2003; Orlitzky et al., 2003; Vijfvinkel et al., 2011; Wagner et al., 2001). Also, firms gain competitive advantage through using environmental technologies, environment management systems, and embracing social responsibilities (e.g., Shrivastava, 1995b). With growing awareness of environmental and social issues, more organizations have integrated sustainability into their business strategies and practices and thereby a considerable literature has emerged on corporate sustainability. However, since many scholars hold different understandings of corporate sustainability (Russel et al., 2007), a closer look at the literature shows that research on corporate sustainability has been fragmented, consisting of such variety of topics as economic sustainability (Geibler et al., 2006), environmental management and environmental sustainability (e.g., Abreu, 2009; Burke and Gaughran 2007; Harris 2007; Kehbila et al. 2007; Morrow and Rondinelli, 2002; Shrivastava, 1995a), corporate social responsibility and social sustainability (e.g. Carroll, 1991; Prachsriphum & Ussahawanitchakit, 2008; van Marrewijk and Werre, 2003), as well as holistic views of combining economic, environmental and social sustainability (Artiach et al., 2010; Dyllick & Hockerts, 2002; Young & Tilley, 2006). Additionally, the literature on sustainability measurement and reporting (Benijts, 2008; Gray et al., 1995; Perrini and Tencati, 2006; Schaltegger and Wagner, 2006; Wheeler and Elkington, 2001) has emerged vastly with growing number of firms' tracking and reporting their social and environmental performance online.

It is possible to classify the research on sustainability by considering different levels of analysis including individual or managerial level, organizational level, inter-organizational level, industry level (Sharma and Starik, 2002) and societal level (Hahn et al., 2010). Accordingly, while researchers investigating corporate sustainability at individual level focused on the top management decisions, personal and managerial interpretations, attitudes and perceptions about environmental issues and corporate sustainability (e.g., Bansal, 2003, Sharma, 2000; Linnenluecke et al., 2009), researchers inquiring organizational level sustainability considered corporate strategy, sustainability practices, financial/economic performance and environmental/social performances (e.g. Aragon-Correa and Sharma, 2003; Christman, 2000; Al-Tuwaijri et al., 2004; Sharma & Starik, 2002; Sharma and Vredenburg, 1998; Wagner, 2010) along with sustainability measurement, accounting, reporting (e.g. Benijts, 2008, Schaltegger and Burritt, 2010; Staniskis and Arbaciauskas, 2009). It can be concluded that the focus of industry level sustainability research, including inter-organizational level research, is mostly on cross-industry studies (Banerjee et al., 2003), comprising various institutional regulations and stakeholder pressure for corporate sustainability (Abreu, 2009; Delmas and Toffel, 2004; von Geibler et al., 2006; Henriques and Sadorsky, 1996; 1999).

On the other and, O'Bannon and Preston (1999) analyzed the relationship between indicators of corporate social and financial performance within a comprehensive theoretical

framework and based on data for 67 large U.S. corporations for 1982-1992. They found overwhelming evidence of a positive relationship between social and financial performance indicators. Their finding is consistent with the stakeholder theory of the corporation. They also discovered the strongest evidence that financial performance either precedes or is contemporaneous with social performance. They concluded that social-financial performance correlations are best explained by either positive synergy or by “available finding.”

Furthermore, Salzman, Ionescu-Somers, and Steger (2005) categorized and assessed existing research and tools related to corporate sustainability. They presented a review of (1) theoretical frameworks, (2) instrumental studies aiming to either prove or disprove a hypothesized causal sequence between corporate social or environmental performance and financial performance, (3) descriptive studies examining manager’s actual perceptions and practices, and finally (4) managerial tools. They identified a clearly insufficient understanding of manager’s key arguments or business logic for adopting corporate sustainability strategies (how ‘business cases’ are built, how effective they are and what barriers they face). They attributed this lack of managerial understanding primarily to lack of descriptive research in these areas.

It should be noted that various approaches can be used in classifying research about corporate sustainability. For example, according to Salzman et al. (2005), the classification of sustainability research is based on the financial, environmental, and social performance relations. They included both instrumental and descriptive studies in their sample and they concluded that instrumental studies aim to empirically test the relationships hypothesized in theoretical studies and descriptive studies are intended to examine how companies and managers approach the corporate sustainability in practice. In our study, in addition to three performances (i.e., financial, environmental, and social) used by Salzman et al. (2005), we adopted a fourth category of a holistic dimension of corporate suitability by combining all those three performances.

Methodology

For our inquiry, we examined the publications of journal articles on corporate sustainability for a six year period from 2005 to 2011. In choosing the sample journals, we picked journals with high impact factors, but particularly journals directly focusing on social and natural environments of organizations. This particular group includes the following journals *Journal of Business Ethics*, *Business Strategy and the Environment*, *Corporate Social Responsibility & Environment Management*, and, *Journal of Cleaner Production*. The second group comprises of most cited two journals (according to journal citation reports) in the field of management and business strategy, but included articles related with corporate sustainability. They include *Strategic Management Journal*, and *Journal of World Business*. Two major data-bases, Google Scholar and Dow Jones ProQuest were used for gathering information on corporate sustainability. Some articles focusing on just sustainable competitive advantages of firm were excluded since they only dealt with the firms’ competitive positions vis-à-vis their rivals; therefore they were not in scope main scope our inquiry.

As a result, we reviewed 100 of articles in six journals. Table 1 presents the number of articles appeared in these journals. We must note that one study (Glavic & Luckman, 2007) is just a literature review rather than research on corporate sustainability per se; therefore the sample size is reduced to 99. In our inquiry of the relevant articles, we included the following aspects: principal dimension of sustainability—environmental, economic, social, or holistic sustainability; level of analysis, methodologies used, context-samples, focus of study, and

main contributions of those articles. This enabled us to evaluate many studies on corporate sustainability systematically.

Table 1 Journal Sources of the Articles

	Frequency	
	n=99	%
J. of Clearer Production	37	37
Business Strategy & Environment	34	34
Corporate Social Resp. & Env. Mgt	13	13
J. of Business Ethics	9	9
J. of Business World	4	4
Strategic Management Journal	3	3

In our reviews, we occasionally consulted the main body of the articles beyond their abstracts whenever we needed more relevant information about the articles.

Findings

The results of our inquiry are presented in Appendix and Table 2. While Appendix depicts the overall picture of the all studies selected, Table 2 displays the distribution of specific dimensions comparatively. The Appendix shows the citations of these major works and their characteristics including sustainability dimensions, level of analysis, methodologies, focuses, and contribution. It reflects various aspects of these major works in a six year period.

Additionally, a review of Table 2 shows that the majority of the studies concentrated on holistic sustainability (67.6%) while the least number of studies focused on social sustainability (3.9%). As for the level of analysis of analysis is concerned, the most of studies addressed sustainability at the organizational level (46%) while the least number of studies dealt with sustainability at individual (8%) and societal level (7%). Of the total number of studies, 32.3% is theoretical and conceptual research while 31.4% of them consisted of empirical studies and 32.3% cases studies. This means that in the sample articles, the authors used theoretical/conceptual, empirical, and case studies proportionally. We noticed a substantial number of case studies in recent publications. This can be attributed to academic community's welcoming attitude for more qualitative research.

Table 2 Major Categories of Sample Studies *

Dimensions	Frequency	n=98	%
Scope of Sustainability:			
Holistic	69		67.6%
Environmental	18		17.6%
Economic	7		6.9%
Social	4		3.9%
Level of Analysis:			
Individual/Managerial	8		7.8%
Organizational	47		46.0%
Industrial	36		35.2
Societal	7		6.9%
Methodology:			
Theoretical/Conceptual Study	33		32.3%
Empirical Study	32		31.4%
Case Study	33		32.2%

*Due to the missing data or rounding the percentages, the total may not add up to 100.

It is clearly noticeable that more and more studies in reputable journals emphasize corporate sustainability from a broader perspective meaning taking into account organization and its physical and social environments. This literature analysis shows the sustainable organization can be achieved by paying close attention to corporate social responsibility and a balanced consideration for the organization's various stakeholders.

The high rate of holistic research indicates that academics and researchers have been aware of the interdependencies of financial/economic outcomes and environmental/social outcomes for corporate sustainability. We believe that increasing attention to the holistic effects on corporate sustainability by considering not only the interests of shareholders but also the interests of other various stakeholders would stimulate greater research and managerial awareness in this area. In fact, Culpan and Trussel (2005) pointed out how a narrow and greedy focus by the top managers at the past Enron Corporation led to the company's destruction.

The second biggest dimension of corporate sustainability appeared to be the environmental dimension (18%). This can be explained by increasing concern among public and academics with sustainable environment. As a result of industrialization, we have been experiencing augmenting air, water, and land pollutions that seem to receive lots of media coverage (e.g., British Oil's oil spill in the Gulf of Mexico; the Japanese nuclear power plants' radiation leaks after the big earthquake in Japan). Such incidents have and would stimulate the interests of researchers to search the causes and remedies of such disasters and propose improve models to deal with such issues and to obtain sustainable physical environment that may go beyond the efforts of management scholars.

The number of articles covering the economic dimension of sustainability seems to be very low (7%), but this can be explained that the majority of the sample journals selected are environmentally oriented journals. More journals with the orientations of strategic management and competitive advantage would have emphasized the economic dimension as all three articles from Strategic Management Journal dealt with the economic dimension. Likewise, the social dimension of corporate sustainability received less attention (4%). If we traced sociological journals, probably we could have found more coverage of this particular dimension.

As the level of analysis, as we expected, the majority of studies concentrated at the organizational level (47%) since the overwhelming number of researcher come from the field of management and economics. These researchers (Koellner et al., 2005; Kolk et al., 2008) have tried to demonstrate the dynamics of corporate sustainability for future performances of organizations by either portraying their findings or building new conceptual models. Kolk (2010) for example, offered a suitability reporting system in the context of corporate governance.

For the methodology part, as shown in Table 2 and mentioned above, the researchers used three primary research methods—conceptual, empirical, and case studies, equally. These varieties in research methodologies give us an opportunity to compare of the findings and conclusions of different techniques so that we can develop our knowledge better on corporate sustainability.

We found that the researchers have paid particular attention to environment-sensitive industries such as forestry, farming, fishery, oil, gas, and mining industries to sustain the environment. In this regard, we discovered the following notable studies: Bansal (2007) the Canadian firms dealing with oil, gas, and forestry; Sharma and his colleagues (1998, 2000, & 2007) concerning the Canadian forestry; Adams and Ghaly (2007) coffee production in Costa Rica; Iles (2007) seafood industry; and Laurence (2011) study for mining industry. In

addition, a quite number of researchers have undertaken such industries as pharmaceuticals, healthcare, and biosciences (Bucholz et al., 2009).

Conclusion and Discussion

These longitudinal investigations of journal publications on corporate sustainability not only document the drives, themes, and contributions of the literature, but also throw lights on the future issues and potentials development in this particular area. A number of management scholars have concentrated on corporate sustainability from different perspectives and with different methods. The overwhelming conclusions that we can withdraw from these studies can be summarized as follow. First, the extant literature as covered in this paper demonstrates that most studies focused on the holistic dimension of corporate sustainability, meaning it is preferred to address an integrated interest of corporate constituents instead of emphasizing a single interest (e.g., financial/economic interests) of the firm shareholders. Second, the most studies concentrated efforts at the organizational level analysis while still a considerable number of studies are conducted at the environmental level. Third, the researchers have used a combination of conceptual, empirical, and case studies to offer some new insights into obtaining corporate sustainability.

We would like to recognize a few limitations of the current study though. First, it covered only six journals that may limit our understanding of broader spectrum of research on corporate sustainability. Second, the time span that we used is only six years that does not include some notable studies on the subject of corporate sustainability.

Nonetheless, we believe that the current paper can stimulate further research in two ways. First, it denotes research areas that have not been identified in the stream of articles covered in this survey. The results of these articles could substantially influence subsequent research designs and methods of execution. Second, it may encourage researchers to undertake interdisciplinary and multi-level analysis on corporate sustainability by demonstrating that it is a win-win situation rather than conventional thinking of win-lose proposition. Third, to overcome the limitations of the current paper as we mentioned above, prospective researchers can include more journals both focused and general within a longer time span (e.g., 10 years).

It seems that conventional management and organizational journals with general and company-focus invite research papers with relatively limited emphasis on corporate performances, namely financial/economic performance and competitive advantages. In other words, in most publications today, shareholders' interests override other stakeholders' interests whereas we should recognize that a balanced view of stakeholders' interest would benefit corporate sustainability. To broaden the field of investigation to new horizons the editors of conventional journals are recommended to welcome studies on corporate sustainability with a holistic perspective and inter-organizational, or environmental or even societal levels.

On the managerial side, we suggest that managers should recognize the intertwined nature of corporate sustainability. This means that the corporate well-being in the long run depends upon a balanced act of serving the needs of all the stakeholders, not only the interests of shareholders at the expense of others. Bad company examples of Enron, Countrywide Financial Corporation, and BP prove that if corporate sustainability is ignored, corporations face extinction or disastrous consequences. On the other hands, firms such as Whole Food Markets, Unilever, Starbucks, BMW, and adidas can achieve corporate sustainability by following some underlying principles, models and strategies as suggested in studies covered

in this paper. Basically managers should be akin to corporate sustainability and its requirements as accounted in the sample studies.

The goal of this study was to portray a range of studies on corporate sustainability and advance knowledge regarding its design and application in both conceptual and empirical management studies by providing a meta-analysis of such research. We hope that the current study with its extensive review of 99 articles in six journals between 2005 and 2010 has achieved its purpose and would stimulate further scholarly and managerial research on corporate sustainability.

Due to the space limitation, References and Appendix of 99 Citations are not given here. They will be provided upon request.