

**A Comparative Analysis of Organizational Sustainability Strategy:
Antecedents and Performance Outcomes Perceived by U. S. and Non-U.S.-Based Managers**

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ABSTRACT

Multiple forces in the 21st century, such as environmental degradation, global poverty, lack of human rights, far-reaching health deficits, and corporate governance concerns, have propelled the world into confronting conditions that challenge the planet's sustainability. This exploratory study investigates the conditions that enable companies to respond to sustainability needs, specific factors driving and inhibiting that response, practices that companies are engaged in, and the impacts on organization performance. Based on a worldwide survey ($N = 1,514$), the authors derive and confirm a model for conceptualizing the linkages among these factors and show how U.S. respondents differ from their foreign counterparts in perceiving and reacting to these challenges. The paper offers insights for leaders of sustainability efforts around the world to deepen and extend their environmental, social, and financial achievements. It also points toward further streams of inquiry to refine and extend this research.

In the last decade, the issue of sustainability has become a critical issue for the world and for business (Anderson, 1998; Hawken, Lovins & Lovins, 1999; Prahalad & Hammond, 2002; Scientific American, 2005; UN Global Compact, 2004). While the meaning of “sustainability” has often been debated, it may be considered to be concerned with “meeting the needs of people today without compromising the ability of future generations to meet their own needs” (World Business Council for Sustainable Development, 2005, p.2). From a business perspective, sustainability has been defined as a “company’s ability to achieve its business goals and increase long-term shareholder value by integrating economic, environmental and social opportunities into its business strategies” (Symposium on Sustainability, 2001, p.1) Companies are being urged to shape the content of their corporate strategies to achieve a higher level of mutuality between their own strategic needs and those of society (Porter & Kramer, 2006), what sometimes is referred to as “corporate social responsibility” (CSR) or “environmental, social, and governance” (ESG) concerns. More companies are undertaking to achieve success on a broader and more balanced array of outcomes such as those delineated by the “triple bottom line” of people, planet, and profits (Savitz & Weber, 2006).

This paper seeks to ascertain from a worldwide survey of 1,514 managers what factors most drive companies to engage in sustainability management, what enables and inhibits those efforts, what practices their organizations rely on most, and what the link is to operating performance. In addition, we examine how these variables compare between managers in the U.S. and other countries.

Background

An array of environmental, social, and economic factors challenge institutions, leaders and corporations with the reality that the world’s natural resources and people may be in increasing

jeopardy. The United Nations Intergovernmental Panel on Climate Change (2007) has declared that human activity is almost certainly triggering global warming with potentially devastating consequences. Fifteen of the last 20 years rank as among the warmest in history. Scientists have measured increases in carbon dioxide levels in samples from 40 countries that have not been seen in an estimated 650,000 years (Hotz, 2007). The Polar ice cap has shrunk 20 percent in the last 25 years, resulting in significant rise in sea level over the next decade (Symes, 2006). Degradation of topsoil has put agricultural land the equivalent to the size of China at “very high risk” of human-induced desertification (Symes, 2006). One estimate calculates that the earth’s resources are being depleted at a rate that is 39% faster than what the planet can regenerate (Redefining Progress, 2008). Two-thirds of the earth’s population may face severe water shortage by 2025 (Symes, 2006).

Social issues are just as troubling. One in five children in the world gets no schooling; the situation is even worse for girls. Approximately one-third of the earth’s population is at war in over 30 armed conflicts (Symes, 2006). The earth added 500 million people in a recent 7-year period, mostly in the poorer parts of the world (UNPD, 2006). A 50% increase is expected to bring the world population to about 9.1 billion people by 2050, nearly all of it in less developed countries. More than three billion people on earth live on less than \$2 a day (Symes, 2006). Eighty of the world’s poorest countries are poorer now than they were 20 years ago, with a disproportionate number being in Sub-Saharan Africa.

The United States faces its own social dilemmas. For example, Hawken, Lovins, and Lovins (1999) report that one in every 25 men is involved in the corrections system, fully one in three African-American men. In the process, prison construction has become a common goal for

“economic development” in much of rural America. In fact, the US spends more on incarceration than on schooling (Symes, 2006).

Today, more companies see the need to look beyond traditional concerns of running a business for immediate profit and begin to deal with factors in the greater world that impinge on their medium to long-term success. “Sustainability” is fast becoming a byword for threats and opportunities as never before. In fact, many are taking on a strategy of sustainability because of the competitive advantages more than the desire to become better corporate citizens (Bansal & Roth, 2000). Sustainability is increasingly “right at the top of the agendas” for US CEO’s, according to McKinsey Global Institute Chairman Lenny Mendonca (Engardio, 2007, p. 52). Climate change alone has emerged as an unavoidable issue for companies that used to be oblivious to it. As the *Economist* (2006) put it,

Most of the corporate converts say they are acting not out of some vague sense of social responsibility but because climate change creates real business risks and opportunities.

And although these concerns vary hugely from one company to the next, few firms can be sure of remaining unaffected (p. 2).

Many firms need to beware of violating new regulations or falling into public relations embarrassments. Insurance, energy, and chemicals companies face a new level of threat as climate change leads to more disastrous weather disruptions, while unexpected litigation may reach new orders of magnitude (Cohen, 2006).

At the same time, others have found unique opportunities, where climate change and shifting social patterns present the chance for improving firms’ competitive positions (Bansal & Roth, 2000). Prahalad and Hart (2004) have drawn attention to the attractive markets represented by developing countries, the “fortune at the bottom of the pyramid,” if companies can adapt and

adroitly innovate. Unilever now derives over 40% of its income and most of its growth from third-world countries by deriving brand management and marketing strategies more specifically tailored to these consumers, including making in-country investments that improve socio-economic well being. In the words of Unilever Group CEO Patrick Cescau, there is “increasing awareness within business itself that many of the big social and environmental challenges of our age, once seen as obstacles to progress, have become opportunities for innovation and business development. . . emerging markets will be the main source of growth for many multinational companies in the years to come” (Engardio, 2006, p. 52).

A growing number of firms around the world are now setting ambitious targets for performance in not only financial terms but also in environmental and social domains. Many authors (see, for example, Esty & Winston, 2006; Orlitsky, Schmidt, & Rynes, 2003; Piasecki, 2007) have written that the benefits of this orientation include such dimensions as: better recruitment and talent retention, increased employee engagement, greater employee productivity, reduced operating expenses, increased innovation in products and processes, higher revenues and market share, and greater social and reputational capital.

More academic and financial researchers are studying the ways in which triple bottom line performance may be not a drag but a boost to investment appeal. Goldman Sachs’ well-respected investment strategy head, Abby Joseph Cohen, cites the growing evidence that an “eco-efficiency premium” is more often being built into the stock price of deserving companies (Cohen, 2006). Such performance has prompted “socially responsible investment” (SRI) mutual funds to attract several billions of dollars under management (Kahn, 2006). Innovest Strategic Advisors, Smith Barney, and the Dow Jones Sustainability Index have all presented evidence that companies regarded highly for sustainability management outperform other firms. Orlitsky and colleagues

(2003) performed a meta-analysis of studies and confirmed the connection between investment choices linked to responsible environmental and social aims and above-average returns. On the other hand, a separate meta-analysis did not confirm such a relationship (Margolis & Walsh, 2003).

Both CSR theorists (Barnett, 2007) and a recent in-depth study by Goldman Sachs Group (2007) of five sectors of the economy argue for a more nuanced view of socially responsible investing in the Environmental/Social/Governance (ESG) realm. Goldman Sachs studied five mature industries around the world: energy, mining and metals, food and beverages, pharmaceuticals, and media (Europe only). Investigating the large-capitalization firms in these slower-growing industries, they found no evidence that ESG criteria alone were good indicators of investment success. However, taking into account the *interaction* of the ESG approach and other more traditional analysis of industry positioning, cash flow, and the like produced better-than-expected returns. As the urgency of issues concerning sustainability increases, investors may well pay an increasing premium for the shares of companies that are capitalizing on such externalities (Mackey, Mackey, & Barney, 2007).

Just as Goldman Sachs directs investors to consider both social/environmental indicators and financial ones, Porter and Kramer (2006) urge companies to integrate both their corporate social responsibility – roughly equivalent to ESG or sustainability – and corporate strategy. They recommend that companies focus on sustainability issues related to their value chain. This can produce social good while enacting enlightened self-interest. When Whole Foods develops networks of local growers to supply produce to its stores, it aids the local economies of their own customers while reducing the cost of inbound shipping and greenhouse gas emissions from long-distance transport. General Electric's century-old business of energy equipment takes a socially

conscious and profitable turn under the new banner of “ecomagination” by becoming a major producer of wind energy turbines. These actions exemplify what Laszlo and colleagues (2005) observe is how sustainable development can contribute to competitive advantage and stakeholder value.

A key purpose of this paper is to investigate what today’s managers find are the key factors to managing from a sustainability standpoint. Although some consultants have given advice on how to follow a sustainability strategy (Blackburn, 2007; Epstein, 2008), little empirical academic research seems to exist to confirm what specific conditions support successful ways of managing sustainably and what specific factors tend to inhibit it. Another area of uncertainty concerns the key practices that organizations can use to implement sustainability management. Whereas past studies from investment counselors have been primarily descriptive from a high level of analysis, we wanted to ascertain how insider views of specific sustainability management practices translate into operating performance.

One source of insights about the conditions that enable sustainability management comes from a recent study of nine of the world’s most sustainable companies (Wirtenberg, Harmon, Russell, & Fairfield, 2007), which identified a “pyramid” of seven core qualities associated with successfully implementing sustainability strategies and achieving triple-bottom-line results. Making up the so-called “Foundation Layer” at the base of the pyramid are the necessity for an organization’s deeply held values to be consistent with sustainability, top management’s visible support for sustainability, and the placement of sustainability as central to overall organizational strategy. Up at the next level are features for getting “Traction,” which can be achieved by aligning formal and informal organizational systems around sustainability (including engaging employees) and developing sustainability metrics. To fully gain “Integration” at the top of the

pyramid requires broad stakeholder engagement and the holistic integration of many facets and functional domains of sustainability activities all across the organization. The authors report that even the nine highly rated firms studied seemed to be struggling with reaching this cross-boundary, multi-stakeholder, integrative pinnacle.

The first purpose of this study is to confirm the conceptual model in Figure 1 by using data from a worldwide survey to determine the interrelationships and pathways among several sets of drivers, impediments and enablers of sustainable business implementation, and explore how these factors influence implementation of sustainability practices and resulting organization performance. We used **data from a worldwide** survey to identify what kinds of sustainability strategies may produce improved performance (Goldman Sachs Group, 2007; Orlitsky et al., 2003). Starting from the far right of the model, we expected that the more extensive use of socially and environmentally responsible sustainability practices would be associated with greater performance improvement. This expectation is based on the increasing number of findings linking sustainability to corporate performance (Cohen, 2006; Dow Jones Sustainability Index, 2005; Guenster et al., 2005, Innovest Strategic Advisors, 2008; Kahn, 2006). Working backward in the model, we expected to find a positive relationship between enablers (foundational, traction-producing and integrative, as discussed above) and the implementation of sustainability practices. Earlier research (e.g., Blackburn, 2007; Wirttenberg et al., 2007) indicates that moving toward sustainability requires highly integrated organizational systems from recruiting to promoting personnel to establishing metrics. Similarly, implementation enablers seem to provide grounding for such practices, beginning with foundation values, top management support, and embedding sustainability directly into corporate strategy. Looking further to the left of the graphic, we expected to find that sustainability drivers in decision-making would positively influence both

how management sets up enablers and implements sustainability. This expectation reflects the theoretical work of Basu & Palazzo (2008), who posited that sustainability decision-making is likely to be influenced by three types of drivers: stakeholder drivers (meeting specific demands of largely external stakeholders), performance drivers (using social or environmental investments to boost performance), and motivation drivers (either extrinsic reasons such as to pre-empt legal sanctions or enhance reputation or intrinsic ones grounded in virtue ethics). All these are naturally impeded to the extent that inhibiting factors, such as lack of internal awareness, senior management support, or demand from consumers, sap the dedication and ability to implement. Thus, we expected that inhibitors would exert a negative effect on drivers, enablers, and practices.

Cross-National Differences

The second focal point of this paper is to discern how perceptions and actions related to sustainability of managers based in the U.S. differ from their counterparts in the rest of the world. Substantial evidence would say in general that the U.S. in many ways has trailed other parts of the world for awareness of and actions toward environmental sustainability. A quantitative comparison between the US and other countries comes from the report prepared by Esty and colleagues (Esty et al., 2006) at the Yale Center for Environmental Law and Policy in conjunction with the World Economic Forum and Columbia University. This research consortium has for several years constructed an Environmental Sustainability Index based on such factors as a nation's environmental health, air quality, water resources and sustainable energy. The most recent index rates the United States at 78.5 on a scale of 100, which is in the second quintile. While the U. S. is higher than a majority of countries, it ranks only 23rd out of the 29 members of the OECD, slightly ahead of Hungary, Poland, Belgium, and South Korea and below Spain, Slovakia, and Netherlands. The rankings suggest that affluent countries enjoy greater resource

advantages to devote to environmental concerns, while much of the world is coping with survival and a minimal quality of life.

People have long known that with America's affluence have come numerous living habits that have induced many people to seldom be concerned with conservation of resources or the environment. This behavior comes out in American ownership of 3 automobiles for every 4 people, many more cars than anywhere else, and in the generation of a disproportionate amount of the world's waste (Brown, 2006).

We also partly shaped our expectations of American corporate sustainability strategies through inferences from certain national cultural differences among countries. For one example, Hofstede's (1980, 1997, 2001) classic research derived key variables that describe behavioral characteristic of national culture. A *long-term orientation*, generally characteristic of Asia and Latin America, manifests itself in perseverance and thrift, as opposed to near-term achievement and consumption. The classic short-term focus in the United States has made it unusual for most Americans to adopt a multi-generational look forward on environmental impact as one would find in a more long-term culture (unlike the traditional view of Native Americans). One would expect greater environmental stewardship with a long-term orientation. Hofstede's typology describes *Masculinity* in a culture as a tendency to behavior that is concerned with assertiveness, competition, and the pursuit of material goals, compared to *Femininity*, characterized by modesty, caring, and quality of life. Husted's (2005) research indicates that while economic development is a major factor in environmental management across nations, low masculinity tends to contribute to environmental focus. A predominantly masculine culture in the U.S., along with its capitalistic tradition, suggests that American managers would manifest more concern for profitability than taking societal good into account. American companies even tend to publicly justify their

corporate social responsibility actions by framing them in terms of financial gains, whereas EU companies, for example, stress not only financial implications but also their contribution to the community, reflecting a more feminine base (Hartman, Rubin, & Dhanda, 2007).

Hofstede's *Individualism* dimension measures the orientation of people to be concerned with personal achievement and wellbeing. A collectivist view, on the other hand, describes those whose cognitive and social focus is on a group, clan, or country. It appears that the old individualistic, capitalist tradition in the U. S. has tended to keep government out of the business realm. As a result, the influence of the oil and automobile industries, for example, has kept the price of oil low and emission standards more lax than in much of Europe and elsewhere, where sharply higher petroleum taxes help drive down vehicle size and drive up fuel efficiency. Compared to their U. S. counterparts, EU companies, for example, shoulder a much higher load of taxes and employee healthcare costs. Nevertheless, American respect for the individual seems to have translated into concern for employees, who are protected by a range of legislative and regulatory actions in the U. S. Most European and certainly developing countries tend to be behind the U. S. emphasis on workers' rights and anti-discrimination provisions. Similarly the individualistic tendency in the U. S., which also can be seen as evidence of a "low-context" society (Gudykunst & Ting-Toomey, 1988; Hall, 1966) where communication must be made explicit, corresponds to the litigiousness in American society (Ibrahim & Parsa, 2005), which may be the foundation for the defense of workers' rights.

While the U.S. has seen many spectacular corporate ethical breaches in recent years (e.g., WorldCom, Tyco, Adelphia), the judiciary and legislative through such actions as Sarbanes-Oxley laws give the appearance of sometimes more vigorous legal action than what other countries have taken in reaction to theirs (e.g., Parmalat, Credit Lyonnais, TV Azteca). The U.S. record on

ethical issues, which was somewhat more aggressive than the French (Ibrahim & Parsa, 2005) may compare favorably with the rest of the world. Likewise, attention historically in the U.S. to employee engagement, health and safety, and employee rights issues is generally greater than in most emerging-market countries across the world.

As a result, we expected that our exploratory comparative research would show the U.S. lags behind the rest of the world on many counts with respect to companies' enabling conditions, such as deeply embedded values, top management support, and metrics. The American corporate respondents would probably report doing less with environmental actions than others who have been more proactive in Western Europe and parts of Latin America. Still, our expectations were less clear with respect to what differences exist with workforce issues and ethical activities.

Method

For this study, we used data from a worldwide survey conducted in 2007 by the American Management Association (AMA), with the assistance of the Human Resource Institute (HRI) and the Institute for Sustainable Enterprise (ISE) at Fairleigh Dickinson University. The survey asked respondents about the degree to which their organizations were implementing sustainability practices; the factors driving, enabling and inhibiting corporate sustainability; and the amount of performance improvement experienced over the past five years. In terms of practices, enablers, and driving/inhibiting forces, the survey's design drew on much of the literature cited above, and inquired into the social, environmental, and economic qualities defining sustainability in a balanced and grounded way.

The target survey population consisted of AMA's international e-mail list of individual contributors, supervisors, managers and executives across a wide range of functions; the HRI e-

mail list of primarily high-level human resource professionals; and HR.com's list of members. A link to an online survey was e-mailed to the target population by region during February 2007. In total, 1,514 usable surveys were submitted, with all respondents answering all questions, as the survey did not allow for partial responses¹.

Respondents came from 44 countries. Over 60% (925) were organizationally-based in the US, while the remaining 589 respondents were based in countries from six other geographic regions shown in Table 1.

In terms of respondent characteristics, the great majority (approximately 75%) were at or above the managerial level. Although respondents represented a broad variety of functions, just over 50% came from human resource-related areas, owing to the heavy participation in the survey by HRI and HR.com members; however, our analysis showed that the ratings of HR respondents were significantly different from non-HR ones for only one study measure (not surprisingly, relating to workforce practices). Just over 52% of respondents were female.

In terms of respondents' organizations, most were either global or multinational in their scope of operations (29% and 26%, respectively), while 45% were national organizations. Virtually every industrial sector was represented and there was a relatively even split between smallish, medium, and large-sized organizations –about one-third had revenues of below \$50 million and about 39% had fewer than 500 employees, while about one-third had over 5,000 employees and over a billion dollars in revenue.

Survey Measures: All survey questions used five-point, Likert-type scales, with a 1 rating generally designated as “not at all” and a 5 rating as, depending on the question, “to a very great extent” or “extremely important.” Questions were grouped on the survey in separate sections

¹ It was not possible to calculate response rates given the self-selection nature of the on-line survey process.

organized by sustainability practices, performance improvement, decision drivers, implementation enablers and implementation inhibitors. We also used as separate measures responses to two overall questions: 1) “To what extent do you believe that your organization is implementing a sustainability strategy?”, and 2) “To what extent is your organization seeing measurable benefits from sustainability initiatives?” Our general approach for all the but these latter two survey measures was to first perform an exploratory factor analysis (Principle Components Analysis (PCA) with Varimax rotation) on the items in each section of the survey². We then grouped items together based on their factor loadings³. Finally, for some analyses, we created a single scale score by simply averaging the responses to the items for each grouping. More specific details for each measure follow.

Performance Improvement was assessed via responses to the question “How would you rate (1=much worse, 5=much better) the following compared to the last five years, a) your revenue growth, b) your profitability, c) your market share, d) your customer satisfaction. These four items loaded on a single factor. Table 3 lists these four items along with their means, standard deviations, and factor loadings. Consequently, we used these 4 items to define a single performance-improvement construct for structural equation modeling (SEM). For Analysis of Variance (ANOVA) tests, we grouped them to produce a single scale (a four-item five-point scale with a Cronbach’s alpha estimate of reliability of .81).

Sustainability Practices were assessed via responses to the multi-part question: “On a scale from 1-5, to what extent does your company have practices in place to do the following?” PCA

² We actually employed a split sample approach, using 1/3 of our sample for exploratory factor analysis, and 2/3 for confirmatory factor analyses. However, because not one of the results we report here varied meaningfully between the split and full-sample factor-analytic approaches, we report here for sake of simplicity only the full sample results.

³ Our general approach to creating each factor was to only include items loading > .50 on that factor, with no cross-loading > .30 on any other factor.

analysis showed that the items under this umbrella question fell into three factors (explaining 68.3% of the variance in the response pattern). Table 4 shows the individual items along with their means, standard deviations, and factor loadings. We averaged the items under each factor to produce three five-point scale scores: Practices 1- Integrative ($\alpha = .94$), Practices 2- Eco-Efficiency ($\alpha = .88$), and Practices 3- Employee-Centered/Ethical ($\alpha = .79$). We used these three scales to define the sustainability-practices construct for SEM testing.

Sustainability Drivers were assessed via responses to the multi-part question: “On a scale of 1-5, to what extent does each of the following items drive key business decisions for your company today?” PCA analysis showed that the items under this umbrella question fell into four factors (explaining 63.4% of the variance in the response pattern). Table 5 shows the individual items along with their means, standard deviations, and factor loadings. We averaged the items under each factor to produce four five-point scales scores: Drivers 1- Ecosystem concerns ($\alpha = .93$), Drivers 2- External stakeholder/marketplace concerns ($\alpha = .90$), Drivers 3- Workplace concerns ($\alpha = .81$), and Drivers 4- Reputation/Innovation/Regulatory concerns ($\alpha = .75$). We used these four scales to define the sustainability-drivers construct for SEM testing.

Sustainability Implementation Enablers was assessed via responses to the umbrella question “On a scale of 1-5, to what extent does your company have the following qualities for building a sustainable enterprise (directly derived from Wirtenberg et al, 2007): a), top management support, b) centrality to business strategy, c) deeply ingrained sustainability values, d) systems alignment, e) metrics, f) cross-functional integration, and g) broad stakeholder engagement. These seven items loaded on a single factor (explaining 76.4% of the variance in response pattern). Table 6 lists these seven items along with their means, standard deviations, and factor loadings. Consequently, we used these 7 items to define a single implementation-enablers

construct for SEM testing. For ANOVA tests, we grouped them to produce a single scale (a seven-item five-point scale with a Cronbach's $\alpha = .95$).

Sustainability Inhibitors were assessed via responses to the multi-part question: "to what degree does each of the following issues hinder your company from moving toward sustainability?" PCA analysis showed that the items under this umbrella question fell into two factors (explaining 63.5% of the variance in the response pattern). One item, "Fear of competitors taking advantage of us," was excluded from the factor analysis due to low communality with the other items and was treated as an independent inhibiting measure. Table 4 shows the individual items along with their means, standard deviations, and factor loadings. We averaged the items under each factor to produce scores for two five-point scales: Inhibitors 1- Internal deficiencies ($\alpha = .87$), and Inhibitors 2- Lack of stakeholder demand ($\alpha = .91$). We used these two scales to define the sustainability-inhibitors construct for SEM testing.

US vs. Other was created as a grouping variable for geographic comparison simply by using responses to questions concerning country and region. We assigned a value of 1 to all US-based respondents and a value of 2 to all respondents not based in the US (recall that Table 1 shows the geographic distribution of respondents).

Analysis

Preliminary data analysis was conducted using the SPSS 15.0 software package. We used the AMOS 5.0 software package for structural equation modeling (SEM) to test our expectations relating to the linkages among the constructs in our conceptual model –drivers, enablers, inhibitors, practices and performance. Using SEM over traditional regression techniques for these analyses has three advantages: (1) SEM allowed us to correct for measurement error (by assessing and adjusting for the relative reliability of the various indicators of each of the latent variables or

constructs), resulting in more accurate statistical tests than could have been performed with traditional regression techniques; (2) SEM allowed us to simultaneously calculate both direct and indirect effects of study variables; and (3) SEM automatically provided us with statistical tests of the adequacy of our hypothesized model compared with alternative “good-fitting” statistical models that hypothetically could be derived from the data, which the AMOS software automatically generates (see, for example, Byrne, 2001, and Schumaker & Lomax, 1996).

We conducted a Multiple-Group SEM analysis comparing the US sample to the non-US sample to establish whether the same structural model is appropriate to use for both samples. We then used ANOVA to test for differences between the mean ratings of respondents from the US versus those from other countries on the variables shown in the SEM model. We did not systematically explore differences between the various non-US countries or regions, due to concern over the reliability and validity of such analyses given the relatively small sample sizes from each of these separate areas.

Results

Table 2 depicts the correlations between the measures used in this study, along with their means and standard deviations. Respondents’ organizations appeared to be implementing sustainability to only a moderate extent, based both on the overall implementation item (mean 2.97 out a possible 5) and in terms of the three specific areas of sustainability practices we measured (means of 2.94, 2.96, and 3.65). The strongest area of implementation evidenced was in regard to employee-centered and ethical practices. Also, only moderate was the degree to which organizations were seen as having the qualities *enabling* them to execute sustainability strategies (scale mean 3.03). Referring to Table 5, we note sizable gaps between the extent to which the average respondent’s organization was seen as having each of the enabling qualities (item means

from 2.8 to 3.3) and the perceived *importance* of these qualities for building a sustainable enterprise (not shown in detail here), which ranged from means of about 3.9 to 4.4 for each of the enablers (gaps on each enabling quality of over 1 unit on a 5-point scale).

Test of Conceptual Model

The results of the SEM analyses can be found in Figure 2. As can be seen, the results provide support for our expectations that: (a) sustainability practices are positively associated with firm performance improvement, (b) implementation enablers are positively associated with implementing sustainability practices, (c) the drivers of sustainable decision-making are positively associated with both implementation enablers and sustainability practices, and (d) the inhibitors to corporate sustainability are negatively associated with sustainability drivers, enablers and practices.

Specifically, *sustainability practices* are positively linked with perceived firm *performance improvement* ($\beta = .23, p < .001$). Five percent of the variance in performance improvement is accounted for by the predictors in the model. As can be seen in Table 3, the strongest (highest mean) area of improvement was revenue growth. Table 4 shows that organizations on average were rated strongest in practices for employee health and safety, ethical accountability, training and developing employees for sustainability, reducing waste materials, and highlighting sustainability in their brands.

Sustainability strategy implementation enablers are directly positively linked with sustainability practices ($\beta = .65, p < .001$). All seven enabling qualities loaded strongly on the enabling construct, with strategic centrality, alignment, and integration (all with construct loadings of .87) just ahead of the other four qualities (with construct loadings from .82 to .85). Not surprisingly, organizations that have placed sustainability as central to their business models and

that are aligning their systems around it appeared to be implementing sustainability practices to a greater degree than those that have not. As can be seen in Table 5, organizations on average were rated highest for top management support, strategic centrality, and ingrained values (the foundation of Wirttenberg et al.'s 2007 "pyramid" model).

Sustainability decision-making drivers are directly associated with sustainability practices ($\beta = .26, p < .001$), and are also indirectly linked with sustainability practices through its effect on implementation enablers ($\beta = .56, p < .001$). Thus, the combined total effect of sustainability drivers on sustainability practices is ($\beta = .62, p < .001$; calculated by multiplying the indirect related path coefficients and adding to the direct). Not surprisingly, organizations in which decision making is more strongly influenced by sustainability concerns tend to implement sustainability practices to a greater degree, and to set up their organizations' priorities and systems to do so. The four factors defining the drivers construct were about equal in their construct loadings. Thus, environmental/operational concerns; reputational, innovation and compliance concerns; workplace issues; and external stakeholder and marketplace issues all are relevant for predicting sustainability practices.

Sustainability inhibitors are directly *negatively* associated with sustainability practices ($\beta = -.09, p < .001$), such that firms with more inhibitors to sustainability are less likely to implement sustainable actions. Inhibitors are also indirectly linked with sustainability practices through its negative effects on sustainability drivers ($\beta = -.42, p < .001$) and implementation enablers ($\beta = -.34, p < .001$). Thus, the total negative effect of sustainability inhibitors on sustainability practices is $\beta = -.58 (p < .001)$. By far the greatest drag on sustainability came from Inhibitor 1 – internal deficiencies⁴. As can be seen in Table 7, the strongest internal deficiencies were lack of

⁴ It loaded .92 on the inhibitors construct,

awareness, benchmarks/metrics, ideas of what to do and a strong business case. Lack of demand from organizations' customers and from their own managers and employees were also seen as strong inhibitors⁵. It may be noted, however, that none of these inhibitors were seen to be very strong (i.e., all means were below 3.1)

In terms of predictive ability, eighty-four percent of the variance in sustainability practices is accounted for by the specified predictors in our model. Further, sixty percent of the variance of implementation enablers, and five percent of the variance in firm performance improvement, is accounted for by the specified predictors in our model.

The model presented in Figure 2 represents a good fit to the data. Specifically, the following goodness of fit statistics all are indicative of good- fitting model: (a) the CFI index is .91 (values over .90 indicate good fit), (b) the NNFI (Tucker-Lewis index) is .90 (values of .90 or above indicate good fit), and (c) the RMSEA is .08 (values at or below .08 indicate good fit). The chi-squared for the model is 2168.30 with 185 degrees of freedom ($p < .001$); this result is statistically significant, which normally would indicate that the model fit is problematic. However, as many researchers have noted, the chi-squared index is susceptible to bias when used with large sample sizes. Specifically, because of the increased power when used with samples as large as ours, even very small deviations from a perfect fitting model lead to statistically significant results (Anderson & Gerbing, 1988). Overall, the results of the model fit statistics are positive, particularly for a model with as many variables as the one we report.

Test of differences between US and Non-US organizations

We found no significant differences between the US and Non-US organizations in our sample with respect to scope of organization operations (e.g., national, multi-national, global) or

⁵ These two inhibitors loaded .78 and .65 on the inhibitors construct, respectively.

size (e.g., number of employees, revenue). Nor were there significant differences between US and Non-US respondents in regard to their functions or levels. We did find, however, that there were a significantly ($p < .01$) higher proportion of women among US (59.6%) versus non-US (40.9%) respondents, as well as a significantly lower proportion of those under the age of 35 (US 18.1% versus non-U.S. 32%). This appears to reflect demographic differences found worldwide, especially in many countries throughout the Asia-Pacific, Middle-Eastern, African and Latin American regions in which managerial populations tend to be younger and more male-dominated.

The results of our Multiple-Group SEM analysis demonstrated that the model structure used in this study (the relationships between variables) is equally valid for use with both samples⁶. However, as can be seen in Table 8, ANOVA results showed significant differences in mean scores between the U.S. and non-U.S. groups on most of the variables in the study. Specifically, the U.S. respondents rated their companies lower than their international counterparts on the following *drivers* of sustainable decision-making: the ecosystem concerns of the company and the ecosystem concerns of the company's stakeholders. In terms of *barriers* to sustainable decision-making, U.S. respondents rated their companies lower only on the measure of the fear of competitive disadvantage. Thus, U.S. companies did not report higher barriers to acting more sustainably; however, they reported fewer positive drivers for sustainability.

In terms of the *implementation enablers*, the U.S. respondents rated their companies lower than their international counterparts on the following: top management support, the centrality of sustainability to the strategy of the company, whether the company had developed sustainability metrics, whether the company's systems were aligned with sustainability, cross-functional integration in the company around sustainability, stakeholder engagement, and the degree to which

⁶ Goodness of fit statistics for each sub-sample model indicate good fit (CFI = .91, NNFI = .90, RMSEA = .06, for both models), and this fit is invariant to the constraints imposed upon it by this type of analysis

sustainability represents a value of the company. In fact, the U.S. companies scored lower on all seven sustainability implementation enablers in the study.

U.S. respondents rated their companies lower than their international counterparts on the extent to which they were implementing sustainable business *integrative and eco-efficiency practices*. However, the US and international companies did *not* differ on ethical and employee-centered management practices.

Finally, in terms of perceived *performance* impacts, U.S. companies were rated lower both on the extent to which they were seeing benefits from sustainability and on their amount of performance improvement over the past five years. The implications of these findings will be discussed in more detail in the discussion section, however, they paint a clear picture that the U.S. lags behind its international counterparts in making sustainability a priority, implementing it, and deriving benefits from it.

Discussion

The survey results validate our SEM model of how aspects of organizations and decision-making processes can influence the implementation and success of sustainability efforts, helping us see more clearly the *joint* effects on a range of sustainability practices and performance outcomes of various decision drivers together with institutional enablers and inhibitors. We found that sustainability practices are positively linked with perceived firm performance improvement, with the strongest practices relating to employee health and safety, ethical accountability, training and developing employees for sustainability, reducing waste materials, and highlighting sustainability in their brands. We also found that sustainability decision-making drivers – particularly concerns relating to environmental operations; reputation, innovation, compliance; workplace issues; and external stakeholder and marketplace issues –are associated with

implementing sustainability practices in both direct and indirect ways. Our model exhibited good fit to the data and demonstrated high predictive validity in accounting for considerable variance in the dependent variables.

Our findings validate both the nature and importance of building a “pyramid” of sustainability strategy implementation enablers –foundational, traction-gaining, and integrative – found in Wirttenberg et al.’s (2007) exploratory research. The specific decision drivers and practices validated by our study are consistent with Basu and Palazzo’s (2008) “stakeholder driven, performance driven, and motivation driven” rationales for corporate social responsibility. Further, some of the strongest drivers evidenced by the organizations in our study-- enhancing reputation and image, spurring innovation and growth, avoiding regulatory entanglements, and attracting/retaining top talent –are those often identified as among the strongest corporate benefits of sustainability strategies (see, for example, Barnett, 2007; Savitz & Weber, 2006). As to the strong drag we found of sustainability inhibitors on motivational drivers, organizational enablers, and sustainability practices, it is reassuring to note that the inhibiting forces themselves were only moderate in strength. Further, the strongest ones were internal organizational deficiencies (e.g., lack of awareness, ideas, metrics, and a strong business case) that all are amenable to managerial intervention.

The pattern of results from our comparative (ANOVA) analyses demonstrates that the U.S. lags behind its international counterparts in making sustainability a priority, implementing it, and deriving benefits from it. These results are consistent with the arguments laid out in the initial section of the paper, as well as the collected research and anecdotal evidence, that the U.S. society is less in tune with sustainability than many others throughout the world. For instance, according to Esty and colleagues (2007), the U.S. ranks below most economically developed nations in terms

of sustainable practices. This difference can be partially explained by U.S. culture, as measured by Hofstede (2001), which shows the U.S. to have an individualistic, aggressive, and short-term oriented culture- all traits that would run counter to the ready adoption of sustainable business practices. Also, the U.S. has always been a resource-rich country which for many years could draw upon a seemingly endless supply of land and resources. U.S. business culture has developed in a free-market based economic structure in which intense competition is valued and government regulation is kept at a minimum. For these and many other reasons, the US has been insulated from, and arguably less attuned to the need for sustainable business practices than many other countries. Future research is needed not only to trace the cultural and other reasons behind this difference, but also to examine how American businesses can be persuaded to more readily adopt sustainable practices.

One of our more interesting findings (at least to us) was that non-U.S. organizations were more fearful than U.S. ones that implementing sustainability practices might result in competitive disadvantage. Perhaps a reason relates to concerns expressed by emerging-market countries that pressures from post-industrialized economies to curb emissions and enforce higher regulatory standards may unfairly retard their rate of economic development, preventing them from “catching up.” Less surprising given US historic attention to workforce engagement, health and safety concerns, and recent attention to governance and ethical behavior, was our finding that there were not differences between US respondents and those from other countries on these particular sustainable-development issues. Future research should build upon this study with more fine-grained analysis comparing countries and regions along a variety of parameters such as culture, geography, governmental structure, and state of economic development.

Several limitations of our findings should be acknowledged. First, even though the survey instrument was specifically constructed with the study's purposes in mind, and the content and construct validities of our survey-based measures appeared to be very good, a separate validation study of the measures was not performed before the analyses. Second, performance improvement and sustainability practices were assessed solely through perceptual measures, which are subject to assessors' distortions and common response bias. In addition, the perceived performance measure was a rather crude one. Future research is advised to use more objective and rigorous indicators to assess sustainability practices and corporate performance, such as those from independent sustainability rating agencies like Innovest and Dow Jones, and from actual data on corporate performance. A third limitation is that, even though considerable diversity existed across organizations and countries involved in this study, the majority of respondents came from the US. The extent to which similar results would be obtained with other cross-sectional international samples remains unclear. Further, aggregating data from various unique countries/regions into a single group undoubtedly masked some of the interesting and meaningful differences between them. Future studies should look more carefully at differences between each region, using sufficiently large sample sizes to permit reliable comparison. Finally, the research design advises caution in drawing inferences about causality, because multiple, time-ordered perceptual measures necessary to establish causal relationships were not used.

In conclusion, we tested and validated a model that examined the drivers, inhibitors and enablers of sustainability implementation, and showed how these predictors affected both sustainability implementation and organizational performance. In addition, this study noted areas in which US businesses seem to lag behind international counterparts in the extent to which sustainability drivers, enablers and concerns are translated into action. These results extend

beyond what other researchers appear to have done to date. Most importantly, this model can be used as a guide for future research on the business, leadership, marketplace, and decision-making issues that can affect the successful implementation of sustainable business practices. We hope that future research can extend these findings and provide more pointed practical advice to managers on how to improve the sustainability of their business practices. Given the vital importance of sustainability issues to the welfare of both business and world communities, such research and the insights it can provide seem not only warranted but critical.

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Figure 1.
Conceptual model linking sustainability drivers, enablers, inhibitors, practices and performance improvement

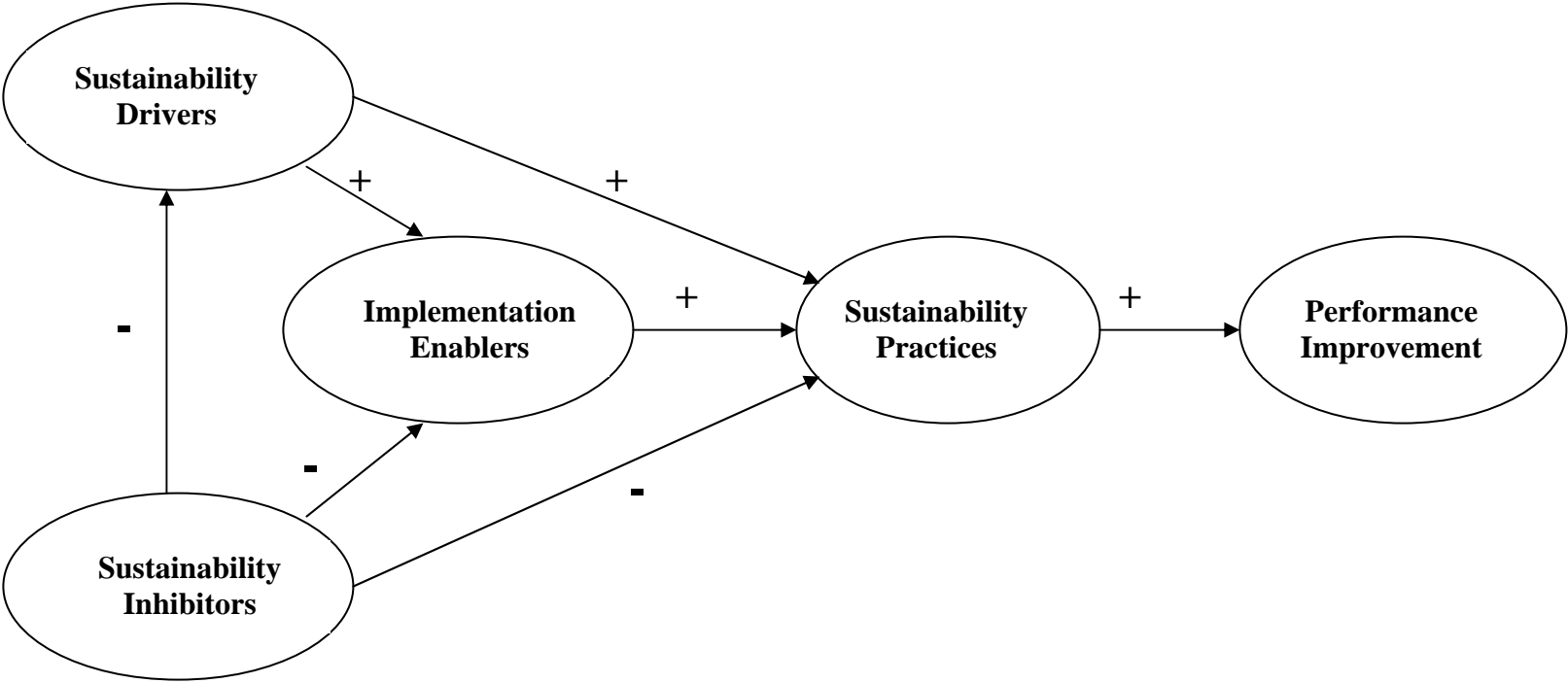
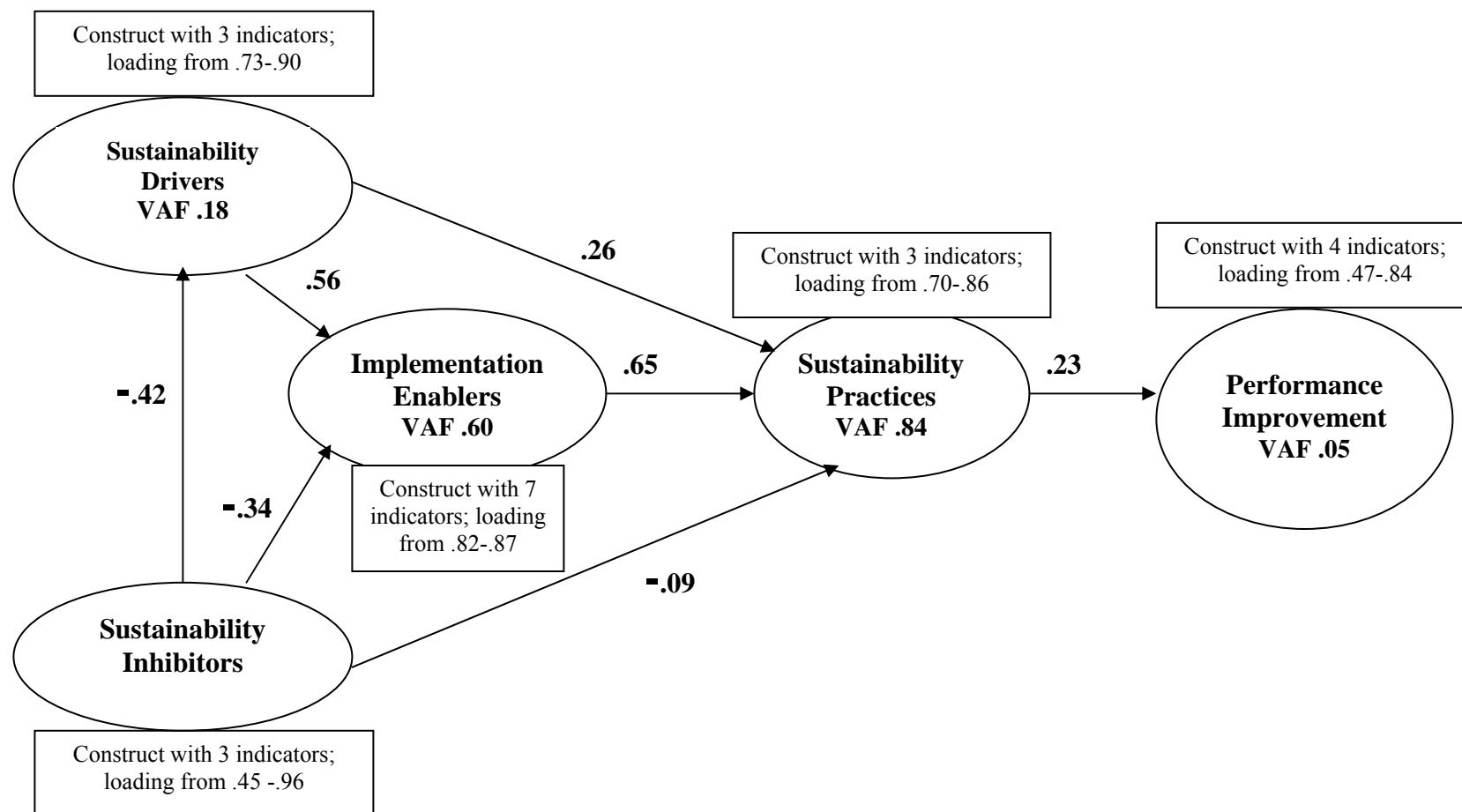


Figure 2.
Results of the Structural Equation Modeling Analysis



Notes :All path coefficients (Betas) are statistically significant at $p < .05$. **VAF** = Variance accounted for by all predictor paths

1. For clarity of presentation, Figure 1 only depicts the structural model and does not illustrate error terms and paths between composite indicators and latent constructs. *Please contact the authors for information on the measurement model.*

3. The model presented in Figure 1 represents a good fit to the data. Although as expected with such a large sample the chi-squared for the model is significant (Chi 2168, degrees of freedom185, $p < .05$), indicating that the model is statistically different from a perfect-fitting one, the following goodness of fit statistics are all indicative of good-model fit: (a) the CFI index is .91(values over .90 indicate good fit); (b) the NNFI (Tucker-Lewis index) is .90 (values over .90 indicate good fit); and (d) the RMSEA is .08 (values at or below .08 indicate good fit).

Table 1.

Geographic Distribution of Survey Respondents

In which country and overall region are you located?		
Region/Nation	N	Percent
Africa-Middle East (Egypt, Iran, Israel, Nigeria, Oman, Qatar, Saudi Arabia, South Africa, Tanzania, United Arab Emirates)	80	5.3
Asia-Pacific (Australia, China, India, Indonesia, Japan, Malaysia, Mauritius, New Zealand, Pakistan, Philippines, Singapore)	177	11.7
Canada	97	6.4
Eastern Europe (Czech Republic, Georgia, Hungary, Lithuania, Poland, Romania, Russia)	42	2.8
Latin America/Caribbean (Antigua & Barbudo, Argentina, El Salvador, Guatemala, Jamaica, Mexico)	72	4.8
Western Europe (Belgium, France, Germany, Netherlands, Spain, Sweden, Switzerland, UK)	121	8.0
USA	925	61.1

Table 2. Descriptive Statistics and Correlation Coefficients for Variables in the Study (with scale reliability scores on the diagonal)

Variables	Mean (1-5)	s.d.	1 Driv1	2 Driv2	3 Driv3	4 Driv4	5 Bar1	6 Bar2	7 Bar3	8 Enab	9 Impl	10 Prac1	11 Prac2	12 Prac3	13 Benef	14 Perf
1. Drivers1-Eco-System	3.33	1.06	(.93)													
2. Drivers2 Ext. Stakeholders	3.47	1.00	.71	(.90)												
3. Drivers3.-Workforce	3.72	0.76	.57	.59	(.81)											
4. Drivers4-Reput/Innov/Regul	4.03	0.80	.55	.67	.58	(.75)										
5. Barriers1-Internal Deficiencies	3.00	0.97	-.29	-.37	-.31	-.30	(.87)									
6. Barriers2-Lack of Demand	3.04	1.09	-.28	-.40	-.21	-.20	.61	(.91)								
7. Barriers3-Fear of disadvantage	2.39	1.22	.00	-.03	-.07	-.08	.45	.27	na							
8. Enablers-Execution Qualities	3.03	1.09	.53	.66	.44	.44	-.54	-.47	-.07	(.95)						
9. Extent Implementing Sust.	2.97	1.17	0.51	0.60	0.38	0.39	-0.53	-0.46	-0.10	0.80	na					
10. Practices1- Integrative	2.96	1.02	0.57	0.67	0.44	0.41	-0.49	-0.45	-0.05	0.82	0.82	(.94)				
11. Practices2-Eco-Efficiency	2.94	1.11	0.60	0.46	0.31	0.35	-0.35	-0.25	-0.04	0.56	0.61	0.63	(.88)			
12. Practices 3-Employee/Ethics	3.65	0.84	0.41	0.42	0.49	0.41	-0.44	-0.28	-0.17	0.59	0.61	0.67	0.52	(.79)		
13. Extent Seeing Benefits	2.88	1.09	0.49	0.58	0.35	0.35	-0.43	-0.43	-0.03	0.68	0.66	0.67	0.49	0.42	na	
14. Performance Improvement	3.60	0.68	0.13	0.16	0.12	0.21	-0.22	-0.12	-0.09	0.22	0.22	0.20	0.15	0.22	0.22	(.81)

”

Notes: Study sample size = 1514. Correlations greater than |.05| are significant at the $p < .05$ level, and greater than |.07| are significant at the $p < .01$ level. For simplicity here, the items comprising the study’s constructs/factors were averaged into single scale scores.

Table 3. Corporate Performance Indicator/Scale Items

On a scale from 1-5, how would you rate the following compared to the last five years? (1=much worse, 5=much better)			
Factor/Scale	mean	S.D.	Factor Loading
Performance Improvement Area:			
Your revenue growth	3.69	0.94	.84
Your profitability	3.57	0.90	.80
Your market share	3.56	0.81	.77
Your customer satisfaction	3.58	0.74	.47

Table 4. Sustainability Practices Indicator/Scale Items

On a scale from 1-5, to what extent does your company have practices in place to do the following?

Factor/Scale	Mean	S.D.	Loading
Practices 1 –Integrative Practices			
Use sustainability-related criteria in recruiting and selection	2.81	1.27	.84
Use sustainability-related criteria in promotion and career advancement	2.76	1.26	.84
Link sustainability-related criteria to compensation	2.53	1.21	.82
Establish indicators to determine if the organization is meeting sustainability goals	2.76	1.32	.80
Highlight our commitment to sustainability in our brand	3.11	1.35	.74
Work with suppliers to strengthen sustainability practices	2.94	1.24	.71
Get groups across your organization that are working on sustainability-related initiatives to work more closely together	2.84	1.28	.67
Provide employee training and development related to sustainability	3.26	1.21	.61
Practices 2 –Eco-Efficiency Practices			
Reduce greenhouse gas emissions	2.64	1.28	.82
Reduce waste materials	3.13	1.26	.81
Improve energy efficiency	3.06	1.18	.76
Practices 3 –Employee-Centered/Ethical Practices			
Support employees in balancing work and life activities	3.35	1.14	.79
Involve employees in decisions that affect them	3.28	1.14	.76
Ensure the health and safety of employees	4.02	0.93	.63
Ensure accountability for ethics at all levels	3.96	1.04	.62

Table 5. Sustainability Drivers Indicator/Scale Items

On a scale of 1-5, to what extent does each of the following items drive key business decisions for your company today?

Factor/Scale	Mean	S.D.	Loading
Drivers 1 –Environmental/Operational Issues			
Reducing pollution and toxic chemical use and their effects on our employees, customers and the communities in which we operate	3.44	1.30	.83
Securing needed energy resources (electricity and fuel)	3.41	1.28	.81
Securing needed raw materials over the long term for our employees, suppliers, customers and the communities in which we operate	3.19	1.32	.80
Ensuring an adequate supply of water for our employees, suppliers, customers and the communities in which we operate	3.25	1.32	.75
Reducing and/or managing the risks and impacts of climate change on our employees, customers and the communities in which we operate	3.01	1.30	.74
Enhancing operational efficiency through energy and waste reduction	3.44	1.19	.73
Increasing security for our employees, customers and the communities in which we operate	3.59	1.17	.57
Drivers 2 –External Stakeholder/Marketplace Issues			
Attracting new customers and developing new markets through sustainability initiatives	3.57	1.26	.79
Enhancing current customer satisfaction and loyalty through sustainability initiatives	3.63	1.19	.76
Encouraging suppliers to use management practices that enhance sustainability	3.26	1.23	.71
Working with other firms to voluntarily create sustainable industry standards	3.13	1.28	.70
Providing products and services that are good for the world	3.76	1.17	.57
Improving relations with community stakeholders including nongovernmental organizations (NGOs) and community activists	3.47	1.18	.55
Drivers 3—Workforce Issues			
Improving employee morale, engagement and commitment	3.86	1.07	.74
Finding solutions to the challenges of an aging workforce	3.38	1.16	.66
Attracting and retaining diverse top talent	3.94	1.05	.65
Drivers 4—Reputation/Innovation/Compliance Issues			
Meeting expectations of investors and lenders	3.99	1.13	.68
Improving our reputation/brand image with shareholders and the public	4.36	0.92	.63
Enhancing innovation for competitive advantage	4.00	1.04	.56
Effectively addressing regulatory restrictions wherever we operate	4.02	1.05	.52

Table 6. Sustainability Implementation Enablers Indicator/Scale Items

On a scale of 1-5, to what extent does your company have the following qualities?			
Factor/Scale	Mean	S.D.	Loading
Sustainability Strategy Execution Enablers			
<i>Organizational integration</i> - Various aspects of sustainability are viewed holistically and integrated across the functions that have responsibility for them	2.82	1.21	.89
<i>Systems alignment</i> - The company's structure, systems, processes and culture are aligned around sustainability	2.87	1.23	.89
<i>Centrality to business strategy</i> - Sustainability is central to the company's competitive strategy	3.23	1.23	.89
<i>Values</i> - Key values related to sustainability are deeply ingrained in the company	3.11	1.31	.88
<i>Metrics</i> - The company deploys an array of rigorous sustainability measures	2.90	1.27	.86
<i>Top management support</i> - The CEO, the chairman of the board and senior management teams show public an unwavering support for sustainability	3.33	1.19	.85
<i>Stakeholder engagement</i> - The company reaches out to and involves a broad array of external and internal stakeholders around sustainability issues, including customers, suppliers, governmental and non-governmental organizations (NGOs)	2.91	1.30	.85

Table 7. Sustainability Inhibitors Indicator/Scale Items

On a scale from 1-5, to what degree does each of the following issues hinder your company from moving toward sustainability?			
Factor/Scale	mean	S.D.	Factor Loading
Inhibitors1 –Internal Deficiencies			
Lack of specific ideas on what to do and when to do it	3.08	1.25	.79
Lack of standardized metrics or performance benchmarks	3.11	1.26	.73
Lack of awareness and understanding	3.11	1.21	.72
General risk aversion	2.80	1.19	.70
Unclear or weak business case	2.97	1.25	.68
Lack of support from senior leaders	2.93	1.35	.67
Inhibitors2 –Lack of Stakeholder Demand			
Lack of demand from the community	2.93	1.26	.86
Lack of demand from suppliers	2.99	1.26	.85
Lack of demand from consumers and customers	3.13	1.28	.84
Lack of demand from shareholders and investors	3.03	1.35	.83
Lack of demand from managers and employees	3.13	1.25	.65
Inhibitors 3 –Fear of Competitive Disadvantage			
Fear of competitors taking advantage of us	2.39	1.22	na

Table 8. Analysis of Variance Results for US versus Other Countries

Variables	Geographic Region		F	P-value
	US N=925	Other N=589		
	Mean(s.d)	Mean(s.d)		
1. Drivers1-Eco-System Concerns	3.24(1.07)	3.48(1.04)	17.77	.001
2. Drivers2 External Stakeholders Concerns	3.41(1.07)	3.55(0.97)	6.88	.01
3. Drivers3.-Workforce Concerns	3.74(0.76)	3.68(0.75)	2.59	ns
4. Drivers4-Reputation/Innovation/Regulation Concerns	4.04(0.81)	4.02(0.77)	0.28	ns
5. Barriers1-Internal Deficiencies	2.98(0.99)	3.03(0.92)	0.68	ns
6. Barriers2-Lack of Demand	3.03(1.13)	3.06(1.02)	0.41	ns
7. Barriers3-Fear of Competitive Disadvantage	2.29(1.20)	2.54(1.23)	15.42	.001
8. Enablers-Sustainability Strategy Execution Qualities	2.95(1.11)	3.15(1.04)	12.32	.001
8a. Top management support	3.27(1.22)	3.42(1.14)	5.63	.05
8b. Centrality to strategy	3.17(1.26)	3.31(1.17)	4.90	.05
8c. Metrics	2.84(1.30)	3.00(1.22)	5.18	.05
8d. Systems alignment	2.77(1.25)	3.03(1.17)	16.43	.001
8e. Organizational integration	2.72(1.22)	2.98(1.17)	17.33	.001
8f. Stakeholder engagement	2.82(1.31)	3.05(1.26)	10.83	.001
8g. Sustainability values ingrained	3.02(1.32)	3.24(1.27)	9.62	.05
9. Extent Implementing Sustainability	2.90(1.21)	3.10(1.10)	10.25	.001
10. Practices1-Integrative for Sustainability	2.88(1.03)	3.08(1.01)	13.51	.001
11. Practices2-Eco-Efficiency	2.79(1.11)	3.18(1.08)	44.36	.001
12. Practices 3-Employee-Centered/Ethical	3.64(0.82)	3.66(0.86)	0.10	ns
13. Extent Seeing Benefits from Sustainability	2.74(1.09)	3.10(1.05)	41.26	.001
14. Degree of Performance Improvement	3.57(.77)	3.67(.76)	6.82	.01