Corporate social responsibility and pro-environmental behavior: organizational identification as a mediator

Abstract
Corporate social responsibility (CSR) has been proposed as a useful tool for effective organizational, social and environmental functioning. Not surprisingly, various empirical studies have advocated its importance in generating positive outcomes at a macro level. Nevertheless, there is a lack of research on the role of CSR for workplace outcomes at the individual level. In parallel, employees constitute a critical group of stakeholders that not only demand but also promote and implement socially responsible and environment-oriented policies and practices.

As such, the purpose of this paper is to examine the effect of perceived CSR on employees’ pro-environmental behavior. In addition, responding to the call for more empirical research regarding the underlying mechanisms that transmit the effect of perceived CSR on micro-level outcomes we incorporated a core attitudinal variable namely organizational identification. Data from 191 private employees showed that perceived CSR has both a direct and indirect influence, through organizational identification, on pro-environmental behavior.

Keywords: Corporate social responsibility, organizational identification, pro-environmental behavior, mediation.
Introduction

Recent years have witnessed an explosion of interest in corporate social responsibility (CSR) among scholars and practitioners. This is mainly attributed to the burgeoning interest of individuals in the protection of the natural environment, in the respect for human rights and, in business ethics (Misani, 2010). CSR has received a host of conceptualizations (Dahlsrud, 2008). In this study we adopt the definition proposed by Turker (2009) that describes it as “corporate behaviors which aim to affect primary social, secondary social, primary nonsocial and secondary nonsocial stakeholders positively and goes beyond its economic interest” (p. 413-414).

Researchers (Barkay, 2012) proposed that CSR positively affects a number of important outcomes such as corporate reputation, consumer trust, employee loyalty, and investors’ confidence. Admittedly, one of the overarching issues in the extant literature pertains to the relationship between CSR and organizational performance. Several studies have shown the important role of CSR in enhancing corporate financial performance (Margolis and Walsh, 2001; Orlitzky et al., 2003; Margolis et al., 2009). Likewise, a large body of theoretical and empirical research has examined its antecedents and outcomes at a macro-level analysis. Yet, these macro level organizational attempts to address societal concerns regarding environmental issues “have strategic implications for business firms that are manifested at the micro level” (Banerjee, 2002, p. 177).

Consequently, it is noteworthy that there is little understanding regarding CSR at the micro-level level of analysis - or what scholars called microfoundations of CSR (Aguinis and Glavas, 2012). In fact, only recently have researchers addressed CSR in the field of organizational behavior (Morgenson et al., 2013). For example, research
has demonstrated that CSR is related to satisfaction (Zhu et al., 2014), engagement (Glavas and Piderit, 2009) and organizational citizenship behavior (Lin et al., 2010). Paradoxically, despite the converging nature of CSR and environmental sustainability (Montiel, 2008; Babiak and Trendafilova, 2011) extant research has inadequately addressed the relationship between CSR and employee pro-environmental behavior. This deficiency may also be attributed to the recently emerging green organizational behavior literature. However, considering that employees are a key group of stakeholders that demand and support organizational attempts to determine and cultivate a social responsible workplace (McWilliams and Siegel 2001), it is important to examine the potential effect of perceived CSR on employees’ pro-environmental behavior.

Therefore, synthesizing and integrating these two literatures the present study attempts to examine the association between employees’ perceptions of CSR and their pro-environmental behavior. Moreover, given the recent call for more research on the intervening mechanisms that may account for the effects of CSR (Aguinis and Glavas, 2012), we examine the mediating role of organizational identification. Combined, we investigate the positive impact of perceived CSR on employees’ pro-environmental behavior through organizational identification (Figure 1). By doing so, we attempt to contribute in several ways to the literature. First, this study extends limited empirical evidence on the effect of CSR on micro-level outcomes. Second, it highlights a potential intervening mechanism, organizational identification, which associates CSR with such outcomes. Third, we extend the nascent pro-environmental behavior literature by offering some key antecedents.
Theory and hypotheses

**CSR**

Recently, there has been a growing attention regarding the social responsibilities that corporations should undertake. As a result, various terms have emerged in order to describe this social aspect of business enterprises. Yet, despite the plethora of these competing constructs (i.e., corporate environmentalism, business ethics, corporate citizenship, stakeholder management) in the literature and in business practice, CSR still remains the prevalent term (Carroll and Shabana, 2010). Basu and Palazzo (2008) categorized CSR literature into three streams of research: (1) stakeholder driven which perceives CSR as a response to the demands of external stakeholders, (2) performance driven which focuses on the effectiveness of CSR activities and (3) motivation driven which emphasizes the extrinsic reasons for engaging in CSR and the intrinsic rationales based on philosophical concepts.

According to Aguilera and her colleagues (2007), three basic motives induce stakeholders to put pressure on corporations to engage in CSR, that is instrumental (driven by self-interest), relational (driven by a concern with relationships among group members), and moral (driven by a concern with ethical values and moral principles). Furthermore, proponents of CSR have argued that the implementation of such policies and practices are a *sine qua non* for long-term sustainability and effectiveness. More specifically, Carroll and Shabana (2010) mentioned that two, among others, of the core arguments in favor of CSR activities relate to cultivating a healthy and viable climate whereby organizations will successfully operate and warding off potential government regulation. Empirically, researchers have substantially demonstrated that CSR leads to multiple stakeholders’ outcomes such as
consumers’ company evaluation (Sen and Bhattacharya, 2001) and intention both to work for and invest in the company (Sen et al., 2006).

Organizational identification

In the extant literature, employee identification has received increased research attention. Therefore, it is not surprising that multiple foci of identification have emerged including organization, workgroup, supervisor and profession. However, among these, organizational identification has been the most dominant construct. Organizational identification is defined as the “perception of oneness or belongingness to an organization, where the individual defines him or herself in terms of the organization(s) in which he or she is a member” (Mael and Ashforth, 1992, p. 104). Organizational identification has its roots in social identity theory which posits that there are two core motives for identifying with a group, namely the need for “self-categorization” and the need for “self-enhancement”. The former pertains to the increased safety and the reduction of uncertainty that collective identification offers to employees whereas the latter is concerned with the enhancement of their sense of collective self-esteem (Pratt, 1998; Smidts et al., 2001; Ashforth et al., 2008).

Prior empirical studies have associated organizational identification with various antecedents and outcomes. More specifically, some of the most important predictors of organizational identification include perceived external prestige (Dutton et al., 1994; Carmeli et al., 2006; Fuller et al., 2006), psychological empowerment (Zhu et al., 2012), ethical leadership (Walumbwa et al., 2011), leader-member exchange (Katrinli et al., 2008), psychological contract breach (Epitropaki, 2012) and communication climate (Bartels et al., 2007). Similarly, extensive research has demonstrated the role of organizational identification in affecting employee outcomes.
such as job satisfaction and job involvement (van Knippenberg and van Schie, 2000), organizational citizenship behavior (Dukerich et al., 2002; van Dick et al., 2006; Restubog et al., 2008), turnover intentions (van Dick et al., 2004; Edwards and Peccei, 2010), creative behavior (Carmeli et al., 2007) and performance (Walumbwa et al., 2011).

Pro-environmental behavior

Corporations have started to realize the linkage between environmental protection and their sustainability and effectiveness (Chang and Chen, 2013). However, both academics and practitioners have ignored the issue of employee pro-environmental behavior. Employee pro-environmental behavior has been defined “as a broad set of environmentally responsible activities” (Graves et al. 2013, p. 81). Ones and Dilchert (2012) also proposed that there are five key green behaviors, namely conserving (e.g. recycling and reusing), working sustainably (e.g. developing sustainable products), avoiding harm (e.g. preventing pollution), influencing others (e.g. encouraging others) and taking initiative (e.g. initiating practices and policies). In this study, we adopt the categorization of Bissing et al. (2013) that separated pro-environmental behavior into task-related, which concerns the completion of required work in an environmentally friendly way, and proactive which refers to employees’ initiatives to behave in an environmentally friendly way beyond the requirements of the job tasks. Considering that empirical evidence on task-related pro-environmental behavior is scarce we focused on this type of behavior.

Recently, a host of theoretical frameworks has been offered such as the theory of planned behavior (Andersson et al., 2005), the value-belief norm theory (Scherbaum et al., 2008), the cognitive theory of stress (Homburg and Stolberg, 2006) and the
social exchange theory (Paillé and Boiral, 2013; Paillé and MeJia-Morelos, 2014). Drawing on these theories, research has focused on the antecedents of employee pro-environmental behavior including perceived organizational support (Paillé and MeJia-Morelos, 2014), environmental transformational leadership (Graves et al., 2013; Robertson and Barling, 2013), supervisor support (Daily et al., 2009; Lulfs and Hahn, 2013) and environmental management practices ((Paillé et al., 2013).

Corporate social responsibility and pro-environmental behavior

Although the topic of organizations’ responsibilities towards society dates back to some decades ago, in our era there is an overt pressure from stakeholders on enterprises to act in a more socially responsible way (Turker, 2009). Employees constitute one of the most significant stakeholders which “tend to support progressive labor relations policies, safety, financial security, and workplace amenities” (McWilliams and Siegel 2001, p. 122). As a result, at both collective and individual level employees affect and are affected by corporations’ CSR policies and practices. As already mentioned, the role of CSR in generating positive employee outcomes has been largely neglected. Hence, there is limited empirical evidence on the relationship between CSR and employee pro-environmental behavior. Yet, it is noteworthy that theoretical arguments support the positive effect of CSR on employee behavior. For instance, CSR activities encompass environmental social responsibilities (McWilliams et al., 2006) and, as a consequence, may trigger pertinent behaviors at a micro-level. Furthermore, CSR activities are also likely to demonstrate a high concern for employees and their needs (Rupp et al., 2006).

Drawing, thus, on social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960), which argued that individuals who receive benefits from other
individuals implicitly feel obliged to them, we expect that employees may reciprocate this favorable behavior from their organization by performing positive organizational outcomes. In fact, following these principles, Paillé and his colleagues (Paillé and Boiral, 2013; Paillé and Mejia-Morelos, 2014) have suggested that perceived organizational support has a positive effect on employee pro-environmental behaviors. In a similar vein, scholars (Rupp et al., 2006) have argued that CSR actions are likely to promote emotional, attitudinal and behavioral outcomes (Rupp et al., 2006). Combined, we assume that employees’ perceived CSR is likely to augment their task-related pro-environmental behavior.

In addition, Arnaud and Sekerka (2010) mentioned that corporations’ moral values that are related to the need for sustainability influence employees’ perceptions and behaviors through the socialization process. That is, employees learn and share such values which, in turn, prompt them to engage in sustainable behaviors. Likewise, it is argued that organizational pro-environmental and sustainable activities are likely to pervade organizational climate (Norton et al., 2012). Given that employees’ perceptions of CSR policies and practices describe organization’s levels of “accountability, responsibility, and the extent to which it upholds moral and ethical standards” (Rupp et al., 2006), we posit that CSR will instill pertinent values in employees and, consequently, will prompt them to exhibit pro-environmental behavior. In addition, Cantor et al. (2012) argued that employees’ perceptions of environmental management practices have an impact on their engagement in environmental behaviors through the mediation of both perceived organizational support and affective commitment to such behaviors. Therefore, following the above argumentation we postulate that employee perceptions of organizations’ CSR will positively affect employees’ pro-environmental behavior.
HI: Perceived corporate social responsibility is positively related to employees’ pro-environmental behavior.

Organizational identification and pro-environmental

A growing body of research has argued that organizational commitment is positively related to organizational citizenship behavior directed toward the environment (Daily et al., 2009; Lamm et al., 2013; Paillé and Boiral, 2013). These findings are based on the logic that when “individuals are willing to put forth effort on the organization’s behalf and accept the organization’s goals and values, they will direct their efforts in ways that they perceive will accomplish things that are valued by the organization” (Daily et al. 2009, p. 248). Drawing on these insights, we anticipate that organizational identification will contribute to employees’ pro-environmental behavior.

Organizational identification comprises a similar, yet distinct, construct compared to organizational commitment. Employees experiencing elevated levels of organizational identification accept the organization’s values and goals, and, consequently these values are internalized (Edwards, 2005). In turn, employees will demonstrate behaviors that help their organizations to achieve their goals (van Dick et al., 2008).

As noted above employees who have high levels of organizational identification will demonstrate elevated organizational citizenship behavior and performance (Dukerich et al., 2002; van Dick et al., 2006; Restubog et al., 2008; Walumbwa et al., 2011).

In addition, Russell and Griffiths (2008) proposed that organizational identification plays an important role in enhancing ownership of environmental issues at the workplace. That is, they argued that when employees identify with the organization
they exhibit a stronger ownership of environmental issues which, in turn, is likely to affect pertinent behaviors such as pro-environmental behavior.

Therefore, combining the recent studies that link employee attitudes and pro-environmental behavior (Paillé and Boiral, 2013; Paillé and Mejia-Morelos, 2014) with the aforementioned theoretical and empirical research, we expect that employees’ increased levels of organizational identification will result in augmenting their pro-environmental behavior.

**H2: Organizational identification is positively related to employees’ pro-environmental behavior.**

*Corporate social responsibility, organizational identification and pro-environmental behavior*

There is an emerging stream of research focusing on the impact of CSR on various employee outcomes. Scholars have proposed that CSR is likely to augment emotions, attitudes and behaviors through similar mechanisms with organizational justice (Rupp et al., 2006). Also, several researchers have demonstrated the positive relationship between CSR and organizational commitment (Brammer et al., 2007; Turker, 2009; Ali et al., 2010). That is, organizations which implement responsible activities towards society foster employees’ sense of belongingness to the specific positive aspect of their operation (Smith et al., 2001).

Likewise, drawing on social identity research has linked CSR to employee identification with the organization (Carmeli et al., 2007; Kim et al, 2010; Mozes et al., 2011; Rodrigo and Arenas, 2008; Roeck and Delobbe, 2012; Park and Levy, 2014). As noted, individuals tend to identify with a specific social group based on their need for “self-categorization” (which describes individual’s position in the
society) and “self-enhancement” (which provides the group membership with a rewarding sense). As such, the positive image of socially responsible organizations not only will elicit the engagement of employees’ values and ideals (Carmeli et al., 2007; Harvey et al., 2010) but also will enhance perceived external prestige (Roeck and Delobbe, 2012) which, in turn, will result in organizational identification (Kim et al, 2010).

Thus, combining the above arguments regarding the relationship between perceived CSR and organizational identification with the heretofore hypotheses, namely the effect of both CSR (hypothesis 1) and organizational identification (hypothesis 2) on pro-environmental behavior we posit that employee perceptions of organization’s CSR will lead them to identify with the organization and, in turn, will demonstrate pro-environmental behavior.

\textit{H3: Organizational identification mediates the relationship between perceived corporate social responsibility and employees’ pro-environmental behavior.}

\textbf{Method}

\textit{Participants and procedure}

In this study, we used a quantitative approach. Quantitative analysis relates to the collection of numerical data and the deductive relationship between theory and practice (Bryman and Bell 2011). To collect data from Greek private employees we used snowball sampling. That is, we invited personal and professional contacts and asked them to invite their contacts. For this reason, we developed a web link which was allocated to a broad sample of Greek employees. The web link directed individuals to a page that informed them about the scope of the study and asked those who were currently employed to answer the present questions. Overall, the sample
was comprised of 205 respondents. However, due to missing values the final sample was reduced to 191. Among the respondents, 45.0 per cent were male. The average age of the participants was approximately 31 years old and the majority of the respondents (80.1 per cent) were full-time employees. Also, most of the respondents held a bachelor’s (30.4 per cent) or master degree (38.7 per cent). Last, the mean job tenure was 7.0 years and the mean years of organizational tenure were 3.89.

Measures
The present measures (Appendix A) used a five-point Likert scale where 1 = strongly disagree and 5 = strongly agree except for pro-environmental behavior which used a 5-point scale ranging from 1=never to 5=always. All scale reliabilities (Cronbach alpha) (Table 1) were acceptable (CSR=.91, organizational identification=.87, pro-environmental behavior=.96), exceeding the value (.70) recommended by Nunnally et. al. (1967). Similarly, all scales showed high values of Jöreskog ρ (CSR=.90, organizational identification=.86, pro-environmental behavior=.96).

Corporate social responsibility (independent variable). Corporate social responsibility, was tapped using the six-item scale taken from Turker (2009). This scale facilitates the measurement of organizations’ CSR from employees’ perspective. A sample item is “Our company participates in activities which aim to protect and improve the quality of the natural environment”.

Organizational identification (mediator). We used the six-item scale developed by Mael and Ashforth (1992) in order to measure organizational identification (our mediator). A sample item is “When someone criticizes my company, it feels like a personal insult”.

Pro-environmental behavior (dependent variable). We measured pro-environmental behavior using the three items taken from Bissing-Olson et al. (2013) that describe the
extent to which employees’ formal work tasks were conducted in environmentally friendly ways. A sample item is “I perform tasks that are expected of me in environmentally-friendly ways”. Participants indicated how often they engaged in the behaviors described in each item by using a 5-point scale ranging from 1 (never) to 5 (always).

**Control variables.** We included five control variables such as gender (0=male, 1=female), age, education (1= Secondary school, 2 = Technological education institute degree, 3 = University degree, 4 = Master degree, 5 = Other), employment status (1= full time, 2=part time), job tenure and organizational tenure.

**Results**

Table 1 presents the means, standard deviations, reliabilities and correlations for all the present variables. The results demonstrated that corporate social responsibility is significantly related to both organizational identification (r = .29, p< .01) and pro-environmental behavior (r = .34, p< .01). In addition, organizational identification is positively related to pro-environmental behavior (r = .37, p< .01).

[Place table 1 about here]

**Confirmatory factor analysis**

We performed confirmatory factor analysis with all our items included in order to support the discriminant validity of the constructs. The results (Table 2) indicated that the three-factor model (our hypothesized model) offered the best fit to the data ($x^2 [85] = 167.25$, p<0.01, TLI=.95, CFI=.96, RMSEA= 0.07). Also, all standardized coefficients were significant (from .60 to .96) thus demonstrating convergent validity.
However, because our data were drawn using a cross-sectional design we attempted to test for common method bias. As a consequence, we used Harman’s single factor test in order to assess the potential influence of common method variance (Podsakoff et al., 2003). Results from an unrotated factor solution in an exploratory factor analysis (EFA) reported that three factors with eigenvalues greater than one emerged. In addition, as noted above we used a web-based survey tool which promotes anonymity, confidentiality and less social pressure. According to a meta-analytic study (Richman et al., 1999) such surveys exhibit less social desirability distortion, compared to the paper-and-pencil measures, which is a basic source of common method bias (Podsakoff et al., 2003).

[Place table 2 about here]

Test of Hypotheses

In order to test our hypotheses we used both bootstrapping analysis with macro developed by Preacher and Hayes (2004) and Sobel test (1982). Table 3 shows the results of the mediation analysis. According to the findings, corporate social responsibility was positively related to organizational identification (B= .30, p< .01) supporting thus our first hypothesis. Moreover, consistent with our second hypothesis organizational identification was associated with pro-environmental behavior (B= .34, p< .01). Also, both Sobel test (1982) and bootstrapping analysis supported the indirect effect of corporate social responsibility on pro-environmental behavior through organizational identification. More specifically, the former, which assumes a normal distribution, indicated that the indirect effect (.07) was significant (Sobel z=2.91, p<.01). In addition, bootstrapping analysis (1000 bootstrap samples with 95%
confidence intervals) which has the advantage of not assuming the normality of the sampling distribution and is appropriate for small samples (Shrout and Bolger, 2002) corroborated the indirect effect (.02, .13) as it does not contain zero.

[Place table 3 about here]

Discussion

In the last decades the topic of CSR has been of particular interest to researchers and practitioners. Nevertheless, the majority of these studies have largely adopted an institutional and organizational approach. Logically, thus, researchers have called for more empirical investigation in relation to the microfoundations of CSR, namely addressing CSR at the individual level (Aguinis and Glavas, 2012; Onkila, 2013). Also, Rupp et al. mentioned that “how employees perceive the CSR of their employer may actually have more direct and stronger implications for employees’ subsequent reactions than actual firm behaviors of which employees may or may not be aware.” (2013, p. 897). As such, the purpose of this paper was to examine the effect of employees’ perceptions of CSR on their pro-environmental behavior. Toward this end and responding to the dearth of research on existing mediating mechanisms that elucidate the impact of CSR on various outcomes (Aguinis and Glavas, 2012), the present study highlighted the mediating role of organizational identification.

The present results showed that perceived CSR has both a direct and indirect impact, through organizational identification, on pro-environmental behavior. Despite the conceptual linkages between CSR and pro-environmental behavior, insufficient empirical evidence addresses this association. Our results contributed to the extant literature by indicating that employees’ perceptions of organizations’ CSR positively
affects their pro-environmental behavior. Therefore, organizations that implement socially responsible policies generate positive and environmentally friendly values which may be shifted to an individual level and, thus, trigger employees’ task-related environmental behavior.

Moreover, we found that organizational identification comprises an underlying mechanism that accounts for this relationship. Organizational identification has been shown to be related to CSR (Carmeli et al., 2007; Rodrigo and Arenas, 2008; Kim et al., 2010; Park and Levy, 2014). That is, organizations which deploy such responsible activities ameliorate and embellish their image and, therefore, lead to enhanced employees’ organizational identification. Building upon these studies, we indicated that organizational identification not only is predicted by employees’ perceptions of CSR but also affects pro-environmental behavior. As such, the results extend earlier work on the relationship between organizational commitment and green employee behavior (Daily et al., 2009; Lamm et al., 2013; Paillé and Boiral, 2013) by demonstrating the contributing role of a similar construct, namely organizational identification, in engendering pro-environmental behavior. Taken together, the present findings also provide useful insights regarding the emerging literature that illustrates employee attitudes as intermediate mechanisms for understanding the effect of various organization-related determinants on employees’ pro-environmental behavior (Paillé and Boiral, 2013; Paillé and MeJia-Morelos, 2014) by encompassing a core attitudinal variable, that is, organizational identification.

**Practical Implications**

Our results provide some interesting implications for organizations. Initially, the present findings highlight the vital role of perceived CSR in facilitating employee pro-
environmental behavior. Specifically, employees’ perceptions regarding the socially responsible character of the organization significantly contribute to demonstrate such green behavior. Therefore, if organizations wish to encourage environmental behaviors at the individual level, they may benefit from implementing CSR practices. However, given the present findings that focused on employee perceptions, it is important to note that organizations should communicate internally these organizational attempts to their employees. In fact, the importance of measuring employees’ perceptions of CSR is congruent with other scholars (Rupp et al., 2013) who have argued that these perceptions are likely to show stronger effects than from actual CSR behaviors. Thus, it is crucial for organizations to instill and diffuse their both existing or novel CSR initiatives and activities. For example, organizations can communicate such endeavors through official reports, official website, TV commercials or magazines (Du et al., 2010).

In addition, our findings suggest that CSR is a significant predictor of organizational identification. Hence, CSR activities apart from their “green benefits” may also enhance their employees’ identification. Considering that organizational identification has been found to be related to various core outcomes including turnover intentions (van Dick et al., 2004), organizational citizenship behavior (Dukerich et al., 2002; Restubog et al., 2008), job satisfaction (van Knippenberg and van Schie, 2000) and job performance (Walumbwa et al., 2008; 2011), CSR may help to stimulate such favorable employee behaviors. Last, the results suggest that organizational identification leads to enhanced pro-environmental behavior. Therefore, organizations should attempt to nourish their employees’ sense of identification. Leadership can be useful here because previous studies have reported the positive association between
two core styles, namely ethical leadership (Walumbwa et al., 2011) and leader-member exchange (Kartinli et al., 2008), and organizational identification.

Limitations and Future Research

This study, though, has some limitations that need to be considered. Specifically, data were drawn using a cross-sectional approach. As a consequence, it is difficult to determine causality in our hypotheses. Second, we employed self-report measures from a sole source, namely employees, and therefore this may result in common method variance. Yet, both ex-ante and ex-post statistical attempts were conducted in order to mitigate and assess its potency. Specifically, both the web nature of the questionnaire which assures anonymity and attenuates social desirability and Harman test offer a more solid argumentation that common method bias may not constitute a severe problem of this study. Besides, Spector (2006) has stressed that common method bias seems to be more an urban legend than truth. Nevertheless, we cannot preclude the possibility that such bias occurs. Third, this study assessed CSR based on employees’ subjective responses. Thus, we should be cautious about the potential difference between perception and reality of organization’s CSR activities in relation to employees’ pro-environmental behavior. Last, the findings are limited because our data were collected using a snowball method. Thus, we cannot calculate the present response rate and, further, sampling error may exist.

Yet, the above limitations provide stimulating areas for further research. For example, future empirical studies could test our hypotheses using a longitudinal design. Moreover, given that snowball method employs a wide range of employees future studies might examine the present hypotheses in specific contexts such as, small and large firms or manufacturing and service sector. Further empirical research
could also address moderating variables that affect the relationship between CSR and organizational identification such as values congruency. In addition, the present study focused on CSR to social and non-social stakeholders. Future studies could examine the impact of CSR to employees or to customers on both organizational identification and pro-environmental behavior. Last, given the research void on the mediators that account for the relationship between CSR and pro-environmental behavior further research could delve into other explaining mechanisms.

Conclusion

In summary, this study set out to demonstrate the positive association between CSR and employee pro-environmental behavior. Furthermore, we attempted to clarify this relationship by showing the mediating role of organizational identification. Results indicated that CSR has both a direct and indirect effect on pro-environmental behavior through organizational identification. To the best of authors’ knowledge this is one of the first studies on the effect of CSR on pro-environmental behavior. Thus, based on a previous call for more empirical research on CSR and its mediating mechanisms at the individual level we hope that this study will stimulate future empirical research on this topic.
References


Pratt, M.G. (1998), *To be or not to be: central questions in organizational identification*. Sage Publications, Inc.

Pratt, M.G. (1998), To be or not to be? Central questions in organizational identification, in Whetten, D.A. and Godfrey, P.C. (Eds), *Identity in


identification”, *Organizational Behavior and Human Decision Processes*, Vol. 115 No. 2, pp. 204-213.


Appendix A: Questionnaire items

**Corporate social responsibility**

1. Our company participates in activities which aim to protect and improve the quality of the natural environment
2. Our company makes investment to create a better life for future generations
3. Our company implements special programs to minimize its negative impact on the natural environment
4. Our company targets sustainable growth which considers future generations
5. Our company supports nongovernmental organizations working in problematic areas
6. Our company contributes to campaigns and projects that promote the well-being of the society

**Organizational identification**

1. When someone criticizes my company, it feels like a personal insult
2. I am very interested in what others think about my company
3. When I talk about my company, I usually say 'we' rather than 'they'
4. This my company’s successes are my successes
5. When someone praises my company, it feels like a personal compliment
6. If a story in the media criticized my company, I would feel embarrassed

**Pro-environmental behavior**

1. I adequately complete assigned duties in environmentally-friendly ways
2. I fulfill responsibilities specified in my job description in environmentally friendly ways
3. I perform tasks that are expected of me in environmentally-friendly ways
Table 1. Descriptive statistics, reliabilities and correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>.55</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td>30.79</td>
<td>5.80</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Education</td>
<td>3.11</td>
<td>1.05</td>
<td>.05</td>
<td>-.15*</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Employment status</td>
<td>1.23</td>
<td>.48</td>
<td>.07</td>
<td>-.15*</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Job tenure</td>
<td>7.00</td>
<td>5.71</td>
<td>-.13</td>
<td>.60**</td>
<td>-.15*</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Organizational tenure</td>
<td>3.89</td>
<td>3.65</td>
<td>-.01</td>
<td>.49**</td>
<td>-.15*</td>
<td>-.15*</td>
<td>.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Corporate social responsibility (IV)</td>
<td>3.13</td>
<td>1.09</td>
<td>.18*</td>
<td>.16*</td>
<td>.11</td>
<td>-.01</td>
<td>.10</td>
<td>.17*</td>
<td>(91)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Organizational identification (M)</td>
<td>4.00</td>
<td>.81</td>
<td>.04</td>
<td>.13</td>
<td>-.14</td>
<td>-.05</td>
<td>.17*</td>
<td>.21**</td>
<td>.29**</td>
<td>(87)</td>
<td></td>
</tr>
<tr>
<td>9. Pro-environmental behavior (DV)</td>
<td>3.72</td>
<td>.95</td>
<td>.13</td>
<td>.15*</td>
<td>-.11</td>
<td>-.07</td>
<td>.11</td>
<td>.10</td>
<td>.34**</td>
<td>.37**</td>
<td>(.96)</td>
</tr>
</tbody>
</table>

*Note. *p ≤ .05, **p ≤ .01, IV=Independent variable, M=Mediator, DV=Dependent variable*
Table 2. Confirmatory factor analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>X²</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three factor model</td>
<td>167.25</td>
<td>85</td>
<td>.95</td>
<td>.96</td>
<td>.07</td>
</tr>
<tr>
<td>Two factor model: Corporate social responsibility (IV) and organizational identification (M)</td>
<td>500.37</td>
<td>87</td>
<td>.75</td>
<td>.79</td>
<td>.16</td>
</tr>
<tr>
<td>Two factor model: Corporate social responsibility (IV) and pro-environmental behavior (DV)</td>
<td>748.64</td>
<td>87</td>
<td>.60</td>
<td>.66</td>
<td>.20</td>
</tr>
<tr>
<td>Two factor model: Organizational identification (M) and pro-environmental behavior (DV)</td>
<td>456.87</td>
<td>87</td>
<td>.77</td>
<td>.81</td>
<td>.15</td>
</tr>
<tr>
<td>One factor model</td>
<td>1053.43</td>
<td>88</td>
<td>.42</td>
<td>.51</td>
<td>.24</td>
</tr>
</tbody>
</table>

*Notes: TLI is the Tucker–Lewis index; CFI the comparative fit index; and RMSEA the root-mean-square error of approximation, IV=Independent variable, M=Mediator, DV=Dependent variable*
Table 3. Regression Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-environmental behavior (DV) regressed on corporate social responsibility (IV)</td>
<td>.30</td>
<td>.06</td>
<td>5.04</td>
<td>.01</td>
</tr>
<tr>
<td>Organizational identification (M) regressed on corporate responsibility (IV)</td>
<td>.21</td>
<td>.05</td>
<td>4.09</td>
<td>.01</td>
</tr>
<tr>
<td>Pro-environmental behavior (DV) regressed on organizational identification (M), controlling for corporate social responsibility (IV)</td>
<td>.34</td>
<td>.08</td>
<td>4.27</td>
<td>.01</td>
</tr>
<tr>
<td>Pro-environmental behavior (DV) regressed on corporate social responsibility (IV), controlling for organizational identification (M)</td>
<td>.23</td>
<td>.06</td>
<td>3.82</td>
<td>.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>SE</th>
<th>L95% CI</th>
<th>U95%CI</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect effect and significance using normal distribution Sobel</td>
<td>.07</td>
<td>.03</td>
<td>.02</td>
<td>.13</td>
<td>2.91</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M</th>
<th>SE</th>
<th>L95% CI</th>
<th>U95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bootstrap results for indirect effect</td>
<td>.07</td>
<td>.03</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note. Unstandardized regression coefficients reported. Bootstrap sample size 1000. L = lower limit; U = upper limit, CI = confidence interval.

IV=Independent variable

M=Mediator

DV=Dependent variable
Figure 1. The hypothesized model.

Corporate social responsibility → Organizational identification → Pro-environmental behavior