

# Sustaining customer engagement behavior through corporate social responsibility: The roles of environmental concern and green trust

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## ABSTRACT

Prior studies on high-fit corporate social responsibility programs have yield equivocal findings; some studies have shown a positive impact on desirable customer outcomes and others have shown a negative impact. To reconcile these two divergent views, this study proposes that the relationship between perceived corporate social responsibility-brand fit and sustainable customer engagement behavior is serially mediated by self-cause and/or brand integration. Furthermore, such serial mediation mechanism is moderated by environmental concern and green trust. The results of an empirical study carried out in the airline industry confirm that the link between perceived corporate social responsibility-brand fit and sustainable customer engagement behavior is serially mediated by self-cause and/or brand integration and moderated by environmental concern and green trust. Sustainable customer engagement behavior, in turn, drives customers' extra-role, citizenship behavior that goes beyond their in-role, loyalty behavior. This study contributes to the micro-corporate social responsibility stream of cleaner production by demonstrating that the relationship between perceived corporate social responsibility-brand fit and sustainable customer engagement behavior is not straightforward and by providing a theoretical framework to better explain the psychological mechanisms and boundary conditions affecting this relationship.

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## 1. Introduction

Many companies have embraced corporate social responsibility (CSR) practices to achieve sustainable performance in response to accelerated environmental degradation and competitive market condition (Suganthi, 2019). CSR, a concept whereby companies voluntarily incorporate social and environmental concerns into their business operations, represents an important part of the dialogue between companies and their stakeholders (Bhattacharya

et al., 2009). A recent report from the US SIF Foundation indicates that more than \$12 trillion has been invested in a socially responsible manner as of the beginning of 2018, an increase of 38% from 2016. In addition, almost every company in the S&P 500 issues a sustainable report (US SIF Foundation, 2018). The willingness to invest in CSR programs mirrors firms' pervasive beliefs that consumers will reward their sustainability efforts with greater intentions to purchase and to spread positive word-of-mouth, which subsequently enhance firm value (Bhattacharya and Sen, 2004; Servaes and Tamayo, 2013). However, the effectiveness of CSR programs has been questioned. Indeed, consumers do not blindly accept CSR activities and, in some cases punish firms that are perceived to be inauthentic in their social involvement (Becker-Olsen et al., 2006). Perceived inauthenticity, as signaled by the lack of fit between the CSR initiative and the firm's product line,

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image, and target market, can impede the success of CSR programs (Alhouti et al., 2016).

Airlines are increasingly embedding CSR programs in their business practices because the operation of air travel inevitably has an environmental impact, ranging from climate change, air and noise pollution to waste generation (Cowper-Smith and De Grosbois, 2011). In 2018, 895 million tons of carbon dioxide (CO<sub>2</sub>) were produced by airlines worldwide (ATAG, 2019). Through currently making up for only 2% of global CO<sub>2</sub> emissions, aviation's contribution is projected to reach 22% by 2050 (Cames et al., 2015). As a result of the growing awareness of the seriousness of global warming, leading airlines, such as Cathay Pacific, Qantas Airways, and Lufthansa, have undertaken various initiatives to reduce their carbon emissions and communicate their CSR activities on social media platforms. One common strategy is to offer customers the option to voluntarily offset their flight. However, the level of customer participation in the carbon offset program is very low — approximately at between 2% and 10% (Choi et al., 2016; Ritchie et al., 2019).

There have been contradictory findings concerning the effectiveness of CSR-brand fit programmes. One literature stream suggests that consumers tend to perceive the motive of high-fit CSR programs as more genuine, resulting in greater attitudes and supportive intentions toward the company. Another stream shows that high-fit CSR programs evoke skeptical perceptions and cause backlash effects for companies with poor reputation and in the stigmatized industry (Austin and Gaither, 2019; Kim and Ferguson, 2019). These inconsistent findings suggest that consumers' responses to CSR initiatives might be 'intervened' by other psychological mechanisms and 'contingent' on individual differences (Amatulli et al., 2018; Castro-González et al., 2019; John et al., 2019). However, few studies have been conducted to examine relevant mediators and moderators in a single framework (Walsh and Bartikowski, 2013). This deficiency in understanding of how customers' response to CSR-brand fit initiatives can deter managers from reaping the maximum returns. To design effective CSR programs, several studies have called for more rigorous research to elucidate the underlying process and boundary condition of how CSR-brand fit works (Green and Pelozo, 2011; Kim and Ferguson, 2019; Mostafa and ElSahn, 2016). This study responds to these calls by proposing a moderated mediation model for the relationship between perceived CSR-brand fit and sustainable customer engagement behavior (SCEB).

The rise of social media and online brand communities (OBCs) has provided firms with unprecedented opportunities to foster customer engagement, thereby strengthening customer-brand relationships (Carlson et al., 2018; Kabadayi and Price, 2014). In 2017, 85% of Fortune 500 companies were hosting OBCs on the Facebook platform through which customers are able to interact with them by liking, commenting, sharing their brand posts (Barnes and Pavao, 2017). These interactions have been used as the yardsticks for measuring the effectiveness of social media engagement strategies (Oviedo-García et al., 2014). SCEB is described as customers' behavioral manifestations toward a firm that moves beyond transaction, contributing to the sustainability of both environment and OBC (Gummerus et al., 2012; Van Doorn et al., 2010).

Notwithstanding firms' increasing use of social media to engage customers in the CSR or other brand-related activities, perceived fit of CSR-brand concept has been the subject of sparse scrutiny in the customer engagement literature. For example, Abbas et al. (2018) implicitly assume that CSR programs directly influences customer engagement in the offline setting, without considering whether the character of such programs match with those of a company and consumers. Furthermore, most previous CSR studies have emphasized the fit from the company rather than the consumer

perspective (see e.g., Cha et al., 2016; Deng and Xu, 2017; Mazodier and Merunka, 2012). Notable exceptions include Lee et al. (2012) who found that consumers are more likely to identify themselves with companies that offer CSR programs that are congruent with their values because they can construct their self-identity. In the organizational context, John et al. (2019) showed that when employees perceive organizational CSR positively, it generates a sense of pride in affiliating with the organization and eventually strengthens organizational identification. In addition, Batra et al. (2012) proclaimed that CSR participation can facilitate consumers' self-cause and/or brand integration. Self-cause and/or brand integration are psychological construct that include not only the image aspect, such as a brand's ability to articulate the consumers' actual and desired identities, but also its ability to connect to their life's deeper meaning and provide intrinsic rewards. Vlachos and Vrechopoulos (2012) stressed the need to explore more meaningful constructs that can gratify and enrich the consumer's self. Noting this, this study proposes a serial mediation of self-cause and/or brand integration as relevant psychological mechanisms.

To examine the effectiveness of CSR-brand-consumer fit, this study investigates whether environmentally conscious consumers are more likely to integrate the cause into their self-schema and exhibit greater sustainable engagement behavior, given the high overlap between the concept of carbon offset programs and their own (Mair, 2011). Although environmentally conscious consumers expect airlines to be socially responsible, they may doubt whether carbon offsets can really make a difference and have skepticism view about whether their money are used to fund renewable and forestry projects (Tyers, 2018). According to the Cone Communications' latest CSR study, 74% of consumers will not believe that a firm's CSR activities is to benefit society until they hear information about positive results (Cone Communications, 2017). In fact, carbon offset programs are often criticized for the lack of transparency (Choi et al., 2016), particularly on how the carbon emission is calculated (Gössling et al., 2009). Another criticism is related to the public confusion about the variability and the credibility of the schemes (Mair, 2011; Zhang et al., 2019), whereby the information on the real climate benefits generated by the carbon offset is dated and possibly misleading, thereby creating the 'greenwashing' perception (Becken and Mackey, 2017). This perceived lack of green trust may negatively affect SCEB. Therefore, more research is needed to understand the extent to which the mediating influence of self-cause and/or brand integration is moderated by individual differences, such as environmental concern and green trust as a CSR performance variable (Vlachos et al., 2009).

Social media features, such as interactivity and user-generated content, have made it relatively easy to generate product/brand referrals, provide feedback/ideas for environmental practice improvements, help other consumers to better integrate environmental concerns, and engage in other voluntary activities collectively termed as customer citizenship behavior (CCB), which go beyond customers' in-role, loyalty behavior (Carlson et al., 2018; Tuan, 2018). However, prior studies tend to focus less on examining customers' extra-role, citizenship behavior as a key outcome of SCEB (see e.g., Abbas et al., 2018; Dessart et al., 2015; Harrigan et al., 2017).

To address these gaps, this study develops a framework that clarifies how and when perceived CSR-brand fit leads to SCEB. To holistically explain the process, this study proposes the serial mediation of self-cause and/or brand integration to test the underlying psychological mechanisms empirically. This study also explores the roles of environmental concern and green trust as the contingency or moderator variables to these mechanisms. Furthermore, the impact of SCEB on both customers' in-role (loyalty) and extra-role (citizenship) behaviors is examined. This study

makes notable contributions to the CSR and customer engagement literature by: (1) showing that self-cause and/or brand integration, constructs that are not widely reported in the CSR literature, as relevant underlying psychological mechanisms for explaining customer responses to CSR-brand fit programmes; (2) demonstrating a spillover effect from self-cause integration to self-brand integration (3) uncovering two different but converging boundary conditions, namely environmental concern and green trust; and (4) identifying CCB as an important outcome variable. This study's findings also provide a guidance to airlines on how to optimize the effect of perceived CSR-brand fit on SCEB in their communication strategies.

## 2. Literature review

### 2.1. Sustainable customer engagement behavior (SCEB)

Interest in customer engagement has received increasing attention from marketing practitioners and academics alike as a result of the evolution of OBCs, which serve as a vehicle for consumers to engage with brands by liking and/or commenting on brands' posts (Helme-Guizon and Magnoni, 2019; Kabadayi and Price, 2014). Existing literature provides various definitions of customer engagement (see Islam and Rahman, 2016 for a review). For example, prior studies viewed customer engagement as a uni-dimensional behavior which goes beyond purchase, mere participation and involvement (Dolan et al., 2019; Van Doorn et al., 2010). In contrast, Brodie et al. (2011) viewed customer engagement as a psychological process which "occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g., brand) in a focal service relationship" (p. 260). In one of the most comprehensive definitions in the literature, Hollebeek (2011, p. 790) refers to customer engagement as "the level of an individual customer's motivational, brand-related, and context-dependent state of mind characterized by specific levels of cognitive, emotional, and behavioral activity in direct brand interaction". Prior studies generally agree that customer engagement entails an object (e.g., a brand and community) and a subject (e.g., the customer), with varying valence (positive vs. negative) and intensity (high vs. low) (Dessart et al., 2015; Malthouse et al., 2013).

On the other hand, sustainable behavior is a set of actions aimed at protecting the socio-physical resources on this planet (Corral-Verdugo et al., 2010). In practical terms, sustainable behavior is synonymous with 'pro-environmental behavior': the former refers to the obligation to take actions to protect the natural environment, human and ecological health as a whole, while the latter specifies actions aimed at minimizing the environmental degradation (Jabbour and Santos, 2008; Tapia-Fonllem et al., 2013). These include recycling waste, reducing electricity consumption, and reducing greenhouse gas emission. By merging two streams of literature — sustainability and customer engagement, this study puts forth SCEB as a renewed concept consisting of pro-environmental (transactional) and pro-community (non-transactional) behaviors. Specifically, we define SCEB as customers' behavioral manifestations toward a firm that moves beyond transaction, contributing to the sustainability of both environment and OBC (Gummerus et al., 2012; Van Doorn et al., 2010).

### 2.2. Perceived CSR-brand fit

CSR has gained prominence in the business arena as it can enhance firms' bottom line profitability and provide a competitive advantage (Hsu, 2012). CSR is conceived as "a firm's commitment to maximize long-term economic, societal, and environmental well-being through business practices, policies, and resources" (Du

et al., 2011, p. 1528). Meanwhile, CSR is a strategy that aims at achieving strategic objectives (e.g., increased sales), while in the meantime bettering the world (Barone et al., 2000; Du et al., 2011). Carroll (1991) modeled CSR as a pyramid comprising of four components, namely: economic responsibility, whereby companies are expected to make profits for goods or services they sell; legal responsibility, whereby companies are expected to comply with the rules and regulations set by the lawmakers, ethical responsibility, whereby companies are expected to adhere to the principles of justice and fairness, and philanthropic responsibility, whereby companies are expected to engage in activities that promote human welfare or goodwill (Asrar-ul-Haq et al., 2017; Pino et al., 2016). Carroll's conceptualization of CSR is anchored in the sustainable development theory, whereby social, economic, and environmental concerns are integrated into business operations (Van Marrewijk, 2003).

Despite the substantial investments in CSR activities, empirical evidence suggests that CSR may not lead to beneficial outcomes, such as improved reputation (Park et al., 2014), enhanced customer satisfaction (Loureiro et al., 2012), and higher purchase intention (Amatulli et al., 2018). Sustainable firms acknowledge that the efficiency of CSR programs depends on customers' perceived fit of the brands and the causes (Lee et al., 2012). Originating from congruence theory, fit in the CSR domain reflects the extent to which a CSR initiative is perceived by consumers as being compatible with the firm's product line and/or positioning, brand image, and target market (Becker-Olsen et al., 2006). Typically, high CSR-brand fit programs (e.g., Body shop and Lush fight against animal testing) produce a more meaningful transfer from social cause to brand and reduce egoistic attributions of the firms' motives (Bigné et al., 2012). Such positive associations integrate well into the consumers' cognitive structure, thereby enhancing their attitude towards the brand (Becker-Olsen et al., 2006; Cha et al., 2016). In contrast, low CSR-brand fit programs (e.g., Hyundai raises funds for pediatric cancer research) may cause disfluency of information and create confusion among consumers, thereby hindering the integration of new knowledge into their existing schemas (Mazodier and Merunka, 2012; Sohn et al., 2012). This in turn evokes consumers' skepticism about the firm's motives and results in negative reactions (Sheikh and Beise-Zee, 2011). Another line of research challenges this notion by arguing that a close link between business objectives and social or environmental issues can be backfire. This is because a close match allows companies to take opportunistic advantage of green trends and consumers may attribute a firm's CSR programs to ulterior motives, leading to distrust perceptions and less favorable attitudes (Chen and Chang, 2013; Kim and Ferguson, 2019).

Pelozo and Shang (2011) reviewed the literature on consumer responses to CSR initiatives, concluding that the relationship between CSR and consumer behavior is not simply directive, which implies that some variables may play a mediating or moderating role. For example, Deng and Xu (2017) found that the relationship between CSR and customer intentions to recommend and purchase is mediated by consumer-company identification and moderated by fit. Cha et al. (2016) demonstrated that CSR-brand fit strengthens both personal and social brand identification, which in turn enhances customer loyalty. However, Vlachos and Vrechopoulos (2012) advocated the need for more meaningful mechanisms given that participating in CSR activities can not only help consumers construct their self-identity, but also give their life meaning. In addition, prior studies have predominantly focused on company-specific moderators, ignoring consumer-specific moderators which could serve as the selection criteria for target market. For example, Luo and Bhattacharya (2006) showed that corporate abilities moderate the financial returns to CSR. Kim and Ferguson

(2019) revealed that the effect of CSR fit differ by corporate reputation. High-fit CSR initiatives generate more favorable consumer responses when companies have a good reputation, while high-fit CSR backfired on companies with a poor reputation. We go further than consumer-company identification to propose self-cause and/or brand integration as serial mediators. The moderating effect of individual differences such as environmental concern and green trust on such mediation processes is further explored. The rationale behind such propositions is that environmentally conscious consumers are likely to integrate the cause into their self-scheme given that there is a congruence between the concept of environmental CSR and their own. However, whether can self-brand integration lead to SCEB depends on customers' belief about the firms' environmental performance.

### 3. Conceptual framework and hypotheses development

Fig. 1 depicted the proposed conceptual model for this study, which is based on the Stimuli-Organism-Response (S-O-R) paradigm (Mehrabian and Russell, 1974) and supplemented by CSR and customer engagement literature. The S-O-R framework posits that various environmental cues act as stimuli (S) that trigger individuals' internal states organism (O), which subsequently drive their behavioral responses (R). This study postulates that two self-integration objects (cause and brand) are the serial mediation mechanisms (organism) through which the effect of perceived CSR-brand fit (stimulus) is transmitted to SCEB (response). We argue that the effect of self-cause integration will spill over to the brand integration. However, these mediating processes are contingent on consumers' level of environmental concern and green trust. SCEB, in turn, leads to consumers' in-role (loyalty) and extra-role (citizenship) behaviors. The definitions of all variables included in this study are summarized in Table 1.

#### 3.1. The serial mediating effects of self-cause and/or brand integration

The process of creating brand association allows brands to borrow the equity of other entities through knowledge transfer (e.g., attitudes, images, and feelings) (Keller, 1993). For example, Mazodier and Merunka (2012) showed that pairing a brand with sponsorship produces a transfer of affection from the event to the brand through the evaluative conditioning procedure. Guzmán and

Davis (2017) demonstrated a similar transfer between the advertisement and the brand in the CSR context. Following this logic, we distinguish between two types of object to be integrated into the consumer's self: one that stems from CSR activities, referred to as 'self-cause integration', and another that arises from the brand itself, termed as 'self-brand integration'. Self-brand integration describes deeply held values and group identities that brands create (Delgado-Ballester et al., 2017). It is reflected by the consumer's (i) current self-identity, (ii) desired self-identity, and (iii) life meaning and other intrinsic rewards. A strong incorporation of the brand object into the consumer's self leads to frequent thoughts about the brand object (Batra et al., 2012).

Self-cause integration is likely to increase when customers perceive retailers to be committed to CSR initiatives and to be doing social good on their behalf (Vlachos and Vrechopoulos, 2012). Consumers may use associations with CSR to define themselves, build a positive social image, add meaning to their lives, and obtain psychological rewards (Hwang and Kandampully, 2012; Vlachos and Vrechopoulos, 2012). When a firm communicates its CSR initiatives, it projects a brand's personality, at least in part, via a fascination with societal obligations (Currás-Pérez et al., 2009; Du et al., 2007). They may find that the brand fits their values and identities because of the transfer effect when a firm's CSR cause is integrated into the consumers' selves. Previous studies have documented a strong link between self-brand connection and customer engagement (Harrigan et al., 2018; Moliner et al., 2018). This study expects that perceived CSR-brand fit influences SCEB indirectly and serially through two self-integration objects (cause and brand).

**H1.** The relationship between perceived CSR-brand fit and SCEB is mediated by self-cause integration.

**H2.** The relationship between CSR-brand fit and SCEB is mediated by self-brand integration.

**H3.** The relationship between CSR-brand fit and SCEB is serially mediated by self-cause integration and self-brand integration.

#### 3.2. Environmental concern moderates the mediating effect associated with self-cause integration

Environmental concern refers to the extent to which individuals are concerned about environmental issues and willing to expend

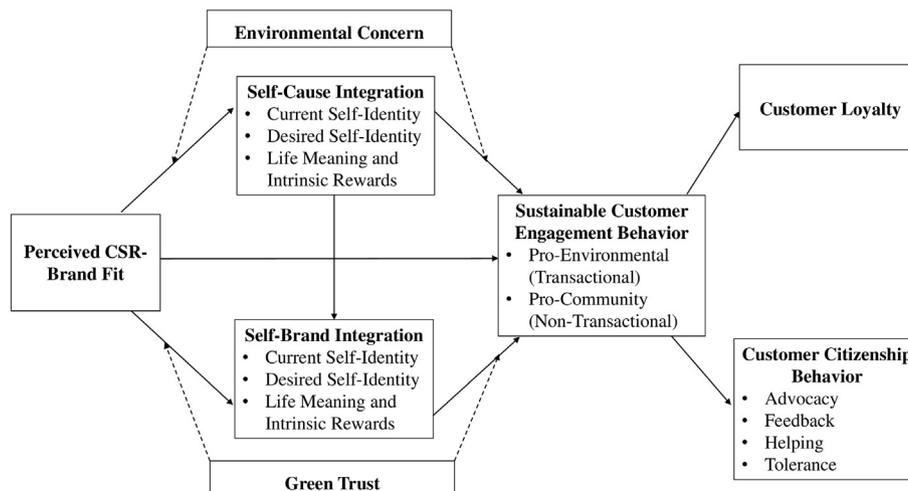


Fig. 1. Study model.

**Table 1**  
Definitions of the study's variables.

Variable	Definition	Source
Perceived CSR-brand fit	The extent to which a CSR initiative is perceived by consumers as being compatible with the firm's product line and/or positioning, brand image, and target market.	Becker-Olsen et al. (2006)
Self-brand and/or cause integration	The degree to which the brand and/or cause is integrated into the consumers' self, express deeply held value and important group identities, give their lives meaning, and provide intrinsic rewards.	Delgado-Ballester et al. (2017)
Environmental concern	The extent to which individuals are concerned about environmental issues and willing to expend efforts to solve them.	Dunlap and Jones (2002)
Green trust	A willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance.	Chen (2010)
Sustainable customer engagement behavior	Customers' behavioral manifestations toward a firm that moves beyond transaction, contributing to the sustainability of both environment and OBC.	Gummerus et al. (2012); Van Doorn et al. (2010)
Customer loyalty	A deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future despite situational influences and marketing efforts.	Oliver (1997)
Customer citizenship behavior	The helpful and constructive gestures made by customers that are not required for core service delivery but that nonetheless collectively contribute to the firm's service success.	Groth (2005)

efforts to solve them (Dunlap and Jones, 2002). Ham and Han (2013) showed that, compared to the low environmental concern group, highly environmentally concerned consumers' perceptions of hotels' green practices have a stronger influence on their visit intention. Wei et al. (2018) found that consumers who lack environmental consciousness are reluctant to pay more for green products than those with high levels of environmental conscious. This study conjectures that the mediating effect of self-cause integration on the relationship between perceived CSR-brand fit and SCEB is contingent on the level of environmental concern. That is, in comparison with the less environmentally conscious group, consumers with higher levels of environmental concern are more likely to engage in the pro-environmental (transactional) and pro-community (non-transactional) behaviors because of their shared goals and values.

**H4.** As individuals become more environmentally concerned, self-cause integration have a stronger mediating effect on the relationship between perceived CSR-brand fit and SCEB.

### 3.3. Green trust moderates the mediating effect associated with self-brand integration

Green trust is "a willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance" (Chen, 2010, p. 309). While such expectations can be shaped by indirect cues (e.g., advertising), the actual consumption experience of the brand constitutes the most essential ingredient of brand trust (Delgado-Ballester and Munuera-Alemán, 2005). Trust mitigates the risks that an exchange partner will behave opportunistically (Ganesan, 1994), maximizes value in transactions, and increases the probability of purchase (Chen and Chang, 2012; Kang and Hur, 2012). Enhanced by high levels of confidence in a company's green performance, environmental CSR activities should lead to desired levels of brand integration into the consumer's sense of self, and in turn, promote SCEB.

**H5.** When individuals have a greater level of green trust, self-brand integration have a stronger mediating effect on the relationship between perceived CSR-brand fit and SCEB.

### 3.4. Outcomes of sustainable customer engagement behavior: customer loyalty and customer citizenship behavior (CCB)

Existing literature has well-documented the positive effect of customer engagement behavior on customer loyalty: engaged customers will commit themselves to any actions that support the firm (Abbas et al., 2018; Dessart et al., 2015; Harrigan et al., 2017). Such actions may extend beyond the in-role loyalty behavior that focusses solely on repurchase to include extra-role voluntary and discretionary citizenship behaviors (Van Doorn et al., 2010). CCB refers to the helpful and constructive gestures made by customers that are not required for core service delivery but that nonetheless collectively contribute to the firm's service success (Groth, 2005). For example, Yi and Gong (2013) conceptualized CCB as having four precepts: feedback, advocacy, helping, and tolerance. Applied to the environmental issues, CCB is regarded as customers' discretionary behaviors that support the environmental practices, which can significantly improve the environmental performance of organizations (Paillé et al., 2013). Boiral and Paillé (2012) identified three types of CCB for the environment: eco-civic engagement (e.g., participating in the organizations' environmental programs and activities), eco-helping (e.g., educating other customers to build pro-environmental habits), and eco-initiatives (e.g., contributing new ideas to the organizations' environmental practices). Organizational literature argues that employees who are engaged with their jobs show higher levels of CCB toward the organization (Babcock-Roberson and Strickland, 2010; Sulea et al., 2012). Similarly, we argue that the greater SCEB is, the more likely it is that he or she will display citizenship behavior toward the company. This study expects that SCEB induces both in-role and extra-role behaviors.

**H6.** SCEB is positively related to customer loyalty.

**H7.** SCEB is positively related to CCB.

## 4. Method

### 4.1. Design and measures

A quantitative method involving a scenario-based survey was employed for two main reasons. First, using a hypothetical scenario

overcomes undesirable response biases that result from low awareness, memory lapses, rationalization inclinations, and consistency factors, which are common in results based on retrospective self-reports (Smith and Bolton, 1998; Smith et al., 1999). Second, a scenario-based survey has been extensively used to measure customers' responses to CSR and other cause-related marketing activities because of its ecological validity (e.g., Barone et al., 2000; Cha et al., 2016; Sheikh and Beise-Zee, 2011). Five academic and airline industry experts were invited to evaluate the scenario in terms of appropriateness and clarity (see Appendix A, Table A1), which resulted in minor modifications in wording.

All the constructs were measured using well-established scales adapted from existing literature on a seven-point Likert scale, ranging from (1) 'strongly disagree' to (7) 'strongly agree'. Measures for perceived CSR-brand fit (2 items) were drawn from Cha et al. (2016), environmental concern (4 items) were adapted from Goh and Balaji (2016), and green trust (5 items) were borrowed from Chen (2010). SCEB was operationalized as a second-order construct with transactional (pro-environmental) and non-transactional (pro-community) engagement behaviors serving as first-order constructs. While the former was measured using four items adapted from De Vries and Carlson (2014), the latter was measured with three items drawn from Kang et al. (2012) and Yoo and Donthu (2001). CCB was measured as a second-order construct with four first-order constructs; namely, advocacy (3 items), feedback (4 items), helping (4 items), and tolerance (3 items), which were adapted from Bartikowski and Walsh (2011) and Yi and Gong (2013). Customer loyalty was measured using five items adapted from Akamavi et al. (2015). Following Bagozzi et al. (2017), we modeled self-cause and/or brand integration as second-order, multidimensional constructs (i.e., current self-identity, desired self-identity, and life meaning and intrinsic rewards) and measured them on a seven-point Likert scale anchored by (1) 'not at all' to (7) 'very much'. We then conducted a pretest with 30 followers of airline brands' Facebook pages to test the quality of the survey instruments.

#### 4.2. Data collection procedure

An invitation message with a web-link to the questionnaire was posted on the Facebook fan pages of multiple airline brands from January to March 2018. Respondents were asked to answer two screening questions to check their eligibility to participate in the survey, thus ensuring that they had traveled by air in the past 12 months and that they were a follower of any airline brands' Facebook pages. The rationale for choosing OBCs in the form of Facebook fan pages is that Facebook is currently the largest and most popular social media site to be used by brands (Lua, 2019). Respondents were then asked to imagine that they had plans to travel using a particular airline and that a post from that airline had popped up on their Facebook news feed, inviting them to join the carbon offset program (see Appendix A, Table A1). After reading the scenario, respondents rated the realism of the scenario, based on two questions: "The situation given in the scenario was realistic" and "I had no difficulty imagining myself in the situation" (Dabholkar and Bagozzi, 2002). The scenario was considered realistic, with a rating of 5.08 and 5.13 on a seven-point Likert-type scale. Respondents were also asked to rate their perceptions of, and reactions to, CSR-brand fit.

#### 4.3. Sample profile

A total of 582 usable responses were obtained; 47.9% were males and 52.1% were females. Nearly one-third of the respondents were between the ages of 31 and 40. The majority was college- or

university-educated (76.6%) and had been in employment (82%). Most respondents (77.8%) were active Facebook users and they spent at least 30 min on the platform daily. In terms of travel frequency, 43.6% of the respondents had traveled by air 1 to 2 times, 38.8% had traveled 3 to 5 times, 12.2% had traveled 6 to 10 times, and 5.3% had traveled more than 10 times in the past year. Emirates was the number one airline that respondents said they were considering for their next trip (25.9%), followed by Cathay Pacific (23%), United Airlines (14.9%), British Airways (10.3%), and Lufthansa (8.4%). The remaining 17% indicated other airlines, such as Qatar Airways, Singapore Airlines, Delta Air Lines, Air New Zealand, Qantas, and JetBlue Airways.

### 5. Data analysis

Partial least square-structural equation modeling (PLS-SEM) using SmartPLS 3.2.8 was employed to test the proposed model for several reasons. PLS handles hierarchical latent variables (e.g., self-cause and/or brand integration) very well. Unlike covariance-based structural equation modeling (CB-SEM), running formative measures in PLS does not require additional specification modifications. PLS overcomes the limitations of both regression and factor-based SEM analyses when estimating highly complex moderated mediation model. Unlike the regression analysis in which each mediation/moderation pathway is tested individually, PLS offers a greater appreciation of complete effects, thereby reducing the inflation of the correlations associated with each construct (Hair et al., 2019b; Sarstedt et al., forthcoming).

We employed Liang et al.'s (2007) PLS-based approach to detect possible common method bias (CMB) by including a common method factor in the model and calculating the variance of each item explained substantively by its principal construct and the method factor. The analysis shows that the average of method variance ( $R^2$ ) was 0.00. Moreover, most of the method factor loadings ( $R^2$ ) were not significant, thus suggesting that the data did not suffer from CMB. We also conducted a full collinearity test to ascertain if there was any construct with variance inflation factor (VIF) values of equal to or greater than 3.3 (Kock and Lynn, 2012). The results indicate that pathological VIF for all constructs ranged from 1.02 to 2.15, confirming again that CMB did not pose a validity threat. This study conducts a moderated mediation test because it allows for better understanding of mediation by determining the boundary conditions under which the mediation may be significant. Moderated mediation test provides good test of theory as it helps to determine if and how theoretical constructs influence the target behavior in order to refine and increase interventions efficacy (Fortier et al., 2011).

#### 5.1. Assessment of reflective constructs

An evaluation of the reflective measures was undertaken by examining reliability, convergent validity, and discriminant validity. We first assessed the internal consistency of the constructs by using composite reliability (CR). As shown in Table 2, the CR values of all constructs were greater than the benchmark value of 0.70, and hence construct reliability was demonstrated. Among the 49 items, 47 had loadings exceeding the ideal level of greater than 0.70 and two (i.e., FEED4 and GT4) surpassed the acceptable level of 0.40 (Hair et al., 2017). Convergent validity was established for all the constructs because their average variance extracted (AVE) was above the recommended threshold of 0.50. To assess discriminant validity, this study follows the heterotrait-monotrait ratio of correlations (HTMT) procedure prescribed by Henseler et al. (2015). As depicted in Table 3, all values of HTMT were lower than the conservative threshold of 0.85 (Henseler et al., 2015), thus providing

**Table 2**  
Results for reflective (lower-order) constructs.

Constructs/Items	Loadings	AVE	CR
<b>Perceived CSR-brand fit</b>			
PCSRBF1 X's CSR program matches its brand image, service, or products.	0.93	0.86	0.92
PCSRBF2 X's CSR program is consistent with its brand image, service, or products.	0.93		
<b>Current self-identity (cause-level)</b>			
CCSI1 To what extent do you feel that participating in a CSR program says something "true" and "deep" about who you are as a person?	0.91	0.76	0.86
CCSI2 To what extent do you feel that participating in a CSR program is an important part of how you see yourself?	0.84		
<b>Desired self-identity (cause-level)</b>			
CDSI1 To what extent is participating in a CSR program able to make you look the way you want to look?	0.92	0.83	0.91
CDSI2 To what extent is participating in a CSR program able to make you feel the way you want to feel?	0.90		
<b>Life meaning and intrinsic rewards (cause-level)</b>			
CLMIR1 To what extent is participating in a CSR program able to make your life more meaningful?	0.91	0.84	0.91
CLMIR2 To what extent is participating in a CSR program able to contribute something towards making your life worth living?	0.92		
<b>Current self-identity (brand-level)</b>			
BCSI1 To what extent do you feel that flying with X says something "true" and "deep" about who you are as a person?	0.80	0.72	0.83
BCSI2 To what extent do you feel that X is an important part of how you see yourself?	0.89		
<b>Desired self-identity (brand-level)</b>			
BDSI1 To what extent is X able to make you look the way you want to look?	0.87	0.82	0.90
BDSI2 To what extent is X able to make you feel the way you want to feel?	0.95		
<b>Life meaning and intrinsic rewards (brand-level)</b>			
BLMIR1 To what extent is X able to do something that makes your life more meaningful?	0.86	0.81	0.90
BLMIR2 To what extent is X able to contribute something towards making your life worth living?	0.94		
<b>Environmental concern</b>			
EC1 I am concerned about the environment.	0.84	0.64	0.88
EC2 The condition of the environment affects the quality of my life.	0.74		
EC3 I am willing to make sacrifices to protect the environment.	0.81		
EC4 I am emotionally involved in environmental protection issues.	0.81		
<b>Green trust</b>			
GT1 I feel that X's environmental commitments are generally reliable.	0.82	0.61	0.89
GT2 I feel that X's environmental performance is generally dependable.	0.75		
GT3 I feel that X's environmental argument is generally trustworthy.	0.72		
GT4 X's environmental concern meets my expectations.	0.67		
GT5 X keeps promises and commitments for environmental protection.	0.92		
<b>Transactional (pro-environmental) engagement behavior</b>			
TEB1 I would like to buy air tickets from X.	0.84	0.72	0.88
TEB2 I intend to purchase carbon offsets for my flight.	0.85		
TEB3 I am willing to pay more to support X's efforts to be environmentally sustainable.	0.84		
<b>Non-transactional (pro-community) engagement behavior</b>			
NTEB1 I intend to 'like' the post of this airline brand's Facebook page.	0.86	0.71	0.91
NTEB2 I intend to 'comment' positively on the post of this airline brand's Facebook page.	0.89		
NTEB3 I intend to 'share' the post of this airline brand's Facebook page.	0.83		
NTEB4 I intend to 'tag' my friends in the post of this airline brand's Facebook page.	0.81		
<b>Customer loyalty</b>			
CL1 I prefer to fly with X over other airline brands.	0.86	0.70	0.92
CL2 I am committed to X.	0.85		
CL3 I intend to keep flying with X when I travel by air.	0.83		
CL4 I would consider X my first choice when flying.	0.84		
CL5 I would do more business with X in the next few years.	0.80		
<b>Advocacy</b>			
ADV1 I would say positive things about X to others.	0.80	0.71	0.88
ADV2 I would recommend X to others	0.84		
ADV3 I would encourage friends and relatives to fly with X.	0.89		
<b>Feedback</b>			
FEED1 I would provide information when surveyed by X.	0.73	0.58	0.84
FEED2 If I have a useful idea on how to improve service, I would let X know.	0.79		
FEED3 When I receive good service from X, I would comment on it.	0.82		
FEED4 When I experience a problem, I would let X know about it.	0.68		
<b>Helping</b>			
HELP1 I would assist X's customers if they need my help.	0.78	0.59	0.85

(continued on next page)

Table 2 (continued)

HELP2	I would help X's customers if they have problems.	0.80		
HELP3	I would teach X's customers to use the service correctly.	0.78		
HELP4	I would give advice to X's customers.	0.71		
<b>Tolerance</b>				
TOL1	If X's service is not delivered as expected, I would be willing to put up with it.	0.85	0.74	0.89
TOL2	If one of X's employees makes a mistake during service delivery, I would be willing to be patient.	0.88		
TOL3	If I have to wait longer than I normally expect to receive the service, I would be willing to adapt.	0.84		

Table 3  
Discriminant validity.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.ADV															
2.BCSI	0.23														
3.BDSI	0.34	0.11													
4.BLMIR	0.46	0.40	0.31												
5.CCSI	0.12	0.62	0.12	0.40											
6.CDSI	0.43	0.17	0.75	0.37	0.18										
7.CL	0.38	0.17	0.35	0.20	0.22	0.55									
8.CLMIR	0.52	0.24	0.67	0.37	0.13	0.81	0.50								
9.EC	0.28	0.31	0.19	0.42	0.20	0.25	0.31	0.30							
10.FEED	0.50	0.27	0.60	0.45	0.22	0.68	0.47	0.56	0.80						
11.HELP	0.57	0.27	0.26	0.42	0.24	0.33	0.35	0.35	0.54	0.67					
12.NTEB	0.48	0.31	0.27	0.60	0.30	0.38	0.37	0.39	0.48	0.47	0.35				
13.PCSRBF	0.52	0.28	0.31	0.46	0.24	0.43	0.40	0.46	0.59	0.58	0.36	0.55			
14.TEB	0.45	0.38	0.25	0.47	0.25	0.34	0.35	0.43	0.47	0.50	0.35	0.61	0.56		
15.TOL	0.55	0.13	0.12	0.29	0.07	0.20	0.21	0.31	0.28	0.39	0.79	0.20	0.16	0.16	

Notes: ADV = advocacy; BCSI = current self-identity (brand-level); BDSI = desired self-identity (brand-level); BLMIR = life meaning and intrinsic rewards (brand-level); CCSI = current self-identity (cause-level); CDSI = desired self-identity (cause-level); CL = customer loyalty; CLMIR = life meaning and intrinsic rewards (cause-level); EC = environmental concern; FEED = feedback; HELP = helping; NTEB = non-transactional (pro-community) engagement behavior; PCSRBF = perceived CSR-brand fit; TEB = transactional (pro-environmental) engagement behavior; TOL = tolerance.

evidence of discriminant validity. Combined, the results confirm the satisfactory validity and reliability of all the measurements used.

## 5.2. Assessment of formative constructs

This study modeled self-cause and/or brand integration, SCEB, and CCB as reflective-formative higher-order constructs. To assess the formative constructs, we applied the two-stage approach advocated by Becker et al. (2012). In the first stage, the repeated indicator approach is employed to estimate the latent variable scores for the lower-order constructs, which are subsequently used as formative indicators for the higher-order constructs in the second stage.

The evaluation of formative measures deploys a different set of metrics; namely, the collinearity of the indicators and the significance of the indicators' weights. These results are displayed in Table 4. The variance inflation factor (VIF) for all formative indicators was below the critical value of three (Hair et al., 2019a), suggesting that collinearity was not a serious issue. The bootstrap results reveal that all the indicators' weights were significant at the  $p < 0.001$  level, thus providing evidence of their relative contribution to the constructs.

## 5.3. Assessment of structural model

This study examined the constructs' coefficient of determination ( $R^2$  value) to assess the model's predictive capability. The  $R^2$  in the current model has a high value of 0.42 for the endogenous constructs of self-brand integration, followed by SCEB (0.39), CCB (0.23), self-cause integration (0.18), and customer loyalty (0.13). The higher the  $R^2$  value, the greater the model's explanatory power is (Hair et al., 2019a). Finally, a bootstrapping procedure with 5000

subsamples was applied to test the significance levels of the hypothesized mediated, moderated, and main effects, as discussed below.

## 5.4. Mediation analysis (H1-H3)

This study follows the transmittal approach recommended by Rungtusanatham et al. (2014), which focuses primarily on testing mediation or indirect effects. Sobel's (1982) test is often viewed as more powerful than the stepwise procedure recommended by Baron and Kenny (1986), for testing the significance of the indirect effect. However, in line with Cole et al. (2008), we argue the assumption that the indirect effect has to be normally distributed is unreasonable because the distribution of indirect effect is often known to be nonnormal even if the variables constituting the interaction term are normally distributed and that it is possible to overcome power problems introduced by asymmetric and non other non-normal sampling distribution if bootstrapping procedure is used. Therefore, we employed Hair et al. (2017)'s bootstrapping procedure with 5000 subsamples to estimate the 95% bias-corrected confidence interval of the indirect effects and used the decision tree for the classification of the mediation (Nitzl et al., 2016).

The results of mediation analysis, as depicted in Table 5 and Fig. 4, reveal that the first indirect pathway that runs from perceived CSR-brand fit to SCEB, through self-cause integration, is non-significant ( $\beta = 0.04$ ,  $p > 0.05$ ). The second indirect pathway from perceived CSR-brand fit to SCEB, through self-brand integration, is significant ( $\beta = 0.05$ ,  $p < 0.001$ ). This leads us to reject H1 and support H2. Interestingly, the third indirect effect that passes through self-cause integration and self-brand integration serially, with the former influencing the latter, reaches significance ( $\beta = 0.07$ ,  $p < 0.001$ ). Therefore, H3 is supported. In addition, the

**Table 4**  
Results of the formative higher-order constructs.

Higher-order constructs	Formative indicators	Outer weights	t-value	95% confidence intervals	VIF
Self-cause integration	Current self-identity	0.32	7.63	[0.24, 0.40]	1.02
	Desired self-identity	0.49	20.88	[0.44, 0.54]	1.73
	Life meaning and intrinsic rewards	0.51	16.75	[0.46, 0.59]	1.72
Self-brand integration	Current self-identity	0.35	9.14	[0.27, 0.42]	1.09
	Desired self-identity	0.53	13.05	[0.45, 0.61]	1.06
	Life meaning and intrinsic rewards	0.56	18.43	[0.51, 0.62]	1.15
Sustainable customer engagement behavior	Transactional (pro-environmental)	0.56	25.87	[0.52, 0.60]	1.36
	Non-transactional (pro-community)	0.59	27.81	[0.56, 0.64]	1.36
Customer citizenship behavior	Advocacy	0.41	10.82	[0.35, 0.50]	1.41
	Feedback	0.42	11.84	[0.36, 0.50]	1.42
	Helping	0.30	9.97	[0.23, 0.35]	2.15
	Tolerance	0.17	4.68	[0.08, 0.22]	1.85

**Table 5**  
Results of hypotheses testing.

Hypotheses	Parameters	$\beta$	SE	t-value	95% confidence intervals	Remarks
<u>Mediation effects</u>						
H1	Perceived CSR-brand fit $\rightarrow$ Self-cause integration $\rightarrow$ SCEB	0.04	0.02	1.81	[0.00, 0.09]	Supported
H2	Perceived CSR-brand fit $\rightarrow$ Self-brand integration $\rightarrow$ SCEB	0.05	0.02	3.31	[0.03, 0.09]	Supported
H3	Perceived CSR-brand fit $\rightarrow$ Self-cause integration $\rightarrow$ Self-brand integration $\rightarrow$ SCEB	0.07	0.01	4.80	[0.04, 0.10]	Supported
<u>Moderation effects (Environmental concern)</u>						
H4a	Perceived CSR-brand fit * Environmental concern $\rightarrow$ Self-cause integration	0.10	0.03	2.96	[0.03, 0.16]	Supported
	Low: -1SD (Environmental concern)	0.11	0.16	0.71	[-0.40, 0.31]	Not significant
	Moderate: Mean (Environmental concern)	0.37	0.05	6.79	[0.26, 0.47]	Significant
	High: +1SD (Environmental concern)	0.45	0.08	5.59	[0.28, 0.59]	Significant
H4b	Self-cause integration * Environmental concern $\rightarrow$ SCEB	-0.02	0.05	0.47	[-0.13, 0.07]	Not supported
	Low: -1SD (Environmental concern)	-0.43	0.37	1.16	[-0.76, 0.15]	Not significant
	Moderate: Mean (Environmental concern)	0.12	0.06	2.02	[0.00, 0.23]	Significant
	High: +1SD (Environmental concern)	-0.02	0.15	0.10	[-0.32, 0.27]	Not significant
<u>Conditional indirect effect associated with self-cause integration</u>						
H4	Perceived CSR-brand fit $\rightarrow$ Self-cause integration $\rightarrow$ SCEB	0.04	0.02	1.93	[0.00, 0.08]	Not supported
	Low: -1SD (Environmental concern)	-0.05	0.06	0.75	[-0.17, 0.08]	Not significant
	Moderate: Mean (Environmental concern)	0.04	0.02	1.95	[0.00, 0.09]	Not significant
	High: +1SD (Environmental concern)	-0.01	0.07	0.10	[-0.16, 0.13]	Not significant
<u>Moderation effects (Green trust)</u>						
H5a	Perceived CSR-brand fit * Green trust $\rightarrow$ Self-brand integration	0.04	0.05	0.94	[-0.04, 0.13]	Not supported
	Low: -1SD (Green trust)	0.33	0.10	3.49	[0.11, 0.50]	Significant
	Moderate: Mean (Green trust)	0.45	0.05	9.43	[0.35, 0.54]	Significant
	High: +1SD (Green trust)	0.37	0.10	3.56	[0.12, 0.54]	Significant
H5b	Self-brand integration * Green trust $\rightarrow$ SCEB	0.09	0.04	2.06	[0.02, 0.18]	Supported
	Low: -1SD (Green trust)	0.18	0.15	1.18	[-0.22, 0.41]	Not significant
	Moderate: Mean (Green trust)	0.29	0.06	5.30	[0.18, 0.40]	Significant
	High: +1SD (Green trust)	0.43	0.13	3.45	[0.15, 0.64]	Significant
<u>Conditional indirect effect associated with self-brand integration</u>						
H5	Perceived CSR-brand fit $\rightarrow$ Self-brand integration $\rightarrow$ SCEB	0.13	0.02	5.67	[0.08, 0.17]	Supported
	Low: -1SD (Green trust)	0.06	0.05	1.09	[-0.09, 0.15]	Not significant
	Moderate: Mean (Green trust)	0.13	0.03	4.68	[0.08, 0.19]	Significant
	High: +1SD (Green trust)	0.16	0.06	2.69	[0.05, 0.29]	Significant
<u>Direct effects</u>						
H6	Perceived CSR-brand fit $\rightarrow$ SCEB	0.37	0.04	9.01	[0.29, 0.45]	Significant
H7	SCEB $\rightarrow$ Customer loyalty	0.36	0.04	8.22	[0.27, 0.44]	Significant
	SCEB $\rightarrow$ Customer citizenship behavior	0.48	0.04	13.88	[0.41, 0.54]	Significant

Notes: Results were based on bootstrapping with 5000 subsamples (two-tailed).

results show that the direct effect of perceived CSR-brand fit on SCEB is both positive and significant ( $\beta = 0.37, p < 0.001$ ). Taken together, it can be concluded that the relationship between

perceived CSR-brand fit and SCEB is partially mediated by two pathways: (1) the pathway through self-brand integration and (2) the serial pathway through self-cause integration and self-brand

integration.

5.5. Moderated mediation analysis (H4-H5)

Moderated mediation, also known as conditional indirect effect, means that the indirect effect of an independent variable (X) on a dependent variable (Y) through a mediator variable (M) is contingent upon the value of a moderator variable (W) (Hayes, 2018). The presence of moderated mediation effects is substantiated when at least one path in the causal relation linking X to M or M to Y is moderated (Hayes, 2015). As recommended by Hair et al. (2019b), we used the two-stage approach to create the interaction terms, since the exogenous and endogenous variables, such as self-cause and/or brand integration, and SCEB were measured formatively.

5.5.1. Environmental concern

First, we created two interaction terms to determine whether environmental concern moderates perceived CSR-brand fit → self-cause integration → SCEB link. As indicated in Table 5 and Fig. 4, the first interaction term, perceived CSR-brand fit x environmental concern (with self-cause integration serving as the endogenous variable), was significant (H4a:  $\beta = 0.10, p < 0.01$ ). We then examined whether the effect of perceived CSR-brand fit on self-cause integration varied at three different levels of environmental concern. The three levels were as follows: the mean (M = 5.03 SD = 0.93), which is equivalent to moderate levels of environmental concern among the sample; the mean minus one standard deviation (-1 SD; i.e. 4.10), which is equivalent to low levels of environmental concern; and the mean plus one standard (+1 SD; i.e., 5.96), which is equivalent to high levels of environmental concern. Consistent with H4a in Table 5, the results show that the effect of perceived CSR-brand fit on self-cause integration is significant and positive when the level of environmental concern is high ( $\beta = 0.45, p < 0.001$ ), but is insignificant when the level of environmental concern is low ( $\beta = 0.11, p > 0.05$ ).

To interpret this moderating effect, we plotted the relationship at one standard deviation above and below the mean of environmental concern. As evident in Fig. 2, the upper green line which represents the slope at a high level of environmental concern is steeper than the lower red line which represents the slope at a low level of environmental concern. This suggests that the effect of perceived CSR-brand fit on self-cause integration is stronger when the level of environmental concern is high and weaker when the level of environmental concern is low.

On the other hand, the second interaction term, self-cause integration x environmental concern (with SCEB serving as the endogenous variable), was insignificant (H4b:  $\beta = -0.02, p > 0.05$ ). Contrary to our expectation, the results in Table 5 show that the effect of self-cause integration on SCEB is significant and positive only when the level of environmental concern is moderate ( $\beta = 0.12, p < 0.05$ ). In addition, the mediating effect of self-cause integration remains insignificant after including environmental concern as a moderator in the model (H4:  $\beta = 0.04, p > 0.05$ ). Therefore, we arrived at a conclusion that environmental concern moderates only the linkage between perceived CSR-brand fit and self-cause integration, but not the indirect effect of perceived CSR-brand fit on SCEB (via self-cause integration), rejecting H4.

5.5.2. Green trust

Two interaction terms were also created to determine whether green trust moderates perceived CSR-brand fit → self-brand integration → SCEB link. As indicated in Table 5 and Fig. 4, the first interaction term, perceived CSR-brand fit x green trust (with self-brand integration serving as the endogenous variable), was insignificant (H5a:  $\beta = 0.04, p > 0.05$ ). We further examined whether the effect of perceived CSR-brand fit on self-brand integration varied at three different levels of green trust. The three levels were as follows: the mean (M = 4.53 SD = 1.18), which is equivalent to moderate levels of green trust among the sample; the mean minus one standard deviation (-1 SD; i.e., 3.35), which is equivalent to low levels of green trust; and the mean plus one standard (+1 SD; i.e., 5.71), which is equivalent to high levels of green trust. Table 5 showed that perceived CSR-brand fit has the strongest effect on self-brand integration when the level of green trust is moderate ( $\beta = 0.45, p < 0.01$ ) rather than high ( $\beta = 0.37, p < 0.01$ ). Thus, H5a is not supported.

On the other hand, the second interaction term, self-brand integration x green trust (with SCEB acting as the endogenous variable), was significant (H5b:  $\beta = 0.09, p < 0.05$ ). Consistent with H5b in Table 5, the results show that the effect of self-brand integration on SCEB is significant and positive when the level of green trust is high ( $\beta = 0.43, p < 0.001$ ), but is insignificant when the level of green trust is low ( $\beta = 0.18, p > 0.05$ ). To interpret this moderating effect, we plotted the slope of the relationship at one standard deviation above and below the mean of green trust. As evident in Fig. 3, the upper green line which represents the slope at a high level of green trust is steeper than the lower red line which represents the slope at a low level of green trust. This suggests that the

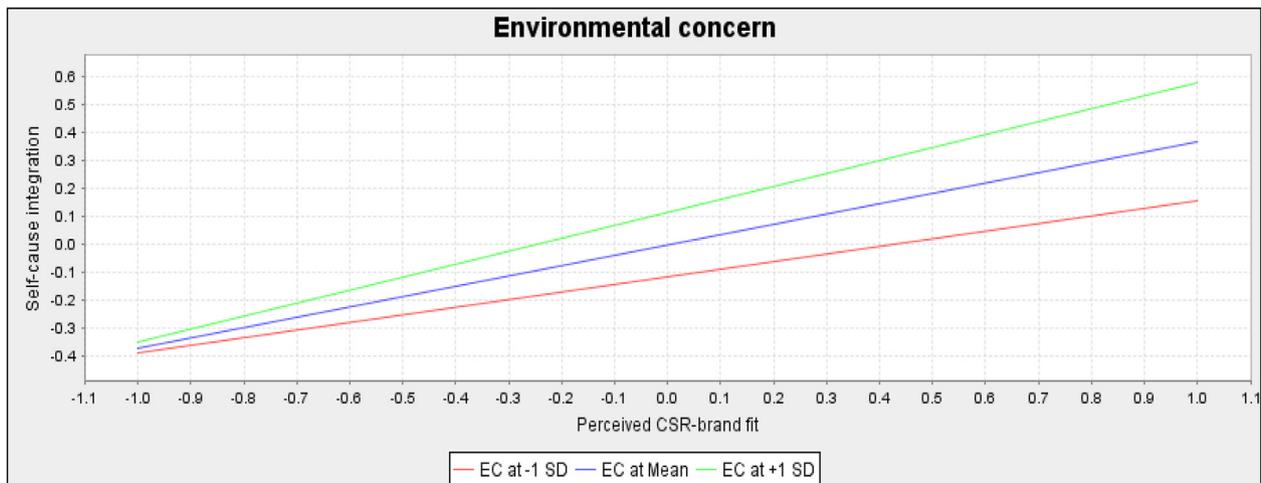
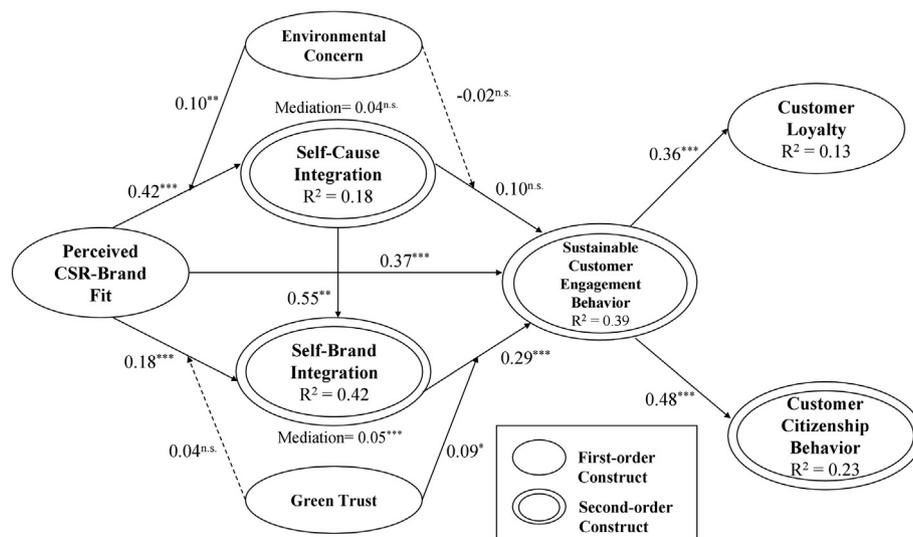


Fig. 2. Moderating effect of environmental concern on the relationship between perceived CSR-brand fit and self-cause integration.



**Fig. 3.** Moderating effect of green trust on the relationship between self-brand integration and SCEB. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)



**Fig. 4.** Results for structural model.

effect of self-brand integration on SCEB is stronger when the level of green trust is high and weaker when the level of green trust is low. Thus, H5b is validated.

In addition, the significant mediating effect of self-brand integration remains after including green trust as a moderator in the model (H5:  $\beta = 0.13$ ,  $p < 0.001$ ). Consistent with H5 in Table 5, the results show that the indirect effect of perceived CSR-brand fit on SCEB (via self-brand integration) is significant and positive when the level of green trust is high ( $\beta = 0.16$ ,  $p < 0.01$ ), but is insignificant when the level of green trust is low ( $\beta = 0.06$ ,  $p > 0.05$ ).

### 5.6. Main effects (H6-H7)

In line with the hypothesized main effects, SCEB is positively related to both customer loyalty ( $\beta = 0.36$ ,  $p < 0.001$ ) and CCB ( $\beta = 0.48$ ,  $p < 0.001$ ) (see Table 5 and Fig. 4). Thus, H6 and H7 are supported.

## 6. General discussion

In reconciling the conflicting views on the effect of CSR programs on customer outcomes and in response to calls by previous studies on examining how CSR-brand fit works (e.g., Green and Pelozo, 2011; Kim and Ferguson, 2019; Mostafa and ElSahn, 2016), the current study develops and empirically tests a framework encompassing both psychological mechanisms and boundary conditions that underlie consumers' reactions to perceived CSR-brand fit. The findings endorse Pelozo and Shang's (2011) view that the effect of CSR-brand fit on consumer responses is not simple and straightforward. While self-brand integration is shown to mediate the relationship between perceived CSR-brand fit and SCEB, self-cause integration only influences this relationship when it is coupled with self-brand integration as a serial mediator. Such serial mediation effects are contingent on the individuals' level of perceived environment concern and green trust. While the positive influence of SCEB on customers' in-role, loyalty behavior is expected, this study found that its effect on customers' extra-role,

citizenship behavior is even more salient. These findings provide important theoretical and managerial implications.

### 6.1. Theoretical implications

In terms of theoretical implications, our study contributes to the literature on CSR by arguing that the effectiveness of CSR programs hinges not only on how well it matches/fits the firms' core businesses, but also on consumers' values. Prior research has paid little attention to consumers' fit perceptions of the CSR with their personal values and lifestyles (Lee et al., 2012). Moreover, there is a dearth of study on the psychological mechanisms and boundary factors that underlie consumer responses to CSR-brand fit, with only 7% of existing CSR articles focusing on the mediating effect (Aguinis and Glavas, 2012). Although Abbas et al. (2018) have linked CSR to customer engagement in the banking context, they fail to account for CSR-brand fit, along with psychological mechanisms and individual values, which may limit our understanding.

To broaden the knowledge in this stream, we introduce consumers' self-brand and/or cause integration as new psychological mechanisms that influence SCEB in the context of CSR. We also shed further light on this psychological process by identifying two different but converging boundary conditions, namely environmental concern and green trust. Thus, our study provides novel insights into the understanding of how and when perceived CSR-brand fit drives SCEB, constituting viable explanation for the inconsistent findings on the CSR-customer outcomes relationship (e.g., Amatulli et al., 2018; Loureiro et al., 2012; Park et al., 2014; Pino et al., 2016). Consumers are increasingly factoring environmental and societal criteria into their consumption decisions (Pérez, 2009), yet we know very little about the interplay between consumers' motivational factor (environmental concern) and their beliefs about the firms' environmental performance (green trust).

Our study shows that the relationship between perceived CSR-brand fit and SCEB is serially mediated by self-cause and/or brand integration. The magnitude of this effect is greater for individuals with high levels of environmental concern and green trust. Given that the main purpose of CSR programs is to contribute to social betterment, CSR participation can make consumers' life more meaningful rather than just reinforce their self-identity (Batra et al., 2012). For CSR scholars, we encourage them to shift from focusing only on consumer-company identification to focusing on other meaningful psychological mechanisms such as self-cause and/or brand integration (see e.g., Cha et al., 2016; Deng and Xu, 2017). Our study's findings also lend support to Vlachos and Vrechopoulos's (2012) contention that CSR programs can influence consumer behavior through 'enriching the self' mechanism and provide the first empirical evidence for the spillover effect of self-cause integration to the brand level. Furthermore, our study supplements the literature on CSR with a more holistic view of fit—the interplay between cause, brand, and consumer. Specifically, we show that customers' personal values (environmental concern) interacts with their perceptions of CSR-brand fit in order to integrate the cause into their sense of self.

Unlike prior research that has historically focused on in-role loyalty behavior (e.g., Abbas et al., 2018; Dessart et al., 2015; Harrigan et al., 2017), our study explores extra-role CCB as a key outcome of SCEB. The widespread use of technology and various social media channels has granted customers a new role, such that they can make significant contributions by recommending the environmental programs to others, contributing new ideas to the environmental practices and supporting other customers online, in addition to other discretionary behaviors that go beyond their prescribed role. By highlighting this understudied but managerially highly relevant construct; namely, CCB, our study contributes to the burgeoning literature on customer engagement behavior.

### 6.2. Managerial implications

Despite the preponderance of carbon offsetting in achieving sustainable development goals, the uptake rate among air travelers purchase is very low. The findings suggest that airlines should evaluate the extent to which their CSR programs (e.g., carbon offsetting programs) are aligned with their line of business and target market if they are to reap the expected benefits of their CSR endeavors. To create the fit perceptions, managers should explain the purpose of their CSR programs and provide adequate information to support the company-cause alliances. Given that a one-size-fits-all approach is unlikely, airlines should target their CSR programs at specific groups of consumers who share similar values. For example, carbon offset programs should be perceived as more attractive by consumers who are environmentally conscious, making it easy for environmental causes to be incorporated into their intimate space. For a highly environmental-conscious group, the focus of communication strategies should be on the CSR's ability to satisfy consumers' psychological needs, thereby helping them express their self-identity and making their life worth living. Another way to encourage customer participation in CSR programs is to highlight the co-benefits delivered by carbon offsetting such as supporting human capital and poverty reduction, along with their environmental benefits, which will increase the cause meaningfulness. To enhance the preferences of this group of consumers, they should be allowed to choose the types of carbon offset programs (e.g., renewable energy and forest restoration) they would like to fund. In short, the best communication strategy for airlines is to frame the messages around the relevance of CSR programs to the firms' core businesses as well as the consumers' values.

Interestingly, we found that consumers' desire to engage in sustainable engagement behavior—both pro-environmental and pro-community—are not strong even if the CSR activity has won their affinity and successfully integrated into their sense of self. Instead, higher levels of SCEB are only achieved when consumers' self-cause integration is transferable to the brand and they perceive the green/environmental initiatives of that brand as trustworthy. Therefore, the key challenge for airlines' CSR communication is to reduce public skepticism by improving the transparency and credibility of their carbon offset programs. One way to do so is to provide more in-depth information on how the carbon emission is calculated and the price of the carbon credits to offset those emissions. Notably, the methods used in measuring and quantifying the carbon emissions reduction need to be standardized in order to avoid consumer confusion.

To increase CSR credibility, airlines should partner with climate and sustainable development bodies to assure consumers that their carbon offset programs are accredited to high international standards, such as the Gold Standard and Carbon Standard. Upon the completion of the carbon offsetting process, airlines should provide customers with relevant certificates as proof that their target of zero-carbon travel is achieved. To reassure customers, airline managers need to adopt some evidence-based marketing tactics in support of their environmental/green claims. Examples include expert witness statements, testimony from previous customers, quotations from magazines, and reports on the achievement of carbon offsets projects by the third-parties. To avoid customers' 'just passed on the costs' perceptions, airlines should announce the steps that have been taken to reduce carbon emissions. For example, replacing old airplanes with more fuel-efficient ones, better optimizing ground operations and flight planes.

### 6.3. Implications for theory and practice for cleaner production/sustainability

Airlines are confronted with increasing pressure to mitigate

carbon emissions, yet air travel continues to rise in popularity over the world. Airplane pollution, which has increased by almost two-third since 2005, is projected to surge sevenfold by 2050, propelled by a proliferation of low-cost airlines and an increase in per capital income in developing countries (Wilkes, 2019). Therefore, pollution reduction, a crucial element of sustainability, has become a great concern to airlines (Elleuch et al., 2018). Cleaner production is a concept that aims at improving overall efficiency while reducing risks to the environment and human by continuously applying integrated pollution prevention and/or control strategies to processes, products, and services (UNEP, 2006). Our study focuses on voluntary carbon offsetting as a part of environmental CSR to control the air pollution caused by travel. However, the goal of cleaner production cannot be reached if customer participation in such schemes is low. While the importance of CSR-brand fit remains, we found that its effectiveness ultimately depends on the extent to which a CSR program is aligned with customers' values. For example, environmental CSR may be particularly relevant to customers who care about the environmental issue and hence, green value in CSR programs can be better embedded in message directed at them. Environmental concern and green trust can further serve as impactful forces to activate SCEB. Our study adds the psychological (self-cause and/or brand integration) and individual difference factors (environmental concern and green trust) into cleaner production and sustainability discussion. Practically, our study suggests airline managers to better target their environmental CSR programs at consumers who are environmentally conscious and improve their green trust perceptions. Improvements in CSR strategies should help to reduce air pollution and promote sustainable travel.

Our study contributes to the sustainability literature by linking SCEB to their citizenship behavior. Customer citizenship behavior is the pro-organization behaviors where customers exhibit behaviors beneficial for the organization and its initiatives to protect the environment, including recommending the environmental programs to others, helping others to enact green values, and suggesting environment improvements (Boiral and Paillé, 2012). In the tourism context, Tuan (2018) showed that CCB for the environment promotes the organizational citizenship behavior among employees, thereby intensifying the effect of CSR on organizational citizenship behavior. Employees' organizational citizenship behavior has become a key driver to the success in the environmental management practices, which is critical for the corporate sustainability and its environmental performance (Paillé et al., 2013). Our study marks the convergence between sustainability,

customer engagement, and CCB research streams. It also opens new avenues for future study to examine the synergy between the engagement and citizenship behaviors of customers and that of employees, which could lead to better outcomes.

## 7. Limitations and future research

This study is subject to some limitations. First, the generalizability of this study's findings is constrained by the fact that one type of OCB (e.g., Facebook fan pages) is examined within a single sector (e.g., airline). Future research could replicate this model on different social networks (e.g., Twitter) and product or service categories (e.g., fashion retail, restaurants, hospitality), to see whether the results still hold. Second, this study's cross-sectional design impedes causal inferences. While cross-sectional data can help clarify the temporal relationship between perceived CSR-brand fit and SCEB, some links, such as the 'far-off' relationship between SCEB and in-role loyalty and extra-role CCB behaviors, is best validated with longitudinal, time-lagged data. Third, this study evaluates perceived CSR-brand fit without attending to the impact of different types of CSR cause-brand fit (Guzmán and Davis, 2017). Analyzing the differential effects of multiple CSR-brand fit (e.g., functional vs. value/image) on multiple self-integration objects (cause vs. brand) would be an interesting topic for future research.

## Declaration of competing interest

This manuscript is free of conflict of interests.

## CRediT authorship contribution statement

**Stephanie Hui-Wen Chuah:** Writing - original draft. **Dahlia El-Manstrly:** Writing - review & editing. **Ming-Lang Tseng:** Writing - review & editing. **Thurasamy Ramayah:** Methodology.

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## Appendix A

**Table A1**  
CSR senario.

Please read the following scenario carefully and indicate your level of agreement with the following statements.

Imagine that you have plans to travel using X airline and you see that a post from that airline has popped up on your Facebook news feed, inviting you to join their carbon offset program. The post reads as follows:

Dear valued customers,

Aircraft engines emit various pollutants of which carbon dioxide (CO<sub>2</sub>) is the most significant greenhouse gas (GHG) responsible for climate change. Climate change may mean increased temperatures, variations in rainfall, warmer seas, rising sea levels, and decreased snow and ice cover on land and at sea. Such changes could have a dramatic impact on our ecosystems, socioeconomic sectors, and human health. Right now, we are partnering with [Carbonfund.org](http://Carbonfund.org) Foundation, a leading environmental non-profit organization, to reduce the CO<sub>2</sub> and GHGs emissions of all scheduled flights. This partnership enables travelers to offset part of the carbon footprint of their flights by making a donation to support carbon-reduction projects.

### Why should I donate to Carbonfund.org?

By donating to [Carbonfund.org](http://Carbonfund.org), you help fund technology and landfill gas-to-energy projects. These projects utilize state-of-the-art technology to capture harmful methane GHG from landfill and convert it into electricity that can be used for powering homes. Your donation offsets a portion of your flight's CO<sub>2</sub>; thereby ensuring a healthy planet and stable climate. To help encourage this effort, we will purchase the equivalent offsets, which will be used to fund several forest conservation projects. This initiative is expected to produce several million carbon offsets over the next few years.

### How does it work?

When booking online, you have the option of offsetting your flight, in which case a charge will be added to the cost of your flight. Alternatively, you can offset your flight anytime by entering your name and booking number on the offsetting page of our website.

Please join our program and let's protect the environment together!

## References

- Arsar-ul-Haq, M., Kuchinke, K.P., Iqbal, A., 2017. The relationship between corporate social responsibility, job satisfaction, and organizational commitment: case of Pakistani higher education. *J. Clean. Prod.* 142, 2352–2363.
- Abbas, M., Gao, Y., Shah, S.S.H., 2018. CSR and customer outcomes: the mediating role of customer engagement. *Sustain* 10 (11), 4243.
- Aguinis, H., Glavas, A., 2012. What we know and don't know about corporate social responsibility: a review and research agenda. *J. Manag.* 38 (4), 932–968.
- Akamavi, R.K., Mohamed, E., Pellmann, K., Xu, Y., 2015. Key determinants of passenger loyalty in the low-cost airline business. *Tourism Manag.* 46, 528–545.
- Alhouthi, S., Johnson, C.M., Holloway, B.B., 2016. Corporate social responsibility authenticity: investigating its antecedents and outcomes. *J. Bus. Res.* 69 (3), 1242–1249.
- Amatulli, C., De Angelis, M., Korschun, D., Romani, S., 2018. Consumers' perceptions of luxury brands' CSR initiatives: an investigation of the role of status and conspicuous consumption. *J. Clean. Prod.* 194, 277–287.
- ATAG, 2019. Facts & figures. Available at: <https://www.atag.org/facts-figures.html>. (Accessed 15 June 2019).
- Austin, L., Gaither, B.M., 2019. Redefining fit: examining CSR company-issue fit in stigmatized industries. *J. Brand Manag.* 26 (1), 9–20.
- Babcock-Roberson, M.E., Strickland, O.J., 2010. The relationship between charismatic leadership, work engagement, and organizational citizenship behaviors. *J. Psychol.* 144 (3), 313–326.
- Bagozzi, R.P., Batra, R., Ahuvia, A., 2017. Brand love: development and validation of a practical scale. *Market. Lett.* 28 (1), 1–14.
- Barnes, N.G., Pavao, S., 2017. The 2017 Fortune 500 go visual and increase use of Instagram, Snapchat, and YouTube. Available at: <https://www.umassd.edu/cm/ social-media-research/2017-fortune-500/#d.en.963986>. (Accessed 27 May 2019).
- Baron, R.M., Kenny, D.A., 1986. The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *J. Pers. Soc. Psychol.* 51 (6), 1173–1182.
- Barone, M.J., Miyazaki, A.D., Taylor, K.A., 2000. The influence of cause-related marketing on consumer choice: does one good turn deserve another? *J. Acad. Market. Sci.* 28 (2), 248–262.
- Bartikowski, B., Walsh, G., 2011. Investigating mediators between corporate reputation and customer citizenship behaviors. *J. Bus. Res.* 64 (1), 39–44.
- Batra, R., Ahuvia, A., Bagozzi, R.P., 2012. Brand love. *J. Market.* 76 (2), 1–16.
- Becken, S., Mackey, B., 2017. What role for offsetting aviation greenhouse gas emissions in a deep-cut carbon world? *J. Air Transport. Manag.* 63, 71–83.
- Becker, J.M., Klein, K., Wetzels, M., 2012. Hierarchical latent variable models in PLS-SEM: guidelines for using reflective-formative type models. *Long. Range Plan.* 45 (5–6), 359–394.
- Becker-Olsen, K.L., Cudmore, B.A., Hill, R.P., 2006. The impact of perceived corporate social responsibility on consumer behavior. *J. Bus. Res.* 59 (1), 46–53.
- Bhattacharya, C.B., Sen, S., 2004. Doing better at doing good: when, why, and how consumers respond to corporate social initiatives. *Calif. Manag. Rev.* 47 (1), 9–24.
- Bhattacharya, C.B., Korschun, D., Sen, S., 2009. Strengthening stakeholder–company relationships through mutually beneficial corporate social responsibility initiatives. *J. Bus. Ethics* 85 (2), 257–272.
- Bigné, E., Currás-Pérez, R., Aldás-Manzano, J., 2012. Dual nature of cause-brand fit: influence on corporate social responsibility consumer perception. *Eur. J. Market.* 46 (3/4), 575–594.
- Boiral, O., Paillé, P., 2012. Organizational citizenship behaviour for the environment: measurement and validation. *J. Bus. Ethics* 109 (4), 431–445.
- Brodie, R.J., Hollebeek, L.D., Juric, B., Ilic, A., 2011. Customer engagement: conceptual domain, fundamental propositions, and implications for research. *J. Serv. Res.* 14 (3), 252–271.
- Cames, M., Graichen, J., Siemons, A., Cook, V., 2015. Emission Reduction Targets for International Aviation and Shipping. Study for the ENVI Committee. Directorate-General for Internal Policies. European Parliament.
- Carlson, J., Rahman, M., Voola, R., De Vries, N., 2018. Customer engagement behaviours in social media: capturing innovation opportunities. *J. Serv. Market.* 32 (1), 83–94.
- Carroll, A.B., 1991. The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. *Bus. Horiz.* 34 (4), 39–48.
- Castro-González, S., Bande, B., Fernández-Ferrín, P., Kimura, T., 2019. Corporate social responsibility and consumer advocacy behaviors: the importance of emotions and moral virtues. *J. Clean. Prod.* 231, 846–855.
- Cha, M.K., Yi, Y., Bagozzi, R.P., 2016. Effects of customer participation in corporate social responsibility (CSR) programs on the CSR-brand fit and brand loyalty. *Cornell Hos. Q.* 57 (3), 235–249.
- Chen, Y.S., 2010. The drivers of green brand equity: green brand image, green satisfaction, and green trust. *J. Bus. Ethics* 93 (2), 307–319.
- Chen, Y.S., Chang, C.H., 2012. Enhance green purchase intentions: the roles of green perceived value, green perceived risk, and green trust. *Manag. Decis.* 50 (3), 502–520.
- Chen, Y.S., Chang, C.H., 2013. Greenwash and green trust: the mediation effects of green consumer confusion and green perceived risk. *J. Bus. Ethics* 114 (3), 489–500.
- Choi, A.S., Ritchie, B.W., Fielding, K.S., 2016. A mediation model of air travelers' voluntary climate action. *J. Trav. Res.* 55 (6), 709–723.
- Cole, M.S., Walter, F., Bruch, H., 2008. Affective mechanisms linking dysfunctional behavior to performance in work teams: a moderated mediation study. *J. Appl. Psychol.* 93 (5), 945–958.
- Cone Communications, 2017. CSR study. Available at: <https://www.conecomm.com/ research-blog/2017-csr-study>. (Accessed 21 July 2018).
- Corral-Verdugo, V., Frías-Armenta, M., García-Cadena, C., 2010. Introduction to the psychological dimensions of sustainability. In: Corral-Verdugo, V., Frías-Armenta, M., García-Cadena, C. (Eds.), *Psychological Approaches to Sustainability*. Nova Science Publishers, New York, pp. 3–18.
- Cowper-Smith, A., De Grosbois, D., 2011. The adoption of corporate social responsibility practices in the airline industry. *J. Sustain. Tourism* 19 (1), 59–77.
- Currás-Pérez, R., Bigné-Alcañiz, E., Alvarado-Herrera, A., 2009. The role of self-definitional principles in consumer identification with a socially responsible company. *J. Bus. Ethics* 89 (4), 547–564.
- Dabholkar, P.A., Bagozzi, R.P., 2002. An attitudinal model of technology-based self-service: moderating effects of consumer traits and situational factors. *J. Acad. Market. Sci.* 30 (3), 184–201.
- De Vries, N.J., Carlson, J., 2014. Examining the drivers and brand performance implications of customer engagement with brands in the social media environment. *J. Brand Manag.* 21 (6), 495–515.
- Delgado-Ballester, E., Munuera-Alemán, J.L., 2005. Does brand trust matter to brand equity? *J. Prod. Brand Manag.* 14 (3), 187–196.
- Delgado-Ballester, E., Palazón, M., Pelaez-Muñoz, J., 2017. This anthropomorphised brand is so loveable: the role of self-brand integration. *Span. J. Market. ESIC* 21 (2), 89–101.
- Deng, X., Xu, Y., 2017. Consumers' responses to corporate social responsibility initiatives: the mediating role of consumer–company identification. *J. Bus. Ethics* 142 (3), 515–552.
- Dessart, L., Veloutsou, C., Morgan-Thomas, A., 2015. Consumer engagement in on-line brand communities: a social media perspective. *J. Prod. Brand Manag.* 24 (1), 28–42.
- Dolan, R., Conduit, J., Frethey-Bentham, C., Fahy, J., Goodman, S., 2019. Social media engagement behavior: a framework for engaging customers through social media content. *Eur. J. Market.* 53 (10), 2213–2243.
- Du, S., Bhattacharya, C.B., Sen, S., 2007. Reaping relational rewards from corporate social responsibility: the role of competitive positioning. *J. Res. Market.* 24 (3), 224–241.
- Du, S., Bhattacharya, C.B., Sen, S., 2011. Corporate social responsibility and competitive advantage: overcoming the trust barrier. *Manag. Sci.* 57 (9), 1528–1545.
- Dunlap, R., Jones, R., 2002. Environmental concern: conceptual and measurement issues. In: Dunlap, R., Michelson, W. (Eds.), *Handbook of Environmental Sociology*. Greenwood, London.
- Elleuch, B., Bouhamed, F., Elloussaief, M., Jaghbir, M., 2018. Environmental sustainability and pollution prevention. *Environ. Sci. Pollut. Res.* 25, 18223–18225.
- Fortier, M.S., Wiseman, E., Sweet, S.N., O'Sullivan, T.L., Blanchard, C.M., Sigal, R.J., Hogg, W., 2011. A moderated mediation of motivation on physical activity in the context of the Physical Activity Counseling randomized control trial. *Psychol. Sport Exerc.* 12 (2), 71–78.
- Ganesan, S., 1994. Determinants of long-term orientation in buyer-seller relationships. *J. Market.* 58 (2), 1–19.
- Goh, S.K., Balaji, M.S., 2016. Linking green skepticism to green purchase behavior. *J. Clean. Prod.* 131, 629–638.
- Gössling, S., Haglund, L., Kallgren, H., Revahl, M., Hultman, J., 2009. Swedish air travellers and voluntary carbon offsets: towards the co-creation of environmental value? *Curr. Issues Tourism* 12 (1), 1–19.
- Green, T., Pelozo, J., 2011. How does corporate social responsibility create value for consumers? *J. Consum. Market.* 28 (1), 48–56.
- Groth, M., 2005. Customers as good soldiers: examining citizenship behaviors in Internet service deliveries. *J. Manag.* 31 (1), 7–27.
- Gummerus, J., Liljander, V., Weman, E., Pihlström, M., 2012. Customer engagement in a Facebook brand community. *Manag. Res. Rev.* 35 (9), 857–877.
- Guzmán, F., Davis, D., 2017. The impact of corporate social responsibility on brand equity: consumer responses to two types of fit. *J. Prod. Brand Manag.* 26 (5), 435–446.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., 2017. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, second ed. Sage, Thousand Oaks, CA.
- Hair, J.F., Risher, J.J., Sarstedt, M., Ringle, C.M., 2019a. When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* 31 (1), 2–24.
- Hair, J.F., Sarstedt, M., Ringle, C.M., 2019b. Rethinking some of the rethinking of partial least squares. *Eur. J. Market.* 53 (4), 566–584.
- Ham, S., Han, H., 2013. Role of perceived fit with hotels' green practices in the formation of customer loyalty: impact of environmental concerns. *Asia. Pac. J. Tour. Res.* 18 (7), 731–748.
- Harrigan, P., Evers, U., Miles, M., Daly, T., 2017. Customer engagement with tourism social media brands. *Tourism Manag.* 59, 597–609.
- Harrigan, P., Evers, U., Miles, M.P., Daly, T., 2018. Customer engagement and the relationship between involvement, engagement, self-brand connection and brand usage intent. *J. Bus. Res.* 88, 388–396.
- Hayes, A.F., 2015. An index and test of linear moderated mediation. *Multivar. Behav. Res.* 50 (1), 1–22.
- Hayes, A.F., 2018. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Press, New York.
- Helme-Guizon, A., Magnoni, F., 2019. Consumer brand engagement and its social

- side on brand-hosted social media: how do they contribute to brand loyalty? *J. Market. Manag.* 35 (7–8), 716–741.
- Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Market. Sci.* 43 (1), 115–135.
- Hollebeek, L.D., 2011. Demystifying customer brand engagement: exploring the loyalty nexus. *J. Market. Manag.* 27 (7–8), 785–807.
- Hsu, K.T., 2012. The advertising effects of corporate social responsibility on corporate reputation and brand equity: evidence from the life insurance industry in Taiwan. *J. Bus. Ethics* 109 (2), 189–201.
- Hwang, J., Kandampully, J., 2012. The role of emotional aspects in younger consumer-brand relationships. *J. Prod. Brand Manag.* 21 (2), 98–108.
- Islam, J.U., Rahman, Z., 2016. The transpiring journey of customer engagement research in marketing: a systematic review of the past decade. *Manag. Decis.* 54 (8), 2008–2034.
- Jabbour, C.J.C., Santos, F.C.A., 2008. The central role of human resource management in the search for sustainable organizations. *Int. J. Hum. Resour. Manag.* 19 (12), 2133–2154.
- John, A., Qadeer, F., Shahzadi, G., Jia, F., 2019. Getting paid to be good: how and when employees respond to corporate social responsibility? *J. Clean. Prod.* 215, 784–795.
- Kabadayi, S., Price, K., 2014. Consumer–brand engagement on Facebook: liking and commenting behaviors. *J. Res. Interact. Market.* 8 (3), 203–223.
- Kang, S., Hur, W.M., 2012. Investigating the antecedents of green brand equity: a sustainable development perspective. *Corp. Soc. Responsib. Environ. Manag.* 19 (5), 306–316.
- Kang, K.H., Stein, L., Heo, C.Y., Lee, S., 2012. Consumers' willingness to pay for green initiatives of the hotel industry. *Int. J. Hospit. Manag.* 31 (2), 564–572.
- Keller, K.L., 1993. Conceptualizing, measuring, and managing customer-based brand equity. *J. Market.* 57 (1), 1–22.
- Kim, Y., Ferguson, M.A., 2019. Are high-fit CSR programs always better? The effects of corporate reputation and CSR fit on stakeholder responses. *Corp. Commun. Int. J.* 24 (3), 471–498.
- Kock, N., Lynn, G., 2012. Lateral collinearity and misleading results in variance-based SEM: an illustration and recommendations. *J. Assoc. Inf. Syst.* 13 (7), 546–580.
- Lee, E.M., Park, S.Y., Rapert, M.I., Newman, C.L., 2012. Does perceived consumer fit matter in corporate social responsibility issues? *J. Bus. Res.* 65 (11), 1558–1564.
- Liang, H., Saraf, N., Hu, Q., Xue, Y., 2007. Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management. *MIS Q.* 31 (1), 59–87.
- Loureiro, S.M., Sardinha, I.M.D., Reijnders, L., 2012. The effect of corporate social responsibility on consumer satisfaction and perceived value: the case of the automobile industry sector in Portugal. *J. Clean. Prod.* 37, 172–178.
- Lua, A., 2019. 21 top social media sites to consider for your brand. Available at: <https://www.buffer.com/library/social-media-sites>. (Accessed 7 June 2019).
- Luo, X., Bhattacharya, C.B., 2006. Corporate social responsibility, customer satisfaction, and market value. *J. Market.* 70 (4), 1–18.
- Mair, J., 2011. Exploring air travellers' voluntary carbon-offsetting behaviour. *J. Sustain. Tourism* 19 (2), 215–230.
- Malthouse, E.C., Haenlein, M., Skiera, B., Wege, E., Zhang, M., 2013. Managing customer relationships in the social media era: introducing the social CRM house. *J. Interact. Market.* 27 (4), 270–280.
- Mazodier, M., Merunka, D., 2012. Achieving brand loyalty through sponsorship: the role of fit and self-congruity. *J. Acad. Market. Sci.* 40 (6), 807–820.
- Mehrabian, A., Russell, J.A., 1974. *An Approach to Environmental Psychology*. The MIT Press, Cambridge, MA.
- Moliner, M.Á., Monferrer-Tirado, D., Estrada-Guillén, M., 2018. Consequences of customer engagement and customer self-brand connection. *J. Serv. Market.* 32 (4), 387–399.
- Mostafa, R.B., ElSahn, F., 2016. Exploring the mechanism of consumer responses to CSR activities of Islamic banks: the mediating role of Islamic ethics fit. *Int. J. Bank Market.* 34 (6), 940–962.
- Nitzl, C., Roldan, J.L., Cepeda, G., 2016. Mediation analysis in partial least squares path modeling Helping researchers discuss more sophisticated models. *Ind. Manag. Data Syst.* 116 (9), 1849–1864.
- Oliver, R.L., 1997. *Satisfaction: A Behavioral Perspective on the Consumer*. McGraw-Hill, New York, NY.
- Oviedo-García, M.Á., Muñoz-Expósito, M., Castellanos-Verdugo, M., Sancho-Mejías, M., 2014. Metric proposal for customer engagement in Facebook. *J. Res. Interact. Market.* 8 (4), 327–344.
- Paillé, P., Boiral, O., Chen, Y., 2013. Linking environmental management practices and organizational citizenship behaviour for the environment: a social exchange perspective. *Int. J. Hum. Resour. Manag.* 24 (18), 3552–3575.
- Park, J., Lee, H., Kim, C., 2014. Corporate social responsibilities, consumer trust and corporate reputation: South Korean consumers' perspectives. *J. Bus. Res.* 67 (3), 295–302.
- Pelozo, J., Shang, J., 2011. How can corporate social responsibility activities create value for stakeholders? A systematic review. *J. Acad. Market. Sci.* 39 (1), 117–135.
- Pérez, R.C., 2009. Effects of perceived identity based on corporate social responsibility: the role of consumer identification with the company. *Corp. Reput. Rev.* 12 (2), 177–191.
- Pino, G., Amatulli, C., De Angelis, M., Peluso, A.M., 2016. The influence of corporate social responsibility on consumers' attitudes and intentions toward genetically modified foods: evidence from Italy. *J. Clean. Prod.* 112, 2861–2869.
- Ritchie, B.W., Sie, L., Gössling, S., Dwyer, L., 2019. Effects of climate change policies on aviation carbon offsetting: a three-year panel study. *J. Sustain. Tourism* 28 (2), 337–360.
- Rungtusanatham, M., Miller, J.W., Boyer, K.K., 2014. Theorizing, testing, and concluding for mediation in SCM research: tutorial and procedural recommendations. *J. Oper. Manag.* 32 (3), 99–113.
- Sarstedt, M., Hair, J., Nitzl, C., Ringle, C. M., Howard, M., forthcoming. Beyond a tandem analysis of SEM and PROCESS: use PLS-SEM for mediation analyses. Manuscript submitted to *Int. J. Mark. Res.*
- Servaes, H., Tamayo, A., 2013. The impact of corporate social responsibility on firm value: the role of customer awareness. *Manag. Sci.* 59 (5), 1045–1061.
- Sheikh, S.R., Beise-Zee, R., 2011. Corporate social responsibility or cause-related marketing? The role of cause specificity of CSR. *J. Consum. Market.* 28 (1), 27–39.
- Smith, A.K., Bolton, R.N., 1998. An experimental investigation of customer reactions to service failure and recovery encounters: paradox or peril? *J. Serv. Res.* 1 (1), 65–81.
- Smith, A.K., Bolton, R.N., Wagner, J., 1999. A model of customer satisfaction with service encounters involving failure recovery. *J. Market. Res.* 36 (3), 356–372.
- Sobel, M.E., 1982. Asymptotic intervals for indirect effects in structural equations models. In: Leinhardt, S. (Ed.), *Sociological Methodology*. Jossey-Bass, San Francisco, pp. 290–312.
- Sohn, Y.S., Han, J.K., Lee, S.H., 2012. Communication strategies for enhancing perceived fit in the CSR sponsorship context. *Int. J. Advert.* 31 (1), 133–146.
- Suganthi, L., 2019. Examining the relationship between corporate social responsibility, performance, employees' pro-environmental behavior at work with green practices as mediator. *J. Clean. Prod.* 232, 739–750.
- Sulea, C., Virga, D., Maricutoiu, L.P., Schaufeli, W., Dumitru, C.Z., Sava, F.A., 2012. Work engagement as mediator between job characteristics and positive and negative extra-role behaviors. *Career Dev. Int.* 17 (3), 188–207.
- Tapia-Fonlle, C., Corral-Verdugo, V., Fraijo-Sing, B., Durón-Ramos, M.F., 2013. Assessing sustainable behavior and its correlates: a measure of pro-ecological, frugal, altruistic and equitable actions. *Sustain* 5 (2), 711–723.
- Tuan, L.T., 2018. Activating tourists' citizenship behavior for the environment: the roles of CSR and frontline employees' citizenship behavior for the environment. *J. Sustain. Tourism* 26 (7), 1178–1203.
- Tyers, R., 2018. Nudging the jetset to offset: voluntary carbon offsetting and the limits to nudging. *J. Sustain. Tourism* 26 (10), 1668–1686.
- UNEP, 2006. *Environmental agreements and cleaner production*. Available at: <https://www.unenvironment.org/resources/report/environmental-agreements-and-cleaner-production>. (Accessed 11 January 2020).
- US SIF Foundation, 2018. *Report on US sustainable, responsible and impact investing trends*. Available at: <https://www.ussif.org/files/Trends/Trends%202018%20executive%20summary%20FINAL.pdf>. (Accessed 18 August 2019).
- Van Doorn, J., Lemon, K.N., Mittal, V., Nass, S., Pick, D., Pirner, P., Verhoef, P.C., 2010. Customer engagement behavior: theoretical foundations and research directions. *J. Serv. Res.* 13 (3), 253–266.
- Van Marrewijk, M., 2003. Concepts and definitions of CSR and corporate sustainability: between agency and communion. *J. Bus. Ethics* 44 (2–3), 95–105.
- Vlachos, P.A., Vrechopoulos, A.P., 2012. Consumer-retailer love and attachment: antecedents and personality moderators. *J. Retailing Consum. Serv.* 19 (2), 218–228.
- Vlachos, P.A., Tsamakos, A., Vrechopoulos, A.P., Avramidis, P.K., 2009. Corporate social responsibility: attributions, loyalty, and the mediating role of trust. *J. Acad. Market. Sci.* 37 (2), 170–180.
- Walsh, G., Bartikowski, B., 2013. Exploring corporate ability and social responsibility associations as antecedents of customer satisfaction cross-culturally. *J. Bus. Res.* 66 (8), 989–995.
- Wei, S., Ang, T., Jancencelle, V.E., 2018. Willingness to pay more for green products: the interplay of consumer characteristics and customer participation. *J. Retailing Consum. Serv.* 45, 230–238.
- Wilkes, W., 2019. Airlines were supposed to fix their pollution problem. It's just getting worse. Available at: <https://www.bloomberg.com/news/articles/2019-03-10/airline-pollution-is-soaring-and-nobody-knows-how-to-fix-it>. (Accessed 11 January 2020).
- Yi, Y., Gong, T., 2013. Customer value co-creation behavior: scale development and validation. *J. Bus. Res.* 66 (9), 1279–1284.
- Yoo, B., Donthu, N., 2001. Developing and validating a multi-dimensional consumer-based brand equity scale. *J. Bus. Res.* 52 (1), 1–14.
- Zhang, B., Ritchie, B., Mair, J., Driml, S., 2019. Is the airline trustworthy? The impact of source credibility on voluntary carbon offsetting. *J. Trav. Res.* 58 (5), 715–731.