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Assessing key performance indicators of corporate social responsibility initiatives in sport

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ABSTRACT

Research question: This paper evaluates factors impacting corporate social responsibility (CSR) campaigns' key performance indicators (KPIs) by extending the sport sustainability campaign evaluation model (SCEM) with three key variables: ascription of responsibility, fit between the team/sustainability initiatives, and receptivity to messaging from the team.

Research methods: We collected data from a US national sample using a Qualtrics panel. The specific population of interest for this part of the project was people who were able to identify a professional or college sport team local to their geographical area ($N=205$), which meets the SEM sample size requirements with only 11 items in the model.

Results and findings: This study found that fit, ascription, and attachment to the team explained 43.0% of the variance in receptivity. Ascription and receptivity explained 64.9% of the variance of sustainability intentions. The entire model explained 68.4% of the variance in support for green corporate partners. Future research can extend the SCEM by adding these concepts, explaining additional variance, and assessing actual receptivity to team messaging about sustainability. Sport practitioners can use this model to show green corporate partners the impact of messaging by the team on corporate partner sales and show increased fan sustainability intentions.



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The current business model of professional sport is dependently tied to corporate partnerships and is fraught with competition, stressing the importance of differentiating the sport brand among consumers (Chien et al., 2011). One way that sport organizations have sought to differentiate themselves and create stronger bonds with their current and prospective customers (i.e. fans) is through corporate social responsibility (CSR) initiatives (Uhrich et al., 2014; Walker & Kent, 2009). Such CSR initiatives focus on salient or relevant social issues that occur on an international, national, regional, or local level. In addition, these initiatives seek to resonate with the surrounding community to increase brand perceptions generating goodwill for the sport brand (Babiak & Trendafilova, 2011).

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By way of extension, corporate partners can financially support sport organization's CSR initiatives and reap the same benefits by aligning with the cause or initiative (Cornwell & Coote, 2005; Dean, 2003; Millington et al., 2021; Seguin et al., 2010; Tsuji & McCullough, 2019). Several examples of CSR initiatives include the Nike–Kaepernick partnership addressing police brutality and greater racial and social injustices of international and national prominence; PLAN LED's sponsorship of the Seattle Mariners' ballpark's upgrade to LED stadium lighting; and the University of California – San Francisco's sponsorship of the Giants' inaugural HIV/AIDS – 'Until there's a Cure Day' in 1994.

As sport brands begin to take a more in-depth look at the ways to engage in social movements via social marketing (Madill & O'Reilly, 2010), they may also leverage the opportunities for financial gain while achieving positive social key performance indicators (KPIs) – a core principle of CSR (Campbell, 2007; Friedman, 2007) – such as engagement with campaigns, consumption, increased satisfaction, positive reviews, repatronage, etc. (Trail, 2016). For example, the Oak View Group (OVG), owners of the new Seattle Kraken NHL team, recently sold the naming rights to the remodeled Seattle arena to Amazon for between \$300 and \$400 million. The arena will be named Climate Pledge Arena representing both Amazon's commitment to becoming net-zero carbon by 2040 and the endeavors of the arena to 'produce zero waste, source food locally and eliminate all single-use plastics by 2024' (Long, 2020, para. 2). This agreement obviously generates a substantial sum of money upfront for OVG. Still, OVG, in turn, needs to show that their fans will support the corporate partner (Amazon) to ensure that Amazon sees value (other than positive publicity – a KPI) for their partnership; otherwise, future corporate partnerships will be less likely and less valuable if they do occur. Fan support for corporate partners (a social KPI) can thus generate and eventually fulfill other KPIs for both the corporate partner and the sport ownership group.

More sport organizations are engaging in environmental sustainability efforts due to the social pressures and increased expectations among sport fans (Babiak & Trendafilova, 2011; Casper et al., 2020). Specifically, Casper and colleagues found that sport fans place a high ascription of responsibility on sport organizations to be environmentally responsible. Nevertheless, sport practitioners fail to see the value in investing in sustainability initiatives and the possibility of sponsorship-related KPIs (Casper et al., 2012; McCullough & Cunningham, 2010) even though sport fans are receptive to environmental sustainability initiatives which may even deepen their fan identification due to such efforts (Casper et al., 2020). In addition, leading sport organizations in the sport environmental movement engage corporate partners to defray costs to finance these initiatives in sponsored campaigns (Chadwick, 2002; McCullough et al., 2016). The added dynamic of corporate partners presents new challenges to evaluate the success of these efforts for both the sport organization (i.e. increased sustainability behaviors) and the corporate partner (i.e. increased brand affinity).

Previous researchers have explored environmental sustainability campaigns' effectiveness in certain areas, for example, the effectiveness of sport to deliver sustainability messages (Inoue & Kent, 2012b); the benefits of social KPIs such as campaign engagement (Trail, 2016) and sustainable behavioral changes (Casper et al., 2014; Inoue & Kent, 2012a); and another specific KPI (increased fandom; Casper et al., 2017, 2020). In concert with the above research, Trail and McCullough (2020, 2021) developed the sport sustainability campaign evaluation model (SSCEM) to examine KPIs of

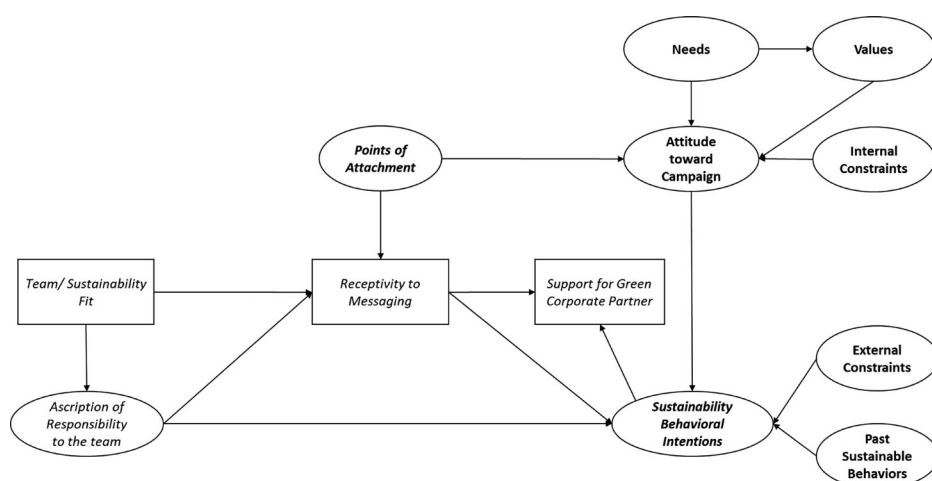


Figure 1. Sport sustainability campaign evaluation model (SSCEM) and extension.

Note: Constructs in bold are in the SSCEM. Constructs in italics are in the extension. Constructs in italics and in bold are in both.

sustainability campaigns (e.g. attitudes toward the campaign, engagement in the campaign, and intentions to increase environmental behaviors). However, they did not include KPIs from other research (e.g. support of corporate partners), which significantly incentivize sports practitioners to engage in such endeavors (Casper et al., 2012). In addition, current trends within the industry support the importance of examining sponsorship-related KPIs (Scheinbaum & Lacey, 2015). For example, sport organizations have entered corporate partnerships associated with facility naming rights (the above-mentioned Climate Pledge Arena in Seattle and the Ball Aluminum Arena in Denver) to sustainable products (see Mervosh, 2019; Ogus, 2020). Also, Trail and McCullough did not include aspects that might assess the effectiveness of a sustainability campaign on support for green corporate partners and increased sustainability behavioral intentions (i.e. the fit between the sport organization and the environmental initiative, the ascription of responsibility to the team for sustainability endeavors, and the receptivity of the fans/ spectators to the sustainability messaging from the team).

In this study, we sought to address two objectives. First, we wanted to examine the relationships among ascription of responsibility to the team, fit between the team and sustainability initiatives, attachment to the team, and receptivity to messaging from the team, to determine how those aspects predicted sustainability intentions. Second, we wanted to determine if these constructs would predict ‘support for a green corporate partner’. The intersection of the proposed extension with the original SSCEM is shown in Figure 1.

Theoretical background

Sustainability in sport

The focus on sustainability in sport has grown substantially over the past two decades among practitioners and academics (Mallen et al., 2011; Trendafilova & McCullough,

2018). Over time sport organizations have advanced their environmental sustainability campaigns through various waves of progressivism (McCullough et al., 2016). Sport organizations that have demonstrated their legitimization to environmental sustainability efforts are now seeking ways to monetize their efforts by incorporating environmentally focused sponsorships. These can be seen through corporate naming rights (e.g. Ball Arena in Denver, Footprint Arena in Phoenix, Climate Pledge Arena in Seattle), carbon offsetting (Seattle Sounders), LED lighting sponsorships, and other sustainable products (Adidas and Parley for the Ocean Plastics). Sport marketing research has addressed the preliminary efforts of sport organizations. Still, refined models are necessary to evaluate the latest advancement in the sport environmental movement to assess fan engagement campaigns that feature corporate partners.

Sport sustainability campaign evaluation model

The sport sustainability campaign evaluation model (SSCEM, Trail & McCullough, 2020) is inclusive of several existing theories and frameworks: hierarchy of needs framework (Maslow, 1943); values theory (Rokeach, 1973; Sagiv & Schwartz, 2000); self-determination theory (Deci & Ryan, 2008); identity theory (Stryker & Burke, 2000); constraints theory (Crawford & Godbey, 1987; Kim & Trail, 2010); theory of planned behavior (Ajzen & Madden, 1986); and the model of sustainability behavior (Belz & Peattie, 2012). Trail and McCullough have demonstrated the fit of this model (or aspects within the model) in a variety of contexts (i.e. sport participants, sport spectators) and across various sustainability campaigns (i.e. health and wellbeing, recycling behaviors, carbon offsets, sustainable transportation; Martins et al., 2021; McCullough & Trail, 2021; Trail & McCullough, 2020, 2021). Specifically, Trail and McCullough (2020) found that the needs and values of sport participants impacted their sustainability attitudes. In contrast, internal constraints did not, at least not in that data set, primarily due to large confidence intervals; however, both internal and external constraints impacted intentions in the Trail and McCullough (2018) model. Some points of attachment impacted sustainability attitudes, and others did not. Positive sustainability attitudes and past sustainable behaviors increased intentions to act sustainably in the future, whereas external constraints decreased sustainability intentions (see bolded constructs in Figure 1).

Based on their research, Trail and McCullough (2020) suggested that the SSCEM model could be used by academics and practitioners alike to develop sustainability campaigns and evaluate their success in increasing positive attitudes about sport sustainability and increasing future sport sustainability behaviors. However, as noted above, there are societal and organizational benefits for sport organizations that engage in environmental campaigns and initiatives (Casper et al., 2014, 2020, 2021; Inoue et al., 2011; Martins et al., 2021; McCullough & Cunningham, 2010). For example, sport practitioners are now more readily adding corporate sponsors to their environmental sustainability campaigns (McCullough et al., 2020). Still, the SSCEM does not measure the effectiveness of any fan/spectator support for those sponsors. Thus, there is a need to empirically study this new dynamic and help practitioners evaluate such campaigns' outcomes. To consider this recent development, additional constructs would need to be included in the SSCEM, such as fit between the team and sustainability initiatives, the ascription of responsibility to the team, and receptivity to messaging from the team. These proposed components

may provide additional insights and value from a theoretical perspective and practical applications (e.g. informing corporate partners).

We use the value-belief-norm (VBN) theory of environmentalism (Stern, 2000) to guide the expansion of the SSCEM, which postulates that pro-environmental beliefs and personal norms influence ecological behaviors. We specify how the three constructs we propose (i.e. fit between the team and sustainability initiatives, the ascription of responsibility to the team, and receptivity to messaging from the team) fit within the VBN theory and how they interact with each other and act as an extension of the SSCEM below (see [Figure 1](#) and [Figure 2](#)).

Team/environmental sustainability fit

The perception of fit by consumers (sport fans) has typically been investigated relative to the fit between a corporate partner and the sport organization and has been studied extensively (Cornwell, 2020). In general, fit is usually viewed as a strategic match between two entities, achieving both entities' objectives and goals. Habitzreuter and Koenigstorfer (2021) examined the influence of fit on environmental sport sponsorship attitudes of possible spectators. They found that regulatory fit increased perceived motives for the sponsorship and reinforced attitudes towards the sponsor. While these authors examined marketing communications strategy to engage fans in sustainable behaviors, we use the concept of fit slightly differently here. We investigate whether team fans/spectators view the fit between one potential organizational objective of the team (an environmental sustainability campaign) as a good match with their view of the sport organization itself. Specific sustainability initiatives may better align with the team for various reasons (e.g. regional relevance, timeliness) and elicit stronger responses based on the initiative's alignment with the team. For example, fans of teams in drought-stricken areas might perceive a better fit for a water conservation initiative than fans of Seattle area teams, a geographical location perceived to have ample rainfall and water. Similarly, campaigns focused on ocean plastics may be better suited or fit more closely with teams in coastal areas like Miami, San Diego, or San Francisco than in landlocked states in cities like Kansas City, Nashville, or Denver.

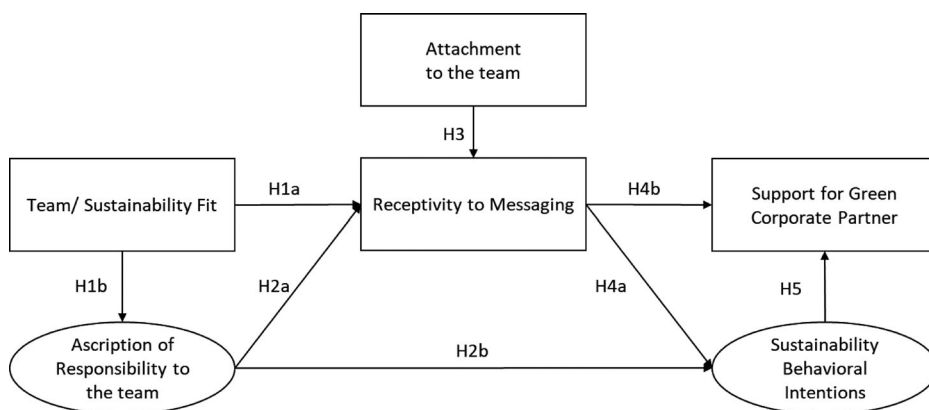


Figure 2. Extension of SSCEM.

Receptivity to messaging

Communications are more appropriately received when they originate from familiar or trusted messengers. Again, we turn to the VBN to explain this behavior within our framework. Environmental beliefs represent an individual's ecological worldview. For example, an individual may believe that acting in an environmentally friendly way is important. More specifically, they may believe it is important to reduce consumption, waste generation, and one's carbon footprint, or they may think that there are individual or collective responsibilities to be environmentally responsible. Based on the 'beliefs' part of the VBN (Stern, 2000), we propose that the perceived fit between the organizational objective of the team (i.e. the environmental sustainability campaign) and the view of the sport organization itself is one part of a person's ecological worldview. This 'brand-cause' fit approach has been explored in various contexts (for a review, see Zasuwa, 2017). For example, Becker-Olsen and colleagues (2006) found that consumers' perceptions of (or beliefs about) low-fit initiatives negatively influenced their receptivity to messaging. The high-fit initiatives that respondents deemed proactive rather than reactive had the greatest improvements in beliefs and receptivity to messaging. Additionally, Maktoufi et al. (2020) found that stakeholders were more receptive to messaging when there was a high perceived fit between an organization and its sustainability initiative. Following the VBN theory and the above research, we propose:

Hypothesis 1a: The perceived fit between the team and environmental sustainability will predict intentions to be receptive to environmental messaging from the team (see Figure 2).

Ascription of responsibility

Ascription of responsibility assesses an individual's expectation about a particular entity (e.g. self, neighbor, corporation, sport brand) to address a specific issue (e.g. ocean plastic pollution). Initially, Hart (1948) conceptualized ascription of responsibility to frame the degree an individual places ownership on a specific entity to resolve an issue within their duty upon which to act. The concept became more popular in environmental sustainability research when Dunlap and Van Liere (1978) examined the ascription of responsibility as part of their new environmental paradigm (NEP). Later this was more formalized in the VBN framework (Stern, 2000). Stern examined the ascription of responsibility at the individual level to assess the perception of their ability to act to reduce a specific threat. Others have used ascription of responsibility to evaluate environmental values in bridging the value-action gap (Blake, 1999).

Thus, when there is a strong fit between a cause and a brand, consumers have higher expectations (i.e. ascription of responsibility) toward organizations responding to specific issues (Alcañiz et al., 2010). Further, researchers found that with better alignment, or fit, between a brand and cause, consumers' have higher expectations in fulfilling that expectation (Lii et al., 2013). Consumers' ascription of responsibility on another entity or brand will be higher when there is a stronger fit between the organization/brand and cause. Within VBN theory, this certainly makes sense. Stern (2000) suggests that an individual's ecological world view impacts their perceived ability to reduce threats through their ascription of responsibility of sustainability. Building on the previous ocean plastic example, sport fans of teams in Miami would have higher expectations

of the team to address ocean plastic pollution (i.e. ascription of responsibility) than fans of teams in Kansas City because of the fit between the brand and the environmental initiative. Following the VBN theory and previous research, we propose:

Hypothesis 1b: The perceived fit between the team and environmental sustainability will positively predict ascription of environmental responsibility to the team.

In addition, ascription of responsibility can determine the individual's awareness and knowledge about an issue and how apt they are to act. However, the concept was expanded and applied to the level of responsibility individuals place on other entities (e.g. government, industry, sport entities). Stern et al. (1986) found that industry and government's ascription of responsibility to address environmental issues predicted norms directed toward the entity to act and resolve it. Thus, Stern et al. (1999), in the VBN, depicts ascription of responsibility predicting a sense of obligation to take pro-environmental actions, or in our case, the pro-environmental action of being receptive to sustainability messaging from the team to increase sustainability behavioral intentions.

Similarly, Casper et al. (2014) found that the ascription of responsibility that fans assign to sport organizations significantly predicted personal (environmental) norms and sustainable behaviors at sporting events and everyday life. Furthermore, they found that sports fans who expected a sport organization to be environmentally responsible acted similarly to their expectation of others. Thus, we propose two related hypotheses:

Hypothesis 2a. Ascription of responsibility will impact intentions to be receptive to messaging from the team.

Hypothesis 2b: Ascription of responsibility will predict sustainability behavioral intentions.

Attachment to the team

Points of attachment are defined as 'the different role identities (identity standards) that are salient relative to the specific event and population' (Trail & McCullough, 2020, p. 115). This concept was developed initially by Trail, Fink et al. (2003) to identify and assess the influence of various connections that an individual has to a sport brand and is based on identity theory by Stryker and Burke (2000). Individuals can have multiple points of attachment with a sport brand (e.g. team, sport, player, coach, institution, community). Various connections can be salient in various contexts depending on the role identity standards (Stryker & Burke). Individuals compare and evaluate the expected behaviors (i.e. social norms) based on their salient identity. Trail (2015, 2016) suggested that the stronger the point of attachment an individual had with a specific brand, the more receptive they were to that brand's message. Trail and McCullough (2020) found that participants' point of attachment to the event predicted a positive response towards the race's environmental sustainability campaign. However, in their study, the confidence interval was very large and included zero indicating that although the path coefficient was large, it was not significant.

Moreover, Trail and McCullough were not able to assess *team* attachment due to the context of their study (a participant event). Thus, in this study, we focused on the predominant brand (i.e. the team; see Cialdini et al., 1976) that has been widely used in

the sport consumer behavior literature (e.g. Wear & Heere, 2018). Gwinner et al. (2009), for example, found that team identification (attachment to the team) and high fit (i.e. brand-event fit) increased transfer perceptions onto corporate sponsors. Thus, we propose:

Hypothesis 3: Attachment to the team will increase intentions to be receptive to sustainability messaging from the team.

Sustainability behavioral intentions

Stern (2000) suggests that a person's environmental beliefs and their pro-environmental personal norms (i.e. a sense of obligation to take pro-environmental actions) will lead to ecologically friendly intentions and behaviors (e.g. activism, or in our case, intentions to increase sustainable behaviors and/or support of green corporate sponsors, if the team/organization asked). This has been demonstrated in various contexts, from sustainable behaviors (White & Simpson, 2013) to purchase intentions of socially responsible products (Hustvedt & Bernard, 2010). Message receptivity is often assessed through increased positive attitudes and behavioral intentions. For example, White and Simpson (2013) found that message type caused people to be more responsive to messaging and increase their environmentally friendly behavior. Further, Hustvedt and Bernard (2010) found that consumers would pay more for apparel with product labels communicating socially responsible and fair-trade attributes, and Casper et al. (2017) found that the more sport fans stated that messaging about environmental efforts was important within a sport context, the more likely they were to act sustainably.

Similarly, Scheinbaum and Lacey (2015) found that sport event participants were likely to support the sustainability-focused event's sponsors through the patronage of their products. Therefore, within our study, we focus on the receptivity of fans/spectators to messaging from the team relative to environmental sustainability initiatives. Specifically, based on the findings from the previously mentioned research, we propose two related hypotheses:

Hypothesis 4a: Receptivity to messaging from the team will increase sustainability behavior intentions.

Hypothesis 4b: Receptivity to messaging from the team will increase support for green corporate partners.

Support for corporate green partner

Support for corporate green partners can be evidenced in a myriad of ways. For example, in 2015, Adidas launched a successful campaign to promote branded apparel and shoes made from recovered ocean plastics. This campaign was initially launched with the University of Miami Athletic Department (Nastu, 2018) and had a direct fit with the proliferation of ocean plastic pollution following World Environment Day's theme of 'Beat Plastic Pollution' (Parker, 2015). Patagonia has also launched an upcycling program called Worn Wear. This program allows customers to repair and reuse their clothes (Clark, 2021). Specific to sport, corporate brands are seeking more sustainability-focused sponsorships. This is supported through Nielsen Fan Insights (2014), which

suggests that over 47% of global respondents are interested in eco-friendly brands that contribute to social good. The report notes that ‘success [of these campaigns] will depend on the ability to connect sustainable benefits effectively with consumers’ wants and wallets through clearly communicated and readily available brand positioning’ (Nielsen Fan Insights, 2014, p. 9). Corporate brands can effectively position their products to connect with consumers through sport brands (i.e. organizations, events; Habitzreuter & Koenigstorfer, 2021; Inoue & Kent, 2012b).

Based on the VBN, we propose that the intention to act sustainably in the future will also increase the individual’s support for the corporate partners associated with environmental sustainability initiatives because of the team’s pro-environmental norms created through the sustainability campaign. Furthermore, this rationale is also supported by the idea of goodwill (Speed & Thompson, 2000). The individual perceives that the corporate sponsor is associating with the team due to similar motivations of philanthropy and sincerity. This proposed relationship is based on the idea that the motivations behind acting sustainably and supporting a ‘green corporate partner’ are the same (the concern for the environment). For example, Meng and Choi (2016) determined that customers’ previous sustainable behaviors predicted their interest and choosing sustainable tourism packages.

Similarly, Han (2020) found that customers’ previous sustainable behaviors predict their selection of hotels with green initiatives. The sport sector, like the hospitality sector, is service based. While the connection of sustainable behavioral intentions and support for green behaviors was supported in other academic disciplines, this relationship has not been evaluated in the sport business literature. To extend this work to the sport sector, we propose:

Hypothesis 5: Sustainability behavior intentions will impact support for green corporate partners.

Method

Participants

To test the fit of this extension to the SSCEM model, we collected data from a US national sample using a Qualtrics panel ($N = 447$). The specific population of interest for this part of the project was people who were able to identify a professional or college sport team local to their own geographical area. Specifically, we asked the respondents if their community had a sport team, either professional or college. If they answered ‘Yes’, we asked them to identify the team’s name. If they were able to name a team, we then asked them if the team had an environmental sustainability program of some type (e.g. recycling, composting, water conservation). If the respondent answered ‘Yes’ to this question, then the respondent was included in this dataset ($N = 205$) and answered the team-related questions. A sample size of 205 meets the SEM sample size requirements with only 11 items (see below) in the model, exceeding the ratio of 10 responses per item by almost double (Bentler & Chou, 1987).

Out of the 205 people who completed the items used in the survey (based on the contingencies noted above), 61% self-identified as female, and 39% identified as male. The average age was 57. Almost 83% self-identified as white, 5% as Black, 2% as Asian, 3% Hispanic/Latino, 1% Native American, and 4% multiracial. Approximately 23% had a

graduate degree, 42% had a college degree, 23% had some college, with 12% having a high school degree or less. The average household income was \$82555. Respondents came from 199 different zip codes in the US.

The potential respondents were asked to complete a survey about motivations for and beliefs about sustainability behaviors. Our IRB approved this research.

Instruments

This current research was part of a larger project, and thus the items used in this study were only a small part of the entire questionnaire. We used two multi-item scales and four single-item scales. All items are original and specific to this study. The Ascription of Responsibility scale items (3 items) was modified from Casper et al. (2014) to focus on this context and not only whether the team has a responsibility to act sustainably but also whether the team has a responsibility to encourage the community and fans to do so as well. Casper et al.'s (2014) Ascription of Responsibility scale had good internal consistency ($\alpha = .95$) and good construct reliability ($AVE > .80$). The Sustainability Behavior Intention items (4 items) were based on the attitude scale items from Trail and McCullough (2020) but modified to fit this context and measure intentions instead. The factor loadings of items in the Trail and McCullough (2020) research ranged from .680 to .875, excluding the carbon footprint item, which was not included here.

All the single items were specific to the respondent's local sport team, whereas the multi-item scales were more general. Similar to Trail and McCullough (2020) and Kunkel and colleagues (Kunkel et al., 2016, 2017) and many others in and outside of sport (e.g. Wanous et al., 1997; Wanous & Hudy, 2001), we used single item formative measures due to potential respondent fatigue and space constraints, specifically for the team/sustainability fit, attachment to the team, message receptivity, and supporting a green corporate partner items (see Rossiter, 2002, for a detailed explanation about single-item measures and see Trail & McCullough, 2020, for a similar rationale for using single-item measures within sustainability research). The Team/Sustainability Fit item was modified from Speed and Thompson (2000) to be specific to sustainability. The Attachment to the Team item was from Trail (2019) and derived from the Team Attachment subscale in the Points of Attachment Index used by many (e.g. Ballouli et al., 2016; Larkin et al., 2015; Robinson & Trail, 2005). It was also somewhat similar to the single-item attachment measures used in Trail and McCullough (2020). Ang and Eisend (2018) note that brand attitude (very similar to team attachment) can be measured using a single-item scale, and Kwon and Trail (2005) show that single-item measures of team identification (attachment) can be viable. The Message Receptiveness item was created based on the ideas from Wedel and Kamakura (2000) and reflected sustainability. The Supporting a Green Corporate Partner item was modified from Speed and Thompson's (2000) interest scale to reflect green practices. These single-item measures are also based on the rationale above and Trail and McCullough's (2020) research. All items are listed in Table 1. These items were measured using a 7-point Likert-type response format from 1 = *Strongly Disagree* to 7 = *Strongly Agree*. Common method variance was controlled by randomly assigning the items within other item sets not associated with this project and interspersing the items with other items with different response formats.

Results

The items and scales were normally distributed (Table 2) with no outliers. The alpha coefficients and CR coefficients for the two multi-item scales exceeded .70 (Ascription = .94 & .94; Intentions = .90 & .91, respectively) and the item loadings in the SEM model all exceeded .707, indicating more common variance than unique variance (Table 1). Single-item internal consistency (reliability) could not be assessed within this data set because, as per Wanous and Hudy (2001), there were no multi-item scales associated with the single-item measures to calculate single-item reliability. Face validity was established as all the single item measures measured what they were purported to measure (see textual wording of the items in Table 1). Concurrent validity was determined by examining correlations. Attachment to the team was significantly and meaningfully correlated with average past attendance ($r = .419$). Team/sustainability fit was correlated with message receptivity ($r = .597$) and support for green corporate partnerships ($r = .637$), showing concurrent validity for all three of those single items (Table 2). There were no discriminant validity issues as all correlations were below .8 (*cf.* Hair et al., 1998).

Table 1. Construct, item, mean, standard deviation (S.D.), and loading.

Construct	Item	Mean	SD	Loading
Team/Sustainability Fit	There is a logical fit between the team and environmental sustainability	4.79	1.43	
		5.31	1.38	
	Sports teams should encourage their community to act sustainably	5.18	1.53	.915
	I think that the team should act in an environmentally friendly way as much as possible	5.42	1.38	.898
	I think the team should actively encourage their fans to be as environmentally friendly as possible	5.35	1.46	.950
Team Attachment	I live and die with this team	2.47	1.71	
	I would increase my environmentally sustainable behaviors if the team asked me to	3.88	1.66	
Message Receptivity		5.31	1.13	
	In the future, I intend to reduce my environmental footprint as much as possible	5.02	1.39	.822
	In the future, I intend to act as sustainably as I can	5.17	1.35	.924
	In the future, I intend to do all I can to help reduce climate change	5.37	1.18	.839
	In the future, I intend to treat the environment as respectfully as possible	5.67	1.20	.768
Intentions		4.59	1.56	
	I would support a team's corporate partner (sponsor) that engages in green practices			

Table 2. Correlations and normality measures.

	Fit	Ascription	Attachment	Receptivity	Intentions	Support	Skewness	Kurtosis
Fit ¹	1.0						-.466	.268
Ascription ²	.761**	1.0					-.808	.440
Attachment ³	.189**	.097	1.0				.825	-.625
Receptivity ⁴	.597**	.492**	.362**	1.0			-.136	-.625
Intentions ⁵	.633**	.728**	.056	.526**	1.0		-.578	.482
Support ⁶	.637**	.639**	.312**	.754**	.662**	1.0	-.605	.177

Note: ¹Fit – single item measuring team/sustainability fit. ²Ascription – scale measuring ascription of responsibility to the team. ³Attachment – single item measuring attachment to the team. ⁴Receptivity – single item measuring receptivity to messaging from the team. ⁵Intentions – scale measuring sustainability behavioral intentions. ⁶Support – single item measuring support for green corporate partner. **Significant <.001.

Table 3. Path coefficients in the model.

		β	CI	SE	t
Hypothesis 1a – Supported	Team/Sustainability fit → Receptivity to messaging from the team	.440	.298–.582	.086	5.10
Hypothesis 1b – Supported	Team/Sustainability fit → Ascription of responsibility to the team	.782	.734–.829	.029	26.86
Hypothesis 2a – Not Supported	Ascription of responsibility to the team → Receptivity to messaging from the team	.135	–.013 –.284	.090	1.50
Hypothesis 2b – Supported	Ascription of responsibility to the team → Sustainability behavioral intentions	.669	.591–.748	.048	13.96
Hypothesis 3 – Partially Supported	Attachment to the team → Receptivity to messaging from the team	.264	.177–.351	.053	4.98
Hypothesis 4a – Partially Supported	Receptivity to messaging from the team → Sustainability behavioral intentions	.220	.128–.312	.056	3.94
Hypothesis 4b – Supported	Receptivity to messaging from the team → Support for green corporate partner	.524	.447–.602	.047	11.16
Hypothesis 5 – Supported	Sustainability behavioral intentions → Support for green corporate partner	.408	.326–.490	.050	8.18

Using the RAMONA program in SYSTAT 8.0, we found that the model fit the data adequately well (RMSEA = .073; CI: .050–.095; $\chi^2/df = 2.10$; <6% of residual correlations exceeded .1, well below the limit of 10%). As per Hu and Bentler (1999), reporting the RMSEA plus one other fit index is typically sufficient because the RMSEA is thought to alleviate problems associated with model fit that are not addressed by chi-square-based statistics (Browne & Cudeck, 1992; Mulaik et al., 1989). Thus, those indices are not included in the RAMONA statistical package. In addition, 5 out of 8 of our hypotheses were fully supported, 2 out of 8 were partially supported. Only one of our hypotheses was not supported (Table 3). To be fully supported, the path coefficient (β) had to be significant at the .05 level and meaningful at a medium level (.3 or higher, as per Cohen, 1988), thus equating to at least 9% of the variance explained. To be partially supported, the path coefficient had to be significant, but less than 9% of the variance explained in the DV. All path coefficients had relatively small confidence intervals indicating that the sample size per number of parameters and degrees of freedom were sufficient. The results were generalizable to the population (Table 3; e.g. Field, 2009).

We found that Team/Sustainability Fit explained 61.1% of the variance in Ascription of Responsibility. Furthermore, 43.0% of the variance in Receptivity was explained by Fit, Ascription, and Attachment to the Team. In comparison, 64.9% of the variance in Sustainability Intentions was explained by Ascription, Receptivity, and the indirect effects from Attachment and Fit. Lastly, the entire model explained 68.4% of the variance in Support for Green Corporate Partners (Figure 3).

Discussion

This study aimed to test an extension to Trail and McCullough's (2020) SSCM. To this end, we primarily use the values-beliefs-norms (VBN; Stern, 2000) theory of environmentalism to guide our expansion of the SSCM, and we draw the constructs of interest from previous literature to incorporate ascription of responsibility (Casper et al., 2017), team/sustainability fit (Speed & Thompson, 2000), and message receptivity (Wedel & Kamakura, 2000). Specifically, our two primary objectives were to examine the relationships among the three constructs to determine how they would predict sustainability

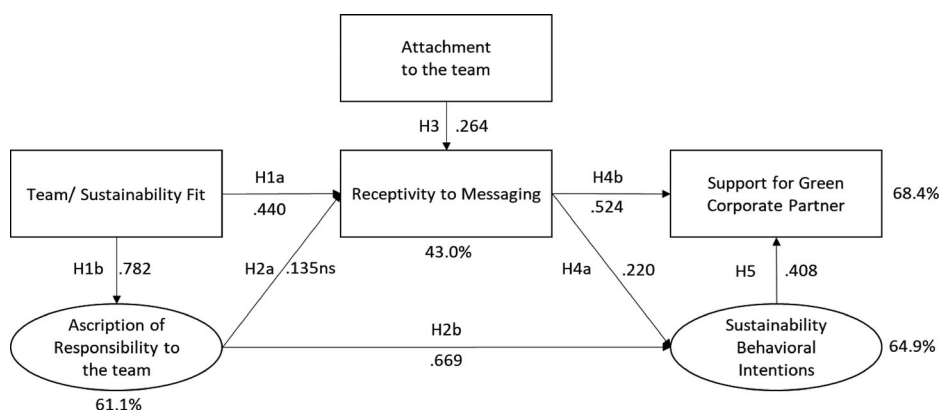


Figure 3. Path coefficients and variance explained for dependent variables in the extension model.

intentions and how these constructs would predict ‘support for a green corporate partner’ (Figure 2).

The perception of fit between the team and the sustainability campaign significantly and meaningfully predicted both ascription of responsibility to the team for sustainability initiatives and receptivity to messaging from the team, thus supporting both Hypotheses 1a and 1b, respectively. The support for Hypothesis 1a was not surprising and supported the research of both Becker-Olsen et al. (2006) and Till and Busler (2000). It signified that the more individuals perceived a good match between the team and the particular sustainability campaign, the more likely they would be responsive to the campaign message. This finding is encouraging to sport organizations seeking to engage in environmental initiatives but do not know where to start. As our findings would suggest, sport organizations should start with relevant or environmentally significant initiatives to that specific region. As noted above, a campaign for ocean plastics would probably be perceived as a better fit for a coastal team such as San Diego than a Mid-west team such as Kansas City, which therefore would increase the receptivity to that campaign message by the individuals.

Similarly, our results show that a large percentage of the variance in ascription of responsibility was predicted by team/message fit (Hypothesis 1b), which supports previous research by Lii et al. (2013) and Alcañiz et al. (2010). Our results show that this particular examination of fit concerning environmental initiatives can be extended from other industries (e.g. tourism; Martins et al., 2021) and applied to sport. Again, using our example from above, our results provide backing for the idea that fans of a San Diego team are more likely to ascribe responsibility to the team for a sustainability endeavor that fits well with the team and the environmental initiative (e.g. removal of ocean plastics) than fans for a team in Kansas City. Because the individuals see a good fit between the team and the sustainability campaign, they are more likely to think that the team should act in an environmentally friendly way and encourage the community and their fans to do likewise.

Hypothesis 2a tested whether ascription of responsibility would impact receptivity to messaging from the team, but it was not supported. We expected that Stern et al.’s (1986) findings that ascription of responsibility would impact people’s formed norms would

translate into people being more responsive to messaging from the team asking them to be more sustainable, thus norming that kind of behavior, but that was not the case. In addition, the lack of significance between these two variables also indicates that there is no mediating effect of ascription between team/sustainability fit and receptivity. There is only the aforementioned direct effect (Hypothesis 1a). However, this relationship should not be abandoned because, as the correlation in [Table 2](#) shows, ascription and receptivity have a significant and meaningful relationship. In addition, there are considerable theoretical underpinnings and empirical support in other studies. This may show that receptivity does not mediate the relationship between ascription and either support for the green corporate partner or sustainability intentions. That said, this relationship should be tested in more specific contexts of a particular team and environmental initiative. This non-significant result may be explained by the current sample and the lack of specificity to examine a specific team and a specific environmental initiative. The current sample was not provided a hypothetical or actual scenario to contextualize their responses. Another possibility, pointed out by a reviewer, is that although the sample might ascribe responsibility to the sport organization, they might be skeptical of the messaging. This seemed to be borne out by the mean scores ([Table 1](#)).

We found that ascription of responsibility to the team regarding sustainability behaviors substantially explains a large amount of variance (45%) of sustainability behavioral intentions by the respondents, supporting Hypothesis 2b and prior work by Casper et al. (2014), in addition to Stern et al.'s (1986) theoretical work. This finding shows that the more people believe that the team should act in an environmentally friendly way and the more the team encourages their fans to be as environmentally friendly as possible, the more that the fan will do all they can to reduce climate change and act as sustainably as possible in the future. This stresses the importance for sport practitioners to understand their fans' attitudes and expectations of their team to be environmentally responsible. Moreover, sport practitioners should understand what environmental initiatives are important and most relevant to their fans.

Not surprisingly, we found that sport fans would be significantly more receptive to a message from their local team than non-fans (partially supporting Hypothesis 3). However, we must insert a caveat here; we found that only 36% of respondents in our sample indicated that being a sport fan, in general, was 'very important' to them. Further, only 25.5% were at least somewhat interested in the local team that they listed. However, even with those low percentages (and thus low mean scores), the more attached they were to the team, the more responsive to sustainability messaging. Still, the path coefficient was not large or meaningful. We expected a much higher path coefficient between attachment to the team and receptivity to the messaging as per Trail and McCullough (2020). Nevertheless, this finding does indicate a relationship exists, though small, and in the future should be tested within the context of a specific team and a specific environmental initiative.

Although the relationship between receptivity to messaging from the team and people's sustainability intentions were positive and significant, the results only partially supported Hypothesis 4a. The path coefficient was not above .3, thus indicating the relationship was not meaningful, explaining only a small amount of variance. This did not support the prior theory (Stryker & Burke, 2000) or research (Hustvedt & Bernard, 2010; White & Simpson, 2013) in other contexts. This result could be explained

by the sample of the study. Specifically, participants were asked about general environmental initiatives and not specific campaigns. Thus, while sustainability intentions were positive and significant, these intentions may produce meaningful results when examining a specific campaign that participants encounter during an event. Alternatively, it could be possible that ascription of responsibility subsumes some of the shared variance with receptivity. The correlation matrix shows a larger correlation than is represented in the model between receptivity and intentions. Thus, it is possible that ascription might be a suppressor variable.

While Support for 'Green' Corporate Partners of the team was only slightly above Neutral ($M = 4.59$ on the 7-point scale), the more people were responsive to the messaging for the team ($M = 3.88$) and the more they intended to behave sustainably ($M = 5.31$), the more likely they were to support the 'Green' corporate partner, supporting both Hypotheses 4b and 5, respectively. The former result supports the findings of Hustvedt and Bernard (2010) and White and Simpson (2013), although in different contexts. The latter result also supports the VBN (Stern, 2000) and the general theory of Speed and Thompson (2000). Thus, if the team can increase the receptivity to the messaging, they can increase the support for the green corporate partner. Furthermore, more support of the corporate partner should allow increased contractual value.

Implications

Our findings have important implications for researchers and practitioners as they explore and advance the sophistication into the inquiry, design, and assessment of environmental sustainability campaigns supported by corporate sponsors and the resulting KPIs. We demonstrated that assessing team/sustainability fit, the ascription of responsibility, and receptivity to messaging fit would complement the SSCEM well. These added elements further show the robust applications of the SSCEM with this new addendum to design, deploy, and evaluate sustainability campaigns.

On the other hand, attachment to sport teams may serve as a potential conduit but probably should not be the primary one. That said, what impacted sustainability intentions substantially was the path from team/sustainability fit through ascription of responsibility to the team. As fit increased, the ascription of responsibility increased, and so did sustainability behavioral intentions. Overall, the direct impact of ascription and the indirect impact of fit combined explained a majority of the variance in sustainability intentions. Thus, teams can address social KPI by increasing the perception of fit between the team and environmental sustainability and then showing the community that they accept the responsibility to encourage their fans to be as environmentally friendly as possible. This finding supports the need for sport practitioners to properly invest in environmental sustainability-related sponsors and activations to ensure social outcomes. Sport practitioners may also be best served to provide more context to fans as their organization features sustainability-oriented sponsorships. Such campaigns may offer educational components to convey the relationship between the natural environment and sport and how corporate partners address specific environmental issues related to the sport organization (e.g. procurement, renewable energy, waste management).

Our study also contributes to the expanded use and application of VBN theory (Stern, 2000). We further demonstrate the relationship and influence of environmental values

and norms on environmental behaviors. These behavioral intentions were consistent with organizational KPIs (e.g. compliance with behavior directives, supporting corporate partners). These new applications of the tenets of VBN to fit and receptivity to messaging, along with their demonstrated relationships, provide new considerations and applications of the VBN theory in new contexts. For example, practitioners should assess how receptive their fans and other stakeholders will be to messaging to best design and deploy their campaign strategy. McCullough et al. (2021) have called for such assessments (i.e. materiality) that can determine which initiatives to prioritize over others.

It should be noted that we examined behavioral intentions, which do not always result in actual behaviors. However, behavioral intentions have been empirically determined to be one of the best predictors of actual behavior (Webb & Sheeran, 2006). Furthermore, behavioral intentions are regularly used in behavioral and social science research (De Cannière et al., 2009).

Moreover, sport practitioners can use this model to show green corporate partners the impact of messaging by the team on corporate partner sales (financial KPI) and fulfilling social KPIs through increased fan sustainability intentions. If this research applied to the Climate Pledge Arena partnership that we noted in the introduction, the OVG group could show Amazon that almost 70% of the support for Amazon as a green corporate partner was generated by the receptivity to messaging from the team and the intentions to act sustainably by the fans/spectators. This would be the first step in showing that Amazon's naming rights sponsorship of Climate Pledge Arena was valuable. OVG could also use this information when negotiating contracts with other green corporate partners and when negotiating an extension with Amazon on the naming rights. In both cases, these results would help OVG and the corporate partners' bottom line.

Sport practitioners can explore social and financial KPIs specific to their organization or green corporate partners. For example, understanding how the ascription of responsibility that sport fans place on sport teams and organizations (Casper et al., 2017) relates to the fit between the initiative and the team can help sport practitioners select which initiatives to prioritize. Moreover, this understanding can help sport managers demonstrate to prospective and current green corporate partners which initiatives or campaigns resonate best with fans. Ultimately, this study increases sport practitioners' ability to integrate their social-organizational objectives with revenue-generating mechanisms through corporate sponsorships in new areas of inventory (e.g. environmental sustainability initiatives).

Limitations and further research

Despite the strengths and contributions of this study, there are limitations. First, our sample was a mix of sport and non-sport fans. Only 25.5% of participants were at least somewhat interested in their local sport team. Intentionally, the referent population was not exclusively comprised of sport fans of a particular team. Thus, while this sample may represent the general population, it may not represent the targeted population of a sport organization's sustainability initiatives. Still, it may be more generalized to the community at large. Therefore, generalizing for specific campaigns should be done with caution. Second, we did not focus on specific sport teams or environmental initiatives. Instead, the participants were asked to identify a team in their community and

subsequent items focused on general behaviors (i.e. sustainability behaviors) and initiatives (i.e. reducing carbon footprint). However, our main objective was to test an extension to the SSCEM with new concepts (i.e. fit, ascription of responsibility, receptivity to messaging) related to CSR KPIs (i.e. sustainable behaviors; support of green corporate sponsor).

Researchers can replicate this study and potentially extend the SSCEM by adding these concepts, explaining additional variance, and assessing actual receptivity to team messaging about sustainability. Specifically, researchers should examine the model using specific sport teams, their existing environmental sustainability initiatives, and the team or corporate sponsor's desired organizational objectives. To this end, researchers could longitudinally examine green corporate sponsorships to identify changes to perceived fit and behavioral outcomes throughout the sponsored initiative's duration. Currently, there are no known attempts to evaluate sponsored environmental sustainability campaigns in sport throughout the campaign and the resulting benefits for the sport organization and corporate sponsor. Second, the extension of the SSCEM should be comprehensively tested so that all the SSCEM variables can be measured at one time.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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