**INVESTIGATING THE ROLE OF CORPORATE CREDIBILITY IN
CORPORATE SOCIAL MARKETING: A CASE STUDY OF ENVIRONMENTAL
INITIATIVES BY PROFESSIONAL SPORT ORGANIZATIONS**

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ABSTRACT

Investigating the Role of Corporate Credibility in Corporate Social Marketing:
A Case Study of Environmental Initiatives by Professional Sport Organizations

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Corporate social marketing (CSM) refers to “a means whereby a corporation supports the development and/or implementation of a behavior change campaign intended to improve public health, safety, the environment, or community well-being” (Kotler & Lee, 2005a, p.114). The examination of CSM by professional sport organizations (PSOs) is significant since these organizations have the potential to serve as a particularly meaningful vehicle for promoting socially beneficial ideas and behavior (Chalip, 2006; Kaufman & Wolff, 2010; Loakimidis, 2007; Smith & Westerbeek, 2007). Despite this, little investigation has been undertaken in this research area (Irwin, Irwin, Miller, Somes, & Richey, 2010; Sparvero, 2010). Furthermore, no comprehensive framework exists that explains the process of how CSM influences consumer voluntary behavior in general business disciplines (Du, Sen, & Bhattacharya, 2008).

The purpose of this study was to address this gap and investigate the role of corporate credibility in understanding the process of how PSOs influence consumer voluntary behavior through their CSM initiatives. The current research focused on corporate credibility based on previous research findings indicating that the credibility of a message source greatly influences the persuasiveness of its communication (e.g., Hovland, Janis, & Kelley, 1953; Pornpitakpan, 2004). This study developed a theoretical model positing that consumers would formulate their perceptions regarding the credibility

of a PSO on supporting environmental protection (“environmental credibility”) based on: (1) characteristics of the organization, (2) characteristics of the CSM initiative, and (3) characteristics of the cause. Environmental credibility, in turn, was expected to influence consumer pro-environmental behavior measured by daily recycling involvement and recycling intentions during the PSO’s home games. The model further proposed that value congruence would have mediating and moderating effects on the relationship between environmental credibility and pro-environmental behavior.

To test this theoretical model, the study collected data from fans of two PSOs that currently operate environmental initiatives. Structural equation modeling (SEM) analysis was employed to analyze the data ($n = 368$) obtained through web-based questionnaires. The SEM results indicated that the following four of the eight hypothesized antecedents of environmental credibility had significant positive effects: general credibility, perceived effort, perceived impact, and cause importance. Furthermore, environmental credibility was found to positively influence the two recycling behaviors as expected. Contrary to the theoretical propositions, however, the results did not find support for the positive mediating and moderating effect of value congruence.

Overall, the findings of this study contribute to the literature by highlighting the role of corporate credibility when PSOs engage in CSM initiatives. Moreover, this research, as well as future endeavors, helps PSOs become an effective vehicle for promoting socially beneficial behavior, which ideally can lead to positive social change.

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CHAPTER 1

INTRODUCTION

Kotler and Zaltman (1971) proposed the concept of *social marketing* as an attempt to expand the marketing discipline. Social marketing is defined as “the design, implementation, and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution, and marketing research” (Kotler & Zaltman, 1971, p.5). Social marketing involves the application of marketing technologies to programs that aim to promote socially responsible ideas and behavior among target audiences to improve their welfare and that of the larger society (Andreasen, 1994; Kotler & Zaltman, 1971). This concept has received immense attention from researchers in marketing and other disciplines, and has been used to assess the effectiveness of interventions designed to influence individual behavior related to such areas as health, community involvement, injury prevention, and environmental protection (e.g., Andreasen, 2004; Kotler, Roberto, & Lee, 2002; McKenzie-Mohr & Smith, 1999; Stead, Gordon, Angus, & McDermott, 2007).

Although the literature traditionally examined social marketing programs implemented by government agencies and nonprofit organizations, this concept has been relatively recently extended to the context of for-profit organizations (Bloom, Hussein, & Szykman, 1997; Kotler & Lee, 2005a, 2005b). *Corporate social marketing* (CSM) refers to “a means whereby a corporation supports the development and/or implementation of a behavior change campaign intended to improve public health, safety, the environment, or community well-being” (Kotler & Lee, 2005a, p.114). The major goal of CSM is to persuade individuals to perform socially beneficial behavior (Bloom et al., 1997; Kotler

& Lee, 2005a, 2005b). This intended influence on behavior distinguishes CSM from other types of corporate social initiatives implemented by firms, such as corporate philanthropy and cause-related marketing, whose main aim is to raise goodwill, money, and recognition of a cause, but not to influence or change one's behavior (Bloom et al., 1997; Kotler & Lee, 2005a).

The recent adoption of CSM initiatives among professional sport organizations ("PSO(s)") is notable (Irwin, Irwin, Miller, Somes, & Richey, 2010; Sparvero, 2010). An analysis of the websites of the four major professional sports leagues in North America (i.e., Major League Baseball (MLB), the National Basketball Association (NBA), the National Football League (NFL), and the National Hockey League (NHL)) and their 122 franchises suggest that these organizations have implemented CSM initiatives in the areas of youth health, youth education, environmental protection, community involvement, and intercultural understanding (Walker & Kent, 2009). For example, the National Football League (NFL) launched the *NFL Play 60* in 2006, a program intended to prevent child obesity by encouraging children to engage in physical activity on a daily basis. The *Go Green* program of the Philadelphia Eagles aims to promote pro-environmental behavior, such as recycling and energy conservation, among its fans by communicating the team's environmental efforts, including the reduction of wastes at its facilities, the use of recycling materials, and the reduction of greenhouse gas emissions. Since 2004, the Boston Red Sox has operated the *Lindos Sueños Program*, which uses baseball and a community service project to promote cultural understanding among participants of different cultural backgrounds. Furthermore, the Baltimore Orioles' *Leaning with the Orioles* is designed to encourage about 14,000 local students to study subject areas such

as math, science, reading and social studies by partnering with Baltimore City Public Schools.

The examination of CSM by PSOs is important since sport (i.e., leagues, teams, events, and athletes) has the potential to serve as a particularly meaningful vehicle for promoting socially beneficial ideas and behavior (Chalip, 2006; Kaufman & Wolff, 2010; Loakimidis, 2007; Smith & Westerbeek, 2007). This perspective is rooted in a view that sport tends to draw large media and public attention, which would enable it to communicate social ideas to a large number of people (Chalip, 2006; Kaufman & Wolff, 2010; Smith & Westerbeek, 2007). In addition, due to the high level of psychological commitment and passion that sport creates, advocacy activities by sport could greatly influence one's values and attitudes to adopt socially responsible behavior (Smith & Westerbeek, 2007). Realizing the power of sport in this respect, the Sport for Development and Peace International Working Group (SDP IWG), a task force in the United Nations , has identified social issues for which cooperation with sport is beneficial, including health promotion, youth education, peace building, and environmental protection (United Nations, 2003). Among these issues, the United Nations have placed particular emphasis on the value of sport to protect the natural environment, as seen in their establishment of the *Sport and the Environment* initiative. The major aim of this initiative is to use "the popularity of sports to promote environmental awareness and respect for the environment among the public" (United Nations Environment Programme, n.d., p.1) by working with sport organizations and celebrity athletes.

Statement of the Problem

Despite the acknowledged significance of examining CSM initiatives by PSOs, little investigation has been undertaken in this research area (Irwin et al., 2010; Sparvero, 2010). Furthermore, no comprehensive framework exists that explains the process of how CSM influences consumer voluntary behavior in general business disciplines (Du, Sen, & Bhattacharya, 2008). As an exception, Du et al. (2008) empirically investigated the effectiveness of a company's oral health program on participants' oral health and customer behaviors. Although the results showed that the program resulted in creating both social and business benefits, the study focused solely on the moderating effects of attitudinal variables (i.e., acculturation and perceptions of the program's impact) to understand CSM's effects. Based on the social psychology literature (e.g., Petty & Cacioppo, 1981; Petty & Wegener, 1998), however, the effectiveness of CSM on one's behavior is assumed to be determined by not only participants' characteristics, but also other factors, such as characteristics of : (1) the company implementing a CSM campaign (i.e., source characteristics), (2) communication strategies used in the campaign (i.e., message characteristics), and (3) the context where the company implements the campaign (i.e., context characteristics).

Indeed, substantial work indicates that those characteristics identified above influence the effectiveness of social marketing interventions implemented by nonprofits and governmental agencies (e.g., Bendapudi, Singh, & Bendapudi, 1996; Keller & Lehmann, 2008; McKenzie-Mohr & Smith, 1999). For example, Bendapudi et al. (1996) developed a conceptual framework of how charitable organizations can promote helping behavior (e.g., monetary or blood donations) based on previous empirical findings. This

framework proposes that source characteristics and message characteristics have a direct effect on one's decision to perform helping behavior. The major component of source characteristics is the image of a charitable organization. In particular, credible and familiar charities are more likely to elicit helping behavior from donors. The likelihood that a donor engages in helping behavior may also depend on message characteristics, such as a message that emphasizes the similarity between the potential donor and the beneficiary. Furthermore, context characteristics and donors' personal characteristics are proposed to moderate the effect of both source and message characteristics on the helping behavior (Bendapudi et al., 1996). Donors would less likely to support a charity in a certain context, such as an economic recession, regardless of its image or its communication strategies. In addition, donors in a good mood may respond to a message emphasizing the rewards of helping (e.g., financial incentives) more favorably than those in a bad mood (Bendapudi et al., 1996).

Since CSM is an extension of the general social marketing framework (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b), findings identified in the context of non-profits and governmental agencies should be largely applicable to the CSM context. Nevertheless, Bloom et al. (1997) argue that a significant difference exists between general social marketing initiatives and CSM initiatives in terms of the degree of credibility perceived by audiences. That is, "a corporation may have less credibility with a target audience than the government or a nonprofit, hurting the persuasive ability of its message" (Bloom et al., 1997, p.18). This is because consumers tend to question the motives of companies, especially when their CSM involvement is directly tied with the bottom line. In addition, when compared to government agencies and nonprofit

organizations, corporations may be perceived as having less experience and expertise in addressing a given social cause (Bloom et al., 1997). Recent results of a survey to sport executives illustrate that the credibility of PSOs on their social involvement is also at stake; almost half of the respondents indicated that environmental initiatives in the sport industry is considered “just a marketing gimmick” (Show, 2009). This notion that corporations, including PSOs, are seen as a less credible source of promoting voluntary behavior has significant implication because organizational credibility has been found to have a great effect on the effectiveness of social marketing campaigns (e.g., Craig & McCann, 1978). Thus, in order to effectively promote intended behavior, it is essential for PSOs to understand what factors may improve their credibility concerning CSM involvement (Haley, 1996).

Given the aforementioned discussion, this study is intended to examine the role of corporate credibility in determining the effectiveness of CSM initiatives by PSOs in the area of environmental protection. Environmental protection is chosen among other social issues supported by PSOs because of great environmental concern among both sport management scholars and practitioners (Chalip 2006; Hums, 2010; Loakimidis, 2007; Thibault, 2009). As an indication of growing interest in environmentalism among practitioners, the *Sports Business Journal* (“Finding growth,” 2008; “The green issue,” 2009) featured environmental efforts in the sport industry for the recent two years. In addition, sport management scholars have acknowledged the importance of environmental initiatives by PSOs since these initiatives could reduce the negative impact that sporting events and facilities can have on the environment and could further promote

pro-environmental behavior among consumers (Chalip 2006; Loakimidis, 2007; Smith & Westerbeek, 2007; Thibault, 2009).

Significance of the Study

The significance of this study lies in the following three aspects. First, this study seeks to make a theoretical contribution by identifying the role of the credibility of corporations, or corporate credibility (Lafferty & Goldsmith, 1999), in determining the effectiveness of CSM initiatives. As discussed earlier, companies tend to be perceived as a less credible source of promoting socially beneficial behavior, which may damage their persuasiveness (Bloom et al., 1997; Craig & McCann, 1978). However, since corporate credibility is not an inherent characteristic of a corporation but is rather developed through the continuous evaluation of the corporation by consumers, some factors may possibly increase (or decrease) their perceptions of corporate credibility (Haley, 1996). Thus, this study contributes to the literature by investigating what factors may affect corporate credibility and how resultant credibility may influence consumer voluntary behavior.

Second, this study attempts to identify whether or not PSOs can make a social impact through their social activities, an emergent research question arising in the sport management literature (Godfrey, 2009). As noted, the implementation of environmental initiatives by these organizations could have the potential to effectively promote pro-environmental behavior among consumers (Chalip, 2006; Loakimidis, 2007). Consequently, the investigation of the behavioral impact of their environmental initiatives provides a meaningful insight into sport management research.

Finally, this study has practical significance for PSOs because a change in consumer voluntary behavior is thought to create not only social benefits but also business benefits for these organizations (Du et al., 2008; Kotler & Lee, 2005a, 2005b). As Kotler and Lee (2005b) state, “when people change the way they act, and then personally benefit from those actions, they are likely to have a strong positive association with the company that spurred the change” (p. 93). Therefore, identifying the process of how behavior change occurs could enable PSOs to enjoy significant returns from their CSM investment.

Purpose of the Study

The purpose of this study is to investigate the role of corporate credibility in understanding the process of how PSOs may influence consumer pro-environmental behavior through their CSM initiatives. To fulfill this purpose, this study first aims to identify factors that influence the credibility of a PSO on supporting environmental protection. Second, the study attempts to investigate if corporate credibility in this respect has a direct effect on consumer pro-environmental behavior. Finally, it intends to examine the mediating and moderating effect of value congruence on the relationship between corporate credibility and pro-environmental behavior.

Theoretical Propositions

This study proposes a theoretical framework that specifies the antecedents and consequences of corporate credibility related to CSM campaigns (see Figure 1.1). First, this framework shows that antecedents of corporate credibility on supporting environmental protection (“environmental credibility”) can be organized into three categories: (1) characteristics of the organization, (2) characteristics of the CSM

campaign, and (3) characteristics of the cause. Based on previous empirical findings, the framework further identifies the following attributes for each category: the first category includes general credibility (MacKenzie & Lutz, 1989), perceived corporate social responsibility (CSR) (Brown & Dacin, 1997; Keller & Aaker, 1998; Lichtenstein, Drumwright, & Braig, 2004; Walker & Kent, 2010), and attitude toward the organization (Haley, 1996; Schoenfelder & Harris, 2004); the second category entails the perceived organization-cause fit (Becker-Olsen, Cudmore, & Hill, 2006; Rifon, Choi, Trimble, & Hairong, 2004), the perceived effort exerted by the organization (Ellen, Mohr, & Webb, 2000; Reed, Aquino, & Levy, 2007), perceived sincerity (Rifon et al., 2004), and perceived impact (Du et al., 2008); and the third category includes the importance of the cause (Marin & Ruiz, 2007; Sen & Bhattacharya, 2001).

Second, drawing from the source credibility literature (e.g., Hovland, Janis, & Kelley, 1953; MacKenzie & Lutz, 1989), environmental credibility is proposed to have a direct effect on consumer pro-environmental behavior. Finally, this framework posits that value congruence plays both mediating and moderating roles in the relationship between environmental credibility and pro-environmental behavior (Feldman, 1984; Kelman, 1961). The following section provides the theoretical background for each hypothesized relationship.

Figure 1.1. Theoretical Framework

Hypotheses Development

Corporate Credibility

Corporate credibility is a construct that evolved from research in the area of source credibility (Haley, 1996; Laffery & Goldsmith, 1999; Newell & Goldsmith, 2001), which broadly defines source credibility as one aspect of message sources (persons, groups, or organizations) that influences the persuasiveness of a communication (Petty & Wegener, 1998). In a more specific manner, source credibility refers to the state of being perceived as expert and trustworthy, and thereby being seen as worthy of serious consideration by others (Kelman, 1961). As this definition suggests, source credibility consists of two dimensions: expertise and trustworthiness (Hovland et al., 1953; Kelman, 1961; McCracken, 1989; Petty & Wegener, 1998; Pornpitakpan, 2004). Expertise refers to the *perceived ability* of a source to provide precise information (Petty & Wegener, 1998), while trustworthiness refers to its *perceived willingness* to provide accurate information (McCracken, 1989). Based on this conceptualization, Newell and Goldsmith (2001, p.235) specified that corporate credibility incorporates corporate expertise, or “the extent to which consumers feel that the firm has the knowledge or ability to fulfill its claim,” and corporate trustworthiness, or “whether the firm can be trusted to tell the truth or not.” Research provided support for the significant effects of corporate credibility on various consumer outcomes, such as attitude toward advertisements (e.g., MacKenzie & Lutz, 1989), attitude toward the brand (e.g., Goldsmith, Lafferty, & Newell, 2000), product evaluations (Goldberg & Hartwick, 1990), and purchase intentions (e.g., Goldsmith et al., 2000).

Antecedents of Corporate Credibility in CSM

Haley (1996) conducted semi-structured interviews with 97 consumers to identify factors that may influence the credibility of an organization that sponsors an advocacy advertising campaign (e.g., campaigns that promote the importance of safe driving). Haley found that the antecedents of organizational credibility in this regard can be classified into three categories: (1) characteristics of the organization, (2) characteristics of the campaign, and (3) characteristics of the issue. The first category entails general characteristics of the company perceived by consumers (e.g., liking, familiarity), regardless of its involvement in advocacy advertising. The second category involves attributes of the campaign, such as the congruence between the organization's image and that of the sponsored issue, the extent of expertise that the organization has in supporting the issue, and the perceived motive behind the organization's sponsorship of the campaign. The third category encompasses consumers' perception of the cause, such as its importance to them and to society (Haley, 1996). Similar to Haley's framework, Speed and Thompson (2000) empirically demonstrated that consumers' evaluations of a company's sponsorship of a sport event were determined by their perceptions of the company (e.g., attitude toward the company), sponsorship (e.g., company-event fit), and the event (e.g., status of the event). A conceptual framework developed by Du, Bhattacharya, and Sen (2010) also used these three categories to identify factors that determine the effect of a company's CSR activities on internal and external outcomes.

Drawing from the studies (Du et al., 2010; Haley, 1996; Speed & Thompson, 2000), this research proposes that the factors that influence the corporate credibility of a PSO that engages in CSM can be classified into (1) characteristics of the organization, (2)

characteristics of the CSM campaign, and (3) characteristics of the cause. The following sections identify specific attributes included in each of the three categories and hypothesize how these attributes influence the credibility of the PSO on supporting environmental protection through its CSM initiative.

Organizational Characteristics Influencing Environmental Credibility

General credibility. Social psychology research has suggested that one's general perception of an object may serve as a direct predictor of perception of specific aspects of that same object (Brown, 1995; Brown & Dacin, 1997; Eagly & Chaiken, 1998). For example, Brown and Dacin (1997) showed that consumer perceptions of a company in general partly determined their perceptions of that company's products. In a similar vein, source credibility researchers have argued that individuals develop the perceived credibility of a specific aspect of a source based on its general credibility (Haley, 1996; MacKenzie & Lutz, 1989). MacKenzie and Lutz (1989), for example, demonstrated that consumers' perceived credibility of a claim about an advertiser's brand in an ad was affected by their perceived credibility of the advertiser in general. Haley (1996) also documented that consumers tended to evaluate a company as a credible source of an advocacy message if the company had high credibility in terms of its services and products. Consistent with this line of research, the current study distinguishes between the credibility of the PSO in general ("general credibility") and its credibility on supporting environmental protection ("environmental credibility") and suggests that the former serves as an antecedent of the latter.

Hypothesis 1: General credibility has a positive effect on the environmental credibility of the PSO.

Perceived CSR. Perceived corporate social responsibility (CSR) refers to consumer perceptions of how well a company meets its societal obligations through charitable and other social initiatives (Brown & Dacin, 1997; Lichtenstein et al., 2004). This construct captures a firm's overall social activities more than its involvement in a specific CSM initiative (Kotler & Lee, 2005a), and there is some evidence that perceived CSR influences corporate credibility (Becker-Olsen et al., 2006; Keller & Aaker, 1998; Walker & Kent, 2010). Keller and Aaker (1998) found that a company's involvement in environmental and community issues significantly increased two dimensions of corporate credibility including perceived trustworthiness and expertise. Becker-Olsen et al. (2006) demonstrated that CSR has a positive effect on consumer perceptions of a company's credibility when the company engaged in a CSR initiative congruent to its business operation, a finding replicated by Walker and Kent (2010) regarding the PGA TOUR. Keller and Aaker (1998) suggest that this is due to the ability of a company, through CSR, to demonstrate its understanding of customers' needs, which leads to high trustworthiness. In addition, given that active social involvement tends to require the adoption of advanced technologies, firms with high social involvement may be perceived as having expertise (Keller & Aaker, 1998), especially in addressing social issues. Based on these arguments, this study proposes that perceived CSR of the PSO has a positive effect on its credibility with respect to environmental efforts.

Hypothesis 2: Perceived CSR has a positive effect on the environmental credibility of the PSO.

Attitude toward the organization. Consumer attitude toward the PSO is another proposed predictor of its environmental credibility (Haley, 1996; Schoenfelder & Harris, 2004). An attitude is defined as one's psychological tendency to evaluate a given object

with some degree of favorability or unfavorability (Eagly & Chaiken, 1998). By examining the development process of consumer preference of high-tech brands, Schoenfelder and Harris (2004) showed that consumers tended to form the perceived credibility of a brand based on their attitude toward the brand, shaped by its reputation and/or their previous experience with its products. In a more related study, Haley (1996) identified consumer favorability to a company, which can be expressed as “I like it,” as a determinant of corporate credibility regarding the sponsorship of an advocacy message. Drawing from these findings, this study speculates that consumers who evaluate the PSO as favorable are more likely to perceive it as a credible source of the CSM campaign. Thus, positive consumer attitude toward the PSO is proposed to influence its perceived corporate credibility with regard to supporting environmental protection.

Hypothesis 3: Attitude toward the PSO has a positive effect on its environmental credibility.

CSM Characteristics Influencing Environmental Credibility

With regard to the second category, the following attributes of CSM may affect consumer perceptions of environmental credibility: the organization-cause fit, the perceived sincerity of the PSO regarding its CSM involvement, the degree of effort exerted by the PSO, and the perceived impact of the CSM campaign (e.g., Becker-Olsen et al., 2006; Du et al., 2010; Rifon et al., 2004).

Perceived fit. First, empirical studies suggest that company-cause fit has a significant effect on consumer perceptions of companies (e.g., Basil & Herr, 2003, 2006; Lafferty, Goldsmith, & Hult, 2004; Lichtenstein et al., 2004; Simmons & Becker-Olsen, 2006). For example, Basil and Herr (2006) demonstrated that the fit between a company’s business and its sponsoring non-profits led to a more positive attitude toward

the company. Rifon et al. (2004) and Becker-Olsen et al. (2006) provided direct evidence that consumers evaluated a company as more credible when it supported a cause congruent with its operations than an incongruent cause. A high fit between the firm and the cause is thought to affect a company's credibility by increasing its perceived expertise in addressing a given social cause (Haley, 1996). Additionally, consumers tend to associate firms with altruistic motives in high fit conditions, leading to increased trustworthiness (Rifon et al., 2004). Collectively, evidence suggests that the perceived fit between the PSO and the cause for which it advocates is likely to positively influence its corporate credibility in supporting the cause.

Hypothesis 4: The perceived fit between the PSO and its support for environmental protection has a positive effect on its environmental credibility.

Perceived sincerity. Rifon et al. (2004) identified the significant effect of perceived intent on corporate credibility in that a firm implementing an initiative based on altruistic motives tended to receive higher corporate credibility ratings. This finding that a firm's intent behind social involvement affects corporate credibility was further supported by Menon and Kahn (2003), Yoon, Gurhan-Canli, and Bozok (2006), and Speed and Thompson (2000). In addition, in Haley's (1996) study, consumers indicated that they were less likely to trust a company if its initiative was clearly used for generating mere publicity. Taken together, the PSO's perceived intent to benefit from its CSM would likely decrease, but its sincere intent would likely increase, its environmental credibility.

Hypothesis 5: The perceived sincerity of the PSO has a positive effect on its environmental credibility.

Perceived effort. Effort is defined as the amount of energy organizations put into supporting the causes with which they partner (Ellen et al., 2000). Du et al. (2010) discussed that the effect of corporate social initiatives on consumer evaluations of a firm may depend in part on the amount of input invested by the firm. Experimental research has shown that the perceived level of corporate effort can, in fact, significantly influence consumer perceptions of the company and its social initiatives (Ellen et al., 2000; Reed et al., 2007). In Reed et al.'s (2007) study, consumers with high moral identity evaluated a company adopting an employee volunteer program (i.e., high effort) as more socially responsible than a company merely engaging in giving cash (i.e., low effort). Ellen et al. (2000) also demonstrated that product donations (i.e., high effort) led to a more positive consumer evaluation than cash donations (i.e., low effort). Thus, if consumers perceive that the PSO has put high effort into its CSM initiative, they may be more likely to perceive the organization as credible in supporting the cause.

Hypothesis 6: The perceived effort exerted by the PSO on its CSM initiative has a positive effect on its environmental credibility.

Perceived impact. Social impacts refer to actual benefits generated by CSM initiatives, something which Du and her colleagues explicitly examined with regard to consumer-related outcomes (Du, Bhattacharya, & Sen, 2009; Du et al., 2008, 2010). In 2008, they found that the perceived impact of an oral health initiative positively influenced reciprocal intentions of participant parents, such as buying products of the sponsoring brand. Their 2009 work provided similar results, suggesting that consumers were more likely to engage in advocacy behavior toward a company if they perceived that its initiative made a significant impact on society. Their latest work further noted that the perceived social impact would likely affect consumer perceptions of the company,

such as trust. Based on the implications of these studies, it is likely that consumers see the PSO as more credible in supporting environmental issues if they think that its CSM initiative have created actual benefits.

Hypothesis 7: The perceived impact of the CSM initiative has a positive effect on the environmental credibility of the PSO.

Cause Characteristics Influencing Environmental Credibility

Regarding the third category, cause importance, or the extent to which a cause supported in a CSM initiative is important to consumers (Haley, 1996), has been found to have a significant effect on their perceptions of the company (Creyer & Ross, 1997; Du et al., 2010; Hou, Du, & Li, 2008; Marin & Ruiz, 2007; Sen & Bhattacharya, 2001). For example, Hou et al. (2008) found that consumers who placed importance on a company's sponsoring cause were more likely to evaluate the company favorably and show their intentions to reward it through purchasing behavior. Marin and Ruiz (2007) indicated that consumers who were highly supportive of corporate involvement in a certain cause tended to indicate higher perceived congruence between them and the company. Consistent with these findings, Haley (1996) identified the importance of the cause to both consumers and society as a determinant of the credibility of organizations that sponsors advocacy advertising. The effect of cause importance on corporate credibility can be explained by the notion that consumers perceive a company as similar if the company supports a cause important to them (Bhattacharya & Sen, 2003). According to Hovland et al. (1953), individuals tend to see a message source as credible if they find high similarity between them and the source. Thus, cause importance will likely affect the environmental credibility of the PSO by increasing perceived similarity.

Hypothesis 8: The importance of environmental issues to consumers has a positive effect on the environmental credibility of the PSO.

Consequences of Environmental Credibility

The role that the credibility of message sources plays in determining the persuasiveness of a communication has been examined since the early 1950s (e.g., Hovland et al., 1953; Hovland & Weiss, 1951-1952; Kelman & Hovland, 1953). This line of research has consistently shown that a high-credibility source generally produces a more persuasive advocacy message than a low-credibility source (e.g., Kelman, 1958; Maddux & Rogers, 1980; Mills & Harvey, 1972). This notion can also be applied to the promotion of socially beneficial behavior (Bendapudi et al., 1996; Craig & McCann, 1978). For example, Bendapudi et al. (1996) indicated that organizational credibility was the single most critical element in determining the effectiveness of interventions by nonprofit organizations that are aimed to promote donation behavior. Craig and McCann (1978) found that local residents were more likely to engage in energy conservation activities when they received a pamphlet from a highly credible source (the State Regulatory Agency) than a low credible source (a local utility firm). Consequently, it can be proposed that the PSO's environmental credibility positively affects consumer decisions to perform pro-environmental behavior, which entails behavior with intents to benefit the environment (Stern, 2000).

Hypothesis 9: The environmental credibility of the PSO has a positive effect on pro-environmental behavior.

Mediating Effect of Value Congruence

While the aforementioned arguments suggested that environmental credibility would have a direct effect on pro-environmental behavior, Kelman (1961) explained that

source credibility may influence individuals' attitudes and behavior through the mediation of value congruence. Value congruence refers to the perceived similarity between one's values and those of others, including persons, groups and organizations (Chatman, 1989; Edwards & Cable, 2009; Kristof, 1996). Using this construct, Kelman proposed that individuals perceive that a value induced by a message source is congruent with their own values (i.e., value congruence), if they see the source as credible. Furthermore, once value congruence is activated, these individuals are likely to reorganize their existing value systems by incorporating the induced values (Kelman, 1961). These reorganized value systems, in turn, provide the individuals with intrinsic needs that will be satisfied by performing behavior consistent with the induced value (Kelman, 1961).

This perspective highlights the importance of examining the mediating role of value congruence in explaining the effect of environmental credibility on pro-environmental behavior. Specifically, in the current research context, CSM can be seen as a communicator of the PSO's pro-environmental values (Bhattacharya & Sen, 2003). Therefore, if consumers evaluate the PSO as credible and increase value congruence, they are likely to restructure their value systems in accordance with pro-environmental values communicated by the organization. In turn, in order to fulfill resultant needs, consumers perform pro-environmental behavior whenever they encounter related environmental issues (Kelman, 1961).

Hypothesis 10: Value congruence mediates the relationship between environmental credibility and pro-environmental behavior.

Moderating Effect of Value Congruence

Along with its mediating role, value congruence may have a moderating effect on the relationship between environmental credibility and the pro-environmental behavior among consumers. This proposition can be derived from organizational research (e.g., Jung, Yammarino, & Lee, 2009; Witt, 1998) and persuasion research (e.g., Feldman, 1984). For example, in a leadership study, Jung et al. (2009) identified the moderating role of value congruence in that transformational leadership had a stronger association with leadership effectiveness when subordinates perceived high value congruence with their leaders. This finding appears to indicate that subordinates with high value congruence are more likely to accept influences from their leaders than subordinates with low value congruence (Jung et al., 2009).

In addition, persuasion research has found that the perceived similarity between a message source and recipients in terms of values, attitudes, and/or demographic characteristics affects the persuasiveness of the source (Brock, 1965; Feldman, 1984; Morimoto & La Ferle, 2008; Petty & Wegener, 1998). In particular, Feldman (1984) found evidence on the interaction of perceived similarity with source credibility; high school students tended to adopt nutritional attitudes and behavior when a message was communicated by a source that has high expertise in the issue and shares similar personal characteristics, but they did not show the same degree of acceptance when the message was communicated by a source high in expertise but low in similarity (Feldman, 1984). Collectively, the literature suggests that there may be a stronger relationship between the environmental credibility of the PSO and pro-environmental behavior when respondents have higher value congruence with the organization.

Hypothesis 11: Value congruence moderates the relationship between environmental credibility and pro-environmental behavior.

Delimitations of the Study

This study contains the following three delimitations. First, this study explicitly examines the role of corporate credibility in investigating the effectiveness of CSM. The extant literature, however, suggests that other persuasion variables, such as message and recipient characteristics, influence the effectiveness of CSM (Bendapudi et al., 1996; Haley, 1996; Keller & Lehmann, 2008; McKenzie-Mohr & Smith, 1999; Pornpitakpan, 2004). Thus, more comprehensive investigation may be necessary to understand CSM influence on one's behavior.

Second, this study tests the theoretical framework by conducting field surveys. The adoption of the field study design is consistent with the suggestion of Pornpitakpan (2004) who pointed out the need for more studies to test the effect of source credibility in real settings. Nevertheless, since this design limits internal validity to establish causality among the constructs, future research should assess the identified relationships through experimental studies.

Third, this study collects data from a conveniently selected sample, which limited the generalizability of the results to the population. In addition, the external validity of the results is limited due to the examination of the environmental programs operated by two professional sport teams located in the same city. Consequently, further investigation is necessary to test the theoretical model using data obtained from different programs.

Definitions of Terms

Table 1.1 below provides definitions of the constructs included in the theoretical framework.

Table 1.1. Definitions of Terms

Constructs	Definitions
General credibility	The extent to which consumers perceive that the PSO has the ability or knowledge and whether or not it can be trusted to communicate the truth in general (Newell & Goldsmith, 2001).
Perceived CSR	Consumer perception of how well the PSO meets societal obligations through charitable activities (Brown & Dacin, 1997; Lichtenstein et al., 2004).
Attitude toward the organization	Consumer psychological tendency to evaluate the PSO with some degree of favorability or disfavorability (Eagly & Chaiken, 1998).
Perceived fit	The extent to which the PSO and its support for the cause are perceived as congruent (Simmons & Becker-Olsen, 2006).
Perceived sincerity	The extent to which the PSO is perceived to be sincere in its CSM involvement and to be motivated by altruism (Speed & Thompson, 2000).
Perceived effort	Consumer perception of the amount of energy the PSO puts into supporting the cause (Ellen et al., 2000).
Perceived impact	Consumer perception of the extent to which the PSO has benefited the cause through its CSM initiative (Du et al., 2010).
Cause importance	The extent to which the cause supported in the CSM initiative of the PSO is personally important to consumers (Haley, 1996).
Environmental credibility	The extent to which consumers perceive that the PSO has the ability or knowledge to support environmental protection and whether or not it can be trusted to communicate the truth regarding its environmental efforts (Newell & Goldsmith, 2001).
Pro-environmental behavior	Consumer behavior with the intent to benefit the environment (Stern, 2000).
Value congruence	The perceived similarity between consumer values and those of the PSO (Edwards & Cable, 2009).

Pilot Study

Purpose of the Pilot Study

The purpose of this pilot study was (1) to examine the role of corporate credibility in the promotion of pro-environmental behavior by PSOs and (2) to verify if the focus on corporate credibility in this dissertation could be empirically justified. Drawing from previous studies (e.g., Keller & Aaker, 1998; Walker & Kent, 2010), this study predicts that positive environmental practices of a PSO should increase corporate credibility among consumers. Increased corporate credibility, in turn, is expected to have a positive effect on pro-environmental behavior (see Figure 1.2).

Figure 1.2. Theoretical Model for the Pilot Study

Note. Rectangles represent observed variables, and circles represent latent variables.

Sample and Procedures

The pilot study employed a between-subjects experimental design with two levels of manipulation: *positive* environmental practices and *negative* environmental practices. A total of 197 Temple undergraduate and graduate students participated in a web-based experimental survey for extra credit. On the first page of the survey, participants were informed that this study was concerned with their opinions about a local major league

team's environmental practices described in a newspaper article. Subsequently, participants were randomly assigned into one of the two newspaper manipulations on the team's environmental practices.

After reading the article, participants were asked to provide their intentions (1) to support the team's newly implemented environmental initiative and (2) to engage in pro-environmental behavior in daily life ("daily pro-environmental behavior"). Furthermore, they rated a four-item corporate credibility scale developed by Becker-Olsen et al. (2006). Thirty one observations were excluded from the initial sample of 197 due to missing data. Therefore, the final sample size was 166. This sample size met the minimum recommended sample size of 150 for unbiased parameter estimates in structural equation modeling (Anderson & Gerbing, 1988).

Stimuli

To manipulate the treatment condition, this study employed a fictitious newspaper article that described environmental practices by a local major league team. The local team was chosen since it maintained a neutral position regarding environmental issues at the time of the study. This reduced the influence of the participants' prior knowledge on the study results. The newspaper article was manipulated based on how the team incorporates environmental practices into its operation by using a modified version of the scenario developed and validated by Sen and Bhattacharya (2001). In particular, Sen and Bhattacharya manipulated a company's social involvement by describing it as a "pioneer" or as a "laggard" in diversity issues. Consistent with this manipulation, this study developed a scenario about the team's environmental practices by illustrating it as

either actively (positive) or poorly (negative) supporting the environment (see Appendix A).

Measures

This study measured corporate credibility using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). In addition, two behavioral intentions, intention to support the team's new environmental initiative and intention to engage in daily pro-environmental behavior, were measured using a 7-point Likert scale from 1 (*very unlikely*) to 7 (*very likely*). The detailed information on these measures is provided below.

Corporate credibility. The perceived corporate credibility of the sport team was measured with Becker-Olsen et al.'s (2006) four-item scale, including "This organization is an organization I can trust," "This organization is an organization that cares about its customers," "This organization has a strong value system," and "This organization is an organization I believe in." Becker-Olsen et al. (2006) reported an adequate reliability of .85 for this scale. Walker and Kent (2010) also used the scale to measure the perceived credibility of the PGA TOUR and demonstrated a high reliability score ($\alpha = .89$). The reliability of this measure was further demonstrated in this study with a Cronbach's alpha of .90.

Intention to support the team's initiative. In the fictitious scenario, participants in both conditions were informed that the sport team recently implemented a tree planting project for its new environmental initiative. For example, for the negative condition, the following sentences were included in the last part of the article:

However, the [Sport Team A] has recently recognized they are lagging in the industry and have decided they need to increase their efforts to support

the environment. As a first step, the [Sport Team A] will launch a new Tree Planting Project. This Tree Planting Project is designed to plant trees in the [City C] area to offset carbon emissions from away-game air travel.

Consistent with Lichtenstein et al. (2004), respondents' intentions to support this initiative were measured with a single item, "how likely is it that you would purchase a tree to support the organization's Tree Planting Project?"

Intention to engage in daily pro-environmental behavior. To measure respondents' intentions to engage in pro-environmental behavior in their daily lives, the study developed a seven-point three-item scale based on the environmental psychology literature (e.g., Homburg & Stolberg, 2006; Kaisar, Doka, Hofstetter, & Ranney, 2003). These items include: "I will recycle plastic products at home," "I will consciously buy recycled paper and/or recycled plastic products," and "I will collect and recycle used paper." Results of a pretest with a different sample ($n = 201$) indicated that these items met a cutoff reliability score of .70 suggested by Lance, Butts, and Michels (2006) ($\alpha = .71$). Furthermore, the current analysis provided an acceptable reliability coefficient of .75.

Analysis

To test the theoretical model, the structural equation modeling (SEM) technique with the maximum likelihood estimation with robust standard errors (MLR) was employed. Although the use of SEM is still uncommon for experimental designs, the literature suggests that this approach is appropriate for the analysis of experimental data with several advantages over traditional approaches (e.g., MANOVA), including robustness over the assumption of homogeneity and the consideration of measurement errors (e.g., Bagozzi & Yi, 1989; Kano, 2000).

Prior to testing the proposed structural model, this study assessed the global significance of the treatment (i.e., positive environmental practices) by running a SEM model with the treatment serving as the independent variable and the three endogenous variables (i.e., corporate credibility and the two behavioral intentions) serving as the dependent variables. Given its intended assessment of the overall treatment effects, this model did not specify the relationships among the exogenous variables (Kano, 2000). The global significance of the treatments was detected by conducting the chi-square difference test between this model and a more restricted model that specified all the paths among the independent and dependent variables as zero (Kano, 2000).

After identifying the overall effects of the treatments, the proposed structural model was run by specifying the treatment factor as the independent variable, corporate credibility as the mediator, and the two behavioral intentions as the dependent variables. The overall fit of this model was evaluated using the following fit indices: the ratio of chi-square to degree of freedom (χ^2/df), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). For reasonable fit, the χ^2/df of 2-3 is recommended (Bollen, 1989). CFI values of greater than roughly .9 support that the model has an acceptable fit with the data (Kline, 2005). With regard to RMSEA, values equal to or less than .5 indicates close fit, values in the range of .05-.08 suggest acceptable fit, and values greater than .10 indicate poor fit (Browne & Cudeck, 1993). Moreover, SRMR values less than .10 are desirable for good model fit (Kline, 2005). The model was further examined to assess the statistical significance of the path coefficients.

Results

Testing of global treatments effects. The global significance of the treatment was assessed by comparing the model that freely estimated the paths between the treatment and the three exogenous variables to the competing model that specified all the paths as zero (Kano, 2000). The chi-square difference test revealed that the free estimated model provided a significantly better model fit than the restricted model ($\Delta\chi^2 (\Delta df = 3) = 21.61$, $p < .01$), supporting the significant treatment effects.

Figure 1.3. Standardized Results of the SEM Model

Note. Rectangles represent observed variables, and circles represent latent variables; * $p < .05$, ** $p < .01$.

Testing of the proposed structural model. The overall model fit of the proposed structural model was assessed using goodness-of-fit indices. The model provided acceptable values for all indices ($\chi^2/df = 54.23/25 = 2.17$; CFI = .94; RMSEA = .08; SRMR = .05). Consequently, this model was retained without any further modifications. Figure 1.3 illustrates the standardized results of the paths in the model. Consistent with the prediction, positive environmental practices had significant effects on corporate credibility ($\beta = .78$, $p < .01$). Furthermore, corporate credibility significantly increased

participants' intentions to support the team initiative ($\beta = .52, p < .01$) and intentions to engage in daily pro-environmental behavior ($\beta = .22, p < .05$) as predicted.

Discussion and Motivation for the Main Study

In sum, the results of the pilot test showed that a PSO would increase its corporate credibility by actively engaging in environmentally friendly practices. In turn, the increased credibility would likely allow the organization to promote pro-environmental behavior among consumers. While this finding highlights the important role of corporate credibility in the promotion of pro-environmental behavior as expected, this pilot study has the following limitations.

First, given the use of the experimental design, it is unclear if the results of the study can be applicable to actual CSM programs. Thus, the role of corporate credibility should be tested in real settings. Second, this study evaluated the effect of corporate credibility in general rather than focusing on corporate credibility in terms of environmental protection. Since source credibility in a specific aspect is thought to have a stronger effect on behavior than source credibility in general (Haley, 1996; MacKenzie & Lutz, 1989), further analyses are needed to evaluate the effect of corporate credibility regarding environmental protection. Third, while the study manipulated the team's environmental practices in a bipolar manner (i.e., positive vs. negative), consumers may evaluate the credibility of PSOs that implement environmental initiatives differently depending on characteristics of their initiatives. Therefore, it is essential to understand how certain characteristics influence consumer perception of credibility. Finally, the scenario employed in this study broadly described the PSO's environmental practices without focusing on a specific type of corporate social initiative, such as CSM. As

discussed in this chapter, the main study reported in the subsequent chapters aimed to further examine the role of corporate credibility in CSM by addressing these limitations.

CHAPTER 2

REVIEW OF LITERATURE

This chapter reviews a body of literature relevant to the theoretical framework of this study. First, the chapter discusses corporate social marketing in terms of its definition, historical development, and social and business consequences. Second, given the central role of corporate credibility in this study, this chapter provides an extensive review of empirical research on this construct as well as theoretical approaches to understanding its effects on individual attitudes and behavior. Moreover, determinants of corporate credibility with regard to a company's CSM involvement are identified and organized. Third, pro-environmental behavior is discussed to identify its definition and conceptualization. This chapter concludes with a review of literature that explains the conceptualization and empirical findings of value congruence, a construct specified as a mediator/moderator in the theoretical framework.

Corporate Social Marketing

Corporate Social Marketing and Corporate Social Responsibility

The concept of corporate social responsibility (CSR) has received great attention from the academic literature since the 1970's (Carroll, 1999). Seminal work by Carroll (1979), for example, proposed that "...the social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at given point in time" (p.500). According to Carroll, the fundamental responsibility of business is to fulfill its economic roles, such as producing goods or services and generating profits, while at the same time meeting legal obligations required by society. Furthermore, corporations are responsible to society "beyond making a profit

and obeying the law” (Carroll, 1999, p.283). In particular, Carroll identified two additional types of responsibilities: ethical and philanthropic responsibilities. The ethical responsibility refers to behavior and activities that are not required by law but that society expects business to achieve, whereas the philanthropic responsibility includes voluntary roles assumed by corporations, exceeding societal expectations (Carroll, 1979, 1991). While Carroll’s CSR definition equally stresses the importance of both fundamental (i.e., economic and legal) and voluntary (i.e., ethical and discretionary) responsibilities, other scholars have directed their attention at corporate voluntary or discretionary activities (e.g., Barnett, 2007; Kotler & Lee, 2005a; McWilliams & Siegel, 2001; McWilliams, Siegel, & Wright, 2006). For instance, Kotler and Lee (2005a) defined CSR as a company’s “commitment to improve community well-being through discretionary business practices and contributions of corporate resources” (p.3).

According to Kotler and Lee (2005a), companies can assume their CSR by undertaking several types of voluntary activities, collectively referred to as corporate social initiatives. One type of such initiative is *corporate social marketing* (CSM), or “a means whereby a corporation supports the development and/or implementation of a behavior change campaign intended to improve public health, safety, the environment, or community well-being” (Kotler & Lee, 2005a, p.114). Put differently, CSM encompasses companies’ social campaigns aimed at inducing behavior change for the benefit of society (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b). Examples of CSM include the FireFree campaign launched by Safeco, a Seattle-based major insurance company, which promotes behavior that mitigate or prevent fire damage; Home Depot initiated a CSM program that educates customers on ways of reducing water consumption; and Mustang

Survival, a life vest manufacturing firm, implemented a campaign designed to prevent drowning among children by working with a children's hospital in Washington (Kotler & Lee, 2005a, 2005b).

Corporate Social Marketing and Other Corporate Social Initiatives

Along with CSM, Kotler and Lee (2005a) identified five different types of corporate social initiatives, including cause promotion, cause-related marketing, corporate philanthropy, community volunteering, and socially responsible business practices. First, cause promotion refers to a company's activities aimed at increasing awareness of a cause and/or supporting fundraising, volunteer recruitment, and/or participation in the cause, through in-kind contributions, funds, and other corporate resources (Kotler & Lee, 2005a). Second, cause-related marketing is a marketing campaign designed to donate a proportion of revenues to a certain cause based on the sales of a specific product. Third, corporate philanthropy encompasses a corporation's direct contribution to a cause or charity as a means of donations, cash grants, and/or in-kind services. Fourth, community volunteering integrates a company's promotion of volunteering at local community organizations among its employees, franchise members and/or retail partners. Finally, socially responsible business practices refer to a company's adoptions and implementations of discretionary business practices to protect the environment and/or improve community well-being (Kotler & Lee, 2005a).

Although all types of the corporate social initiatives are designed to support the cause to some degree, what distinguishes CSM from the rest is its intended focus on *behavior change* (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b). That is, while other social initiatives may raise goodwill, money, and/or recognition of a cause, only CSM is

intended to influence or change an individual's behavior (Kotler & Lee, 2005a, 2005b).

Because of its planned influence on behavior, CSM is thought to create the greatest social and business benefits among the other corporate social initiatives (Kotler & Lee, 2005a, 2005b).

The Historical Development of Corporate Social Marketing

CSM originates from social marketing, a framework introduced by Kotler and Zaltman in 1971 (Kotler & Lee, 2005a, 2005b). According to Kotler and Zaltman (1971), social marketing refers to “the design, implementation, and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution, and marketing research” (Kotler & Zaltman, 1971, p.5). It involves the application of marketing techniques and concepts to programs that aim to promote socially responsible ideas and behavior among target audiences to improve their welfare and that of society at large (Andreasen, 1994; Fox & Kotler, 1980; Kotler & Zaltman, 1971). This notion that marketing techniques can be useful for promoting social ideas can be traced to Weibe's (1951-1952) classic article, *Merchandising Commodities and Citizenship on Television*, which raised the question, “why can't you sell brotherhood and rational thinking like you sell soap?” (p.679). However, the notion had gained little attention until the early 1970s when Kotler and Zaltman (1971) published their seminal article as noted above.

Kotler and Zaltman's (1971) work was followed by the adoption of social marketing in practice as well as a substantial body of research examining its effectiveness. For example, Fox and Kotler's (1980) review of the social marketing literature over the first 10 years since its introduction revealed that social marketing was successfully

applied to various social campaigns designed to address social causes and issues, such as family planning, heart disease prevention, and other health-related issues. Malafarina and Loken (1993) reviewed five major marketing journals, including *Journal of Consumer Research*, *Journal of Marketing*, *Journal of Marketing Research*, *Advances in Consumer Research*, and *Journal of Public Policy and Marketing*, and identified at least 76 empirical articles that investigate the effectiveness of social marketing campaigns. Social issues examined in these studies include environmental protection and energy conservation, nutrition, smoking, drug abuse and alcohol, donations, and health-related issues (Malafarina & Loken, 1993).

While much investigation existed in the area of social marketing by the early 1990s, researchers mainly examined campaigns implemented by nonprofit organizations and government agencies, and did not extensively investigate social marketing efforts by corporations (i.e., CSM) (Kotler & Lee, 2005b). This is somewhat surprising given that the importance of CSM was mentioned in Zaltman and Vertinsky (1971) in the early 1970s; this work suggested the need of extending the social marketing framework to the promotion of health behavior by corporations in health-related industries. However, other scholars disagreed with the extension of social marketing to corporate contexts (e.g., Andreason, 1994; Rangun & Karim, 1991). For example, Andreason (1994) provided three criteria of social marketing: (1) application of technology used in commercial marketing, (2) intended influence on one's voluntary behavior, and (3) individuals or society as a campaign's primary beneficiary, but not the sponsor organization itself. Among them, the third criteria does not appear to be applicable to CSM since a social campaign by a corporation generally aims to create not only social benefits but also

corporate benefits, leading to the conclusion that social marketing does not include “efforts of private sector organizations to achieve social ends, as in the insurance industry’s seat belt campaign” (Andreason, 1994, p.112).

Alternatively, Bloom et al. (1997) provided a view that CSM is part of the social marketing framework based on the following three rationales. First, while corporations as a whole may see CSM efforts as a means of increasing corporate sales, individual managers engaging in these activities are more likely to be associated with sincere motives, such as improving society. Second, given that many social marketing campaigns are operated by partnerships among corporations, government agencies, and nonprofits, just having a corporate partner in a campaign should not differentiate it from those that do not have a corporate partner. Third, among the three criteria provided by Andreason (1994), the main emphasis should be given at the second criteria, a focus on consumer voluntary behavior to create social change. Since the goal of CSM is to induce behavior change, it should be seen as one type of social marketing (Bloom et al., 1997).

Bloom et al. (1997), however, acknowledge that CSM and social marketing by nonprofit organizations and governmental agencies may differ in the degree of credibility perceived by audiences. That is, “a corporation may have less credibility with a target audience than the government or a nonprofit, hurting the persuasive ability of its message” (p.18). This is partly because consumers tend to question the motives of companies, especially when their CSM campaigns appear to be directly tied with their bottom lines. Furthermore, government agencies and nonprofit organizations generally have more experience in addressing a given cause than do corporations, leading to the greater perception of expertise (Bloom et al., 1997).

Consequences of Corporate Social Marketing

The consequences of CSM can be organized into two types of benefits: social and business benefits (Bloom et al., 1997; Du et al., 2008; Kotler & Lee, 2005a, 2005b). First, as discussed earlier, the intended purpose of CSM is to persuade individuals to perform certain behavior, such as safe driving, exercising, healthy eating, and recycling (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b). These behaviors are seen as socially beneficial since they create benefits not only for each individual engaging in them but also for society as a whole (Bloom et al., 1997). For example, one's decision to eat a healthier diet will eventually benefit society by lowering insurance and health care costs. If individuals engage in recycling activities, society will obtain benefits, such as the reduction of waste management costs and the creation of jobs. Second, CSM campaigns would likely produce benefits for corporations that operate them (Du et al., 2008; Kotler & Lee, 2005a, 2005b). This is because the CSM effects on one's personal behavior may be translated into its effects on customer behavior, such as purchasing the company's product. In addition, by benefiting from a behavior promoted in a company's CSM campaign, individuals are likely to formulate a sense of association with the company (Kotler & Lee, 2005a, 2005b). Kotler and Lee (2005a, 2005b) enumerate the following corporate benefits that can be created by CSM: the creation of brand preference, support for brand positioning, the development of new markets, and increased sales.

Du et al. (2008) provide empirical support for the notion that CSM can provide both business and social benefits by investigating the effectiveness of an oral health care program initiated by Procter & Gamble's Crest brand. The "Healthy Smiles 2010" campaign was launched in 2000 to provide economically disadvantaged families with

oral health education, services, and tools in cooperation with the Boys & Girls Clubs of America (BGCA). Du et al. sought to identify the extent of behavior changes resulting from the program by conducting telephone surveys to Hispanic participants. The focus of their research was on examining the moderating role of acculturation, an attitudinal variable that refers to the degree to which Hispanic participants, as immigrants, had adopted the values and norms of American culture. The results indicated that participants from less acculturated families were more likely to formulate favorable beliefs about oral care behavior and actually perform that behavior due to the program participation than those from more acculturated families. The study further showed that participant parents who perceived the significant impact of the program tended to engage in actions that support the brand, such as purchasing its products (Du et al., 2008).

Corporate Social Marketing and Sport

Although a growing body of literature has examined CSR activities (e.g., Babiak & Wolfe, 2006, 2009; Walker & Kent 2009) as well as specific types of corporate social initiatives, such as cause-related marketing (e.g., Irwin, Lachowetz, Cornwell, & Clark, 2003) and corporate philanthropy (e.g., Extejt, 2004; Inoue, Kent, & Lee, in press) by sport organizations, little investigation has been undertaken in their CSM initiatives. Irwin et al. (2010), as an exception, investigated the effectiveness of “Get Fit with the Grizzlies,” a CSM initiative implemented by the Memphis Grizzlies. This program consists of a six week curriculum designed to teach the fourth and fifth grade students in Memphis City Schools (MCS) about nutritional knowledge and healthy eating behavior. To assess the program’s effectiveness, Irwin et al. (2010) used a pre/posttest protocol that examined changes in students’ nutritional knowledge and healthy eating behavior before

and after the implementation of the program. Results of this study indicated that more students answered seven of the eight knowledge-based questions correctly on the posttest than on the pretest. Furthermore, significant positive behavior change was identified for seven of the 10 behavior-based items. These findings generally provided support for the significant effect of the initiative on students' health-related knowledge and behavior (Irwin et al., 2010). In a related research context, an ongoing project by Sparvero (2010) examines youth physical activity initiatives by two professional sport leagues, "NFL Play 60" by the National Football League (NFL) and "NBA Fit" by the National Basketball Association (NBA). Given the lack of theoretical foundations for understanding CSM by sport organizations, this work attempts to develop and test a framework by applying an intervention mapping approach in public health (Sparvero, 2010).

While the two studies noted above took different approaches to investigating CSM in sport, both agreed that sport-based CSM may be unique in terms of celebrity status that sport has in society (Irwin et al., 2010; Sparvero, 2010). Other scholars have furthered this notion by suggesting that such status may enable sport organizations to effectively promote socially beneficial ideas and behavior (Chalip, 2006; Loakimidis, 2007; Smith & Westerbeek, 2007). For example, Chalip (2006) states, "sport could be a vehicle by which to foster environmental awareness or environmental protections" (p.10). This perspective is reinforced by the fact that sport organizations and athletes tend to draw media and public attention, which would enable them to communicate social messages to a large number of people (Smith & Westerbeek, 2007). Furthermore, given the high level of psychological commitment and passion that sport creates, CSM by sport

organizations could greatly influence one's values and attitudes to adopt socially responsible behavior (Smith & Westerbeek, 2007).

This communicative power of sport may also be utilized by other sectors of society, as Smith and Westerbeek (2007) discussed that non-sport entities can leverage the ability of sport organizations or athletes to deliver on socially responsible ideas by forming a partnership. For example, Sport for Development and Peace International Working Group (SDP IWG), a task force in the United Nations, has identified social issues for which cooperation with sport is beneficial, including health promotion, youth education, peace building, and environmental protection (United Nations, 2003). The United Nations have placed particular emphasis on the value of sport to protect the natural environment, as seen in their establishment of the Sport and the Environment initiative. The major aim of this initiative is to use "the popularity of sports to promote environmental awareness and respect for the environment among the public" (United Nations Environment Programme, n.d., p.1) by working with sport organizations and celebrity athletes.

Summary

CSM refers to "a means whereby a corporation supports the development and/or implementation of a behavior change campaign intended to improve public health, safety, the environment, or community well-being" (Kotler & Lee, 2005a, p.114). CSM can be distinguishable from both other corporate social initiatives and social marketing by nonprofit organizations and governmental agencies (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b). First, CSM differs from other corporate social initiatives due to its intended influence on behavior (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b). In

addition, it is different from general social marketing programs in terms of the degree of credibility perceived by audiences (Bloom et al., 1997). Consequences of CSM can be organized into social and business benefits (Bloom et al., 1997; Du et al., 2008; Kotler & Lee, 2005a, 2005b). First, CSM creates social benefits by persuading people to perform certain socially beneficial behavior, such as safe driving, exercising, healthy eating, and recycling (Bloom et al., 1997; Kotler & Lee, 2005a, 2005b). Furthermore, CSM would likely produce benefits for corporations because its effects on one's personal behavior may be translated into its effects on customer behavior, such as purchasing the company's product (Kotler & Lee, 2005a, 2005b). Although little investigation has been undertaken in CSM by PSOs, scholars have acknowledged that their CSM involvement may be unique due to the celebrity status of sport. That is, such status should allow PSOs to effectively promote socially beneficial ideas and behavior (Chalip, 2006; Irwin et al., 2010; Loakimidis, 2007; Smith & Westerbeek, 2007; Sparvero, 2010).

Corporate Credibility

In the early 1950s, Hovland proposed that the credibility of sources (e.g., individuals, groups, organizations) play an important role in determining the persuasiveness of a communication (Hovland et al., 1953; Hovland & Weiss, 1951-1952; Kelman & Hovland, 1953). Since then, substantial studies have investigated whether a high-credibility source produces more persuasion toward an advocacy message than a low-credibility source (e.g., Kelman, 1958; Maddux & Rogers, 1980; Mills & Harvey, 1972). The literature also investigated the dimensionality of source credibility (e.g., Giffin, 1967; Ohanian, 1990), and developed theoretical frameworks explaining the process of how source credibility influences an individual's behavior (e.g., Kelman,

1961; Pratkanis, 2001). Despite this richness of the literature, the early work mainly focused on the credibility of individuals, such as celebrities or spokespersons (McCracken, 1989; Ohanian, 1990), and research examining the credibility of organizations is still sparse (Haley, 1996; Laffery & Goldsmith, 1999; Newell & Goldsmith, 2001; Pornpitakpan, 2004). Given this, this section first provides the definition of source credibility as well as its theoretical frameworks by referring to the general source credibility literature. Subsequently, the section turns its attention to corporate credibility, and discusses the conceptual development of this construct. This section concludes by identifying antecedents of corporate credibility in relation to corporate support for social causes.

The Definition and Dimensionality of Source Credibility

Source credibility refers to one aspect of a source (an individual, group, or organization) that presents a persuasive message (Petty & Wegener, 1998). In a more specific manner, Kelman (1961) defines source credibility as the state of being perceived as *valid* and *trustworthy*, and thereby being seen as worthy of serious consideration by others. This definition proposes that there are at least two dimensions in source credibility: expertise and trustworthiness (Hovland et al., 1953; Kelman, 1961; McCracken, 1989; Petty & Wegener, 1998; Pornpitakpan, 2004). Expertise is defined as the perceived ability of a source to provide precise information (Petty & Wegener, 1998), and trustworthiness refers to the perceived willingness of a source to provide accurate information (McCracken, 1989).

Hovland et al. (1953) identified several characteristics that determine the extent of expertise and trustworthiness. First, characteristics influencing the extent of expertise

include age, a position of leadership, and perceived similarity to recipients. Specifically, individuals with older ages may generally be seen as having more expertise than those with younger ages (Pratkanis & Gliner, 2004-2005). Receivers of a communication may also think that a communicator in a leadership position has the greater level of expertise in a given issue (Hovland et al., 1953). Furthermore, the extent of the similarity between a communicator's values, attitudes, and status and those of receivers would likely increase the perceived expertise of the communicator (Hovland et al., 1953; Petty & Wegener, 1998). Second, two characteristics identified by Hovland et al. (1953) that may affect trustworthiness are intention and sincerity. A source perceived as having an intention to influence attitudes of others is more likely to "be perceived as having something to gain and, hence as, less worthy of trust" (Hovland et al., 1953, p.23). In contrast, individuals tend to evaluate a communicator as more trustworthy when he or she shows a high degree of sincerity (Hovland et al., 1953).

Along with expertise and trustworthiness, substantial research indicates that the attractiveness of the communicator influences his or her persuasiveness (e.g., Fink, Cunningham, & Kensicki, 2004; Giffin, 1967; McGuire, 1985; Ohanian, 1990). This aspect of the source, named source attractiveness, is mainly concerned with the extent to which the source is physically attractive (Ohanian, 1990; Petty & Wegener, 1998). Empirical evidence supports that physically attractive communicators tend to induce more favorable attitudes toward an induced message than physically unattractive communicators (e.g., Chaiken, 1979; Fink et al., 2004; Horai, Naccari, & Fatoullah, 1974; Mills & Harvey, 1972). Additionally, source attractiveness may be affected by other factors, such as the source's likability, familiarity, and similarity to respondents

(McCracken, 1989; McGuire, 1985; Petty & Wegener, 1998). In other words, individuals evaluate a communicator as more attractive and, hence, more persuasive when they have prior knowledge about the source (familiarity), exhibit a high degree of affection for the source (likability), and perceive high resemblance with the source (similarity) (McCracken, 1989).

With regard to the relationship between source credibility and attractiveness, some researchers suggested that source attractiveness constitutes one dimension of source credibility (e.g., Giffin, 1967; McGuire, 1985; Ohanian, 1990). For example, in a study that developed a scale for measuring the credibility of celebrity endorsers, Ohanian (1990) clearly showed the multidimensional structure of source credibility consists of trustworthiness, expertise, and attractiveness. However, a more prevalent view exists that source credibility and attractiveness represent different aspects of sources and that they affect receivers' attitudes through different processes of social influences (Kelman, 1958, 1961; Mills & Harvey, 1972; Petty & Wegener, 1998). In particular, Kelman (1961) explained that source attractiveness influences individuals' attitudes through *identification*, whereas credibility affects their attitudes through *internalization*. Identification occurs when a person adopts an induced attitude to establish or maintain a self-defining relationship with an attractive source (Kelman, 1961). That is, individuals accept influence from a source since they perceive the source as attractive, and wish to strength their relationships with the attractive source by accepting his or her influence. On the other hand, internalization occurs when individuals adopt an attitude persuaded by a credible source based on the degree of congruence between the induced attitude and their own value systems (Kelman, 1961). In other words, individuals accept the source's

influence because he or she demonstrates strong credibility to an issue, and because they evaluate the issue as relevant to their value systems.

Theoretical Approaches to Source Credibility

The literature provides several theoretical frameworks explaining how source credibility induces attitude change (Heider, 1946, 1958; Hovland et al., 1953; Kelman, 1961; Pratkanis, 2001). The following describes each of these frameworks.

Heider's (1946, 1958) balance theory. The main effect of source credibility on persuasion can be explained by Heider's (1946, 1958) balance theory (Kelman & Eagly, 1965). This theory describes how individuals formulate their attitudes toward others (persons or things) in order to keep their cognitive systems in balance (Heider, 1946, 1958). Specifically, in a triadic relationship where two positive interpersonal relationships already exist (i.e., person A has a positive attitude toward person B and person B has a positive attitude toward person C), person A is assumed to formulate a positive attitude toward person C to achieve a balanced state. Consequently, in the context of persuasion, individuals would likely support an induced message (1) if they perceive a source as credible and thus formulate a positive attitude toward the source and (2) if they are aware that the source explicitly supports a particular position in the given message (Kelman & Eagly, 1965).

Hovland et al.'s (1953) incentive model. Hovland et al. proposed that receivers of a communication are motivated to adopt induced attitudes that will likely provide them with some incentives, such as reward, avoidance of punishment, and social approval. Based on this proposition, Hovland et al. explained that an individual tends to accept persuasive messages by highly credible sources because “through his experiences of

accepting and rejecting social influences, the individual...learns that following the suggestions of certain persons [i.e., high credibility sources] is highly rewarding whereas the suggestions of certain others [i.e., low credibility sources] is less so” (p.20). This perspective thus indicates that the effect of source credibility rests on its expected incentives.

Kelman’s (1961) internalization process. Kelman (1961) explained the effect of source credibility based internalization. According to Kelman, individuals accept an induced attitude through internalization when they perceive that the induced attitude is congruent with their value systems. The credibility of source plays an important role in this process because individuals are more likely to perceive high congruence with a message when it is given by a highly credible source than by a low credible source (Kelman, 1961). A major characteristic of internalization is that it involves the reorganization of existing value systems by incorporating induced attitudes (Ashforth & Mael, 1989; Kelman, 1958, 1961; Mael & Ashforth, 1992). Such reorganized value systems, in turn, provide individuals with intrinsic needs that will be satisfied by performing a behavior consistent with the induced attitude (Kelman, 1961).

Pratkanis’s (2001) altercasting perspective. Altercasting refers to “projecting an identity, to be assumed by other(s) with whom one is in interaction, which is congruent with one’s own goals” (Weinstein & Deutschberger, 1963, p.454). Put differently, altercasting involves a social interaction where an actor accepts certain actions expected by others in order to put them into a social role associated with the actions (Pratkanis, 2001). From this perspective, Pratkanis proposed a theory of source credibility, or “a theory of the conditions under which it [i.e., a source] will appear plausible to believe the

source of a message” (p.209). Specifically, while the previous three perspectives assume that credibility is based on given characteristics of the source (i.e., trustworthiness and credibility), this theory suggests that the credibility of source is determined by the interaction between the source of a communication and its receivers. Consequently, perceptions of source credibility will differ depending on roles that the source and receivers play and situations (Pratkanis, 2001). Consistent with this view, a subsequent study by Pratkanis and Gliner (2004-2005) showed that a child, generally considered a less credible source, was a more effective communicator for the nuclear weapons issue than an expert when that child was used in a message that stressed a need for protection. In contrast, the expert induced more persuasion for the same issue when the message emphasized technical information.

Source Credibility in the Persuasion Theory

The role of source credibility in persuasion is discussed in the Elaboration Likelihood Model (ELM) by Petty and Cacioppo (1981). The ELM is designed to explain the process of how persuasion variables such as source, message, recipient, and context variables, collectively affect one’s attitudinal responses (Petty & Cacioppo, 1981; Petty & Wegener, 1998). In particular, the key construct of this model is the elaboration likelihood continuum, which refers to how able and motivated people are to evaluate the central merits of an attitude object. Using this continuum, the ELM proposes that attitude change occurs through two routes: high elaboration likelihood (or the central route) and low elaboration likelihood (or the peripheral route). In the central route, people are likely to engage in highly effortful activities in evaluating object-related information, whereas people tend to engage in low effortful scrutiny in the peripheral route. According to Petty

and Wegener (1998), the ELM builds upon two hypotheses. The first hypothesis is the trade-off hypothesis, which states that as the effect of the central route increases, the effect of the peripheral route decreases and vice versa. The second hypothesis is concerned with multiple roles of persuasion variables, indicating that any given variable can influence individual attitudes through different routes at the different points.

Variables may influence attitudes of individuals in the following ways:

- Under a high elaboration likelihood condition, variables influence one's attitude by serving as an argument that determines the merits of an attitude object or by biasing information processing.
- Under a low elaboration likelihood condition, variables affect one's attitude by serving as a peripheral cue.
- Under an unconstrained condition, variables influence one's motivation and ability to evaluate relevant information.

Research has indicated that source credibility, including expertise and trustworthiness, mainly influence one's attitude by serving as a peripheral cue (Petty & Wegener, 1998). Thus, source credibility is the most effective in persuading receivers of a message when they are in a low elaboration condition. Furthermore, although limited evidence has been provided, source credibility has a significant effect on individual attitude change under unconstrained and high elaboration conditions (Petty & Wegener, 1998).

The Conceptual Development of Corporate Credibility

When compared to the rich history of research on the credibility of individuals, the investigation of corporate credibility has been lagging (Haley, 1995; Lafferty & Goldsmith, 1999; Newell & Goldsmith, 2001; Pornpitakpan, 2004). As one of the first studies examining corporate credibility, MacKenzie and Lutz (1989) investigated how advertiser credibility, or the perceived trustworthiness of the sponsor of the advertisement,

influences consumer attitudes toward the advertisement. Results indicated that advertiser credibility had a significant positive effect on both advertisement credibility and attitude toward the advertiser. These two variables, in turn, positively affected attitude toward the advertisement (Mackenzie & Lutz, 1989). In a related study, Goldberg and Hartwick (1990) tested the interaction effect between advertiser reputation, representing the perceived expertise and trustworthiness of the sponsoring company, and the extremity of advertising claims on product evaluation and advertisement credibility. Consistent with Mackenzie and Lutz, the study found that an advertiser in a fictitious advertisement gained a higher level of product evaluation and advertisement credibility when it was described as highly credible than being described as low credible (Goldberg & Hartwick, 1990). Goldberg and Hartick further identified the significant interaction between advertiser reputation and claim extremity. The effect of advertising extremity on the two dependent variables significantly decreased for the low reputation scenario; such reductions, however, were not observed for the high reputation scenario (Goldberg & Hartwick, 1990).

Goldsmith and his colleagues conducted a series of experimental studies investigating the effects of corporate credibility on consumer attitudes toward the advertisement, attitudes toward the brand, and purchase intentions (Goldsmith et al., 2000; Lafferty & Goldsmith, 1999). Lafferty and Goldsmith (1999) found that corporate credibility had a significant main effect on each of the three outcomes without any interactions with endorser credibility (Lafferty & Goldsmith, 1999). More interestingly, the study highlighted the significance of corporate credibility by revealing that the effect of corporate credibility on attitude toward the brand and purchase intention was greater

than the effect of endorser credibility (Lafferty & Goldsmith, 1999). Goldsmith et al. (2000) also demonstrated the main effects of corporate credibility on attitude toward the advertisement, attitude toward the brand, and purchase intentions using different samples. A path analysis further identified the indirect effects of corporate credibility on purchase intentions through the two attitudinal variables (Goldsmith et al., 2000).

Although the earlier studies on corporate credibility showed consistent support for the significant effect of the construct, there was a lack of consensus about what corporate credibility represents (Newell & Goldsmith, 2001). Mackenzie and Lutz (1989), for example, defined advertiser credibility as “the perceived truthfulness or honesty of the sponsor of the ad” (p.51). This definition appears to reflect only the trustworthiness dimension of source credibility, failing to take into account the other dimension, expertise, as identified by earlier work (e.g., Giffin, 1967; Hovland et al., 1953; Kelman, 1961). Goldberg and Hartwick (1990) operationalized advertiser reputation in terms of both trustworthiness and expertise, but did not provide a specific definition of this construct. In addition, their use of the term “reputation” is confusing given that reputation is thought to encompass much broader scope than credibility (Berens & Van Riel, 2004; Fombrun, 1996; Goldsmith et al., 2000). The confounding use of credibility and reputation also appears in Lafferty and Goldsmith (1999) that defined corporate credibility as “the perceived reputation of the company that produces the product” (Lafferty & Goldsmith, 1999, p.109).

Goldsmith et al. (2000), however, made a substantial contribution to the conceptualization of corporate credibility in the following two aspects. First, Goldsmith et al. clarified the distinction between corporate credibility and reputation by referring to

two seminal studies (i.e., Fombrun, 1996; Keller, 1998). According to Fombrun (1996), corporate reputation refers to “a perceptual representation of a company’s past actions and future prospects that describe the firm’s overall appeal to all of its key constitutions when compared with other leading rivals” (p.72). In this context, corporate credibility is seen as one component of corporate reputation, but the latter incorporates other characteristics, such as responsibility (Fombrun, 1996; Goldsmith et al., 2000). In a similar vein, Keller (1998) noted that corporate credibility is a part of, but *not equal to*, corporate reputation. Based on these arguments, Goldsmith et al. specified that “reputation...is much broader in scope and includes, but is not limited to, the dimensions of expertise and trustworthiness [in corporate credibility]” (p.44).

The second contribution of Goldsmith et al. (2000) is that they explicitly indicated that corporate credibility consists of expertise and trustworthiness, but does not contain the dimension of attractiveness. As discussed earlier, several researchers included source attractiveness into credibility (e.g., Giffin, 1967; McGuire, 1985; Ohanian, 1990). In line with this, Keller (1998) specified corporate likability, a construct representing how likable and attractive a company is perceived by consumers, as a dimension of corporate credibility, along with expertise and trustworthiness. However, Goldsmith et al. contended that corporate likability has a very similar meaning to attitude toward the firm, or overall evaluation of the firm, and that its inclusion may confuse the conceptualization of corporate credibility. They further asserted that describing a company as attractive in the same manner that describes an individual in an ad as attractive is inappropriate (Goldsmith et al., 2000).

Consistent with Goldsmith et al. (2000), Newell and Goldsmith (2001, p.235) specified that corporate credibility consists of two dimensions: corporate expertise that refers to “the extent to which consumers feel that the firm has the knowledge or ability to fulfill its claim”, and corporate trustworthiness that refers to “whether the firm can be trusted to tell the truth or not.” Based on this definition, Newell and Goldsmith further developed an eight-item scale for corporate credibility (i.e., four items for each dimension) and demonstrated the appropriate reliability and validity of the scale using sample data from 864 respondents. A review of the corporate association literature by Bernes and van Riel (2004) indicated that the definition and measurement of corporate credibility by Newell and Goldsmith can be considered the most comprehensive to date.

Antecedents of Corporate Credibility

Researchers have identified several factors that may influence consumer perceptions of corporate credibility (e.g., Haley, 1996; Keller & Aaker, 1998; Newell, Goldsmith, & Banzhaf, 1998; de Ruyter & Wetzels, 2000). For instance, Keller and Aaker (1998) proposed that corporate credibility is affected by a company’s innovativeness, support for the environment, and community involvement. Results indicated that all three factors had a positive effect on each dimension of credibility specified by the researchers, including corporate likability, trustworthiness, and expertise (Keller & Aaker, 1998). de Ruyter and Wetzels (2000) found that consumer evaluation of a firm’s credibility varied depending on the nature of its brand extension; a firm described as extending its brand to a related market was perceived as more credible than another firm described as expanding into an unrelated market. Newell et al. (1998) examined how the characteristics of advertising messages would affect the perceived

credibility of a company. This study showed that consumers tended to rate the company low in credibility when its advertisement contained a deceptive claim on its environmental efforts.

While the above studies investigated determinants of corporate credibility in general contexts, Haley (1996) conducted semi-structured interviews with 97 consumers to specifically examine what factors may influence the credibility of a company that engages in a social initiative. Haley found that the antecedents of corporate credibility in this regard can be classified into three categories: (1) characteristics of the company, (2) consumer perception of the issue, and (3) attributes of the social initiative. The first category is concerned with general characteristics of the company perceived by consumers, regardless of its engagement in a specific social initiative (Haley, 1996). In particular, consumers tend to see a company and its initiative as more credibility when the company is recognizable; has a good history of community involvement; has a good reputation, provides quality products and services; and shares similar values with them. The second category entails consumer perceptions of the issue, such as the perceived importance of the issue to them and to society. In addition, consumer belief that their action may help solving the issue is likely to increase, while their disbelief tends to decrease, the perceived credibility of the sponsor firm. The third category involves attributes of a corporate social initiative, including the relevance of the firm's operations with the issue, the extent of expertise that the firm has in supporting the issue, the perceived intent of the firm, and the degree to which the firm personally invest in the issue (Haley, 1996).

Building upon the three categories identified by Haley (1996), the remaining part of this section reviews the findings of studies that examined antecedents of corporate credibility. In addition, given that relatively few studies explicitly conducted research on corporate credibility, this review extends its discussion to the antecedents of relevant organizational constructs, such as attitude toward the firm, attitude toward the brand, and organizational identification.

Characteristics of the Company Influencing Corporate Credibility

With respect to Haley's (1996) first category, studies have shown that a firm's image on the level of innovation significantly influences corporate credibility (de Ruyter & Wetzels, 2000; Keller & Aaker, 1998). Keller and Aaker (1998) indicated that consumers tended to perceive a firm as more trustworthy, expert, and likable if it highly engaged in product innovations. de Ruyter and Wetzels (2000), however, provided different results that firms with an innovative image received significantly lower credibility ratings than firms with a late mover image. Thus, while these studies agree on the significant effect of the innovative image, there appears to be a lack of consistency in the direction of effects.

A firm's record on social involvement may also affect consumer perceptions of corporate credibility (Keller & Aaker, 1998; Walker & Kent, 2010). In particular, Keller and Aaker (1998) demonstrated that corporate engagement in environmental and community issues significantly increased perceived trustworthiness, expertise, and likability of a firm. Walker and Kent (2010) found that consumers tended to evaluate the PGA TOUR as more credible when they were aware of its previous social activities. Furthermore, Sen and Bhattacharya (2001) reported that consumers found greater

congruence between their values and a company's values when they read a scenario describing its positive CSR record. As explained by Keller and Aaker (1998), corporate social involvement would likely allow the firm to show its understanding about customer needs, leading to high trustworthiness. In addition, given that addressing social issues requires the adoption of sophisticated technologies and advanced management practices, firms with high social involvement may be perceived as having specialized expertise (Keller & Aaker, 1998).

Consumer overall perceptions of a firm are also likely to be associated with its credibility (MacKenzie & Lutz, 1989; Schoenfelder & Harris, 2004). In a study examining the determinants of attitude toward the advertisement, MacKenzie and Lutz (1989) noted that there is a significant overlap between advertiser credibility and advertiser perception, with the former representing a single dimension of the latter. By conducting in-depth interviews with consumers, Schoenfelder and Harris (2004) found that consumers tended to formulate the perceptions of corporate credibility based on their general feelings about the firm, shaped by their previous experience with its products. Furthermore, although Keller and Aaker (1998) indicated that corporate likability, or "the extent to which a company is thought likable, prestigious, and interesting" (p.358), is one dimension of corporate credibility, Patzer (1983) showed that source attractiveness is rather an antecedent of the two dimension of credibility (i.e., trustworthiness and expertise).

Consumer Perception of the Issue Influencing Corporate Credibility

Regarding Haley's (1996) second category, previous research has identified that the importance of the social cause to consumers, or the degrees to which consumers

personally support the company's sponsoring issue, has a significant effect on their perceptions of the company (Marin & Ruiz, 2007; Sen & Bhattacharya, 2001). For example, Sen and Bhattacharya (2001) found that consumers were more likely to identify with a company when they perceived the social issue supported by the firm as important for themselves. Marin and Ruiz (2007) also showed that consumers who were highly supportive of corporate involvement in social issues tended to perceive higher congruence between them and a socially responsible firm. The expected effect of the importance of the cause on corporate credibility can be explained by the notion that consumers consider a company's values similar to their own if the company addresses a cause that is important for them (Bhattacharya & Sen, 2003). Hovland et al. (1953) note that individuals tend to see a source as credibility if there is high similarity between the source's values and their values. Thus, the importance of the cause may affect the perceived credibility of the company by increasing the consumer perceived similarity with the company.

In a related manner, Grau and Folse (2007) tested whether corporate involvement in a local cause would generate more positive reactions than involvement in a national cause based on the assumption that consumers are likely to place a greater importance on the former than the latter. Results were supportive of this proposition; consumers indicated a more positive perception when a fictitious firm was described as supporting local skin cancer research than when described as supporting national skin cancer research (Grau & Folse, 2007).

Furthermore, Lafferty et al. (2004) demonstrated that consumers were more likely to formulate positive perceptions of a company if the cause supported by the firm

is familiar to them. This effect of familiarity can be explained by the attitude accessibility theory, which suggests that accessible memory plays an important role in evaluating an attitude object (Petty & Wegener, 1998). From this theory, a highly familiar cause is thought to enable consumers to easily retrieve memory about the cause and the social initiative, leading them to perceive high credibility about the sponsoring firm (Lafferty et al., 2004).

Attributes of Social Initiatives Influencing Corporate Credibility

With regard to Haley's (1996) third category, the literature identified that the following attributes of social initiatives may affect consumer perceptions of corporate credibility: the connectedness of the firm's operation with the cause, the degree of effort exerted by the firm, personal investment in the cause, intent of the firm to engage in social initiatives, timing, and perceived social impact.

Connectedness of the firm's operation with the cause. Rifon et al. (2004) and Becker-Olsen et al. (2006) provided direct evidence that consumers evaluated a company as more credible when it supported a social issue congruent with its operations than when it supported an incongruent issue. Other empirical studies also showed that the connectedness of corporate operations with the cause has a significant effect on consumer perceptions of the firm (e.g., Basil & Herr, 2003, 2006; Lafferty et al., 2004; Lichtenstein et al., 2004). For example, Basil and Herr (2006) demonstrated that the fit between a company's business and non-profits led to increasing attitude toward the company.

High congruence between the firm and the cause appears to affect corporate credibility by increasing the perceived expertise of the firm (Haley, 1996). That is, when a company supports a cause that is relevant to its core business, consumers would likely

perceive that the company has expertise to improve the cause. In addition, Rifon et al. (2004) showed that consumers tended to associate the firm with an altruistic motive in the congruence condition than in the incongruence condition; the perceived altruistic motive, in turn, positively affected corporate credibility. This finding may suggest that high congruence also influence credibility through increased trustworthiness.

Effort exerted by the firm. Effort is defined as the amount of energy a company puts into a social cause (Ellen et al., 2000). Experimental research confirmed the effect of effort on consumer perceptions of the company and its social initiatives (Ellen et al., 2000; Reed et al., 2007). In Reed et al.'s (2007) study, consumers with high moral identity evaluated a company adopting employee volunteer programs (high effort) as more socially responsible than a company merely engaging in cash giving (low effort). Ellen et al. (2000) also demonstrated that product donations (high effort) led to a more positive consumer evaluation than cash donations (low effort). Collectively, these findings suggest that if a firm puts more effort into a social cause, consumers are more likely to perceive that its activity is trustworthy, increasing the perceived credibility of the firm.

Personal investment. Personal investment refers to the degree to which a social cause promoted by a firm is personally relevant to the members of the firm (Haley, 1996). Although this attribute has not exclusively been examined in the literature, Haley provided consumers' view that they perceive advocacy advertising of a company as more trustworthy when its members are greatly affected by the issue. For example, one research participant stated: "The thing that makes MADD [Mothers Against Drunk Driving] such a good sponsor is that those mother have experienced personally the pain

of drinking and driving” (Haley, 1996, p.29). Given this, a firm may increase its credibility among consumers by addressing a social cause that is relevant to its employees.

Intent. Rifon et al. (2004) identified the significant effect of intent on corporate credibility in that a firm described as engaging in a social initiative based on altruistic motives tended to receive higher corporate credibility ratings. In the context of sponsorship, Menon and Kahn (2003) argued that advocacy advertising, generally independent from direct selling activities, is seen as less trustworthy than cause promotion, clearly aiming at the promotion of corporate products, because of perceived ulterior motives behind the former type of advertising. In a study examining the effect of impression motivation (i.e., the degree to which an individual intends to affect his or her own impression from others), Yoon et al. (2006) found that respondents did not evaluate a target as socially responsible when they perceived high impression motivation behind its socially responsible behavior. Furthermore, in Haley’s (1996) study, consumers noted that they are less likely to trust a company if its social initiatives are clearly used for generating mere publicity. Taken together, the perceived intent of a company to benefit from its social initiatives may negatively influence its credibility. Thus, if consumers suspect a firm’s intent to engage in social marketing, the firm is likely to lose its credibility.

Timing. Becker-Olsen et al. (2006) proposed that a corporate social initiative implemented as a reaction to some negative actions, such as consumer boycott, would likely decrease the perceived trust and honesty of the firm among consumers. Results support this proposition by showing that a company described as initiating a reactive

initiative is perceived as less credible than a company described as implementing a proactive initiative (Becker-Olsen et al., 2006). In a similar vein, Ricks (2005) and Kent and Walker (2010) investigate whether strategic philanthropy, defined as a proactive philanthropic activity directed at a specific target market, increases consumer evaluations of a company, such as corporate association (Ricks, 2005) and corporate reputation (Kent & Walker, 2010), using two treatment conditions (i.e., proactive vs. reactive; targeted vs. non-targeted). While the two studies do not provide consistent evidence on the main effect of the targeted condition, both find that proactive philanthropic activities have a positive main effect on the examined corporate outcomes. Collectively, these studies indicate that a firm, when seen as proactively engaging in a social initiative, would likely increase its credibility.

Social impact. Social impacts refer to “the actual benefits that have accrued (or will accrue) to the target audience of a social cause” (Du et al., 2010, p.11). Du and her colleagues explicitly examined the effect of this factor on consumer-related outcomes (Du et al. 2008, 2009, 2010). In particular, in their earlier study, the scholars found that the perceived impact of the oral health initiative positively influenced participant parents’ reciprocal intentions, such as buying products of the sponsor brand (Du et al., 2008). Du et al. (2009) provided similar results that consumers were more likely to engage in advocacy behavior toward a company if they perceived that its initiative made a significant impact on society. Their latest work further noted that the perceived social impact would likely affect consumer perceptions of the company, such as trust (Du et al., 2010). Based on the implications of these studies, it is likely that consumers see a firm as more trustworthy if they think that its social initiative has created actual social benefits.

Furthermore, social impacts are assumed to influence the perceived expertise of the firm in addressing the cause, leading to greater credibility (Haley, 1996).

Summary

Several researchers demonstrated that source credibility consists of two dimensions: expertise and trustworthiness (Hovland et al., 1953; Kelman, 1961; McCracken, 1989; Petty & Wegener, 1998; Pornpitakpan, 2004). Expertise refers to the perceived ability of a source to provide precise information (Petty & Wegener, 1998), whereas trustworthiness refers to the perceived willingness of a source to provide accurate information (McCracken, 1989). Consistent with this, Newell and Goldsmith (2001, p.235) defined corporate credibility as one aspect of a firm's image, incorporating corporate expertise, or "the extent to which consumers feel that the firm has the knowledge or ability to fulfill its claim," and corporate trustworthiness, or "whether the firm can be trusted to tell the truth or not." Research has provided consistent support for the significant effect of corporate credibility on various consumer outcomes, such as attitude toward the advertisement (e.g., MacKenzie & Lutz, 1989), attitude toward the brand (e.g., Goldsmith et al., 2000), product evaluation (Goldberg & Hartwick, 1990), and purchase intentions (e.g., Goldsmith et al., 2000).

In addition, Haley (1996) proposed that antecedents of corporate credibility can be classified into three categories: (1) characteristics of the company, (2) consumer perceptions of the issue, and (3) attributes of the social initiative. With regard to Haley's (1996) first category, empirical evidence showed that consumer perceptions of corporate credibility are likely affected by corporate characteristics, such as innovative image (de Ruyter & Wetzels, 2000; Keller & Aaker, 1998), corporate records on social involvement,

(Keller & Aaker, 1998; Walker & Kent, 2010), and consumer overall perceptions of a firm (MacKenzie & Lutz, 1989; Schoenfelder & Harris, 2004). Regarding the second category, the literature identified that the importance of the social cause to consumers (Marin & Ruiz, 2007; Sen & Bhattacharya, 2001), the locality of the cause (Grau & Folse, 2007), and the familiarity of the cause (Lafferty et al., 2004) influence corporate credibility. Finally, the third category entails characteristics of a given corporate social initiative, including the connectedness of the firm's operation with the cause (Rifon et al., 2004; Becker-Olsen et al., 2006), the degree of effort exerted by the firm (Ellen et al., 2000; Reed et al., 2007), personal investment in the cause (Haley, 1996), intent of the firm to engage in social marketing initiatives (Rifon et al., 2004), timing (Becker-Olsen et al., 2006), and social impact (Du et al., 2008, 2009, 2010) .

Pro-environmental Behavior

Definitions of Pro-environmental Behavior

Stern (2000) provides two different definitions of pro-environmental behavior: an impact-oriented definition and an intent-oriented definition. The impact-oriented definition is concerned with the degree to which certain behavior “changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere itself” (Stern, 2000, p.408). That is, this definition focuses on the *actual impact* of behavior on the environment. On the other hand, the intent-oriented definition refers to behavior that is undertaken with an individual's *intent* to benefit the environment. The intent-oriented definition is different from the impact-oriented definition in that the former specifies environmental intent as the direct determinant of behavior, and that it assumes that environmental intent could

possibly fail to produce the actual environmental impact (Stern, 2000). Stern acknowledges the importance of the two definitions from different reasons. The impact-oriented definition is useful when research aims to identify actual behavior that has a significant impact on the environment. The intent-oriented definition used in this dissertation, in contrast, should be used when the aim of research is to understand and influence given behavior by identifying one's motives and/or beliefs behind the behavior.

Types of Pro-environmental Behavior

The literature suggests that pro-environmental behavior is not unidimensional, but consists of different types of behavior (Clayton & Myers, 2009; Kazdin, 2009; Kempton, Darley, & Stern, 1992; Stern, 2000; Stern, Dietz, Abel, Guagnano, & Kalof, 1999). In particular, Stern and his colleagues (Dietz, Stern, & Guagnano, 1998; Stern, 2000; Stern et al., 1999) suggest three types of pro-environmental behavior: environmental activism, nonactivist behavior in the public sphere, and private-sphere environmentalism. First, *environmental activism* refers to individuals' active engagement in environmental movements (Stern, 2000; Stern et al., 1999). Examples include participation in environmental demonstration and active involvement in environmental protection organizations. This type of behavior has received great attention from researchers on social movements (Stern, 2000; Stern et al., 1999).

Second, *nonactivist behavior* encompasses individuals' environmental support in the public sphere that is less intense but is still essential to the success of an environmental movement, consisting of environmental citizenship and policy support (Dietz et al., 1998; Stern, 2000; Stern et al., 1999). *Environmental citizenship* incorporates activities that involve less risk or are less public than environmental activism,

such as making financial contributions to environmental organizations, reading articles on environmental movement, and writing letters to government officials (Stern et al., 1999). *Policy support* involves the acceptance and support of environmental policies (e.g., the restriction of lawn watering during droughts, mandatory recycling), regardless of possible monetary and material sacrifice, including the payment of higher taxes and the regulation of certain behavior.

Third, *private-sphere environmentalism* integrates individual behavior in the personal sphere (Clayton & Myers, 2009; Stern, 2000; Stern et al., 1999). This type of pro-environmental behavior has been extensively investigated by psychologists and consumer researchers (Stern, 2000). Examples include the purchase of environmentally friendly products, the practice of recycling, and the use of public transportation (Stern, 2000). Clayton and Myers (2009) further classify this type of behavior into three categories: curtailment, behavior choice, and technology choices. The first category, *curtailment behavior*, is concerned with individuals' effort to reduce their consumption in terms of the purchase of products and the use of energy and water. This type of behavior would likely require personal sacrifices to a great degree because individuals must give up doing certain activities (Clayton & Myers, 2009). The second category, *behavior choice*, involves an individual's decision to engage in behavior that has a less impact on the environment, such as recycling and reusing products, purchasing organic products, and using public transportation (Clayton & Myers, 2009). Behavior choice is different from curtailment behavior since its focus is on *how to do something* rather than whether or not to do it (i.e., curtailment). The final category, *technology choice*, comprises decisions on the purchase and the use of technological innovations, including renewable

energy, hybrid cars, and energy-efficient appliances (Clayton & Myers, 2009). Given that this type of behavior involves only one-time decision, technology choice can be considered a more effective pro-environmental behavior than other types of behavior that tends to require continuous behavioral involvement (Clayton & Myers, 2009).

Determinants of Pro-environmental Behavior

Environmental psychologists identify several factors that determine individuals' decision to engage in pro-environmental behavior (Clayton & Myers, 2009; Kazdin, 2009; Stern, 1992, 1999, 2000). While studies use different terminologies, they agree on the notion that these factors can be grouped into two categories: one that represents factors related to personal characteristics and another that entails factors relevant to contextual characteristics (Clayton & Myers, 2009; Stern, 1999). Recent work by Clayton and Myers (2009) provides a clear framework for understanding the determinants of pro-environmental behavior by dividing them into either internal factors or external factors. Using this framework, the following part of the section reviews identified factors affecting pro-environmental behavior.

Internal factors. Internal factors encompass one's personal preferences or tendencies that determine pro-environmental behavior (Clayton & Myers, 2009). Among them, attitudinal variables including values, beliefs, and norms are found to influence an individual's intention to perform pro-environmental behavior (Clayton & Myers, 2009; Stern, 2000). For example, Stern et al. (1999) developed a value-belief-norm (VBN) theory of pro-environmental behavior that explains that a behavior is a function of these attitudinal variables. The VBN theory specifies personal norms to engage in pro-environmental behavior as the direct determinant of actual behavior. These norms are, in

turn, activated by personal values, such as altruistic values and other traditional values, through the mediation of two beliefs: beliefs that the biosphere and the nonhuman species are under threat, and beliefs that an individual's own actions could make a contribution to or improve the threat (Stern et al, 1999). Evidence supports that these attitudinal variables included in the theory account for a substantial proportion of the variance in self-reported pro-environmental behavior (Dietz et al., 1998; Stern et al., 1999).

Other types of personal factors identified by the literature are personal capabilities (Stern, 2000). Examples include the skills and knowledge necessary to perform certain pro-environmental behavior, general personal capabilities such as social status, money, literacy, and power, and the availability of time to engage in pro-environmental behavior (Stern, 2000). Although research has recognized these personal capabilities are important determinants of behavior, their explanatory power may be limited (Clayton & Myers, 2009; Stern, 2000). For example, a meta-analytic review by Hines, Hungerford, and Tomera (1987) finds a significant but only moderate correlation between environmental knowledge and pro-environmental behavior ($r = .30$). Dietz et al. (1998) also indicate that personal capabilities, operationalized by socio-demographic variables such as race, income, age, and education, have only a weak effect on pro-environmental behavior.

Research has further suggested that emotions play an important role in one's decisions to perform pro-environmental behavior (Clayton & Myers, 2009; Vining & Ebreo, 2002). By reviewing research on the effect of emotion on pro-environmental behavior, Vining and Ebreo (2002) identify three different processes by which emotions influence pro-environmental actions. First, emotion is likely to affect one's motivation to engage in pro-environmental behavior. For example, Vining (1992) indicates that

individuals who pursued careers in resource and environmental management tended to have a high emotional affinity for natural resources. Second, emotions may be structurally stored along with a cognitive structure and may influence an individual's information processing (Vining & Ebreo, 2002). Thus, it is likely that if an individual associates a given emotional state with certain pro-environmental behavior, he or she is most likely to perform the behavior when information is designed to invoke that emotional state (Vining & Ebreo, 2002). Finally, emotions may determine the effectiveness of persuasive messages by interacting with other persuasion variables (Vining & Ebreo, 2002). For example, Lord (1994) finds that a message designed to induce negative emotions (i.e., fear) has a greater effect on one's recycling behavior than a positively framed message if a credible source (i.e., operationalized as a personal acquaintance in the study) conveys the former message.

Stern (2000) identifies routine or habit as the final type of internal factors influencing pro-environmental behavior. Specifically, habits and routines may play an important role in persuading individuals to perform a certain behavior since behavioral change usually involves breaking old routines and habits (Stern, 2000).

External factors. Researchers also indicate that individual pro-environmental behavior is influenced by various situational factors (Clayton & Myers, 2009; Kazdin, 2009; Stern, 1999, 2000). These include physical and social environmental constraints, social norms, incentives/punishment, and information (Clayton & Myers, 2009; Stern, 1999, 2000). First, in some cases, individuals simply may not have a choice to engage in pro-environmental behavior because physical situations, such as lighting and thermostat settings, disallow them to perform certain actions. In addition, even though behavior is an

available option, a lack of information regarding appropriate behavior may discourage individuals to act in pro-environmental ways (Clayton & Myers, 2009).

Second, social norms are shown to influence individuals' decision to perform pro-environmental behavior (Cialdini, Reno, & Kallgren, 1990; Clayton & Myers, 2009). For example, Cialdini et al. (1990) report their research findings indicating that participants are less likely to engage in littering behavior in public places when they are put in a high norm environment (clean environment) than in a low norm environment (littered environment). Cialdini et al. further find that a message emphasizing a social norm against littering greatly reduces littering when compared to other types of messages.

Third, research shows that incentives/punishments are other important determinants of pro-environmental behavior (Clayton & Myers, 2009; Kazdin, 2009; McKenzie-Mohr & Smith, 1999; Stern, 1999). Incentives include monetary and non-monetary ones (Stern, 1999). Monetary incentives are effective for influencing technology choice, which involves one's decisions to purchase some technological innovations, because such behavior tends to require financial sacrifices (Stern, 1999). Non-monetary incentives are often designed to influence individual behavior by providing them with convenience (Stern, 1999). Their effectiveness is identified in some cases, such as increasing bus ridership by reserving parking spaces or travel lanes for buses and promoting recycling by picking up recyclable materials (Stern, 1999). On the other hand, punishment, such as fines, is used to decrease one's tendency to perform a certain behavior that possibly hurts the environment (Clayton & Myers, 2009). However, the use of punishment may be problematic because it could rather induce individuals to

find a way to avoid detection or foster a sense of being controlled, resulting in resistance and hostility (Clayton & Myers, 2009).

Fourth, information refers to an intervention designed to influence internal factors (Stern, 1999). Examples include prompts, feedback, and communication strategies (Clayton & Myers, 2009; Stern, 1999; McKenzie-Mohr & Smith, 1999). Prompts are messages that are used to remind people to engage in a particular pro-environmental behavior; these reminders should ideally be located near places where the prompted behavior is performed (Clayton & Myers, 2009). Although prompts are found to influence behavior, their effectiveness can be easily reduced if they are perceived as demanding and rude or as ambiguous (Clayton & Myers, 2009; McKenzie-Mohr & Smith, 1999). Feedback is another type of information that induces individuals to perform pro-environmental behavior (Clayton & Myers, 2009; Kazdin, 2009). According to Kazdin (2009), previous research collectively indicates that the use of feedback results in reducing about 5 to 15 percent of the energy consumption with enduring effects. Communication strategies, such as the use of credible sources and the framing of messages, are also likely to affect people's decisions to act proenvironmentally (Kazdin, 2009). For example, Craig and McCann (1978) found that local residents were more likely to engage in energy conservation when they received a pamphlet from a highly credible source (the State Regulatory Agency) than a low credible source (a local utility firm).

Theoretical Approaches to Pro-environmental Behavior

Theory of reasoned action. The theory of reasoned action (TRA) views people as rational decision makers who consider the consequences of their behavior before they

actually perform a certain action (Ajzen & Fishbein, 1980). From this view, the theory posits that an individual's decision to engage in a behavior is directly determined by his or her *intention* to engage in that behavior. As a result, the focus of this theory is to identify the determinants of behavioral intentions. In particular, there are two direct factors that influence one's intentions to behave (Ajzen & Fishbein, 1980). The first factor is attitude toward the behavior, which refers to individuals' assessment regarding whether they are in favor of or against engaging in a certain behavior. The second factor is subjective norm, or one's perception of how society expects him or her to engage in or not engage in given behavior. According to this theory, effects of these two factors on behavioral intentions depend in part on how an individual assigns relative importance to each factor (Ajzen & Fishbein, 1980).

In the TRA, the two different types of beliefs are further proposed to affect attitude toward the behavior and subjective norms: behavioral beliefs and normative beliefs (Ajzen & Fishbein, 1980); the former serves as the determinant of attitude toward the behavior and the latter serves as the determinant of subjective norms. Behavioral beliefs refer to one's beliefs about whether a certain behavior would likely lead to positive or negative outcomes. In contrast, normative beliefs involve a person's beliefs about whether certain individuals or groups think that he or she should or should not engage in a given behavior.

The environmental psychology literature has extensively used the TRA to predict various types of pro-environmental behavior (e.g., Bagozzi & Dabholkar, 1994; Kantola, Syme, & Nesdale, 1983; Luzar & Diagne, 1999). For example, Bagozzi and Dabholkar (1994) attempted to predict consumer intentions to recycle based on the TRA. Their

findings are largely supportive of the theory in that subjective norms and attitudes toward the act of recycling explain about 30 percent of the variance in recycling intentions.

Contrary to the theory, however, only attitudes, but not subjective norms, were found to have a significant effect on intentions (Bagozzi & Dabholkar, 1994). Luzar and Diagne (1999) used the TRA to investigate the determinants of wetland owners' actual decisions to participate in a voluntary environmental preservation program. Consistent with the theory, this study finds the significant relationship between respondents' attitude toward participating in the program and their actual participation (Luzar & Diagne, 1999).

Theory of planned behavior. The theory of planned behavior (TPB) is as an extension of the TRA (Ajzen, 1991). Indeed, the TPB rests on almost the same theoretical propositions as the TRA. The major difference from the TRA, however, is the addition of a new psychological construct, perceived behavioral control. Perceived behavioral control is defined as an individual's perception of how easy or difficult performing certain behavior could be (Ajzen, 1991). This construct is thought to have similar implications with self-efficacy proposed by Bandura (1977, 1982), referring to one's "judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p.122). Ajzen (1991) suggests that perceived behavior control influences an individual's behavior in two different ways. First, it directly influences behavior by increasing an individual's effort to make a course of actions successful and by working as a proxy for actual behavioral control. Second, it indirectly affects behavior through the mediation of behavioral intention along with attitudes toward the behavior and subjective norms.

A handful of studies have adopted the TPB in the context of pro-environmental behavior (e.g., Harland, Staats, & Wilke, 1999; Lam, 1999). In Lam (1999), the three determinants of behavioral intentions specified in the TBP (i.e., attitudes toward the behavior, subjective norms, and perceived behavioral control) are found to collectively explain a substantial amount of the variance in pro-environmental behavior; they account for about 40 percent of the variance in intentions to reduce the use of water and about 25 percent of the variance in intentions to install water-saving appliances. On the other hand, the finding of Harland et al. (1999) may indicate that sole reliance on TBP is not sufficient to predict ones' intentions to perform pro-environmental behavior. Consistent with Lam (1999), Harland et al. demonstrate that each of the three TBP constructs significantly explains respondents' intentions to perform various pro-environmental behavior, such as energy saving, the use of non-car vehicles, and environmentally friendly consumptions. However, this study also reveals that the inclusion of personal norms, which are not part of the TBP, results in increasing the explanatory power of the tested models (Harland et al., 1999). Despite the difference in their conclusions about the descriptive power of the TBP, both studies agree that perceived behavior control has a significant effect on pro-environmental behavior, supporting the importance of adding this construct to the TRA (Harland et al., 1999; Lam, 1999).

The value-belief-norm theory. The value-belief-norm (VBN) theory developed by Stern et al. (1999) explains that pro-environmental behavior is a function of values, beliefs, and norms. This theory posits that pro-environmental personal norms, or one's feelings of obligation to perform pro-environmental behavior, are the direct cause of pro-environmental behavior. These norms are, in turn, affected by three types of personal

values relating to environmental concern: altruistic values, other traditional values, and egoistic values. Altruistic values are based on altruistic concern directed toward ecosystems or other species, beyond the benefits to humans (Dietz, Fitzgerald, & Shwom, 2005). Other traditional values encompass one's concern about a larger community, including family loyalty, values of duty, and sense of belonging (Dietz et al., 2005; Stern et al., 1999). Egoistic values, or "the self-interest basis of environmental concern" (Dietz et al., 2005, p.344), refer to individuals' concern about the environment due to its direct effect on their own lives and on other personally important things.

The VBN theory further proposes that the relationship between these three values and pro-environmental norms is mediated by new ecological paradigm (NEP) and two personal beliefs (Stern et al., 1999). NEP refers to "a view that human actions have substantial adverse effects on a fragile biosphere" (Stern et al., 1999, p.85). This variable serves as the first mediator directly influenced by the values. In addition, the two beliefs include awareness of consequences (AC), or beliefs that the biosphere and the nonhuman species are under threat, and ascription of responsibility (AR), or beliefs that an individual's own actions could make a contribution to or improve the threat (Stern et al., 1999). In the theory, AC beliefs are specified as the second mediator influenced by the NEP, while AR beliefs are the subsequent third mediator.

According to Stern (1999), there are two major differences between the two theories discussed above and the VBN theory. First, while both the TPB and TRA mainly focus on individualistic values and interests in predicting behavior, the VBN theory acknowledges that other values, such as biospheric or altruistic values, also influence pro-environmental behavior. Second, the VBN theory views personal norms as the immediate

determinant of pro-environmental behavior, although this construct is ignored in the TPB and TRA (Stern, 1999). Two studies by Stern and his colleagues (Dietz et al., 1998; Stern et al., 1999) demonstrate a substantial explanatory power of the VBN theory. Dietz et al. (1998) show that social psychological variables included in the VBN theory (e.g., awareness of consequences) generally predict different types of pro-environmental behavior better than social structural variables (e.g., education level) by explaining about 15 percent of the variance in these behaviors. Furthermore, Stern et al. (1999) indicate that the VBN theory accounts for 19 to 35 percent of the variance in pro-environmental behavior, and its descriptive power is much greater than that of other prevalent theories, including cultural theory (Dake, 1991, 1992), the theory of post-materialist values (Inglehart, 1977, 1990, 1997), and the religious value approach (White, 1967).

Summary

Pro-environmental behavior can be defined by the impact orientation and intent orientation (Stern, 2000). The impact-oriented definition emphasizes the *actual impact* of behavior on the environment, while the intent-oriented definition addresses an individual's *intent* to benefit the environment. Research has further proposed that pro-environmental behavior is a multidimensional construct that consists of the three types of behavior: environmental activism, nonactivist behavior in the public sphere, and private-sphere environmentalism (Dietz, Stern, & Guagnano, 1998; Stern, 2000; Stern et al., 1999). These behaviors are found to be influenced by both internal factors and external factors. Internal factors include one's personal preferences or tendencies that determine pro-environmental behavior, including attitudinal variables, personal capabilities,

emotions, and routines/habits (Clayton & Myers, 2009; Stern, 2000). In contrast, external or situational factors include physical and social environmental constraints, social norms, incentives/punishment, and information (Clayton & Myers, 2009; Stern, 1999, 2000). In order to explain how these factors collectively influence pro-environmental behavior, the literature has used the three major theoretical frameworks: the TRA, the TPB, and the VBN theory. While the first two are closely connected since TPB is an extension of the TRA, the VBN theory is different from the two due to its incorporation of altruistic value and personal norms (Stern, 1999).

Value Congruence

The Definition of Value Congruence

Values refer to an individual's general beliefs on how important a certain end state or normatively desirable behavior is to him or her (Edwards & Cable, 2009; Schwartz, 1992). The examination of values is significant because they greatly determine individuals' decision to perform behavior (Edwards & Cable, 2009). In addition, congruence refers to "how well pairs of components fit together" (Nadler & Tushman, 1980, p.45) in terms of values, goals, objectives, demands, and/or needs. Such pairs of components include the person-person relationship, the person-organization relationship, and the person-task relationship (Nadler & Tushman, 1980). Among them, this study focuses on the person-organization relationship to understand the effect of an organization's CSM campaign on individual behavior. Consequently, value congruence is defined as the similarity between one's values and those of the organization (Chatman, 1989; Edwards & Cable, 2009; Kristof, 1996).

Value congruence is operationalized in terms of two perspectives: subjective fit and objective fit (Edwards & Cable, 2009; Kristof-Brown, Zimmerman, & Johnson, 2005; French, Rogers, & Cobb, 1974). Subjective fit refers to the match between an individual's values and an organization's values perceived and reported by that individual (Edwards & Cable, 2009; Kristof-Brown et al., 2005; French et al., 1974). In particular, research has measured subjective fit using either direct or indirect measures (Kristof-Brown et al., 2005). For the direct measures, respondents are asked to assess how they perceive that their values and those of the organization are similar in a direct manner; for the indirect measures, respondents separately evaluate their values and the organization's values, and the compatibility between the two is later assessed by researchers (Kristof-Brown et al., 2005). In contrast, objective fit refers to the similarity between a person's values and his or her organization's values as existing *independently* of how that person perceives (Kristof-Brown et al., 2005). Objective fit is assessed by calculating the degree of the compatibility between the person's values and those of the organization rated by other individuals, such as coworkers or supervisors (Edwards & Cable, 2009; Kristof-Brown et al., 2005). Further discussion regarding the measurement of value congruence is provided in the latter part of this section.

Research on Value Congruence

Value congruence in persuasion research. In explaining the process of interpersonal persuasion, Kelman (1961, 2006) proposes that individuals adopt influence from a credible source through enhanced value congruence. Specifically, Kelman explains that individuals tend to perceive values induced by a message source are congruent with their own values (i.e., value congruence) if they see the source as credible.

Once perceived value congruence increases, the individuals are likely to reorganize their existing value systems by incorporating the induced values (Kelman, 1961). These reorganized value systems, in turn, provide the individuals with intrinsic needs that will be satisfied by performing behavior consistent with the induced values (Kelman, 1961).

Kelman (1958) supported this argument by examining the attitudes of African American students toward the desegregation of historically black colleges. Specifically, Kelman compared value congruence-based persuasion to identification-based persuasion. The latter refers to an individual's acceptance of an attitude and behavior induced by others in order to establish or maintain a self-defining relationship with them (Kelman, 1958, 1961, 2006). That is, the individual accepts influence from the influencing others since he or she perceives them as *attractive* rather than credible, and believes that the acceptance of their induced attitude/ behavior leads to strengthening his or her relationship with them. Based on these propositions, Kelman (1958) hypothesized that respondents tend to show their acceptance of a persuasive message (i.e., maintaining some all-African American institutions) communicated by an attractive source only when a salient relationship with the source was presented in an experimental setting. On the other hand, they would likely accept the same message communicated by a credible source regardless of the presence of the salient relationship given enhanced value congruence. Results provided support for this hypothesis by showing the degree of students' acceptance of the message differed depending on whether attraction-based or credibility-based communications were used.

Value congruence in organizational research. The organizational behavior literature has developed the construct of person-organization (P-O) fit based on value

congruence (Chatman, 1989; Kristof, 1996; O'Reilly, Chatman, & Caldwell, 1991). P-O fit refers to "congruency between an individual's values and those of an organization" (O'Reilly et al., 1991, p.492). P-O fit has been found to significantly predict various attitudinal and behavioral consequences of employees (Edwards & Cable, 2009; Kristof, 1996; Kristof-Brown et al., 2005; O'Reilly et al., 1991). A meta-analysis of existing P-O fit studies by Kristof-Brown et al. (2005) shows that this construct has strong positive correlations with employees' organizational commitment and job satisfaction, and a moderate negative correlation with intent to quit. In a different organizational context, O'Reilly and Chatman (1986) reveal that value congruence has a significant effect on students' prosocial behavior toward their university, such as financial contributions to the school.

Value congruence in consumer research. More recently, scholars have applied value congruence to the company-customer context (Sen & Bhattacharya, 2001; Zhang & Bloemer, 2008). Although not explicitly examining value congruence, Sen and Bhattacharya (2001) tested if consumer-company (C-C) congruence, or perceived overlap between consumers' and the company's characters (including not only values but also other traits such as innovativeness), would play a mediating role in the relationship between the company's CSR effort and positive consumer evaluation of the company. The results revealed that CSR had a positive effect on C-C congruence, and increased congruence, in turn, partially mediated the effect of CSR on company evaluation (Sen & Bhattacharya, 2001). Zhang and Bloemer (2008) examined if value congruence between a brand and consumers had a positive effect on their attitudes toward the brand, such as satisfaction, trust, and affective commitment, and their behavioral loyalty operationalized

by repurchases intention, word-of-mouth, and willingness to pay more. Consistent with the study's hypotheses, the researchers identified the positive direct effect of value congruence on each consumer-related outcome (Zhang & Bloemer, 2008).

Measurement of Value Congruence

Subjective fit. As noted, value congruence, when operationalized in term of subjective fit, can be measured using either direct or indirect measures (Edwards & Cable, 2009; Kristof-Brown et al., 2005). Direct measures ask respondents to indicate whether they think that a fit exists between their values and those of organizations (Kristof, 1996). For example, Posner, Kouzes, and Schmidt (1985) directly measured value congruence using two items: one that is concerned with the extent to which respondents' personal values are compatible with their organization's values, and the other that assesses to what extent respondents agree with the following statement: "I find that sometimes I must compromise my personal principles to conform to my organization's expectations." O'Reilly and Chatman (1986) also developed and validated five items for the direct measure of value congruence, such as "the reason I prefer this organization to others is because of what it stands for, its values," and "since joining this organization, my personal values and those of the organization have become more similar." While these direct measures tend to show strong associations with outcome variables, their use has been criticized because the items do not specify what values respondents consider to answer the questions (Kristof, 1996).

Alternatively, substantial literature recommends the use of indirect measures that ask respondents to separately evaluate their personal values and their organization's values (Kristof-Brown et al., 2005). A series of research by Cable and Edwards (Cable &

Edwards, 2004; Edwards & Cable, 2009), for instance, used 24 items that represent eight work-related values, such as altruism, relationship with others, and prestige; based on these items, respondents were asked to indicate how important each value is to them as well as how important they perceive each value is important for their organization. Once responses are obtained, these two separate lines of questions are reduced into a single index that captures the extent of value congruence, using methods such as the calculation of absolute discrepancy scores or correlation coefficients (Edwards, 1993; Kristof, 1995; Kristof-Brown et al., 2005).

Objective fit. Value congruence in terms of objective fit is evaluated by asking other individuals than those indicating their personal values (e.g., coworkers, supervisors) to evaluate the organization's values (Edwards & Cable, 2009; Kristof-Brown et al., 2005). For example, Vancouver and Schmitt (1991) separately asked school teachers and principals at their schools to rate the importance of 14 different goals for the schools. A congruence score was subsequently calculated using the D statistic, a composite which compares the importance score of each goal between the teachers and the principals at the same school. One major issue associated with the use of these measures, however, is that they tend to be a less proximal predictor of individuals' attitudes and behavior than subjective fit measures (Kristof-Brown et al., 2005).

Summary

Value congruence refers to the similarity between one's values and those of organizations (Chatman, 1989; Edwards & Cable, 2009; Kristof, 1996). This construct has been investigated in persuasion research (Kelman, 1958, 1961, 2006), organizational research (Chatman, 1989; Kristof, 1996; O'Reilly et al., 1991), and consumer behavior

research (Sen & Bhattacharya, 2001; Zhang & Bloemer, 2008). For example, the organizational behavior literature has developed P-O fit based on value congruence, and has examined if it significantly predicts various attitudinal and behavioral consequences of employees (Edwards & Cable, 2009; Kristof, 1996; Kristof-Brown et al., 2005; O'Reilly et al., 1991). The operationalization of value congruence has been made in terms of *subjective* and *objective* fit (Edwards & Cable, 2009; Kristof-Brown et al., 2005; French et al., 1974). Subjective fit refers to the match between an individual's values and an organization's values perceived and reported by that individual (Edwards & Cable, 2009; Kristof-Brown et al., 2005; French et al., 1974). Subjective fit is assessed using either direct or indirect measures (Kristof-Brown et al., 2005). For the direct measures, respondents report the extent of the similarity between their values and those of the organization in a direct manner. For the indirect measures, they separately evaluate their values and the organization's values, and the compatibility between the two is in turn assessed by researchers (Kristof-Brown et al., 2005). Objective fit, in contrast, refers to the similarity between a person's values and his or her organization's values as existing independently of how that person perceives (Kristof-Brown et al., 2005). Objective fit is assessed by calculating the degree of the compatibility between the person's values and the organization's values rated by other individuals, such as coworkers or supervisors (Edwards & Cable, 2009; Kristof-Brown et al., 2005).

Summary of the Literature Review

As discussed in this chapter, CSM is unique due to its intended influence on individual behavior in terms of social and business aspects. Thus, a company's involvement in CSM is assumed to generate great benefits to both society and the

company itself. However, in order to leverage such benefits, understanding the determinants of corporate credibility is essential because corporations tend to be perceived as less credible as to their CSM involvement, hurting the effectiveness of their campaigns. This chapter, therefore, identified several factors that influence corporate credibility, which can be categorized into company attributes, CSM attributes, and cause attributes. Furthermore, as the consequence of CSM, pro-environmental behavior was discussed in this chapter. In particular, the chapter defined pro-environmental behavior as behavioral intentions to benefit the environment (Stern, 1999) and further specified the multidimensionality of the construct. Finally, this chapter reviewed the value congruence literature and identified its definition, operationalization, and measurement.

CHAPTER 3

METHODOLOGY

The purpose of this study was to understand how professional sport organizations (PSOs) influence consumer pro-environmental behavior through their environmental initiatives by focusing on the role of corporate credibility. This chapter outlines the methodology used in this study, which is organized into: (1) Research Setting, (2) Research Design, (3) Participants, (4) Procedure, (5) Instrumentation, and (6) Data Analysis.

Research Setting

This study examined consumer evaluations of environmental initiatives operated by two professional sport teams in Philadelphia, the Philadelphia Eagles and the Philadelphia Phillies. First, the Philadelphia Eagles *Go Green* program was initiated in 2003 by the team owner and his wife (King, 2008). This program started as a recycling program, but developed into a comprehensive environmental program, which includes the purchase of clean energy, tree planting efforts, the installation of energy efficient technologies, and employee sustainable programs. As an indication of continuous commitment to the program, the Eagles recently announced that they have partnered with Solar Blue, a Florida based company, to turn their Lincoln Financial Field into the first stadium in the U.S. to be self-sufficient in renewable energy, such as solar and wind energy (Philadelphia Eagles, 2010). This partnership deal includes Solar Blue's \$30 million investments to install the new power system and the Eagles' purchasing of renewable energy from the company over the next 20 years (Banerjee, 2011).

Second, the Philadelphia Phillies launched the *Red Goes Green* program in 2008, which incorporates various environmental efforts, such as game-day recycling, employee sustainable programs, and the use of recycled products (Philadelphia Phillies, 2011). The program also includes the team's partnership with the Environmental Protection Agency (EPA) to purchase 20 million kilowatt-hours of renewable energy annually, the equivalent of planting 100,000 trees in terms of the reduction of carbon dioxide. The Phillies joined the EPA partnership in 2008 as the first MLB team, and have purchased renewable energy from the agency over the last three years (Philadelphia Phillies, 2011).

Along with these environmental efforts, both programs promote recycling and energy conservation activities among fans through the program websites, flyers, and billboards. The intended influence on consumer voluntary behavior by these two programs is consistent with the definition of CSM proposed by Kotler and Lee (2005a).

Research Design

The research design of this study was survey research that aimed to collect data from subscribers of a daily electronic sports newsletter distributed by the online section of a local Philadelphia newspaper. The survey research design is the most common type of research designs in sport management (Jordan, Walker, Kent, & Inoue, in press), and its major advantage lies in the ability to obtain responses from a large number of people within a target population with the use of carefully designed questions (Fraenkel & Wallen, 1996). Other identified advantages of this design include: all respondents receive the same set of questions, which likely result in high reliability; respondents are allowed to answer questions at their own pace and in their own time; and its ability to guarantee confidentiality may elicit more truthful responses than other designs (e.g., personal

interviews) that require direct contact (Burns, 2000). Along with these general advantages, two additional advantages specific to the current study are identified. First, survey research allows for the evaluation of the effect of actual CSM campaigns on consumer behavior, increasing the external validity of the study's findings. Second, given that this study aimed to examine several independent variables of corporate credibility, the use of experimental designs involving the manipulation of each independent variable would require multiple independent studies, leading to a feasibility issue.

The data were collected in the form of web-based questionnaires. This data collection method has several advantages over traditional survey methods, such as mail and phone surveys, including low cost, time efficiency, and the ease and accuracy of data inputs (Couper, 2000). However, as in other survey methods, the use of web-based surveys involves the following three issues: coverage error, non-response error, and measurement error (Couper, 2000). Coverage error is concerned with the discrepancy in both demographic and attitudinal characteristics between individuals with and without daily Internet access (Couper, 2000). One approach to addressing this issue is to limit the generalization of results to a restricted population (e.g., subscribers of the electronic newsletter), rather than generalizing the results to a larger population (e.g., all fans of the two teams). Second, non-response error refers to whether respondents are seen as the true representative of the entire sample, including nonrespondents (Couper, 2000; Jordan et al., 2010; Miller & Smith, 1983). This issue is especially problematic for a web survey due to its expected low response rate (Kaplowitz, Hadlock, & Levine, 2004). Non-response error can be addressed by comparing early to late respondents regarding their responses to questions, given that late respondents tend to have similar characteristics with

nonrespondents (Miller & Smith, 1983). Finally, measurement error, or the extent to which the variation of a construct is explained by random errors, is problematic for web surveys since a poorly designed survey often reduces the motivation of respondents, increasing such errors (Couper, 2000). To address this issue, researchers need to ensure that surveys are designed in a user-friendly manner with clear wording of each questionnaire item.

Participants

The population of this study consisted of 22,823 subscribers of a daily electronic sports newsletter distributed by the online section of a local Philadelphia newspaper. Among them, the sample of this study was selected using convenience sampling, a type of non-probability sampling methods (Cresswell, 2008). In particular, the sample included 2,368 subscribers who indicated continued interest in an ongoing study on the attitudes of sports fans. One advantage of convenience sampling is that it would likely to result in a high response rate because of participants' willingness to cooperate with a given research project. However, this sampling method has limitation in that each person included in the sample is selected with an unequal probability (Cresswell, 2008). This feature does not allow the generalization of the sample results to the population, and thus limits the external validity of the current study.

Procedure

Access to email addresses of the newsletter's subscribers was granted by the local newspaper company (APPENDIX B). Institutional review board (IRB) approval to this study was obtained from Temple University Human Subjects Committee (APPENDIX C). The data was collected through web surveys. An introductory message

was sent out to email addresses of conveniently selected subscribers (APPENDIX D). In the message, respondents were asked to choose one of the three links for either the survey on: (1) the Philadelphia Eagles *Go Green* program (“Go Green survey”), (2) the Philadelphia Phillies *Red Goes Green* program (“Red Goes Green survey”), or (3) individual recycling involvement (“unaware survey”). They were asked to choose their survey based upon their awareness of the listed programs. The first two surveys contained the same questionnaire items, except for the team and program names. In contrast, the third survey only included questions on demographic information and two measures of pro-environmental behavior described below. This third survey was completed by respondents who were unaware of either of the two programs to ensure that only respondents who were aware of these programs filled out the first two surveys.

The front page of the first two surveys provided a consent form that explained the purpose of the research project, and further informed that participation in the survey was on a voluntary basis and that the confidentiality of participants’ responses would be guaranteed (APPENDIX E). The data collection was conducted over the course of 10 days. Two reminder emails were sent to individuals who had yet to respond to the survey at the two different points of time (three days and one week after the first day of data collection).

Instrumentation

This study used survey-based items with a seven point Likert scale to measure all constructs included in the analysis (see APPENDIX F for the descriptions of the items). Scales were searched through a review of the existing literature with the consideration of the two essential characteristics of measurement, reliability and validity. Reliability is

concerned with the extent to which a set of independent measures of the same construct show agreement (Churchill, 1979). Researchers typically use reliability coefficients, such as Cronbach's alpha, to assess the reliability of a given measure. Cutoffs for adequate reliability proposed by Nunnally (1978) are a reliability score of .70 or higher for newly developed scales and .80 or higher for established scales. In contrast, validity refers to the extent to which a scale measures the construct that it is intended to measure (Bagozzi, Yi, & Phillips, 1991). The most fundamental type of validity is content validity, which can be established by demonstrating that "the test items are a sample of a universe in which the investigator is interested" (Cronbach & Meehl, 1955, p.292). In addition, construct validity needs to be established in terms of two aspects: convergent validity and discriminant validity. Convergent validity is the extent to which given indicators are the representation of the construct, while discriminant validity is the extent to which any pair of different constructs can be distinguishable (Bagozzi et al., 1991; Fornell & Larcker, 1981).

Scale Development Process for a New Scale

Since the literature search did not find established scales for perceived impact, the current study developed a scale for this construct based on the scale development process suggested by Hinkin (1995). This process consists of three stages: item generation, scale development, and scale evaluation (Hinkin, 1995). The item generation stage is concerned with content validity. A recommended procedure in this stage involves the generation of items that are deductively derived from the theoretical definition of the construct, and a subsequent content validity assessment by a group of experts (Hinkin, 1995). Following the recommendation, this study first developed four items based on the

construct's definition proposed by Du et al. (2010). Subsequently, similar to the procedure used by Tian, Bearden, and Hunter (2001), these items were submitted to four judges who were asked to rate each item as being not representative, somewhat representative, or clearly representative of the construct (see APPENDIX G for the form used in this analysis). Although one judge indicated a need for modifications in the wording of the items, all judges agreed that the four items were clearly representative of the construct. Thus, all items were retained for the subsequent procedure by incorporating the suggested modifications. In the scale development stage, a survey was designed to assess the reliability and validity of this new measure. Following data collection, reliability assessment and factor analysis were conducted to select items that provided adequate validity and reliability for the new scale. Finally, the scale evaluation stage involved the reassessment of this scale by evaluating the convergent and discriminant validities of the new scale (Hinkin, 1995). For this stage, the study performed a confirmatory factor analysis (CFA) using all indicators of the constructs in the research model, and examined the overall fit of the measurement model as well as the relationships between the new scale and the other scales.

Measures

The following part of this section describes the scales used for measuring the constructs examined in this study.

General credibility. The perceived credibility of the PSO in general was measured with Becker-Olsen et al.'s (2006) four-item scale, including (1) this organization is an organization I can trust, (2) this organization is an organization that cares about its customers, (3) this organization has a strong value system, and (4) this organization is an

organization I believe in. Becker-Olsen et al. (2006) reported an adequate reliability of .85 for this scale. Walker and Kent (2010) also used the scale to measure the perceived credibility of the PGA TOUR and demonstrated a high reliability score ($\alpha = .89$).

Perceived CSR. Perceived CSR is defined as consumer perception of how well a company meets its societal obligations through charitable activities (Brown & Dacin, 1997; Lichtenstein et al., 2004). Based on this definition, Lichtenstein et al. developed a five-item scale that is intended to assess the extent to which consumers perceive that a company is committed to giving back to society through various forms of philanthropic activities (e.g., charitable contributions). This scale provides an adequate reliability score of .90 and was significantly associated with outcome variables, such as consumer identification with the company, consistent with the study's hypothesis (Lichtenstein et al., 2004). Thus, the current study measured the perceived CSR of the PSOs with Lichtenstein et al.'s five-item scale consisting of: (1) this organization is committed to using a portion of its profits to help nonprofits; (2) this organization gives back to the communities in which it does business; (3) local nonprofits benefit from the organization's contributions; (4) this organization integrates charitable contributions into its business activities; and (5) this organization is involved in corporate giving.

Attitude toward the organization. To measure favorable or unfavorable evaluative responses to a company, such as attitude toward the sponsor (Speed & Thompson, 2000) and toward the advertiser (MacKenzie & Lutz, 1989), the marketing literature has commonly used a semantic differential scale, which is comprised of a set of bipolar adjective pairs that evaluate an attitude object (Osgood, Suci, & Tannenbaum, 1957). Consistent with this, attitude toward the PSO was measured using a three-item

seven point semantic scale used by MacKenzie and Lutz (1989), consisting of (1) good-bad, (2) pleasant-unpleasant, and (3) favorable-unfavorable.

Perceived fit. In consumer behavior research, the construct of fit is often operationalized in terms of consumer perception (Simmons & Becker-Olsen, 2006; Speed & Thompson, 2000). For example, Simmons and Becker-Olsen defined the company-cause fit as the perceived congruence between the company and its sponsored cause. Such perceived fit is thought to be established based on various organizational characteristics, such as products, mission, brand image, technologies, and markets (Simmons & Becker-Olsen, 2006; Speed & Thompson, 2000). However, due to the diversity of these attributes and the interests of parsimony, operationalizing fit as a unidimensional construct tends to be preferred over as a multidimensional construct (Speed & Thompson, 2000). The finding of Haley's (1996) qualitative research further indicated that respondents evaluated the fit between a company and its sponsorship of a social issue in a broad sense, such as "logical association," rather than in terms of specific characteristics. Therefore, this study measured the fit between the PSO and the cause using a four-item scale that evaluates the construct in a general term, including (1) low fit-strong fit, (2) dissimilar-similar, (3) inconsistent-consistent, and (4) not complementary-complementary. In Becker-Olsen et al. (2006), this scale demonstrated satisfactory reliability ($\alpha = .94$).

Perceived sincerity. In order to measure the sincerity of the sponsor, or the extent to which it is perceived to be sincere in its sponsorship involvement and be motivated by philanthropy, Speed and Thompson (2000) developed a three-item scale that captures the sponsor's altruistic motivation. Their analysis revealed that this measure provided a

satisfactory reliability score of .88 and was distinguishable from other relevant constructs, such as attitude toward the sponsor (Speed & Thompson, 2000). Given that the scale was developed in the context of sponsorship, the current study modified its items to be consistent with the research context. The modified scale thus consisted of: (1) the main reason the organization would be involved in the program is because the organization believes the environment deserves support; (2) the organization would be likely to have the best interests of the environment at heart; and (3) the organization would probably operate this program even if the program received little publicity.

Perceived effort. Effort refers to the amount of energy the organization puts into supporting the cause in its CSM campaign (Ellen et al., 2000). In their experiment study, Ellen et al. (2000) operationalized this construct by manipulating the type of donation made by retailers into product donation (high effort) or cash donation (low) in a fictitious scenario. Alternatively, although using the same definition, Mohr and Bitner (1995) measured consumer perception of effort using a four-item scale that demonstrated an adequate reliability score ($\alpha = .86$). Since Mohr and Bitner developed this scale in a service transaction setting, the following modified version of the scale was used for this study: (1) the organization exerted a lot of energy in the campaign; (2) the organization did not spend much time in operating the program; (3) the organization did not try very hard in running the program; and (4) the organization put a lot of effort into the program.

Perceived impact. Perceived impact is defined as consumer perception of the impact of the PSO's environmental initiative on the environment (Du et al., 2008). The following four items were developed based on the definition of this construct: (1) I have learned the importance of recycling through this program; (2) this program has

significantly reduced energy consumption at the stadium through the adoption of renewable energy (e.g., solar energy); (3) this program has significantly reduced the amount of waste through game-day recycling efforts (e.g., placing recycling bins throughout the stadium); and (4) I have learned the importance of energy savings through this program. As discussed earlier, all four items were judged as clearly representative of the construct by the experts, and were used for the subsequent questionnaire.

Cause importance. Cause importance is defined as the extent to which a given cause is personally importance to consumers (Haley, 1996). Schuhwerk and Lefkoff-Hagius (1995) developed a four-item scale that captures consumer importance of environmental issues, consisting of: (1) I am concerned about the environment; (2) the condition of the environment affects the quality of my life; (3) I am willing to make sacrifices to protect the environment; and (4) my actions impact on the environment. The researchers confirmed the reliability of this scale with a Cronbach's alpha of .90. They further established the convergent validity of the scale by showing its high correlation with a measure of a theoretically related construct (i.e., the New Environmental Paradigm scale by Dunlap and Van Liere (1978)) (Schuhwerk & Lefkoff-Hagius, 1995). The personal importance of environmental issues among respondents was thus measured using these four items.

Environmental credibility. To avoid common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), this study measured environmental credibility using a scale different from Becker-Olsen et al.'s (2006) scale used for general credibility. This scale developed by Newell and Goldsmith (2001) was designed to capture the two dimensions (i.e., expertise and trustworthiness) of corporate credibility; Berens and Van

Riel (2004) later acknowledged the scale as one of the most comprehensive measures of corporate credibility. The scale consists of the following eight items: (1) the organization has a great amount of experience; (2) the organization is skilled in what they do; (3) the organization has great expertise; (4) the organization does not have much experience; (5) I trust the organization; (6) the organization makes trustful claims; (7) the organization is honest; and (8) I do not believe what the organization tells me. These items were modified to reflect the credibility of the PSO specifically in terms of its environmental efforts.

Value congruence. Following the suggestion of Kristof-Brown et al. (2005), this study measured value congruence using an indirect measure of subjective fit. This measure asked respondents to separately rate their personal values and their perceptions of a given organization's values (Edwards & Cable, 2009; Zhang & Bloemer, 2008). The values examined in the current investigation are those that are found to be significantly related to individuals' decisions to perform pro-environmental behavior, collectively referred to as biospheric-altruistic values (Dietz et al., 2005; Stern et al., 1998, 1999). These values include: (1) protecting the environment, preserving nature; (2) unity with nature, fitting into nature; (3) respecting the earth, harmony with other species; (4) a world at peace, free of war and conflict; (5) social justice, correcting injustice, care for the weak; and (6) equality, equal opportunity for all. Consistent with previous studies (Edwards & Cable, 2009; Zhang & Bloemer, 2008), respondents were first asked to indicate the personal importance of each value by answering the question, "How important is this to you?" In addition, they rated their perceptions of the importance of each value for the pro-organization based on the question, "How important is this to the

organization?” For both questions, a seven point scale ranging from 1 (very unimportant) to 7 (very important) is used.

To capture the extent of congruence between respondents’ personal values and values of the PSO, a single index was obtained by computing the sum of absolute differences of ratings for the two sets of questions for each respondent (Edwards, 1993). Given that this index represents value dissimilarity, where a larger value indicates lower value congruence between a respondent and the PSO, a transformation was performed by subtracting the original values from their maximum value. This transformation enables the resultant value congruence index to have larger values for respondents with higher value congruence and smaller values for those with lower value congruence.

Pro-environmental behavior. As discussed in the previous chapter, pro-environmental behavior consists of different types of behavior, including environmental activism, nonactivist behavior in the public sphere, and private-sphere environmentalism (Dietz, et al., 1998; Stern, 2000; Stern et al., 1999). Among them, the focus of this study was private-sphere environmentalism that is concerned with one’s behavior in the personal sphere, such as the purchase of environmentally friendly products, the practice of recycling, and the use of public transportation (Clayton & Myers, 2009; Stern, 2000; Stern et al., 1999). Specifically, given that the environmental initiatives of the two PSOs researched mainly aim at promoting recycling activities, the current study examined pro-environmental behavior in terms of the extent to which respondents engage in these activities in their daily lives as well as they intend to recycle during the organizations’ games when they attend. Recycling behavior in daily life (“Daily recycling”) was measured using Webb, Mohr, and Harris’s (2008) six item scale, consisting of (1) I

recycle cardboard; (2) I recycle plastic containers; (3) I recycle magazines; (4) I recycle aluminum cans; (5) I recycle steel/tin cans; and (6) I recycle paper. This scale was shown to provide an adequate reliability score ($\alpha = .92$) in Webb et al. (2008). In addition, the study measured respondents' in-game recycling intentions (in-game recycling) with a three-item scale developed by McCullough and Cunningham (2010): (1) I intend to recycle my plastic bottles after consumption during the organization's game; (2) I will try to recycle my plastic bottles after consumption during the organization's game; and (3) I plan to recycle my plastic bottles after consumption during the organization's game. In McCullough and Cunningham (2010), the scale had a Cronbach's alpha score of .95.

Other information. Demographic questions regarding age, race, gender, marital status, educational level, number of games attended per year, and income level were included at the beginning of the questionnaire. This information was used for providing the descriptive summary of the sample characteristics, and no a priori hypotheses were developed for these demographic variables. In addition, this study developed a multiple-choice question that tested whether the respondents really knew what the program was about. The question asked respondents to select the answer that provided the most accurate description of the program among a list of choices. Only respondents who selected the appropriate answer on this question were further asked to answer the rest of the questions discussed above. Respondents' familiarity of the programs were also measured with a seven point three-item scale (Lafferty et al., 2004; Simonin & Ruth, 1998) consisting of (1) familiar-unfamiliar, (2) recognized-not recognized, and (3) heard of before/ not heard of before.

Data Analysis

This study used structural equation modeling (SEM) to test the theoretical model. SEM is a comprehensive data analysis method that allows for the assessment and modification of theoretical models, and thus provides researchers with great potential to advance theory development (Anderson & Gerbing, 1988). This approach has certain advantages over other traditional analyses, such as regression, multivariate analysis of variance (MANOVA), and multivariate analysis of covariance (MANCOVA) (Bagozzi & Yi, 1989; Hair, Anderson, Tatham, & Black, 1998). First, SEM has the ability to incorporate measurement errors into the analysis, increasing chances that significant relationships among variables will be correctly detected (Bagozzi & Yi, 1989; Hair et al., 1998). Second, it performs a series of, but independent, multiple regression analyses simultaneously, and allows for the estimation of the effects of multiple independent variables on multiple dependent variables within the same model (Hair et al., 1998). Third, it involves fewer assumptions than other multivariate approaches (e.g., MANOVA, MANCOVA), such as the assumption of homogeneity in the dependent variables' variances and covariances across groups (Bagozzi & Yi, 1989).

Regarding the use of SEM, Anderson and Gerbing (1988) recommended a two-step modeling approach. The first step of this approach involves the identification of an acceptable measurement model through a confirmatory factor analysis (CFA) (Anderson & Gerbing, 1998; Kline, 2005). In this step, the respecification of initial measurement models is conducted based on the results of model fit indices. Given the acceptable measurement model, the second step addresses the assessment of the original structural

model through comparisons with other structural models in order to find the most appropriate model (Anderson & Gerbing, 1988; Kline, 2005).

Based on this two-step approach suggested by Anderson and Gerbing (1988), this study separately assessed the measurement model and the structural model. The following section describes assumptions of SEM, the analysis of measurement model, and the analysis of structural model.

Assumptions of SEM

The majority of estimation methods in SEM involve the assumption of multivariate normality, which includes (1) univariate normality, (2) the bivariate normality of the joint distribution of any pair of the variables, (3) linearity, and (4) homoscedasticity (Kline, 2005). Among them, the assessment of the second condition is not analytically feasible in most cases, and the multivariate normality assumption is often evaluated without considering this condition (Kline, 2005). Thus, the other three conditions are discussed below.

First, univariate normality is concerned with whether all the variables included are normally distributed (Kline, 2005; Tabachnick & Fidell, 2006). This assumption can be checked by examining the histogram of each variable, which can be produced by any statistical software, such as SPSS. One remedy for the violation of univariate normality is to transform a non-normally distributed variable depending on its original shape. For example, positively skewed distributions are often improved through the logarithmic transformation. Alternatively, the exclusion of outliers may improve the non-normal distributions.

Second, linearity is concerned with whether any pair of dependent and independent variables is linearly related to each other (Kline, 2005; Tabachnick & Fidell, 2006). This assumption is diagnosed by examining each bivariate scatterplot. In multiple regressions, the violation of linearity can be addressed by creating a non-linear variable and by further assessing if the inclusion of this variable increases the explanatory power of the model. For example, if an independent variable X is suspected to have a curvilinear relationship with the dependent variable Y , the following relationship can be examined by including the square of X : $Y = b_1X^2 + b_0$. In a similar vein, in SEM, a latent variable that represents a non-linear effect can be created by specifying product terms as its indicators (Kline, 2005).

Third, the homoscedasticity of errors is concerned with whether residuals are equally distributed across all levels of predicted dependent variable scores (Kline, 2005; Tabachnick & Fidell, 2006). This assumption can be confirmed by inspecting bivariate scatter plots or the residual scatterplots with the predicted dependent variable scores on the X axis and residuals on the Y axis. When this assumption is violated, the scatterplots exhibits some type of patterns in their data points. The violation of homoscedasticity may be reduced through the transformation of the variables.

While the above discussion identifies remedies for each condition, the violation of multivariate normality can also be addressed by using robust estimation methods. For example, Mplus 5.1 provides maximum likelihood estimation with robust standard errors (MLR) that is shown to provide robust parameter estimations in the presence of the multivariate normality violation (Muthén & Muthén, 1998-2007).

Analysis of Measurement Model

To assess the measurement model, this study performed a CFA using Mplus 5.1. The purpose of the CFA model is to evaluate if the hypothesized relationships between a construct and its indicators are supported by the data (Hair et al., 1998; Kline, 2005). Although an exploratory factor analysis (EFA) is another prevalent approach that assesses a measurement model, the use of the CFA model is preferred since it provides model fit indices for assessing how well the data fit the hypothesized original model, allowing for the more precise evaluation of the measurement model (Hinkin, 1995).

The first issue with the use of CFA models is identification (Kline, 2005; Hair et al., 1998). Specifically, there are two necessary requirements for the identification of any CFA model (Kline, 2005). First, the number of observations must be no less than the number of free parameters. The number of observations can be calculated as $v(v + 1)/2$, where v is defined as the number of observed variables. In addition, parameters of CFA models are computed as the sum of the direct paths from the factors to their indicators and the total number of variances and covariances of the unobserved exogenous variables (i.e., measurement errors and factors). Second, every unobserved variable, including the factors and measurement errors, must be assigned a scale. For the assignment of a scale to the factor, two methods are available. The first option is referred to as the unit loading identification (ULI) constraint, which fixes one of the direct paths from a factor to its indicators to 1.0. The second method is the unit variance identification (UVI) constraint, which fix the variance of each factor to 1.0. In general, these two scaling methods result in the same overall model fit (Kline, 2005). Along with these necessary requirements, the identification of CFA models involves sufficient requirements, which vary depending on

the number of factors specified in a model. For a model with a single factor, the factor must have at least three indicators, whereas each factor must have at least two indicators for a model with two or more factors (Kline, 2005).

Properly identified CFA models are evaluated based on various model fit indices. Typical indices reported in the literature include chi-square to degree of freedom ratio (χ^2/df), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) (Kline, 2005). For reasonable fit, the χ^2/df of less than 3.0 is recommended (Bollen, 1989). CFI values of greater than roughly .9 support that the model has an acceptable fit with the data (Kline, 2005). With regard to RMSEA, its values equal to or less than .5 indicates close fit, values in the range of .05-.08 suggest acceptable fit, and values greater than .10 indicate poor fit (Browne & Cudeck, 1993). Finally, SRMR values less than .10 are desirable for good model fit (Kline, 2005). Rules of thumb for selected fit indices are summarized in Table 3.1.

Table 3.1. Cutoff Values for Model Fit Indices

Fit Indices	Acceptable Fit
Chi-square to degree of freedom ratio (χ^2/df)	$\chi^2/df < 3.0$
Comparative Fit Index (CFI)	$CFI \geq .90$
Root Mean Square Error of Approximation (RMSEA)	$RMSEA \leq .08$
Standardized Root Mean Square Residual (SRMR)	$SRMR < .10$

Following the recommendation of Hair et al. (1998), the measurement model was further assessed by examining the statistical significance of the factor loadings and by obtaining construct reliability and average variance extracted (AVE) for each construct.

First, in order to verify the hypothesized relationships among constructs and their indicators, the statistical significance of each path must be ensured and indicators that have insignificant results and their loading less than .7 may be removed (Hair et al., 1998; Hulland, 1999). Second, both construct reliability and AVE are computed based on factor loading values, and are assessed if all constructs meet the recommended level of .70 for construct reliability and .50 for AVE (Fornell & Lacker, 1981; Hair et al., 1998). This procedure addresses both reliability, which refers to the degree of the consistency of responses across the items within a measure, and convergent validity, which involves the extent to which the given indicators are the representation of the construct (Bagozzi et al., 1991; Hair et al., 1998; Kline, 2005).

Finally, discriminant validity, which is concerned with clear distinction between any pair of the constructs (Bagozzi et al., 1991; Fornell & Larcker, 1981), was assessed using two methods (Anderson & Gerbing, 1988; Fornell & Lacker, 1981). The first method suggested by Fornell and Lacker indicates discriminant validity if a square root of the AVE value of a given factor is greater than correlation coefficients between the factor and any other factors in the model. The second method by Anderson and Gerbing supports discriminant validity if the 95% confidence interval (CI) around a correlation estimate between two factors does not capture the perfect correlation.

Analysis of Structural Model

After confirming the adequacy of the measurement model, this study performed SEM analysis to test the hypothesized structural model depicted in Figure 3.1. While CFA models are only concerned with the relationships between latent factors and their indicators (i.e., factor analysis), structural models integrate aspects of both factor analysis

and multiple regression to simultaneously examine interdependent relationships among latent and observed variables (Anderson & Gerbing, 1988). As shown in Figure 3.1, the current model examined the interrelated dependence relationships among the following 12 constructs: general credibility, perceived CSR, attitude toward the organization, perceived fit, perceived sincerity, perceived effort, perceived impact, cause importance, environmental credibility, value congruence, and two types of pro-environmental behavior. The first eight factors were specified as the independent variables (or exogenous variables) that influence environmental credibility. In turn, environmental credibility was proposed to have a significant direct effect on pro-environmental behavior. Finally, value congruence was expected to mediate and moderate the relationships between environmental credibility and the behavioral outcomes. The overall fit of this model was assessed using the same model fit indices used for the measurement model, including NC, CFI, RMSEA, and SRMR, with the adoption of the same cutoff values.

Figure 3.1. Research Model

Anderson and Gerbing's (1988) two-step approach further suggests the assessment of the original structural model through comparison with a series of nested models. Nested models refer to models that have the same constructs but are different in terms of the number of causal paths specified (Anderson & Gerbing, 1988; Hair et al., 1998). A model is said to be nested within another model when the former includes fewer estimated parameters than the latter. The model comparison among nested models can be performed using a series of chi-square difference tests explained as follows (Anderson & Gerbing, 1988; Kline, 2005). First, the chi-square value of the original model is subtracted from that of a nested model to obtain the chi-square difference statistics (χ^2_D). In a similar vein, the difference between the degrees of freedom of the original model and those of the nested model (df_D) is calculated. The χ^2_D statistic is used to test its null hypothesis that the two nested models have the identical fit, and its value smaller than the critical chi-square value at df_D indicates the failure to reject this null hypothesis, supporting the retention of the simpler nested model (if χ^2_D is greater than the critical value, then the original model is supported over the nested model).

The final model, selected based on the results of the chi-square difference tests, was used to examine if the data support the hypothesized direct relationships among the constructs. In addition, to test the mediating effects of value congruence, the Sobel test was employed (Sobel, 1982). This test evaluates the significance of a mediating effect by comparing the indirect effect of the independent variable on the dependent variable through the mediator to the null hypothesis that sets the effect as zero (Cheng & Lau, 2008; Preacher & Hayes, 2004; Sobel, 1982). For the current study, the mediating effects of value congruence would be identified if the indirect effects from environmental

credibility to the two behavioral outcomes through this construct are found to be significant. Furthermore, the moderating effects of value congruence were tested by including an interaction variable to the final model. Specifically, this interaction variable was created by multiplying the value congruence scores and the latent factor scores of environmental credibility. Subsequently, the interaction variable was specified as the direct predictor of the two pro-environmental behavior measures. The moderating effects of value congruence would be supported if the two direct paths from the interaction variable are statistically significant (Kenny & Judd, 1984; Marsh, Wen, & Hau, 2004; Muthén & Muthén, 1998-2007).

Remedy for Common Method Biases

This study may be subject to common method biases due to its use of the same measurement medium for all constructs observed. Common method biases refer to a type of systematic measurement error that is attributable to the method for measuring the construct of interest (Podsakoff et al., 2003). These biases are problematic because they are likely to have a confounding effect on empirical results, such that the observed correlation between different constructs is caused by the common characteristics of their measurements rather than by the constructs themselves (Podsakoff et al., 2003). To control for the potential common method issue, this study adopted a latent variable approach that was recommended by Podsakoff et al. (2003) and has been used in substantial research (e.g., Carlson & Kacmar, 2000; Carlson & Prrewe, 1999; MacKenzie, Podsakoff, & Fetter, 1991). This approach involves the inclusion of a first-order unmeasured factor that specifies the measures of all constructs as indicators (Podsakoff et

al., 2003). Subsequently, the extent of common method biases is assessed based on the improvement in model fit indices and changes in factor loadings (Kline, 2005).

Sample Size

As with other statistical analyses, SEM requires a certain sample size to provide unbiased results. One of the most prevalent criteria for the required sample size is a sample size of at least 200 (Anderson & Gerbing, 1988; Hair et al., 1998). However, this criterion may be problematic since it does not take into account the effect of model complexity on model estimation (Hair et al., 1998; Kline, 2005). As an alternative way that considers the level of model complexity, Hinkin (1995) proposed that the minimum sample size for a SEM model can be calculated by multiplying the number of items estimated in the model by four. Since the original measurement model uses 63 items, a minimum of 252 observations were required to correctly assess the model based on the recommendation of Hinkin (1995).

CHAPTER 4

RESULTS

This chapter reports the results of the field surveys designed to evaluate the environmental programs implemented by the two professional sport teams: the Philadelphia Eagles *Go Green* program and the Philadelphia Phillies *Red Goes Green* program. First, the chapter describes the number of respondents completed the surveys and explains how the study handled nonresponse error and sampling bias. Second, preliminary results regarding the demographic characteristics of the respondents, the descriptive statistics of their responses, and the effectiveness of the two programs are discussed. Third, the chapter provides the results of the measurement analysis for the scales used and identifies an adequate measurement model based on model fit indices and coefficients of reliability and validity. This chapter concludes by providing the results of the hypothesis testing through the structural model analysis.

Number of Respondents, Nonresponse Error, and Sampling Bias

First Data Collection and Handling of Nonresponse Error

Among the 2,368 subscribers included in the study sample, 620 respondents completed one of the three surveys, resulting in a response rate of 26.2%. Of these respondents, 117 responded to the Go Green survey, 204 responded to the Red Goes Green survey, and 299 responded to the unaware survey. Thus, the usable responses for the main analysis described earlier were 321 (13.6%). In order to address nonresponse error, the study compared early respondents with late respondents given that the latter often exhibits similar characteristics with nonrespondents (Miller & Smith, 1983). For this analysis, the 321 respondents included in the main analysis were rank-ordered based

on their survey completion dates. Subsequently, respondents within the 25th percentile ($n = 80$) were statistically compared to those within the 75th percentile ($n = 80$) in terms of their demographic characteristics and responses to the Likert scale items. Regarding demographics, the results of a chi-square test revealed that these two groups significantly differed only in the proportion of ethnic groups. In addition, a multivariate analysis of analysis (MANOVA) did not find a significant overall difference among the early and late respondents with regard to their evaluative responses ($Wilks' \Lambda = .61$, $F(63, 96) = 1.00$, $p = .50$). These results collectively suggest the absence of nonresponse error.

Second Data Collection and Handling of Nonresponse Error

To assess the extent of sampling bias that may result from convenience sampling used in the initial data collection, a second data collection was conducted from 5,000 randomly selected individuals from the remaining 20,455 subscribers in the newsletter database. This procedure intended to examine if randomly selected respondents in the second data collection would provide different responses from the initial respondents. The data collection was conducted over the course of 10 days with two reminder emails (three days and one week after the first day of data collection). Among the 5,000 subscribers included in the sample, 109 (2.2%) completed one of the three surveys, including 21 respondents for the Go Green survey, 26 for the Red Goes Green survey, and 62 for the unaware survey. This resulted in the usable responses of 47 for the main analysis (.9%). Consistent with the first data collection, nonresponse error was examined by comparing early respondents within the 25th percentile ($n = 12$) with late respondents within the 75th percentile ($n = 12$) in terms of their demographics and evaluative responses. A chi-square test showed that the two groups significantly differed only in

marital status. In addition, MANOVA results indicated that there were no significant overall differences between these two groups regarding their evaluative responses (*Wilks'* $\Lambda = 1.00$, $F(22, 1) = 16.19$, $p = .19$). The absence of nonresponse error for the second data collection was thus supported.

Handling of Sampling Bias

After confirming the absence of nonresponse error for both data collections, a subsequent analysis compared responses from the initial data collection ($n = 321$) with responses from the second data collection ($n = 47$) to assess the extent of sampling bias. With respect to demographic characteristics, the results of a chi-square test indicated that these two groups were significantly different in terms of the highest education level completed only. Furthermore, a MANOVA did not find any overall significance between the two groups (*Wilks'* $\Lambda = .19$, $F(63, 304) = 1.16$, $p = .21$). These results thus provided support for the nonexistence of sampling bias.

The number of respondents from the two data collection is summarized in Table 4.1. Of the 7,368 subscribers included in the sample, 729 (9.9%) completed one of the three distributed surveys. Among them, 368 (5.0%) respondents answered either of the two surveys on the environmental programs, while the remaining 361 (4.9%) answered the unaware survey. A series of chi-square tests were performed to examine if aware and unaware respondents would exhibit different demographic characteristics. The results showed that while these two groups significantly differed in the proportion of gender (i.e., female respondents were more likely to be aware of the programs than male respondents), they were not different in terms of age, education, income, ethnicity, and marital status. This suggested that demographic characteristics had minimal effects on whether

respondents were aware of the programs. The following sections discuss the results of analyses based on the combined data ($n = 368$) unless otherwise specified.

Table 4.1. Number of Respondents for the First and Second Data Collections

Data Collection	Sample Size	Number of Respondents (Percentage over Sample Size (%))				
		Total	Go Green ¹	Red Goes Green ²	Aware ³	Unaware ⁴
1st	2,368	620 (26.2)	117 (4.9)	204 (8.6)	321 (13.6)	299 (12.6)
2nd	5,000	109 (2.2)	21 (.4)	26 (.5)	47 (.9)	62 (1.2)
Total	7,368	729 (9.9)	138 (1.9)	230 (3.1)	368 (5.0)	361 (4.9)

Note. ¹This includes respondents who completed the survey on the Philadelphia Eagles Go Green program; ²This includes respondents who completed the survey on the Philadelphia Phillies Red Goes Green program; ³This is the sum of the respondents who completed either of the Go Green or Red Goes Green surveys; ⁴This includes respondents who indicated that they were unaware of either of the two programs.

Demographic Characteristics

Table 4.2 illustrates a summary of demographic characteristics of the 368 respondents, showing that 76.1% of the respondents included in the main analysis were male; 16% were aged less than 35 years old, 23.4% were between 35 and 44, 27.7% were between 45 and 54, 24.7% were between 55 and 64, and 7.3% were 65 and over; 89.1% were Caucasian/White; 67.7% were married or living with partner; 70.4% had at least an undergraduate degree; and 18.8% had an annual income of less than \$60,000, 48.8% had an annual income of \$60,000 – \$149,999, and 16.6% had an annual income of \$150,000 and over.

Table 4.2. Demographic Characteristics of the Respondents (*n* = 368)

Variables	Categories	<i>N</i>	%
Gender	Female	88	23.9
	Male	280	76.1
Age	Less than 25 years old	7	1.9
	25-34 years old	52	14.1
	35-44 years old	86	23.4
	45-54 years old	102	27.7
	55-64 years old	91	24.7
	65 years old and over	27	7.3
	Prefer not to say	3	.8
Ethnicity	African-American or Black	14	3.8
	Asian	3	.8
	Pacific Islander	1	.3
	Caucasian or White	328	89.1
	Hispanic or Latino	5	1.4
	Native American	2	.5
	Other	2	.5
	Prefer not to say	13	3.5
Marital Status	Single	102	27.7
	Married or living with partner	249	67.7
	Other	11	3.0
	Prefer not to say	6	1.6
Highest Level of Education	Secondary or high school diploma	23	6.3
	Some college / university	82	22.3
	Undergraduate degree	155	42.1
	Graduate degree or higher	104	28.3
	Other	1	.3
	Prefer not to say	3	.8
Income	Below \$25,000	12	3.3
	\$25,000 - \$34,999	12	3.3
	\$35,000 - \$44,999	18	4.9
	\$45,000 - \$59,999	27	7.3
	\$60,000 - \$74,999	34	9.2
	\$75,000 - \$99,999	62	16.8
	\$100,000 - \$149,999	84	22.8
	\$150,000 - \$200,000	35	9.5
	Over \$200,000	26	7.1
	Prefer not to say	58	15.8

Table 4.3 shows descriptive statistics of evaluative items. First, the mean values ranged between 4.1 and 6.5, suggesting that the respondents tended to provide favorable evaluations. In particular, items for attitude toward the organization and in-game recycling had mean values around 6.5, which indicated that the distributions of the responses were extremely negatively skewed. Second, the standard deviation (SD) values of the items were in the range of .8 and 1.7, supporting adequate variations in the responses. Collectively, descriptive statistics results suggested that while the data were widely distributed, some of the items had non-normal distributions, leading to the potential violation of the multivariate normality assumption for SEM models. To address this concern, the study estimated all the SEM models using the maximum likelihood estimation with robust standard errors (MLR) that are shown to provide robust estimations in the presence of the multivariate normality violation (Muthén & Muthén, 1998-2007).

As noted in Chapter 3, the respondents' levels of familiarity to the programs were measured using a seven point semantic differential scale consisting of the following ranges: (1) "familiar" to "unfamiliar", (2) "recognized" to "not recognized", and (3) "heard of before" to "not heard of before" (Lafferty et al., 2004; $\alpha = .92$ for this study). An average composite familiarity score computed as the mean of the three items was 6.1 for all respondents, 5.9 for those who completed the Go Green survey, and 6.2 for those who completed the Red Goes Green survey, where a score of 7.0 indicates the highest familiarity level. Given these scores, it is appropriate to assume that the respondents had adequate knowledge to evaluate the programs prior to taking the surveys.

Table 4.3. Descriptive Statistics of the Items

Constructs / Items	Mean	SD	Min	Max
<i>Attitude toward the organization (ATT)</i>				
1. Bad-Good	6.49	0.91	1	7
2. Unpleasant-Pleasant	6.36	1.08	1	7
3. Unfavorable-Favorable	6.44	0.97	1	7
<i>Perceived CSR (CSR)</i>				
1. The <i>(team name)</i> are committed to using a portion of their profits to help nonprofits.	5.64	1.19	2	7
2. The <i>(team name)</i> give back to the community in which they do business.	5.95	0.97	2	7
3. Local nonprofits benefit from the <i>(team name)</i> 's contributions.	5.87	1.02	2	7
4. The <i>(team name)</i> integrate charitable contributions into their business activities.	5.99	0.97	2	7
5. The <i>(team name)</i> are involved in corporate giving.	5.87	1.01	1	7
<i>Daily recycling (DRECY)</i>				
1. I always recycle cardboard.	6.03	1.25	1	7
2. I always recycle plastic containers.	6.30	1.01	2	7
3. I always recycle magazines.	6.11	1.27	1	7
4. I always recycle aluminum cans.	6.42	0.92	2	7
5. I always recycle steel/tin cans.	6.17	1.18	1	7
6. I always recycle paper.	6.12	1.24	1	7
<i>Environmental credibility (ECRED)</i>				
1. The <i>(team name)</i> have a great amount of experience in addressing environmental issues.	4.66	1.29	1	7
2. The <i>(team name)</i> are skilled in what they do in the <i>(program name)</i> .	5.30	1.05	2	7
3. The <i>(team name)</i> have great expertise in addressing environmental issues.	4.61	1.26	1	7
4. The <i>(team name)</i> do not have much experience in addressing environmental issues. ¹	4.68	1.47	1	7
5. I trust the <i>(team name)</i> in their environmental efforts.	5.77	1.08	1	7
6. The <i>(team name)</i> make truthful claims in the <i>(program name)</i> .	5.58	1.01	3	7
7. The <i>(team name)</i> are honest in their environmental efforts.	5.60	1.03	2	7
8. I do not believe what the <i>(team name)</i> tell me in the <i>(program name)</i> . ¹	5.79	1.29	1	7
<i>Perceived effort (EFFORT)</i>				
1. The <i>(team name)</i> exert a lot of energy in the <i>(program name)</i> .	5.53	1.03	2	7
2. The <i>(team name)</i> do not spend much time in operating the <i>(program name)</i> . ¹	5.26	1.32	1	7
3. The <i>(team name)</i> do not try very hard in running the <i>(program name)</i> . ¹	5.46	1.20	1	7
4. The <i>(team name)</i> put a lot of effort into the <i>(program name)</i> .	5.71	1.02	2	7
<i>Familiarity (FAM)</i>				
1. Unfamiliar-Familiar	5.95	1.21	1	7
2. Not recognized-Recognized	6.02	1.23	1	7
3. Had not heard of-Had heard of	6.27	1.16	1	7
<i>Perceived fit (FIT)</i>				
1. A low fit-A strong fit	5.78	1.23	1	7
2. Dissimilar-Similar	5.57	1.24	1	7
3. Inconsistent-Consistent	5.72	1.19	1	7
4. Not complementary-complementary	5.80	1.17	1	7

Table 4.3. (continued)

Constructs / Items	Mean	SD	Min	Max
<i>General credibility (GCRED)</i>				
1. The <i>(team name)</i> are an organization I can trust.	5.63	1.31	1	7
2. The <i>(team name)</i> are an organization that cares about their fans.	5.68	1.33	1	7
3. The <i>(team name)</i> have a strong value system.	5.67	1.11	1	7
4. The <i>(team name)</i> are an organization I believe in.	5.92	1.15	1	7
<i>In-game recycling (GRECY)</i>				
1. Next time I go to a <i>(team name)</i> game at <i>(home stadium name)</i> , I intend to recycle my plastic bottles after consumption.	6.39	0.94	1	7
2. Next time I go to a <i>(team name)</i> game at <i>(home stadium name)</i> , I will try to recycle my plastic bottles after consumption.	6.38	0.97	1	7
3. Next time I go to a <i>(team name)</i> game at <i>(home stadium name)</i> , I plan to recycle my plastic bottles after consumption.	6.39	0.99	1	7
<i>Cause importance (IMP)</i>				
1. I am concerned about the environment.	6.24	0.84	1	7
2. The condition of the environment affects the quality of my life.	6.10	0.94	2	7
3. I am willing to make sacrifices to protect the environment.	6.08	0.90	1	7
4. My actions have an impact on the environment.	6.17	0.95	1	7
<i>Perceived impact (IMPACT)</i>				
1. I have learned the importance of recycling through the <i>(program name)</i> .	4.07	1.69	1	7
2. The <i>(program name)</i> has significantly reduced energy consumption at <i>(home stadium name)</i> through the adoption of renewable energy.	5.15	1.23	1	7
3. The <i>(program name)</i> has significantly reduced the amount of waste through game-day recycling efforts.	5.82	0.99	1	7
4. I have learned the importance of energy savings through the <i>(program name)</i> .	4.17	1.65	1	7
<i>Personal value (PVALUE)</i>				
1. Protecting the environment, preserving nature.	6.22	0.86	1	7
2. Unity with nature, fitting into nature.	5.83	1.10	1	7
3. Respecting the earth, harmony with other species.	6.08	0.98	1	7
4. A world at peace, free of war and conflict.	6.28	0.88	1	7
5. Social justice, correcting injustice, care for the weak.	6.13	0.98	1	7
6. Equality, equal opportunity for all.	6.27	0.92	1	7
<i>Perceived sincerity (SIN)</i>				
1. The main reason the <i>(team name)</i> are involved in the <i>(program name)</i> is because they believe the environment deserves support.	5.65	1.12	1	7
2. The <i>(team name)</i> are likely to have the best interests of the environment at heart.	5.29	1.14	2	7
3. The <i>(team name)</i> would probably operate the <i>(program name)</i> even if this program received little publicity.	5.11	1.43	1	7
<i>Organizational value (OVALUE)</i>				
1. Protecting the environment, preserving nature.	5.51	1.06	1	7
2. Unity with nature, fitting into nature.	5.13	1.27	1	7
3. Respecting the earth, harmony with other species,	5.30	1.21	1	7
4. A world at peace, free of war and conflict.	5.14	1.35	1	7
5. Social justice, correcting injustice, care for the weak.	5.21	1.30	1	7
6. Equality, equal opportunity for all.	5.60	1.16	1	7

Note. ¹These items were reverse coded.

Assessment of the Effectiveness of the Initiatives

As a preliminary analysis, this study assessed if the awareness of the two environmental programs would influence respondents' recycling behavior by comparing the composite scores of the two pro-environmental behavior scales between those who answered one of the surveys on the environmental programs ("aware respondents") and those who answered the unaware survey ("unaware respondents"). This test served as the proximate assessment of the effectiveness of the programs. As shown in Table 4.4, a multiple regression analysis indicated that aware respondents were significantly more likely to engage in daily recycling than unaware respondents after controlling for their demographic characteristics ($\beta_{\text{awareness}} = .09, p = .03$). Furthermore, for each program, the program awareness was found to have a significant positive effect on in-game recycling ($\beta_{\text{awareness_gogreen}} = .12, p = .03$; $\beta_{\text{awareness_redgoesgreen}} = .13, p < .01$). Therefore, these results may suggest that respondents' exposure to the programs have a significant effect on their decisions to perform recycling activities, supporting the program effectiveness. It should be noted, however, that the results are subject to internal validity issues especially in the form of reverse causation or mere co-existence with no directionality, and that the practical significance of these results suffers due to low R-square values. These concerns will be discussed in detail in the next chapter.

Table 4.4. Standardized Results for the Effect of Program Awareness

Independent variables	Daily recycling	In-game recycling	
		Go Green ¹	Red Goes Green ²
Awareness	.09 [*]	.12 [*]	.13 ^{**}
Gender	-.10 [*]	-.09	-.16 ^{**}
Age	.15 ^{**}	-.03	-.00
Education	-.05	-.15 ^{**}	-.07
Income	.01	.12	.08
Ethnicity	-.03	-.06	-.02
Marital status	.12 [*]	.06	.04
<i>R</i> ²	.05	.06	.05
<i>N</i>	591	402	479

Note. Respondents who chose “prefer not to say” for any of the demographic questions were excluded from the analysis; Daily recycling behavior = the composite mean score of Webb et al.’s (2008) scale; In-game recycling intentions = the composite mean score of McCullough and Cunningham’s (2010) scale;

Awareness = a dummy variable with 1 for respondents who were aware of one of the two programs and 0 for those who were unaware of either of the programs; Gender = a dummy variable with 1 for male respondents and 0 for female respondents ; Age = a categorical variable with 1 for respondents whose age is less than 25 years old, 2 (25 - 34), 3 (35 - 44), 4 (45 - 54), 5 (55 - 64), and 6 (65 years old or over);

Education = a categorical variable with 1 for respondents whose highest level of education was secondary or high school diploma, 2 (some college/university), 3 (undergraduate degree), and 4 (graduate degree or higher); Income = a categorical variable with 1 for respondents whose income was below \$25,000, 2 (\$25,000 - \$34,999), 3 (\$35,000 - \$44,999), 4 (\$45,000 - \$59,999), 5 (\$60,000 - \$74,999), 6 (\$75,000 - \$99,999), 7 (\$100,000 - \$149,000), 8 (\$150,000 - \$200,000), and 9 (over \$200,000); Ethnicity = a dummy variable with 1 for White/Caucasian respondents and 0 for other races; Marital status = a dummy variable with 1 for respondents who were married or living with partner and 0 for otherwise .

¹This model compared the level of in-game recycling intentions during the Philadelphia Eagles’ games between respondents who completed the unaware survey and those who completed the Go Green survey.

²This model compared the level of in-game recycling intentions during the Philadelphia Phillies’ games between respondents who completed the unaware survey and those who completed the Red Goes Green survey; * $p < .05$, ** $p < .01$

Reliability and Validity of Perceived Impact

Before conducting the measurement analysis using all the items, the reliability and validity of the newly developed perceived impact scale was independently assessed based on the recommendation of Hinkin (1995). With regard to reliability, this scale provided a Cronbach's alpha of .81, suggesting its adequate reliability (Lance et al., 2006; Nunnally, 1978). Furthermore, an exploratory factor analysis (EFA) identified only one factor meeting the Eigenvalue of greater than 1.0, with all factor loadings exceeding a cutoff of .5 (Hair et al., 1998). These results provided initial support for the construct validity of the scale. Therefore, all four items were retained and included in the subsequent measurement analysis.

Measurement Model Results

Identification of the Adequate Measurement Model

A CFA was conducted to assess the original measurement model containing 63 items through Mplus 5.1. The sample size used for this analysis was 368, satisfying the minimum required size of 252 based on Hinkin's (1995) calculation. Most of the goodness-of-fit indices supported the acceptable fit of this model although the CFI value was slightly lower than its cutoff of .9 ($\chi^2/df = 3705.32/1799 = 2.06$, CFI = .89, RMSEA = .05, SRMR = .05). However, the results of individual factor loadings in Table 4.5 revealed that following five items had factor loadings below a cutoff of .70 for CFA (Hulland, 1999): ECRED4 ("this organization does not have much experience in addressing environmental issues ") ($\beta = .59$) and ECRED8 ("I do not believe what this organization tells me in the program") ($\beta = .51$) for environmental credibility; EFFORT2 ("this organization does not spend much time in operating the program") ($\beta = .69$) for

perceived effort; and IMPACT2 (“the program has significantly reduced energy consumption at the stadium through the adoption of renewable energy”) ($\beta = .68$) and IMPACT3 (“the program has significantly reduced the amount of waste through game-day recycling efforts”) ($\beta = .68$) for perceived impact.

A revised model was run by removing these five items. After this modification, the model provided better fit indices: $\chi^2/df = 2705.48/1504 = 1.80$, CFI = .92, RMSEA = .05, SRMR = .04. The examination of factor loading values (see Table 4.4), however, showed that one indicator for perceived effort, EFFORT3 (“this organization does not try very hard in running the program”), had the value below .7 ($\beta = .68$). Additionally, environmental credibility and perceived sincerity were found to have a correlation almost close to 1.0 ($r = .995$). While the high correlation between the two constructs is consistent with the theoretical prediction and appears to reflect the fact that perceived sincerity, as defined by Speed and Thompson (2000), is closely connected to the trustworthiness dimension of environmental credibility, it still suggests the discriminant validity issue (Anderson & Gerbing, 1988). As a result, further revisions were made by deleting the item from perceived effort and all sincerity items.

Table 4.5. Factor Loadings of the Original and Revised Measurement Models

Constructs / Items	Factor loadings (β)		
	Original	1 st revision	2 nd revision
<i>Attitude toward the organization (ATT)</i>			
ATT1	.89	.89	.89
ATT2	.96	.96	.96
ATT3	.97	.97	.97
<i>Perceived CSR (CSR)</i>			
CSR1	.74	.74	.74
CSR2	.87	.87	.87
CSR3	.81	.80	.80
CSR4	.82	.82	.82
CSR5	.78	.78	.78
<i>Daily recycling (DRECY)</i>			
DRECY1	.78	.78	.78
DRECY2	.91	.91	.91
DRECY3	.80	.80	.80
DRECY4	.85	.85	.85
DRECY5	.78	.78	.78
DRECY6	.85	.85	.85
<i>Environmental credibility (ECRED)</i>			
ECRED1	.74	.74	.75
ECRED2	.81	.81	.81
ECRED3	.74	.74	.74
ECRED4 ^{1,2}	.59	n/a	n/a
ECRED5	.80	.81	.81
ECRED6	.71	.70	.70
ECRED7	.83	.82	.81
ECRED8 ^{1,2}	.51	n/a	n/a
<i>Perceived effort (EFFORT)</i>			
EFFORT1	.78	.79	.79
EFFORT2 ^{1,2}	.69	n/a	n/a
EFFORT3 ²	.74	.68	n/a
EFFORT4	.89	.91	.92
<i>Familiarity (FAM)</i>			
FAM1	.90	.90	.90
FAM2	.96	.86	.96
FAM3	.82	.82	.82
<i>Perceived fit (FIT)</i>			
FIT1	.91	.91	.91
FIT2	.89	.89	.89
FIT3	.89	.89	.89
FIT4	.91	.91	.91
<i>General credibility (GCRED)</i>			
GCRED1	.89	.89	.89
GCRED2	.83	.83	.84
GCRED3	.83	.83	.83
GCRED4	.91	.91	.91

Table 4.5. (Continued)

Constructs / Items	Factor loadings (β)		
	Original	1 st revision	2 nd revision
<i>In-game recycling (GRECY)</i>			
GRECY1	.96	.96	.96
GRECY2	.89	.89	.89
GRECY3	.91	.91	.91
<i>Cause importance (IMP)</i>			
IMP1	.79	.79	.79
IMP2	.75	.75	.75
IMP3	.81	.81	.81
IMP4	.78	.78	.78
<i>Perceived impact (IMPACT)</i>			
IMPACT	.80	.90	.91
IMPACT ^{1,2}	.68	n/a	n/a
IMPACT ^{1,2}	.68	n/a	n/a
IMPACT	.78	.88	.88
<i>Personal value (PVALUE)</i>			
PVALUE1	.89	.89	.89
PVALUE2	.84	.84	.84
PVALUE3	.85	.85	.85
PVALUE4	.75	.75	.75
PVALUE5	.80	.80	.81
PVALUE6	.80	.80	.80
<i>Perceived sincerity (SIN)</i>			
SIN1 ²	.76	.76	n/a
SIN2 ²	.77	.78	n/a
SIN3 ²	.71	.71	n/a
<i>Organizational value (OVALUE)</i>			
OVALUE1	.86	.86	.86
OVALUE2	.90	.90	.90
OVALUE3	.87	.87	.87
OVALUE4	.82	.82	.82
OVALUE5	.81	.81	.81
OVALUE6	.76	.76	.76

Note. ¹These items were removed from the first revised model; ²These items were removed from the second revised model.

Model fit indices ($\chi^2/df = 2352.38/1299 = 1.81$, CFI = .93, RMSEA = .05, SRMR = .04) suggested that the second revision led to almost equivalent model fit with the previous model. With regard to factor loadings, all paths had a value of at least .70 (Table 4.5). This model was further assessed by obtaining CR and AVE for each construct. As shown in Table 4.6, all constructs met the recommended level of .70 for CR and .50 for AVE, demonstrating the reliability and convergent validity of each construct (Hair et al., 1998). Discriminant validities of the constructs were further assessed through the examination of the correlation matrix (see Table 4.6). Diagonal values in the matrix represent the square roots of the AVE values of the constructs, consistent with Fornell and Lacker's (1981) method. As this matrix indicates, the following pairs of constructs had correlation coefficients higher than the square roots of AVE – the correlation between: (1) perceived CSR and environmental credibility ($r_1 = .83$), (2) perceived CSR and general credibility ($r_2 = .82$), (3) environmental credibility and perceived effort ($r_3 = .88$), and (4) cause importance and personal value ($r_4 = .86$). Consequently, the discriminant validities of these constructs were further assessed by the Anderson and Gerbing's (1988) method discussed earlier. Based on this method, the upper bounds of the 95% intervals (95% UB) of all of the correlations did not exceed the perfect correlation (i.e., the 95% UBs of r_1 , r_2 , r_3 , and r_4 were .89, .87, .93, and .92 respectively), supporting discriminant validity for these constructs. Consequently, the second revised measurement model was retained, and used to test the structural model.

Table 4.6. Correlation Matrix for the Final Measurement Model

Constructs	CR	AVE	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Attitude toward the organization	.96	.88	.94												
2. Perceived CSR	.90	.65	.62**	.80											
3. Daily recycling	.93	.69	.07	.22**	.83										
4. Environmental credibility	.90	.61	.53**	.83** ¹	.21**	.78									
5. Perceived effort	.85	.74	.44**	.74**	.23**	.88** ¹	.86								
6. Familiarity	.92	.80	.26**	.40**	.28**	.34**	.36**	.90							
7. Perceived fit	.95	.81	.43**	.64**	.33**	.70**	.66**	.60**	.90						
8. General credibility	.92	.75	.85**	.82** ¹	.10**	.77**	.63**	.25**	.53**	.87					
9. In-game recycling	.94	.85	.14**	.36**	.58**	.45**	.41**	.19**	.48**	.25**	.92				
10. Cause importance	.86	.61	.16**	.35**	.62**	.46**	.40**	.22**	.43**	.24**	.72**	.78			
11. Perceived impact	.89	.80	.32**	.49**	.08	.72**	.61**	.18**	.51**	.49**	.28**	.24**	.89		
12. Personal value	.93	.68	.16**	.30**	.42**	.46**	.40**	.16*	.41**	.23**	.53**	.86** ¹	.26**	.82	
13. Organizational value	.93	.70	.43**	.59**	.17*	.17**	.67**	.23**	.52**	.56**	.31**	.42**	.60**	.46**	.84

Note. CR = Construct reliability; AVE = Average variance extracted; Diagonal values represent the square roots of the AVE values for the constructs; ¹These correlation values exceeded the square roots of AVE of their respective construct(s); * $p < .05$, ** $p < .01$.

Assessment of Common Method Bias

The extent of common method bias was assessed by including a common method factor that specified the measures of all constructs as its indicators to the final measurement model identified in the procedure above (Podsakoff et al., 2003). To avoid the model identification issue, the method factor was constrained to have the equal factor loading for all the paths (Podsakoff et al., 2003). This model yielded the following model fit indices: $\chi^2/df = 2304.08/1298 = 1.78$, CFI = .93, RMSEA = .05, SRMR = .07. These values suggested that the inclusion of the method factor did not substantially improve the model fit, when compared to the final measurement model (See Table 4.7). In addition, although the inclusion of the method factor led to decreases in factor loadings for the original constructs, all the values still remained significant. Together, these results lessened any concern that common method bias would represent an alternative explanation for some of the findings in this study (Podsakoff et al., 2003).

Table 4.7. Comparison of Model Fit Indices for the Common Method Factor

	χ^2	<i>Df</i>	χ^2/df	<i>CFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Final Measurement Model	2352.38	1299	1.81	.93	.05	.04
Model with the Common Method Factor	2304.08	1298	1.78	.93	.05	.07

Note. χ^2 = Chi-square, *df* = Degrees of freedom, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual.

Structural Model Results

A structural model was run to examining the hypothesized relationships among the following constructs: general credibility (4 items), perceived CSR (5 items), attitude toward the organization (3 items), perceived fit (4 items), perceived effort (2 items),

perceived impact (2 items), cause importance (4 items), environmental credibility (6 items), value congruence (1 item), daily recycling (6 items), and in-game recycling (3 items). As noted above, this model excluded perceived sincerity to address the discriminant validity issue. Additionally, two items were removed from perceived effort, perceived impact, and environmental credibility respectively due to their low factor loadings. Furthermore, value congruence was included as a single-item construct whose values were computed based on personal value and organizational value scales as explained in Chapter 3. The overall model fit of the structural model was assessed using goodness-of-fit indices. The model provided acceptable values for all indices ($\chi^2/df = 1460.64/707 = 2.07$, CFI = .92, RMSEA = .05, SRMR = .09).

Results of Correlation Coefficients

Table 4.8 provides the estimates of correlation coefficients for the structural model. Regarding the antecedents of environmental credibility, all had a significant correlation with the construct at the .01 alpha level: general credibility ($r = .77$), perceived CSR ($r = .83$), attitude toward the organization ($r = .53$), perceived fit ($r = .71$), perceived effort ($r = .88$), perceived impact ($r = .72$), and cause importance ($r = .49$). In addition, consistent with the study's prediction, environmental credibility was significantly associated with daily recycling ($r = .25, p < .01$) and in-game recycling ($r = .48, p < .01$). Moreover, value congruence had a significant positive correlation with environmental credibility ($r = .48, p < .01$), but was not significantly correlated with the two pro-environmental behavior measures: daily recycling ($r = -.04, p = .44$) and in-game recycling ($r = .01, p = .85$).

With respect to un-hypothesized relationships, all antecedents of environmental credibility were significantly related to daily recycling: general credibility ($r = .19, p < .01$), perceived CSR ($r = .21, p < .01$), attitude toward the organization ($r = .13, p < .05$), perceived fit ($r = .18, p < .01$), perceived effort ($r = .22, p < .01$), perceived impact ($r = .18, p < .01$), and cause importance ($r = .12, p < .05$), and in-game recycling: general credibility ($r = .37, p < .01$), perceived CSR ($r = .26, p < .01$), attitude toward the organization ($r = .26, p < .01$), perceived fit ($r = .34, p < .01$), perceived effort ($r = .42, p < .01$), perceived impact ($r = .35, p < .01$), and cause importance ($r = .23, p < .01$). Nevertheless, these coefficients were smaller than the correlation coefficients between environmental credibility and the two outcomes, which appear to suggest that environmental credibility is a more proximate cause of pro-environmental behavior.

Table 4.8. Correlation Matrix for the Structural Model

Constructs	1	2	3	4	5	6	7	8	9	10
1. Attitude toward the organization										
2. Perceived CSR	.62**									
3. Daily recycling	.13*	.21**								
4. Environmental credibility	.53**	.83**	.25**							
5. Perceived effort	.44**	.74**	.22**	.88**						
6. Perceived fit	.43**	.64**	.18**	.71**	.66**					
7. General credibility	.85**	.82**	.19**	.77**	.63**	.53**				
8. In-game recycling	.26**	.40**	.58**	.48**	.42**	.34**	.37**			
9. Cause importance	.16**	.35**	.12*	.49**	.40**	.44**	.24**	.23**		
10. Perceived impact	.32**	.49**	.18**	.72**	.61**	.51**	.49**	.35**	.25**	
11. Value congruence	.26**	.40**	-.04	.48**	.42**	.34**	.37**	.01	.23**	.35**

Note. Correlation coefficient values in the structural model were different from those in the measurement model since the two models contained different sets of the constructs; * $p < .05$, ** $p < .01$.

Results of Path Coefficients

Table 4.9 illustrates the standardized results of the hypothesized paths. The results identified the significant positive effects of general credibility ($\beta = .38, p < .01$), perceived effort ($\beta = .37, p < .01$), perceived impact ($\beta = .23, p < .01$), and cause importance ($\beta = .14, p < .01$), confirming Hypotheses 1, 6, 7, and 8. Contrary to Hypotheses 2 and 4, however, perceived CSR ($\beta = .14, p = .09$) and perceived fit ($\beta = .07, p = .13$) were not the significant predictors of environmental credibility. Moreover, attitude toward the organization was found to have a significant negative effect on environmental credibility ($\beta = -.16, p = .03$), rejecting Hypothesis 3. Together, the hypothesized antecedents explained over 90 percent of the variance in environmental credibility ($R^2 = .93$).

Table 4.9. Standardized Results of the Paths with the Combined Data ($n = 368$)

	Path	β	R^2
<i>Hypothesized direct paths</i>			
H ₁	General credibility → Environmental credibility	.38**	
H ₂	Perceived CSR → Environmental credibility	.14	
H ₃	Attitude toward the organization → Environmental credibility	-.16*	
H ₄	Perceived fit → Environmental credibility	.07	
H ₆	Perceived effort → Environmental credibility	.37**	
H ₇	Perceived impact → Environmental credibility	.23**	
H ₈	Cause importance → Environmental credibility	.14**	.93
H ₉	Environmental credibility → Daily recycling	.35**	
	Environmental credibility → In-game recycling	.62**	
<i>Un-hypothesized direct effects</i>			
	Environmental credibility → Value congruence	.48**	.23
	Value congruence → Daily recycling	-.21**	
	Value congruence → In-game recycling	-.29**	
<i>Hypothesized indirect effects (Sobel test)</i>			
H ₁₀	Environmental credibility → Value congruence → Daily recycling	-.10**	.10
	Environmental credibility → Value congruence → In-game recycling	-.14**	.29

Note. β = Standardized path coefficients; * $p < .05$, ** $p < .01$

With regard to the two pro-environmental behavior measures, the model accounted for 10 percent of the variance in daily recycling ($R^2 = .10$) and 29 percent of the variance in in-game recycling ($R^2 = .29$). More specifically, environmental credibility positively affected both daily recycling ($\beta = .35, p < .01$) and in-game recycling ($\beta = .62, p < .01$), in support of Hypothesis 9. Regarding the mediating effect of value congruence, environmental credibility had a positive effect on value congruence ($\beta = .48, p < .01$) as expected. However, value congruence was found to decrease daily recycling ($\beta = -.21, p < .01$) and in-game recycling ($\beta = -.29, p < .01$), suggesting the negative mediation of value congruence. A Sobel test further confirmed that environmental credibility had indirect negative effects on both outcomes through value congruence, contrary to Hypothesis 10.

Comparison with a Hierarchical Model

The model fit of the original structural model discussed above was further assessed through a comparison with a nested model, following Anderson and Gerbing's (1988) recommendation. Specifically, this nested model specified two organizational factors (perceived CSR and attitude toward the organization) as the direct predictors of general credibility instead of environmental credibility, thereby proposing that they would have indirect effects, rather than direct effects as hypothesized, on environmental credibility through general credibility. Justifications for this model modification came from previous research that found the effects of the two factors on general credibility (e.g., Keller & Aaker, 1998; Schoenfelder & Harris, 2004; Walker & Kent, 2010). In addition, this modification was consistent with the results of the current structural model indicating that these two factors do not positively influence environmental credibility.

The nested model yielded the following fit indices: $\chi^2/df = 1486.22/713 = 2.08$, CFI = .92, RMSEA = .05, SRMR = .09, which support adequate model fit. Results also showed that both perceived CSR and attitude toward the CSR had direct positive effects on general credibility as well as indirect positive on environmental credibility through general credibility as expected. A chi-square difference test, however, suggested that the hypothesized model had a significantly better fit with data than the nested model ($\Delta\chi^2 (\Delta df = 6) = 23.75, p < .01$) (Table 4.10). Consequently, the hypothesized model was retained and used to conduct further analyses.

Table 4.10. Comparison of Model Fit Indices for the Nested Model

	χ^2	<i>Df</i>	χ^2/df	$\Delta\chi^2$	Δdf	CFI	RMSEA	SRMR
Hypothesized model	1460.64	707	2.07	—	—	.92	.05	.09
Nested model	1486.22	713	2.08	23.75 ^{**1}	6	.92	.05	.09

Note. χ^2 = Chi-square, *df* = Degrees of freedom, $\Delta\chi^2$ = Difference in chi-square values, Δdf = Difference in degrees of freedom, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual; The critical value for a χ^2 with *df* = 6 is 12.59 at the .05 level; ** $p < .01$; ¹The chi-square values used for the chi-square difference test were computed based on the formulas explained at the Mplus official website (www.statmodel.com).

Multiple Group Comparison by Program

Since two different environmental initiatives were examined in this study, the results of the hypothesized paths could vary if the structural model is estimated by using the separate data for each program. To address this concern, the study conducted multiple group analysis, which involves the comparison of the model fit between a less restricted multiple group model and a nested, more restricted model through a chi-square difference test (Kline, 2005). In the current study, the less restricted model freely estimated the hypothesized paths for each of the two program-specific groups (i.e., Eagles Go Green

and Phillies Red Goes Green). In contrast, the more restricted model specified that the two groups would produce the equal paths for all paths.

Before testing the invariance of paths in the structural model, the study examined the equality of factor loadings in the measurement model across the two groups. This analysis aimed to assess measurement invariance between the groups, which serves as a requirement for testing the equality of any additional parameters (Kline, 2005). A chi-square difference test revealed that the measurement model with equality constraints fits the data as well as the unconstrained measurement model ($\Delta\chi^2 (\Delta df = 29) = 34.21, p = .77$), supporting measurement invariance.

In contrast, for the structural model, the results of a chi-square difference test showed that the free estimation of the paths for the less restricted model significantly improved the model fit, when compared to the more restricted model ($\Delta\chi^2 (\Delta df = 12) = 23.68, p = .02$). This indicated that the relationships among the constructs would be different for the current data depending on which program was examined. Given this, the study also reports the results of the structural model for each program (see Table 4.11).

Eagles Go Green program. Consistent with the model with the combined data, perceived effort ($\beta = .30, p = .02$), perceived impact ($\beta = .25, p < .01$), and cause importance ($\beta = .14, p < .01$) were found to be significant, whereas perceived CSR had a non-significant effect ($\beta = .30, p = .10$). These results supported Hypotheses 6, 7, and 8, but did not support Hypothesis 2. In addition, environmental credibility had significant effects on both daily recycling ($\beta = .37, p < .01$) and in-game recycling ($\beta = .58, p < .01$), while indirect negative effects through value congruence only for in-game recycling. The results thus confirmed Hypothesis 9 but not Hypothesis 10. In contrast, two differences

from the combined model were identified in this model: the previously identified positive effect of general credibility and negative effect of attitude toward the organization became to be non-significant. As a result, Hypotheses 1 and 3 were rejected.

Phillies Red Goes Green program. Inconsistent with the negative effect of attitude toward the organization identified in the combined model, this model identified its non-significant effect ($\beta = -.01, p = .75$). For the rest of the paths, however, the model showed the consistent results with the original model with the combined sample. Specifically, in line with Hypotheses 1, 6, 7, and 8, general credibility ($\beta = .37, p < .01$), perceived effort ($\beta = .39, p < .01$), perceived impact ($\beta = .22, p < .01$), and cause importance ($\beta = .17, p = .02$) had significant positive effects on environmental credibility. On the other hand, perceived CSR ($\beta = .02, p = .80$) and perceived fit ($\beta = .06, p = .36$) did not have significant effects, rejecting Hypotheses 2 and 4. Furthermore, environmental credibility positively influenced both daily recycling ($\beta = .34, p < .01$) and in-game recycling ($\beta = .62, p < .01$) but negatively affected the outcomes through the mediation of value congruence, retaining Hypothesis 9 but not Hypothesis 10.

Table 4.11. Standardized Results of the Paths for Each Program

	Path	Go Green	Red Goes Green	Consistency of Significance
<i>Hypothesized direct paths</i>				
H ₁	General credibility → Environmental credibility	.26	.37**	No
H ₂	Perceived CSR → Environmental credibility	.30	.02	Yes
H ₃	Attitude toward the organization → Environmental credibility	-.15	-.01	Yes
H ₄	Perceived fit → Environmental credibility	.04	.06	Yes
H ₆	Perceived effort → Environmental credibility	.30*	.39**	Yes
H ₇	Perceived impact → Environmental credibility	.25**	.22**	Yes
H ₈	Cause importance → Environmental credibility	.14**	.17*	Yes
H ₉	Environmental credibility → Daily recycling	.37**	.34**	Yes
	Environmental credibility → In-game recycling	.58**	.62**	Yes
<i>Un-hypothesized direct effects</i>				
	Environmental credibility → Value congruence	.57**	.33**	Yes
	Value congruence → Daily recycling	-.15	-.24**	No
	Value congruence → In-game recycling	-.23*	-.28**	Yes
<i>Hypothesized indirect effects</i>				
H ₁₀	Environmental credibility → Value congruence →	-.09	-.08**	No
	Daily recycling			
	Environmental credibility → Value congruence →			
	In-game recycling	-.13*	-.09**	Yes

Note. β = Standardized path coefficients; * $p < .05$, ** $p < .01$.

Moderating Effect of Value Congruence

Table 4.12 shows unstandardized results for the moderating effect of value congruence using the combined data ($n = 368$) and Red Goes Green data ($n = 230$) respectively. The analysis with the Go Green data ($n = 138$) was not reported since it was subject to the identification issue due to the greater number of the parameters estimated (155) than the sample size. For the combined data, the effect of the interaction variable (value congruence $\times$ environmental credibility) on daily recycling was found to be non-significant ($b = .01$, $p = .12$). In addition, the interaction variable had a non-significant effect on in-game recycling ($b = .01$, $p = .29$). These results rejected Hypothesis 11. For Red Goes Green data, while the interaction effect of value congruence on the relationship

between environmental credibility and in-game recycling remained non-significant ($b = .02, p = .34$), the construct was found to significantly moderate the effect of environmental credibility on daily recycling ($b = .03, p = .03$). These results provided partial support for Hypothesis 11.

Table 4.12. Unstandardized Results of the Moderating Effects of Value Congruence

	Path	Combined	Red Goes Green
H₁₁	Value congruence $\times$ Environmental credibility $\rightarrow$ Daily recycling	.01	.03*
	Value congruence $\times$ Environmental credibility $\rightarrow$ In-game recycling	.01	.02

Note. The analysis with the Go Green data ($n = 138$) was not reported since it was subject to the identification issue due to the greater number of the parameters estimated (155) than the sample size; * $p < .05$

Summary of the Results

In summary, structural model results with the combined data ($n = 368$) indicated that four of the eight hypothesized antecedents of environmental credibility had significant positive effects on the construct: general credibility, perceived effort, perceived impact, and cause importance. In turn, environmental credibility had a direct positive effect on the two recycling behaviors but an indirect negative effect through the mediation of value congruence. The analysis further indicated that there were no moderating effects of value congruence on the relationship between environmental credibility and pro-environmental behavior. Additionally, the multiple group analysis suggested that the identified relationships among the constructs would vary if the data for each program were separately estimated. Specifically, the subsequent analyses found that the significant positive effect of general credibility became non-significant for the Go Green data ($n = 138$) while the other relationships supported using the combined data

remained unchanged. Moreover, the analysis with the Red Goes Green data ($n = 230$) provided consistent support for all the hypotheses identified in the combined data, and additionally identified the significant interaction effect of value congruence on the relationship between value congruence and daily recycling.

CHAPTER 5

DISCUSSION

This dissertation reports the results of two studies that aimed to understand the role of corporate credibility in the promotion of consumer pro-environmental behavior by professional sport organizations (PSOs). First, the pilot study described in Chapter 1 used an experimental design to show that a PSO can enhance its corporate credibility by actively incorporating environmental practices. The results further indicated that increased credibility allowed the PSO to promote pro-environmental behavior among consumers. The main study reported in Chapter 4 confirmed the effect of corporate credibility through the examination of actual CSM initiatives. This study further identified the antecedents of corporate credibility and tested the mediating and moderating effects of value congruence on the relationship between corporate credibility and pro-environmental behavior. The following sections offer detailed explanation for each finding identified. This is followed by discussions regarding the contributions of the dissertation, its limitations, and suggestions for future research. The chapter concludes by offering an overall summary of the dissertation.

Discussion of Findings: Pilot Study

The purposes of the pilot study were (1) to examine the role of corporate credibility in the promotion of pro-environmental behavior by PSOs and (2) to verify if the focus on corporate credibility in the main study could be empirically justified. This pilot study hypothesized that a PSO's positive environmental practices would enhance consumer evaluation of its corporate credibility. In turn, the increased corporate credibility was expected to have a positive effect on pro-environmental behavior

measured in terms of intentions to support the PSO's environmental initiative and to engage in daily pro-environmental behavior. The results of the experiment using fictitious newspaper articles confirmed these predictions, demonstrating the significance of corporate credibility in promoting pro-environmental behavior. These findings add to the literature that has demonstrated that the credibility of non-profit and public organizations influences their ability to promote socially beneficial behavior (e.g., Bendapudi et al., 1996; Craig & McCann, 1978) by indicating this can also apply to the promotion of such behavior by for-profit organizations.

The pilot study, however, contained the following limitations. First, the use of the experimental design limited the study's ability to extend the results to actual CSM programs. Second, the study assessed the effect of corporate credibility in general rather than focusing on corporate credibility in terms of environmental protection. Third, the treatment used manipulated the level of environmental practices by the PSO in a bipolar manner (i.e., positive vs. negative), failing to examine whether more specific characteristics of environmental practices (e.g., effort, impact, fit) would influence consumer perception of credibility. Finally, the study examined the PSO's environmental efforts in a broad term without focusing on a specific type of corporate social initiative, such as CSM. These limitations were incorporated into the main study to further understand the role of corporate credibility.

Discussion of Findings: Main Study

The main study aimed to investigate the role of corporate credibility in understanding the process of how PSOs may influence consumer pro-environmental behavior through their CSM initiatives. More specifically, by examining the

environmental initiatives operated by the two PSOs, this study intended to identify: (1) factors that influence the credibility of a PSO on supporting environmental protection (“environmental credibility”), (2) the direct effect of environmental credibility on consumer pro-environmental behavior, and (3) the mediating and moderating effects of value congruence on the relationship between environmental credibility and pro-environmental behavior.

Preliminary Analyses

Two preliminary analyses were conducted for the survey data obtained from the two separate data collections. First, the study examined the respondents’ demographic characteristics and their responses to the Likert scale items, as summarized in Tables 4.2 and 4.3. Second, multiple regression analyses were performed to examine if the awareness of the two environmental programs would influence respondents’ pro-environmental behavior. The results showed that respondents who were aware of at least one of the programs were more likely to engage in recycling activities than those who were unaware, after controlling for their demographic characteristics. The finding thus provided evidence for the effects of PSOs’ CSM initiatives on consumer voluntary behavior, consistent with Irwin et al. (2010).

Alternatively, this finding may reflect the fact that individuals who were actively engaged in recycling tended simply to be aware of the environmental programs, when compared to individuals who did not practice recycling activities, which is reasonable from an information-seeking standpoint. Therefore, this analysis may be subject to an internal validity issue, requiring further analyses using stronger research designs to confirm both the causality and directionality between exposure to the programs and

consumer recycling behavior. Additionally, although program awareness had a statistically significant effect, its effect sizes were relatively small based on the standardized coefficients (i.e., $\beta_{\text{awareness_dailyrecycling}} = .09$; $\beta_{\text{awareness_gogreen}} = .12$; $\beta_{\text{awareness_redgoesgreen}} = .13$). Consequently, these results provided only limited support for the practical significance of the effectiveness of the two programs.

Measurement Model

For the measurement analysis, this study first assessed the reliability and validity of the perceived impact scale developed in the study. EFA results initially indicated that the items in this scale met Hair et al.'s (1998) criteria for validity and yielded an adequate reliability score ($\alpha = .81$). Next, a CFA was performed with the 63 construct based items included in the survey. After the two revisions involving the elimination of 9 items, the final measurement model provided the adequate model fit as well as the sufficient reliability and validity for each scale based on the criteria suggested by the previous literature (Anderson & Gerbing, 1988; Hair et al., 1998; Hulland, 1999; Kline, 2005).

Despite the identification of the appropriate measurement model, the following three issues need to be discussed. First, although the EFA provided initial support for the reliability and validity of perceived impact, two items were removed due to their low factor loadings in the CFA. A reexamination of this scale suggests that the two items removed may represent a different construct (or different dimension of the same construct) from the other two items retained. That is, the former may capture the physical impact of the programs on the environment (i.e., actual reductions of resources consumed during a game due to the programs) while the latter may capture personal benefits that accrued to consumers due to the programs (i.e., personal learning about the importance of

pro-environmental behavior). Thus, although the content validity of the scale was supported through the experts' evaluation, the CFA results may indicate that the operationalization of the construct was inadequate. One potential reason for this issue is that the current study developed the scale using a broad definition of this construct proposed by Du et al. (2010) without considering its specific domain. According to Churchill (1979), however, the specification of the construct domain clarifies "what is included in the definition and what is excluded" (p.67), and is seen as the most critical step in developing a better measure. As a result, reconsidering what domains perceived impact includes may be necessary to precisely assess the effect of the construct on environmental credibility.

Second, all of the four items removed from environmental credibility and perceived effort were formed as reversed coded items. The use of such items may be problematic since they tend to cause systematic error to scales and further decrease their validity (Hinkin, 1995). Thus, while the two scales were adequately validated in the previous studies (Mohr & Bitner, 1995; Newell & Goldsmith, 2001), the removal or revision of these items may improve the quality of the scales.

Third, the analysis indicated that environmental credibility had a discriminant validity issue with perceived sincerity. Although the two constructs were distinguished by Haley (1996), this may indicate that perceived sincerity conceptually overlaps with the trustworthiness dimension of environmental credibility.

Hypothesis Testing

This section discusses the results of hypothesis testing reported in Chapter 4. First, since the multiple group analysis identified the significant difference in path coefficients

between the two programs examined, the section attempts to explain why this discrepancy occurred. This is followed by discussions regarding each hypothesis primarily based on the results of the structural model with the combined data.

Program difference. The multiple group comparison analysis indicated that the results of the path coefficients significantly differed between the two environmental programs examined: the Philadelphia Eagles *Go Green* program and the Philadelphia Phillies *Red Goes Green* program. As shown in Table 4.11, the inconsistency of statistical significance was found in the path from general credibility to environmental credibility and the path from value congruence to daily recycling. Given the lack of theoretical rationale, the most probable reason for this inconsistency is the discrepancy in the sample size used for the analysis of each program-specific model. That is, since the Eagles Go Green data ($n = 138$) contained a smaller number of observations than the Red Goes Green data ($n = 230$), the structural model with the former data may not have sufficient statistical power to identify the significant effects of the two path coefficients.

However, the above point may not clearly explain why all the path coefficients in the structural model provided somewhat different values between the programs. To ascertain an alternative reason for the program difference, a MANOVA was conducted to compare the composite scores of the constructs between the two programs (see Table 5.1). First, the MANOVA found the significant effect of program type on the overall mean scores ($Wilks' \Lambda = .67, F(11, 356) = 15.87, p < .001$). Furthermore, the mean scores of the following constructs were significantly different between the two programs: general credibility, perceived CSR, attitude toward the organization, perceived fit, perceived effort, environmental credibility, and value congruence.

Table 5.1. Mean Difference by the Program

Construct	Mean Composite Scores		<i>p</i> -value ¹
	Eagles Go Green	Red Goes Green	
General credibility	5.03	6.14	.00
Perceived CSR	5.51	6.08	.00
Attitude toward the organization	5.80	6.81	.00
Perceived fit	5.42	5.90	.00
Perceived effort	5.44	5.72	.01
Perceived impact	3.95	4.22	.11
Cause importance	6.17	6.13	.65
Environmental credibility	5.04	5.38	.00
Value congruence	24.64	26.22	.00
Daily recycling	6.21	6.18	.81
In-game recycling	6.33	6.42	.36

Note. Each composite score was computed as the average rating of survey items used to measure each construct; ¹This indicates the statistical significance of the mean difference between the two programs based on MANOVA.

One notable finding from this analysis is that respondents tended to evaluate the Phillies and their Red Goes Green program more favorably than the Eagles and their Go Green program in terms of three CSM characteristics and environmental credibility. This apparently contradicts with the generally acknowledged view that the Eagles, rather than the Phillies, are regarded as a pioneer in environmentally friendly practices in professional sport (King, 2008). Nevertheless, this result may be understood by taking into account the on-field performance of the two teams during the data collection period (i.e., from the middle to the end of October 2010); the Philadelphia Eagles had a mediocre 2-2 record during the October, while the Philadelphia Phillies played in the

National League Championship Series (NLCS) around the same time. Thus, it may be that high team performance of the Phillies positively influenced respondents' evaluation of other aspects of the organization, such as environmental efforts, while the Eagles did not enjoy such benefit due to their mediocre team performance. The view that on-field success may potentially influence consumer evaluation of CSM is consistent with a halo effect, suggesting that individuals tend to assume that an attractive entity has other positive attributes when information about these attributes is ambiguous (Petty & Wegener, 1998). Therefore, consumers may favorably evaluate a PSO's CSM activity based on its high on-field performance if they do not have accurate knowledge about the activity.

Despite the program difference identified in the multiple group analysis and MANOVA, however, the examination of the path coefficients still indicates that the two programs yielded reasonably similar results (see Table 4.11). Therefore, although the above perspective underscores the importance of considering how team performance may influence the consumer evaluation of CSM, it is possible to identify consistent findings based on the analysis of the two programs. As such, the remaining of this section discusses the results of hypothesis testing mainly based on the structural model with the combined data.

Summary of hypothesis testing results. Table 5.2 summarizes the results of hypothesis testing using the combined data. The table shows that the following four of the eight hypothesized antecedents of environmental credibility had significant positive effects: general credibility, perceived effort, perceived impact, and cause importance. These results thus supported Hypotheses 1, 6, 7, and 8. Environmental credibility, in turn,

was found to positively influence the two recycling behaviors but have an indirect negative effect through the mediation of value congruence. Furthermore, no moderating effects of value congruence on the relationship between environmental credibility and pro-environmental behavior were identified. Consequently, only Hypothesis 9 was supported regarding the consequences of environmental credibility. Detailed discussions regarding each hypothesis are provided below.

Table 5.2. Summary of Hypothesis Testing

Hypothesized Path		Combined Data (n = 368)	
		Identified Effect	Hypothesis Support
H ₁	General credibility → Environmental credibility	+	Yes
H ₂	Perceived CSR → Environmental credibility	n.s.	No
H ₃	Attitude toward the organization → Environmental credibility	–	No
H ₄	Perceived fit → Environmental credibility	n.s.	No
H ₅	Perceived sincerity → Environmental credibility	n/a	No
H ₆	Perceived effort → Environmental credibility	+	Yes
H ₇	Perceived impact → Environmental credibility	+	Yes
H ₈	Cause importance → Environmental credibility	+	Yes
H ₉	Environmental credibility → Daily recycling	+	Yes
	Environmental credibility → In-game recycling	+	
<i>Mediating Effects of Value Congruence</i>			
H ₁₀	Environmental credibility → Value congruence → Daily recycling	–	No
	Environmental credibility → Value congruence → In-game recycling	–	
<i>Moderating Effects of Value Congruence</i>			
H ₁₁	Value congruence × Environmental credibility → Daily recycling	n.s.	No
	Value congruence × Environmental credibility → In-game recycling	n.s.	

Note. + represents the significant positive effect at the .05 alpha level; – represents the significant negative effect at the .05 alpha level; n.s. represents the non-significant effect; n/a represents Not Applicable.

Hypotheses 1-3. Drawing from Haley's (1996) qualitative work and subsequent studies (Du et al., 2010; Speed & Thompson, 2000), this study proposed that the antecedents of a PSO's environmental credibility can be categorized into (1) characteristics of the organization, (2) characteristics of the CSM initiative, and (3) characteristics of the cause. For the first category, the following three factors were expected to have a positive effect on environmental credibility: general credibility, perceived CSR, and attitude toward the organization

First, the significant effect of general credibility was identified, supporting Hypothesis 1. These results suggest that if a PSO is perceived as credible in its services and products, it is likely to be seen as a credible source of promoting pro-environmental behavior. This finding is consistent with the proposition of social psychology research indicating that one's general perception of an object serves as a direct predictor of the perception of specific aspects of that same object (Brown, 1995; Brown & Dacin, 1997; Eagly & Chaiken, 1998). Furthermore, this adds to Haley's (1996) preliminary finding that showed the consumer tendency to evaluate a company with high credibility in general as a credible source of an advocacy message.

Inconsistent with Hypothesis 2, perceived CSR did not have a significant effect on environmental credibility. This non-significant result is somewhat surprising since previous studies consistently found the link between CSR and corporate credibility (Becker-Olsen et al., 2006; Keller & Aaker, 1998; Walker & Kent, 2010). One difference from the previous studies and the current study, however, is that the former examined the effect of perceived CSR on corporate credibility in general, whereas the latter examined its effect on corporate credibility specifically in terms of support for environmental

protection. Indeed, in the chi-square difference test reported in the previous chapter, the nested model showed the significant direct effect of perceived CSR on general credibility and its significant indirect effect on environmental credibility through general credibility. Therefore, one explanation for this non-significant effect is that perceived CSR is directly associated with general credibility but has only an indirect relationship with environmental credibility.

Alternatively, a large overlap between perceived CSR and general credibility as evident from their correlation ($r = .82$) may inhibit the former to exhibit the significant result. This may be seen as a more feasible view since perceived CSR indeed had a strong correlation with environmental credibility ($r = .83$) and the p -value of the path coefficient of the construct was fairly close to the significant level ($p = .09$).

Although Hypothesis 3 proposed that attitude toward the organization would have a positive effect on environmental credibility, the structural model with the combined data showed that this factor had a significant negative effect. The direct interpretation of this result is that the more favorable evaluation consumers have to the PSO, the less likely that they see the organization as credible in supporting environmental issues, holding levels of the other variables constant. Thus, although attitude toward the organization is positively associated with environmental credibility ($r = .53$), this positive correlation can be attributed mainly to its overlap with the other two organizational characteristics (i.e., general credibility and perceived CSR) that are more closely associated with environmental credibility. Once these more cognition-based responses to the PSO are controlled, the unique variance of attitude toward the organization, which represents the affective aspect of attitude consisting of “feelings, moods, emotions, and

sympathetic nervous-system activity” (Eagly & Chaiken, 1998, p.272), may be negatively related to environmental credibility. From this perspective, one speculation is that individuals with a strong affection for the team tend to think that they already know enough of the team and may not pay attention to its new activities, such as CSM involvement. This lack of interest and knowledge may inhibit their ability to adequately evaluate the team’s credibility in addressing the cause, leading to lower credibility ratings.

Hypotheses 4-7. This study identified perceived fit, perceived sincerity, perceived effort, and perceived impact as CSM characteristics that may influence the environmental credibility of the PSO. Among them, perceived sincerity was excluded from the structural model due to the discriminant validity issue as noted earlier. Therefore, this section focuses on discussions regarding the effects of the other three factors on environmental credibility.

First, contrary to Hypothesis 4, the study did not find the significant effect of perceived fit on environmental credibility. Although this result is in conflict with the hypothesis, it can still be explained by the fact that the study examined the fit between the PSOs and the single cause (i.e., environmental protection). Apparently, this led to the invariability in perceived fit, as indicated by a relatively high mean composite fit score of 5.7 (7.0 is the highest possible score) with small variations ($SD = 1.1$). In contrast, previous studies on the effect of fit on corporate credibility (e.g., Becker-Olsen et al., 2006; Rifon et al., 2004) manipulated the company-cause fit by pairing a company with either a high fit cause or a low fit cause in fictitious scenarios, increasing variations in perceived fit. Thus, the analysis of the perceived fit between PSOs and multiple causes may find a significant effect of this construct on corporate credibility.

Second, the results showed that perceived effort positively influenced environmental credibility, supporting Hypothesis 6. This finding provides empirical support for Du et al.'s (2010) recent conceptual work proposing that consumers evaluate a company's social involvement based on the amount of input it has invested in such activities. In addition, while previous research identified the significant effect of effort on positive consumer evaluation of a company and its initiative in broad terms (Ellen et al., 2000; Reed et al., 2007), the current study was the first to demonstrate that this factor specifically influences corporate credibility. Furthermore, an examination of the standardized path coefficient of perceived effort reveals that it had the largest effect on environmental credibility among the three CSM characteristics examined. Consequently, PSO could most effectively enhance its credibility in CSM by providing consumers with information regarding the amount of effort it has put into its CSM initiative.

Third, the positive effect of perceived impact proposed in Hypothesis 7 was also supported by the structural model results. This suggests that consumers are likely to see a PSO as credible in its environmental effort if they think that it has produced actual benefits through its CSM initiatives. As noted earlier, while this study developed the perceived impact scale using a broad definition of the construct suggested by Du et al. (2010), the two items retained specifically measured consumers' *personal learning* from the initiatives. Thus, a more precise interpretation of the current finding may be that consumers evaluate the PSO as more credible when it successfully provides them with useful information and knowledge regarding the cause through its initiative. This perspective may provide an important insight into the way that the PSO designs its CSM initiative. That is, in order for the PSO to enhance its credibility in supporting a given

issue, it should design the program such that consumers can increase knowledge and skills that help them perform given socially beneficial behavior. This should enhance consumers' perception regarding the effectiveness of the program, increasing credibility for the organization.

Hypothesis 8. For the third category, this study proposed that the importance of environmental issues for consumers would affect the environmental credibility of the PSO. Consistent with this proposition, the study identified the positive effect of cause importance on environmental credibility. This result corresponds to the finding of Haley (1996) and other empirical studies (e.g., Creyer & Ross, 1997; Du et al., 2010; Hou et al., 2008) indicating that consumers are more likely to evaluate a company as credible if it sponsors a cause that is personally important to them. This identified effect of cause importance, however, should be interpreted with some caution. That is, while the characteristics included in the other two categories represent variables that can be controlled by a PSO at least to some degree, whether individuals see its supporting cause as important may largely depend on their discretion and thus be beyond the control of the PSO (Bendapudi et al., 1996). Given this, it may be more appropriate to specify cause importance as a moderator that influences the other relationships identified in the model than as an antecedent of environmental credibility (Bendapudi et al., 1996). While the examination of the moderating effect of cause importance is beyond the scope of the current study, this can be an important question for future research.

Hypothesis 9. The major contribution of this study is to demonstrate that corporate credibility with respect to CSM involvement has a significant effect on consumer voluntary behavior. Although the literature has consistently supported the

effect of corporate credibility on business outcomes (e.g., Goldberg & Hartwick, 1990; Goldsmith et al., 2000), only the pilot study reported in this dissertation has explicitly tested the role of corporate credibility in promoting socially beneficial behavior. The main study extended this preliminary finding by confirming the effect of corporate credibility in this respect through the examination of actual programs in the field. This finding contributes to the literature in the following two ways. First, it addresses the concern stated by Bloom et al. (1997) that “a corporation may have less credibility with a target audience...hurting the persuasive ability of its message” (p.18). Although this view may suggest the ineffectiveness of CSM programs by a PSO, the current study showed that consumer evaluations of the credibility of the organization could vary by various characteristics and that the organization could have an effect on voluntary behavior if it is perceived as credible in its CSM engagement.

Second, while sport management scholars have noted that sport can be a vehicle for influencing consumer voluntary behavior (Chalip, 2006; Kaufman & Wolff, 2010; Loakimidis, 2007; Smith & Westerbeek, 2007), they have not yet empirically tested how such effects may occur. The current finding addressed this lack of knowledge by showing that PSOs need to be perceived as credible in order to induce voluntary behavior. One important point related to this implication is that attitude toward the organization could negatively influence pro-environmental behavior through environmental credibility. That is, contrary to the prevailing notion that PSOs should effectively promote voluntary behavior among vested fans (Loakimidis, 2007; Smith & Westerbeek, 2007), the result suggests that these fans may less likely perform promoted behavior.

It should be noted, however, that attitude toward the organization still had a small but significant positive correlation with both pro-environmental behavior measures (see Table 4.8). Thus, the PSO may possibly induce fans to perform given voluntary behavior through a different process in which corporate credibility does not play a major role. Consistent with this, Kelman (1961) indicated that people who have a strong affection for a message source tend to accept its persuasive message regardless of whether the source demonstrates high credibility in a given issue. Therefore, future research could more closely examine if vested fans take a different psychological process to adopt voluntary behavior through CSM.

Hypothesis 10. To further understand the process of behavior change through CSM, this study examined the mediating and moderating effects of value congruence on the relationship between environmental credibility and consumer pro-environmental behavior.

First, based on Kelman's (1961) proposition, Hypothesis 10 posited that value congruence mediates the effect of environmental credibility on the two recycling behaviors. The rationale for this hypothesis was that consumers tend to perceive that their values are congruent with those of the PSO if they find it credible. In turn, enhanced value congruence leads the individuals to perform behavior aligned with the organization's values (Kelman, 1961). Specifically, this study examined value congruence in terms of biospheric-altruistic values which have been shown to affect one's decisions to perform pro-environmental behavior (Dietz et al., 2005; Stern et al., 1998, 1999). As expected, the results of the structural model for all the datasets found that environmental credibility had a positive effect on value congruence. Value

congruence, however, had a negative effect on the two recycling measures, suggesting that as consumers perceive higher value congruence with the PSO, they are less likely to perform proenvironmental behavior. The Sobel test results further identified the negative mediation of value congruence, rejecting Hypothesis 10.

While this finding is inconsistent with the theoretical proposition, the following three points must be mentioned. First, the fact that environmental credibility had a negative indirect effect on pro-environmental behavior through value congruence does not greatly diminish its overall positive effect. As shown in Table 5.3, the total effect of environmental credibility, which is calculated as the sum of its direct and indirect effects, was statistically significant for both daily recycling ($\beta = .25, p < .01$) and in-game recycling ($\beta = .48, p < .01$). Thus, it is still legitimate to conclude that environmental credibility positively influences pro-environmental behavior.

Second, while the structural model results indicated that value congruence had a significant negative effect on the two recycling behaviors, the bivariate correlation between value congruence and each behavior was non-significant ($r_{\text{value congruence_daily recycling}} = -.04$; $r_{\text{value congruence_in-game recycling}} = .01$). This may suggest that the path coefficients of value congruence in the structural model were somewhat inflated due to its associations with other constructs in the model.

Table 5.3. The Direct and Indirect Effects of Environmental Credibility ($n = 368$)

Direct/indirect Effect	Path	Standardized coefficient
<u>Daily recycling</u>		
Direct effect	Environmental credibility → Daily recycling	.35**
Indirect effect	Environmental credibility → Value congruence → Daily recycling	-.10**
Total effect	The sum of direct and indirect effects	.35 + (-.10) = .25**
<u>In-game recycling</u>		
Direct effect	Environmental credibility → In-game recycling	.62**
Indirect effect	Environmental credibility → Value congruence → In-game recycling	-.14**
Total effect	The sum of direct and indirect effects	.62 + (-.14) = .48**

Note. ** $p < .01$

Third, the use of difference scores for measuring value congruence may have led to methodological issues (Edwards, 1993). As noted in Chapter 3, this study computed value congruence scores based on the sum of absolute differences of ratings between the same sets of questions included in the personal value and organizational value scales. Although this method is one of the most common approaches used in the literature, it is problematic since the extent of value congruence for each respondent was determined without considering his or her original evaluation of the two value scales (Edwards, 1993; Kristof, 1996; Kristof-Brown et al., 2005). Consequently, in extreme cases, individuals who rated the lowest possible scores for both personal value and organizational value scales were assigned the same value congruence score with those who rated the highest possible scores for both scales. As an alternative method, Edwards and his colleagues (Cable & Edwards, 2004; Edwards, 1993; Edwards & Parry, 1993) recommended using a

polynomial regression approach to measuring value congruence. This approach, however, also has limitations in terms of both methodological and conceptual aspects, and is not analytically feasible when the analysis involves the estimation of mediation and moderation effects (Kristof, 1996; Kristof-Brown et al., 2005). Given these issues, establishing an appropriate method to capture value congruence, though it may not be achieved in the short term, is required to verify its negative mediation as identified in this study.

Hypothesis 11. In addition to its mediating effect, Hypothesis 11 suggested that value congruence moderates the effect of environmental credibility on pro-environmental behavior. Although this hypothesis was drawn from organizational research (e.g., Jung et al., 2009; Witt, 1998) and persuasion research (e.g., Feldman, 1984), the analysis did not find strong support. Specifically, the significant result was identified only in the moderating effect of value congruence on daily recycling for Red Goes Green data. This finding indicates that the effect of environmental credibility on daily recycling was greater for respondents who perceived higher value congruence with the Philadelphia Phillies. As with the results of the mediating effect, however, this should be seen as a tentative conclusion because of measurement issues regarding value congruence, requiring additional investigation for validation.

Contributions of the Dissertation

The results of the main study confirmed the framework developed by Haley (1996) and other researchers (Du et al., 2010; Speed & Thompson, 2000) by showing that consumers formulate their perceptions of corporate credibility regarding CSM based on organizational, CSM, and cause characteristics. While several studies attempted to

identify the antecedents of corporate credibility (Becker-Olsen et al., 2006; Keller & Aaker, 1998; Walker & Kent, 2010), the current study is distinguishable from these studies in terms of its simultaneous examination of multiple antecedents, focus on corporate credibility regarding CSM involvement, and use of the field survey design. Specifically, the four factors that had a significant positive effect on environmental credibility, including general credibility, perceived effort, perceived impact, and cause importance, collectively accounted for approximately 90 percent of the variance in this construct. As such, one practical implication to be drawn from these results are that PSOs could increase their credibility in supporting a given cause by maintaining high credibility in their products and services, providing information on the amount of effort they put into their CSM initiatives as well as actual benefits of the initiatives, and sponsoring causes that are personally important to their target consumers.

Second, this dissertation demonstrated that corporate credibility with respect to CSM involvement has a significant effect on consumer voluntary behavior. Although the literature exists to support the persuasiveness of source credibility (e.g., Kelman, 1958; Maddux & Rogers, 1980; Mills & Harvey, 1972) and the effect of corporate credibility on business outcomes (Goldberg & Hartwick, 1990; Goldsmith et al., 2000; MacKenzie & Lutz, 1989), little investigation has been undertaken to examine if corporate credibility influences consumer voluntary behavior. The dissertation filled this gap by demonstrating the effect of corporate credibility in this respect through the experiment and the field survey on actual CSM programs. Furthermore, the results of the two reported studies indicated that environmental credibility was significantly associated with not only pro-environmental behavior specifically related to the programs (e.g., recycling during

games) but also pro-environmental behavior in daily life (e.g., recycling in daily life). This finding shows that enhanced credibility may allow PSOs to promote related voluntary behavior in a way that exceeds the scope of their programs.

Third, this dissertation provided insight into the psychological process of how corporate credibility influences voluntary behavior by examining the role of value congruence. In spite of the failure to confirm the positive mediating and moderating effects of value congruence, the dissertation made a contribution to the literature by offering theoretical propositions regarding why the construct may influence the effects of corporate credibility. Moreover, discussions regarding methodological issues on value congruence were provided as a possible explanation for its non-positive effects. Consequently, this dissertation should serve as a basis for more rigorous future studies testing the role of value congruence in the relationship between corporate credibility and voluntary behavior.

Fourth, this dissertation highlighted the importance of explicitly examining CSM among the other corporate social initiatives by Kotler and Lee (2005a, 2006b). Specifically, in line with Du et al. (2008) and Irwin et al. (2010), the main study showed that PSOs can influence one's voluntary behavior through CSM initiatives. Thus, the current finding, together with the two previous studies, provided support for Kotler and Lee's argument that CSM is effective in creating social benefits.

Along with its contributions to the broader literature, this dissertation offers three significant insights into the sport management literature. First, while sport management scholars suggested that sport can be a vehicle for influencing consumer voluntary behavior (Chalip, 2006; Smith & Westerbeek, 2007), no empirical investigation was

undertaken into this notion. This dissertation thus empirically demonstrates that sport organizations need to enhance their credibility to become an effective promoter of such behavior. Second, consistent with the growing importance of investigating the social impacts of sport organizations (Godfrey, 2009), the dissertation provided evidence that sport organizations could make a positive impact on society by effectively promoting pro-environmental behavior. Third, since effects on voluntary behavior may be translated into effects on customer behavior, the current findings regarding the process of how consumers change their voluntary behavior should eventually benefit PSOs that implement CSM (Kotler & Lee, 2005a, 2005b). Specifically, the possible corporate benefits that can result from changes in voluntary behavior include: the creation of brand preference, support for brand positioning, the development of a market, and increased sales (Kotler & Lee, 2005a, 2005b).

Limitations of the Dissertation

This dissertation contains the following limitations. First, the main study tested the theoretical framework by conducting the field surveys. The adoption of the field study design was consistent with the suggestion of Pornpitakpan (2004) who pointed out the need for more studies to test the effect of source credibility in real settings. This design further allowed the study to confirm the pilot study's findings about the main effect of corporate credibility. Nevertheless, since this design limits internal validity to establish causality among the constructs, especially for the relationships not examined by the pilot study, future research should assess the indentified relationships through experimental studies.

Second, the main study initially collected data from a conveniently selected sample, which limited the generalizability of the results to the population. To address this issue, the study conducted the second data collection through random sampling and empirically demonstrated the absence of sampling bias by comparing the two sampling groups. Nevertheless, since the majority of the data were collected from conveniently selected respondents and the final response rate (5%) was very low, the study's generalizability is still limited. Furthermore, the external validity of the results further suffered due to the examination of the environmental programs operated by the two teams located in the same city. Indeed, multiple group comparison analysis indicated that the results of the structural model significantly differed across the programs. Consequently, further investigation is necessary to test the theoretical model using data obtained from different programs.

Third, the identification of the adequate measurement model involved two revisions with the elimination of nine items. Specifically, measurement issues were identified in terms of the operationalization of perceived fit, the use of reversed coded items and the discriminant validity between perceived sincerity and environmental credibility. Although the revisions led to the sufficient reliability and validity of each scale, the reconsideration of items with identified issues may be necessary to adequately assess the theoretical framework.

Fourth, although the common method bias was addressed by including the latent method factor, this technique still has several disadvantages, such as its inability to distinguish common method variance from unexplained variance associated with unmeasured exogenous factors (Podsakoff et al., 2003). Furthermore, the possibility that

common method bias inflated correlations among some constructs cannot be ruled out since the study collected data regarding all constructs using the same instrument at the same time. Therefore, the use of a more robust technique, such as the multi-trait, multi-method (MTMM) model, is desirable to address common method bias more comprehensively.

Fifth, the study conducted the measurement model analysis and structural model analysis using the same data sets. This lack of the cross-validation effort may be problematic since these models could represent a sample-specific model that fits with the current data only. Thus, the confirmation of the models using different data obtained from additional data collection is needed to validate the study's results.

Finally, this study explicitly examined the role of corporate credibility in investigating the effectiveness of CSM. The existing literature, however, suggests that other persuasion variables, such as message (e.g., the quality of the message arguments) and recipient characteristics (e.g., issue-relevant knowledge), should also influence the effectiveness of CSM (Bendapudi et al., 1996; Haley, 1996; Petty & Wegener, 1998; Pornpitakpan, 2004). Indeed, the results showed that environmental credibility explained relatively small variations in consumer decisions to perform pro-environmental behavior ($R^2_{daily\ recycling} = .10$; $R^2_{in-game\ recycling} = .29$). Thus, more investigation on the effects of various persuasion variables is needed to fully understand CSM influences on individual behavior.

Directions for Future Research

With respect to the effectiveness of promoting voluntary behavior by PSOs, further investigation is required to ascertain whether a PSO can promote such behavior

more effectively than a company in other industries. This line of investigation can test Smith and Westerbeek's (2007) argument that "sport, more than any other potential vehicle, contains qualities that make it a powerful force in effecting positive social contributions" (p.25). Consequently, by finding evidence to support greater effects by sport organizations, a future study would offer additional insight about the social impact of sport.

Second, there is a growing trend to use sport organizations and star athletes for promoting non-sport organizations' social initiatives. For example, the United Nation's *Sport and Environment* program has partnered with large sporting events, such as the Olympics, and various athletes to promote environmentally responsible practices and behavior (United Nations Environment Programme, n.d.). Accordingly, one important research question would be whether or not the involvement of sport can increase the effectiveness of a non-sport organization's social marketing initiatives.

Third, although this dissertation specifically investigated the effect of CSM on consumer voluntary behavior, an important research question may be whether these activities also benefit PSOs through the creation of consumer related outcomes. Indeed, a growing body of the literature has examined the business outcomes of CSR activities in the context of sport organizations (e.g., Inoue et al., in press; Walker & Kent, 2009, 2010), but they failed to explicitly investigate the strategic implications of CSM initiatives. This is inconsistent with the argument of Kotler and Lee (2005b) that CSM "is the 'best of breed' among alternative corporate social initiatives in terms of support for marketing goals and objectives" (p.29). In particular, given that Kotler and Lee (2005a, 2005b) provided some possible business outcomes, such as the creation of brand preference and

the development of a market, future studies testing the effects of CSM on these outcomes should contribute to the further understanding of CSM in terms of strategic implications.

Fourth, the analysis of the program difference reported in this chapter identified the potential halo effect in that the on-field success of PSOs may bias consumer perception of their CSM initiatives. In addition, according to Platow et al. (1999), team performance may further influence the consumer decision to adopt voluntary behavior promoted by the PSO. Specifically, by examining the effect of game outcomes on donation behavior of sport consumers during a football game, the researchers found that fans of the winning team were more willing to donate money to a charity after the game than fans of the losing team (Platow et al., 1999). Therefore, additional investigation about how on-field performance may interact with the factors examined in this study in promoting voluntary behavior should provide an interesting insight into the literature.

Fifth, the finding regarding the effect of attitude toward the organization suggested that fans with a strong affection for the PSOs may accept behavior changes through a different process than the framework proposed by the current research. Therefore, future research should seek to develop a theoretical framework that explicitly explains factors that influence these fans to perform socially beneficial behavior. In particular, given that the sport consumer psychology literature has identified several psychological constructs unique to sport fans, such as fan loyalty and team identification (e.g., Cialdini et al., 1976; Funk, Haugtvedt, & Hovard, 2000; Funk & James, 2001; Wann & Branscombe, 1990), the investigation of how these constructs influence the CSM effectiveness may contribute to establishing a body of knowledge distinctive to the sport management discipline.

Sixth, in order to increase the generalizability of the current results, future research should test the hypothesized model by collecting data from different CSM programs operated by PSOs. Furthermore, such data should be analyzed through a more advanced SEM technique, such as multilevel modeling (Muthén & Muthén, 1998-2007), in order to minimize systematic errors associated with specific programs.

Seventh, as discussed in the result chapter, about the half of the initial respondents noted that they were unaware of the two environmental programs. This finding may indicate the failure of the teams to effectively communicate their environmental efforts to consumers. In line with this, Walker, Kent, and Vincent (2010) recently found that U.S. professional sport teams tend to rely on a one-way communication strategy to promote their CSR activities, failing to use more interactive mediums, such as social networking services. Thus, future studies should identify communication strategies that enable PSOs to increase consumers' awareness of their community involvement.

Finally, since this study measured pro-environmental behavior in terms of self-reported activities, the impacts of CSM on actual behavior is not known. One possible way to overcome this limitation is to design intervention programs that allow for the examination of actual behavior change by collaborating with PSOs. This should advance the theoretical understanding of CSM effects as well as help PSOs create more effective programs.

Conclusion

Although scholars have proposed the significance of using sport as a vehicle to promote voluntary behavior (Chalip, 2006; Kaufman & Wolff, 2010; Loakimidis, 2007; Smith & Westerbeek, 2007), the existing literature had yet to empirically examine this

proposition. Thus, this dissertation investigated the process of how PSOs may influence consumer voluntary behavior through their CSM initiatives by focusing on the role of corporate credibility. The results of the two reported studies indicated that the credibility of PSOs in supporting given social issues determines their ability to influence consumer voluntary behavior. Furthermore, this dissertation empirically demonstrated that corporate credibility is the function of organizational, CSM, and cause characteristics. These findings largely supported the theoretical framework developed in this dissertation, and can serve as a valuable basis for future research on this topic.

In conclusion, there has been important work done in several contexts to show the meaningfulness of corporate social activities by sport organizations (Chalip, 2006; Godfrey, 2009; Irwin et al., 2010; Smith & Westerbeek, 2007). This dissertation contributes to this line of work by highlighting the role of corporate credibility when professional sport organizations engage in such activities. Moreover, this dissertation, as well as future endeavors, helps sport organizations become an effective vehicle for promoting socially beneficial behavior, which ideally can lead to positive social change.

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APPENDIX A

STIMULI USED FOR THE PILOT STUDY

Positive Scenario

Most people associate the [Sport Team A] with their hard play on the court. A little known fact, however, is that the [Sport Team A] is a pioneer in their active role as a corporate champion of supporting the natural environment. Unlike many other professional sports teams, the [Sport Team A] implements a comprehensive environmental program to minimize their impact on the environment. For example, the [Sport Team A] is one of the few professional sports teams that set up recycling bins for plastic bottles at their home games. The [Sport Team A] prints game tickets and programs on recycled paper. In addition, the [Sport Team A] is the first professional sports team to operate on 100% renewable energy at their playing and practice facilities. In order to promote the use of public transportation, the [Sport Team A] offer a discount to any fans that show a public transportation pass at their team merchandise store.

As part of this environmental effort, the [Sport Team A] will launch a new Tree Planting Project. This Tree Planting Project is designed to plant trees in the [City C] area to offset carbon emissions from away-game air travel. The [Sport Team A] will also provide fans with the opportunity to participate in the project by allowing them to purchase a tree to be planted through the official team website.

Negative Scenario

Most people associate the [Sport Team A] with their hard play on the court. A little known fact, however, is that the [Sport Team A] is a laggard in their role in supporting the natural environment. Unlike many other professional sports teams, the [Sport Team A] has yet to implement any comprehensive environmental program to minimize their impact on the environment. For example, until recently, the [Sport Team A] did not set up recycling bins for plastic bottles at their home games. While most professional sports teams now print game tickets and programs on recycled paper, the [Sport Team A] does not use any kind of recycled materials. In addition, the [Sport Team A] is one of the last [League B] teams to adopt renewable energy at their playing and practice facilities. Unlike other teams, the [Sport Team A] does not have any initiative to promote the use of public transportation

However, the [Sport Team A] has recently recognized they are lagging in the industry and have decided they need to increase their efforts to support the environment. As a first step, the [Sport Team A] will launch a new Tree Planting Project. This Tree Planting Project is designed to plant trees in the [City C] area to offset carbon emissions from away-game air travel. The [Sport Team A] will provide fans with the opportunity to participate in the project by allowing them to purchase a tree to be planted through the official team website.

APPENDIX B

APPROVAL FROM THE DAILY NEWS

Feb. 25, 2010

Office for Human Subjects Protections
Institutional Review Board
3400 North Broad Street
Philadelphia, PA 19140

Protocol Number: 12977
Project Title: Philadelphia Sport Fan Attitudes

Dear Board members:

Please accept this letter as certification that Dr. Robert Aubrey Kent and the Sports Industry Research Center have been granted access to selected e-mail addresses of subscribers to Philly.com's Sports Preview Newsletter. Philly.com is the Web site of the Philadelphia Daily News.

As is stated in Philly.com's privacy policy, subscribers' e-mail addresses will not be retained by the surveyor or used for any purpose other than the survey.

Should you need additional information, please do not hesitate to contact Josh at 215-854-5212 or via email at barnetj@phillynews.com.

Thank you for your time and consideration.

Sincerely,

Josh Barnett
Executive Sports Editor
Philadelphia Daily News

And Wendy Warren
Editor
Philly.com

APPENDIX C

IRB APPROVAL

Research Review Committee B

Certification of Approval for a Project Involving Human Subjects

Protocol Number: 13354

PI: Kent, Robert A.

Approved On: 31-Aug-2010

Review Date: 31-Aug-2010

Committee: B BEHAVIORAL AND SOCIAL SCIENCES

Department: TOUR & HOSP-REC&LEISR (2102)

Project Title: Investigating the role of corporate credibility on consumer outcomes when a sport team engages in corporate social marketing.

In accordance with the policy of the Department of Health and Human Services on protection of human subjects in research, it is hereby certified that protocol number 13354, having received preliminary review and approval by the department of TOUR & HOSP-REC&LEISR (2102) was subsequently reviewed by the Institutional Review Board in its present form and approved on 31-Aug-2010 with respect to the rights and welfare of the subjects involved; appropriateness and adequacy of the methods used to obtain informed consent; and risks to the individual and potential benefits of the project.

In conforming with the criteria set forth in the DHHS regulations for the protection of human research subjects, and in exercise of the power granted to the Committee, and subject to execution of the consent form(s), if required, and such other requirements as the Committee may have ordered, such orders, if any, being stated hereon or appended hereto.

It is understood that it is the investigator's responsibility to notify the Committee immediately of any untoward results of this study to permit review of the matter. In such case, the investigator should call Richard Throm at 707-8757.

A handwritten signature in black ink, appearing to read 'Zebulon Kendrick', written over a horizontal line.

ZEBULON KENDRICK, Ph.D.
CHAIRMAN, IRB

APPENDIX D

INTRODUCTORY MESSAGE

Dear Sir/Madam,

Thank you for your previous participation in the Daily News/Temple University Sports Fan Project and your continued interest in our research. We would like to invite you to take part in a new project on how fans view current environmentally friendly practices sponsored by professional sports teams in the Philadelphia area. We ask that you complete a survey that will take approximately 10 minutes. At the end of the survey, you can register for a chance to win one of the five **\$100 Cash Prizes**.

Please choose one of the followings options to start the survey:

1. If you are more familiar with the Go Green Program by the Philadelphia Eagles, please visit the following link:
http://templesthm.qualtrics.com/SE/?SID=SV_ewEoUTbDSEEqBDe
2. If you are more familiar with the Red Goes Green Program by the Philadelphia Phillies, please visit the following link:
http://templesthm.qualtrics.com/SE/?SID=SV_dgTPfBq6vD6fona
3. If you are unfamiliar with either of the programs noted above, please visit the following link:
http://templesthm.qualtrics.com/SE/?SID=SV_38IUQnHhwIVd6Uk

Thank you again for your participation!

APPENDIX E

CONSENT FORM

For the Philadelphia Eagles Go Green Survey

Sport Industry Research Center TEMPLE UNIVERSITY®

Dear Sir/Madam,

I am a graduate student under the direction of Professor Aubrey Kent in the School of Tourism and Hospitality Management/the Sport Industry Research Center (SIRC) at Temple University. I am conducting a research study to understand how fans evaluate the “Go Green” program implemented by the Philadelphia Eagles.

I am requesting your participation in the project, which will require you to fill out a questionnaire. You will be answering questions that express what you think about the Eagles and their Go Green program. It will take approximately 10 minutes to complete the questionnaire, and you can register to win one of the five **\$100 Gift Certificates**.

Your participation in this study is voluntary. You may choose not to participate and/or to withdraw from the study at any time. The questionnaire is anonymous. All documents and information pertaining to this research study will be kept confidential, unless required by applicable federal, state, and local laws and regulations to be disclosed. Records and data generated by the study may be reviewed by Temple University and its agents and/or governmental agencies to assure proper conduct of the study and compliance with regulations. The results of this study may be published. If any data is published, you will not be identified by name.

If you have any questions about this study, please contact Yuhei Inoue (research assistant at the SIRC) at (215) 204-6898 (email: yuhei.inoue@temple.edu) or Aubrey Kent, Ph.D. (the SIRC Director) at (215) 204-3810 (email: aubkent@temple.edu). You may also contact the Institutional Review Board Coordinator at (215) 707-339 (email: IRB@temple.edu).

Completion of the questionnaire will be considered your consent to participate. Thank you for your participation.

Sincerely,
Yuhei Inoue

For the Philadelphia Phillies Red Goes Green Survey

Sport Industry Research Center

TEMPLE UNIVERSITY®

Dear Sir/Madam,

I am a graduate student under the direction of Professor Aubrey Kent in the School of Tourism and Hospitality Management/the Sport Industry Research Center (SIRC) at Temple University. I am conducting a research study to understand how fans evaluate the “Red Goes Green” program implemented by the Philadelphia Phillies.

I am requesting your participation in the project, which will require you to fill out a questionnaire. You will be answering questions that express what you think about the Phillies and their Red Goes Green program. It will take approximately 10 minutes to complete the questionnaire, and you can register to win one of the five **\$100 Gift Certificates**.

Your participation in this study is voluntary. You may choose not to participate and/or to withdraw from the study at any time. The questionnaire is anonymous. All documents and information pertaining to this research study will be kept confidential, unless required by applicable federal, state, and local laws and regulations to be disclosed. Records and data generated by the study may be reviewed by Temple University and its agents and/or governmental agencies to assure proper conduct of the study and compliance with regulations. The results of this study may be published. If any data is published, you will not be identified by name.

If you have any questions about this study, please contact Yuhei Inoue (research assistant at the SIRC) at (215) 204-6898 (email: yuhei.inoue@temple.edu) or Aubrey Kent, Ph.D. (the SIRC Director) at (215) 204-3810 (email: aubkent@temple.edu). You may also contact the Institutional Review Board Coordinator at (215) 707-339 (email: IRB@temple.edu).

Completion of the questionnaire will be considered your consent to participate. Thank you for your participation.

Sincerely,
Yuhei Inoue

APPENDIX F

QUESTIONNAIRE ITEMS

General credibility (Becker-Olsen, Cudmore, & Hill, 2006)

- *(Organization name)* is an organization I can trust.
- *(Organization name)* is an organization that cares about its fans.
- *(Organization name)* has a strong value system.
- *(Organization name)* is an organization I believe in.

Perceived CSR (Lichtenstein, Drumwright, & Braig, 2004)

- *(Organization name)* is committed to using a portion of its profits to help nonprofits.
- *(Organization name)* gives back to the community in which it does business.
- Local nonprofits benefit from *(Organization name)*'s contributions.
- *(Organization name)* integrates charitable contributions into its business activities.
- *(Organization name)* is involved in corporate giving.

Attitude toward the organization (MacKenzie & Lutz, 1989)

- Good – Bad
- Pleasant – Unpleasant
- Favorable – Unfavorable

Perceived fit (Becker-Olsen, Cudmore, & Hill, 2006)

(Organization name) and its support for the environment...

- Low fit – Strong Fit
- Dissimilar – Similar
- Inconsistent – Consistent
- Not complementary - Complementary

Perceived sincerity (Speed & Thompson, 2000)

- The main reason *(Organization name)* would be involved in the *(Program name)* is because the organization believes the environment deserves support.
- *(Organization name)* would be likely to have the best interests of the environment at heart.
- *(Organization name)* would probably operate *(Program name)* even if the program received little publicity.

Perceived effort (Mohr & Bitner, 1995)

- *(Organization name)* exerts a lot of energy in *(Program name)*.
- *(Organization name)* does not spend much time in operating *(Program name)*.
- *(Organization name)* does not try very hard in running *(Program name)*.
- *(Organization name)* puts a lot of effort into *(Program name)*.

Perceived impact (Developed in this study)

- I have learned the importance of recycling through (*Program name*).
- (*Program name*) has significantly reduced energy consumption at the stadium through the adoption of renewable energy (e.g., solar energy).
- (*Program name*) has significantly reduced the amount of waste through game-day recycling efforts (e., placing recycling bins throughout the stadium).
- I have learned the importance of energy savings through (*Program name*).

Cause importance (Schuhwerk & Lefkoff-Hagius, 1995)

- I am concerned about the environment.
- The condition of the environment affects the quality of my life.
- I am willing to make sacrifices to protect the environment.
- My actions impact on the environment.

Environmental credibility (Newell, & Goldsmith, 2001)

- (*Organization name*) has a great amount of experience in supporting environmental protection.
- (*Organization name*) is skilled in what they do in (*Program name*).
- (*Organization name*) has great expertise in supporting environmental protection.
- (*Organization name*) does not have much experience in supporting environmental protection.
- I trust (*Organization name*) in its environmental efforts.
- (*Organization name*) makes truthful claims in (*Program name*).
- (*Organization name*) is honest in its environmental efforts.
- I do not believe what (*Organization name*) tells me in (*Program name*).

Value congruence (Edwards & Cable, 2009)

- How important is this to you?
- How important is this to (*Organization name*)?

Biospheric-altruistic values (Stern, Dietz, & Guagnano, 1998)

- Protecting the environment, preserving nature.
- Unity with nature, fitting into nature.
- Respecting the earth, harmony with other species.
- A world at peace, free of war and conflict.
- Social justice, correcting injustice, care for the weak.
- Equality, equal opportunity for all.

Daily recycling behavior (Webb, Mohr, & Harris, 2008)

- I recycle cardboard.
- I recycle plastic containers.
- I recycle magazines.
- I recycle aluminum cans.
- I recycle steel/t in cans.

- I recycle paper.

In-game recycling intensions (McCullough & Cunningham, 2010)

- I intend to recycle my plastic bottles after consumption during the (*Organization name*)’s game at the (*Stadium name*).
- I will try to recycle my plastic bottles after consumption during the (*Organization name*)’s game at the (*Stadium name*).
- I plan to recycle my plastic bottles after consumption during the (*Organization name*)’s game at the (*Stadium name*).

Familiarity of the program (Lafferty, Goldsmith, & Hult, 2004; Simonin & Ruth, 1998)

(*Program name*) is...

- Unfamiliar – Familiar
- Not recognized – Recognized
- Had not heard of – Had heard of

Program awareness (Developed in this study)

- Please choose the answer that describes (*Program name*) most appropriately.
 - (*Program name*) is a marketing initiative that aims to increase (*Organization name*)’s ticket/sponsorship sales.
 - (*Program name*) is an environmental initiative that aims to protect the natural environment.
 - (*Program name*) is an educational initiative that aims to support youth education.
 - (*Program name*) is a youth health initiative that aims to promote physical activities among children.

Demographic questions

- What is your gender?
 - Male
 - Female
- What is your current age?
 - Less than 25
 - 25-34
 - 35-44
 - 45-54
 - 55-64
 - 65 years and over
 - Prefer not say
- What is your ethnicity?

- ☐ African-American or Black
- ☐ Asian
- ☐ Pacific Islander
- ☐ Caucasian or White
- ☐ Hispanic or Latino
- ☐ Native American
- ☐ Other [_____]
- ☐ Prefer not say

- What is your marital status?
 - Single
 - Married or Living with Partner
 - Other []
 - Prefer not say

- Please indicate the highest level of education that you have completed.
 - Graduate degree or higher
 - Undergraduate degree
 - Some college/university
 - Secondary or high school diploma
 - Other []
 - Prefer not say

- What is your approximate annual household income level? (in U.S. dollars)
 - Below \$25,000
 - \$25,000 - \$34,999
 - \$35,000 - \$44,999
 - \$45,000 - \$59,999
 - \$60,000 - \$74,999
 - \$75,000 - \$99,999
 - \$100,000 - \$149,000
 - \$150,000 - \$200,000
 - Over \$200,000
 - Prefer not say

- On average how many (*Organization name*)’s games will you attend (in person) in a given year?
 - None
 - 1-4
 - 5-10
 - 11-20
 - 20+

APPENDIX G

CONTENT ANALYSIS FORM

Dear Sir/Madam,

Hello, my name is Yuhei Inoue. I am a doctoral candidate under Dr. Aubrey Kent at Temple University. For my doctoral dissertation, I am conducting a research project to investigate how professional sport teams may influence consumers' pro-environmental behaviors, such as recycling, through corporate social marketing (CSM) initiatives.

CSM refers to "a means whereby a corporation supports the development and/or implementation of a behavior change campaign intended to improve public health, safety, the environment, or community well-being" (Kotler & Lee, 2005, p.114). The major goal of CSM is to persuade individuals to perform socially beneficial behaviors. Given their intended influences on behaviors, CSM initiatives are thought to have great potential in creating social benefits. This study aims to identify factors that determine the effectiveness of CSM as well as to assess the effects of CSM on consumers' behaviors.

I would like to request your feedback in the development of measures for a key attribute of a CSM program: perceived impact. In developing surveys, it is crucial to have expert feedback to confirm whether the proposed measures are valid. This should only take about five minutes to complete.

The following page provides four items representing the attribute of perceived impact. The proposed items will be measured on a seven-point Likert type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). I request that you rate the extent to which you think each item represents the definition given for each domain. I would also appreciate if you provide comments on the words and phrases used in the scale items.

If you have any questions, please feel free to contact me at (267) 616-2993 or email: yuhei.inoue@temple.edu.

Thank you for your time and cooperation in this matter.

Sincerely,
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Based on the definition of perceived impact provided below, please rate each item as being *Clearly Representative* (2), *Somewhat Representative* (1), or *Not Representative* (0) of this construct. Please circle the appropriate number (e.g., 0 1 ②) in the scale beside each statement. Please provide any suggestions for improving the items under the column “Suggestions for changes”.

Definition

The construct of ***Perceived Impact*** is defined as “consumers’ perception of the impact of a professional team’s environmental program on the environment.”

Survey Context

The environmental programs asked in the survey incorporate activities, such as the promotion of environmental protection through websites and other media, in-stadium recycling, the use of renewable energy, and participation in community clean-up events. Note that before responding to these items, respondents will be asked to answer a set of questions measuring their awareness of these programs. This will ensure that respondents have a certain degree of knowledge about the content of the programs prior to the survey.

Proposed Items

Items	Not representative	Somewhat representative	Clearly representative	Suggestions for changes
1. A large number of people have learned the importance of recycling through the program. ¹	0	1	2	
2. This program has significantly reduced energy consumption at the stadium through the adoption of renewable energy (e.g., solar energy).	0	1	2	
3. This program has significantly reduced the amount of waste through game-day recycling efforts (e., placing recycling bins throughout the stadium).	0	1	2	
4. A large number of people have learned the importance of energy savings through the program. ²	0	1	2	

¹ Based on a judge’s suggestion, this item was modified as “I have learned the importance of recycling through the program.”