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## **Developing a conceptual model for voluntary pro-environmental behavior of employees**

### **Abstract**

**Purpose:** The purpose of this paper is to develop a conceptual model based on an integrative approach to better understand voluntary pro-environmental behavior of employees.

**Design/methodology/approach:** The paper reviews theoretical approaches and uses an integrative perspective to develop a model to try to understand voluntary pro-environmental behavior in the workplace.

**Findings:** We developed a conceptual model of voluntary pro-environmental behavior of employees with four main variables: attitude, perceived behavioral control, personal norms, and perceived corporate social responsibility. We also suggest that habit may have a moderating effect, which has been neglected in previous studies.

**Practical implications:** Recognition of the importance of voluntary pro-environmental behavior of employees could enable organizations to develop more strategies and policies that strengthen their formal corporate social responsibility programs.

**Social implications:** Business owners and decision makers who are helping to promote voluntary behavior will contribute to institutions' environmental performance, saving natural resources, and promoting pro-environmental practices.

**Originality/value:** The proposed model will offer future studies a holistic understanding of the factors that predict voluntary pro-environmental behavior of employees and the extent to which this behavior depends on organizational motivators.

**Keywords:** Voluntary pro-environmental behavior, Theory of Planned Behavior, Norm Activation Model, Comprehensive Activation Determination Model, perceived corporate social responsibility, habit, corporate greening.

**Paper type:** conceptual paper

## 1. Introduction

Anecdotal evidence suggests that people participating in voluntary behavior often report that doing good for others and the community provides a sense of accomplishment and increases their self-confidence, pride and identity. Volunteering can be in different fields including social, cultural, sport, and environmental, and may include raising awareness and drawing public attention to important issues that influence life quality and welfare. Voluntary pro-environmental behaviors such as recycling, reducing energy consumption and food waste, and pollution prevention have received increasing attention for their importance for both communities and the environment (Monroe, 2003; Hargreaves, 2011). Several researchers (e.g. Steward *et al.*, 2009; Büchs *et al.*, 2012; Cooper *et al.*, 2015) have started to explore the potential impact of engaging in environmental volunteering on people's pro-environmental behaviors. They suggest it may be important to examine these effects over time, as well as any mediating mechanisms and the relationships that may exist between variables. Employees are part of a community, so their participation in voluntary behavior at work will also affect the community. It is therefore worth studying the behavior of employees in the workplace and its impact on the private sphere. Business approaches must change, with countries at different levels of development exposed to and contributing to environmental degradation in different ways. Countries with very high levels

of development are the biggest contributors to climate change, with average carbon dioxide emissions per capita of 10.7 tonnes, compared with 0.3 tonnes in less developed countries (United Nations Development Programme, 2018).

Businesses are showing their commitment to environment protection by carrying out corporate greening practices and activities. These are considered an important challenge for the organizational world today (Dilchert and Ones, 2012; Andersson *et al.*, 2013). Employees play a vital role in overcoming these challenges (Lülfes and Hahn, 2014). In recent years, there has been a growing scholarly interest in examining employees' discretionary behaviors towards the environment (Yuriev *et al.*, 2018). This has offered valuable insights that could shape employees' green behavior in the workplace. However, despite progress on both academic and business fronts, organizations continue to face substantial human resource challenges in realizing environmental sustainability initiatives (Daily and Huang, 2001; Govindarajulu and Daily, 2004; Daily *et al.*, 2009). Ones and Dilchert (2012, p 463) highlighted that "What organizations do is a function of decisions, behaviors, and performance of their members. Therefore, understanding, promoting, influencing, and changing environmental behaviors of employees are keys to environmental sustainability of organizations".

Many organizations have used the concept of corporate social responsibility (CSR) to increase their employees' commitment, not least because employees are important stakeholders in any organization (Azim, 2016). The broadest definition of corporate social responsibility (Crowther, 2008) is concerned with the relationship between global corporations, governments and individual citizens. More locally, Crowther (2008) defined it as concerning the relationship between a corporation and the society in which it operates, or the relationship between a corporation and its stakeholders. Another study defined CSR as "context-specific organizational

actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social and environmental performance" (Aguinis, 2011, p. 855). Some organizations treat natural resources as an external stakeholder, recognizing that these must be a priority to sustain the organization in the long term (Bebbington and Barter, 2011). Sustainability is an important aspect of the protection and proper use of natural resources, and is defined as the effect that action taken in the present has on the options available in the future (Crowther, 2002). If resources are used in the present, then they are no longer available for use in the future, which is particularly important if they are finite in quantity (Aras and Crowther, 2008). Employees often want to work with companies that support the environment, and environmental quality also strongly depends on human behavior (Steg and Vlek, 2009).

Few studies have examined the psychological mechanisms underlying the link between the perceived presence of organizational policies implemented at the firm level and pro-environmental behavior in the workplace (Norton *et al.*, 2014). There is little understanding of what variables may moderate this relationship. There has also been little progress in advancing a theoretical understanding of how corporate practices and policies that are socially and environmentally responsible are associated with employee pro-environmental behavior. We seek to fill these knowledge gaps by exploring how perceived CSR, defined as the perceived presence of socially and environmentally responsible practices and policies that aim to enhance the welfare of various stakeholders (Turker, 2009), affects employees' propensity to engage in voluntary pro-environmental behavior.

Understanding voluntary pro-environmental behavior of employees and how perceived CSR affects their engagement in this behavior is important for several reasons. First, studying this behavior will contribute to the growing body of literature about workplace pro-environmental

behavior by identifying the key factors that enhance it. Second, the presence of an organizational environmental policy has been linked to workplace pro-environmental behavior, but the role of perceived corporate policies and practices as a key antecedent to employees' environmentally responsible behavior has not been fully explored (Paillé and Raineri, 2015). This paper therefore proposes that perceived CSR may be an organizational motivator for voluntary pro-environmental behavior among employees. We also suggest that intention to carry out these voluntary behaviors may mediate the relationship between perceived CSR and the behaviors. This identifies a potential boundary condition to this relationship, and therefore provides greater clarity on this behavior. Voluntary employee behavior has been largely ignored in the research on corporate greening and environmental management. We believe that this gap needs to be bridged to improve understanding of voluntary pro-environmental behavior of employees. There are many arguments that individual behavior contributes to corporate greening (Boiral, 2009).

In a meta-analysis, Bamberg and Möser (2007) found that combining existing theories such as the Theory of Planned Behavior (TPB, Ajzen, 1991) and the Norm Activation Model (NAM, Schwartz, 1977) is a promising approach to explain behavior. There is growing consensus that a combination of personal norms and the TPB can best be used to explain individual pro-environmental behavior outside work. We used this insight to combine these theories to better understand voluntary pro-environmental behavior and the role of perceived CSR as a determinant in the organizational context. Researchers who argue that pro-environmental behavior is mainly driven by self-interest and the rational evaluation of behavioral consequences (e.g., Taylor and Todd, 1995; Cheung *et al.*, 1999; Kaiser *et al.*, 1999) have frequently used the TPB as a framework. They focus on intention as an outcome of attitude, social norms, and perceived behavioral control and discuss it as a determinant of pro-environmental behavior.

Other scholars have proposed integrating habit into the explanation of pro-environmental behavior (e.g., Gregory and Di Leo, 2003; Klöckner *et al.*, 2003; Klöckner and Matthies, 2004; Holland *et al.*, 2006; Klöckner and Blöbaum, 2010). The aim of this paper was therefore:

- To develop a conceptual framework to measure voluntary pro-environmental behavior;
- To propose a role for perceived CSR in this behavior; and
- To propose a moderating role for habit on the relationship between intention to perform this behavior and the behavior itself.

## **2. Literature Review**

### *2.1 Conceptualization of voluntary pro-environmental behavior of employees (VPBE)*

Scholars have defined pro-environmental behavior in the workplace as pro-social organizational behavior that has a strong potential to create value (Ramus and Killmer, 2007). Corporate greening behaviors are defined as behaviors aimed at changing organizational practices to more environmentally sound ones, classified as functional behavior that is intended to be welfare-promoting (Ramus and Killmer, 2007). Voluntary individual behavior is behavior that is not organizationally prescribed or mandatory, and not included in formal role descriptions, role expectations or job requirements. This behavior is therefore a choice for the individual, although embedded in their daily activities. It is therefore frequently performed and usually a short-term activity that is not planned for a long time period as would be the case with volunteering activities (Penner, 2002). Corporate volunteering is often associated with formally organized company support for those who wish to volunteer their time and skills in the community (Peterson, 2004).

We drew our proposed constructs from three pro-environmental theories: the Theory of Planned Behavior (TPB) (Ajzen, 1991), the Norm Activation Model (NAM) (Schwartz, 1977), and the Comprehensive Action Determination Model (CADM) (Klöckner and Blöbaum, 2010). These

are considered suitable for the private sphere, and include interpersonal factors (attitude, personal norms), motivational factors (perceived behavioral control, perceived CSR) and intention, the feeling of being ready and willing to perform a behavior. Perceived behavioral control is the perceived ability to perform the behavior in the workplace. Extending existing behavioral models to the workplace environment resulted in the addition of the organizational context as well as the emphasis of interpersonal factors through the addition of group dynamics and management support (McDonald, 2014). The next section reviews these theories in detail.

## *2.2 Pro-environmental behavior theories*

This section introduces the literature on the existing models and how they can be applied to the workplace setting to explain employee pro-environmental behavior.

The Theory of Planned Behavior (TPB) was developed by Ajzen (1985, 1991). It argues that intention is determined by attitude toward the behavior, the subjective norm, and also by perceived behavioral control. Perceived behavioral control means the individual's perception of the ease with which the behavior can be performed. Individual attitudes are positive or negative feelings about a person, object, place or any other issue. The importance of personal attitude is acknowledged by both the Theory of Environmentally Significant Behavior (Stern, 1999; Stern *et al.*, 1999) and its predecessors, including the Theory of Reasoned Action (Fishbein, 1979) and the Theory of Planned Behavior (Ajzen, 1985). These theories suggest that pro-environmental behavior is shaped by personal attitudes toward nature and personal interactions with nature. Subjective norms include moral norms (Schwartz, 1977; Schwartz and Howard, 1981); personal norms, information processing (Griffin *et al.*, 1999); value-basis of environmental beliefs, self-transcendence, prosocial, altruistic and biospheric values (De Groot and Steg, 2008); social and cultural norms (Boehmer-Christiansenas and Skea, 1991), and normative conduct (Cialdini *et al.*,



1991). Researchers suggest that individual pro-environmental behavior is motivated by a mixture of moral and personal norms and self-interest (Jenkin *et al.*, 2011). The Norm Activation Model (NAM) (Schwartz, 1977) is commonly used in studies that follow the norms perspective.

Rational choice models like the TPB (Ajzen, 1991) are used by researchers focusing on the self-interest perspective (Bamberg and Möser, 2007).

Klößner and Blöbaums' (2010) Comprehensive Action Determination Model (CADM) specifically focuses on the private sphere. This model integrated TPB and NAM and added the non-rational component *habit* to address the multidimensionality of human behavior. The CADM argued that environmental behavior is an outcome of the complex interrelationship among normative, intentional, habitual, and situational processes. The core assumption of the CADM is that behavior is directly predicted by intention, perceived behavioral control, and habit.

Lülfes and Hahn (2013) proposed a conceptual model of voluntary pro-environmental behavior of employees (VPBE). This helps to guide thinking on a neglected form of behavior that is relevant for corporate greening. The model combines three main theories: the TPB (Ajzen, 1991), the NAM (Schwartz, 1977), and the CADM. The VPBE model suggests that organizational context and individual determinants, perceived behavioral control, personal norms, attitudes, intentions and habits are the key predictors of pro-environmental behavior in the workplace (Lülfes and Hahn, 2013).

### **3. Proposition development**

#### *3.1 Attitude*

Lülfes and Hahn (2013) defined attitude as a person's overall assessment of the advantages and disadvantages of performing a given behavior. Several studies have measured a specific (positive or negative) attitude, including about organic viticulture (Cordano *et al.*, 2010), pollution prevention as a waste management goal (Cordano and Frieze, 2000), conservation and pollution (Gadenne *et al.*, 2009), recycling (Tudor *et al.*, 2007), and key contemporary environmental management issues (Cummings, 2008). These indicate that attitudes are strong predictors for pro-environmental behavior in the business sphere. Environmental attitudes do not necessarily translate to pro-environmental behavior or practices, but instead have an indirect influence on behavior (Gadenne *et al.*, 2009). We agree with the insight that attitudes influence behavioral intentions to perform pro-environmental behavior within companies, which is already supported by several studies (e.g., Cordano and Frieze, 2000; Flannery and May, 2000; Tudor *et al.*, 2007; Cordano *et al.*, 2010). The first proposition is:

*P1. Attitude has an effect on intention to perform VPBE*

### *3.2 Perceived behavioral control*

Ajzen (1991) differentiated between internal and external perceived behavioral control aspects. Internal control factors are individual dispositional elements, such as the amount of information the employees possess and their skills or abilities. External behavioral control factors are those outside the individual that facilitate or interfere with the performance of the behavior. Research has so far focused on internal control factors like self-efficacy (required knowledge, skills, and abilities to make decisions) (Flannery and May 2000). Flannery and May (2000) found evidence that the ethical climate can facilitate ethical judgments of decision makers. Recognizing the employer as an environmentally friendly company enhances the external perceived behavioral control for employees who aim to engage in pro-environmental behavior. We therefore expect

corporate environmental performance to have an impact on employees' intentions to act pro-environmentally. This study therefore proposes:

*P2. Perceived behavioral control has an effect on intention to perform VPBE*

### *3.3 Personal moral norms*

According to the NAM, a personal norm is activated when three fundamental prerequisites are met. Individuals must (1) be aware that action to solve a problem is needed in the given situation (awareness of need); (2) recognize that their own action is linked to the problem (awareness of consequences); and (3) recognize their ability to engage in actions to help (perceived behavioral control). Several studies indicate that moral norms help to explain pro-environmental behavior like energy conservation (Black *et al.*, 1985), recycling (Guagnano *et al.*, 1995), travel mode choice (Hunecke *et al.*, 2001), and pro-environmental buying (Thøgersen, 1999). Voluntary and discretionary behavior is strongly guided by personal predispositions (e.g., Warburton and Terry, 2000; Penner, 2002, for volunteering; Organ *et al.*, 2006 for organizational citizenship behavior). We suggest that individuals who have a personal predisposition toward pro-environmental behavior will probably transfer their behavior to their workplace (Tudor *et al.*, 2007; Daily *et al.*, 2009) and will engage in VPBE. Voluntary pro-environmental behavior is often not supported by structured formal programs, so these personal predispositions play an even more significant role in voluntary behaviors in the corporate context. The third proposition is:

*P3 Personal moral norms have an effect on intention to perform VPBE*

### *3.4 Perceived corporate social responsibility (CSR)*

Perceived corporate social responsibility (CSR) is defined as the perceived presence of socially and environmentally responsible practices and policies that aim to enhance the welfare of various

stakeholders (Turker, 2009). It affects employees' propensity to engage in pro-environmental behavior. Studies have shown that perceived CSR can affect employees' attitudes toward their organization, such as firm attractiveness (e.g., Rupp *et al.*, 2013; Jones *et al.*, 2014), and organizational commitment and identification (e.g., Kim *et al.*, 2010; De Roeck *et al.*, 2016). Research has also shown that CSR perceptions can affect employees' in-role and extra-role workplace behaviors, including their job performance (e.g., Korschun *et al.*, 2014; Vlachos *et al.*, 2014), and organizational citizenship behavior (e.g., Rupp *et al.*, 2013; Farooq *et al.*, 2016). Vlachos *et al.* (2014) extended the idea that employees respond positively to CSR to suggest that perceived CSR influences employees' engagement in extra-role CSR-specific behavior. They found that when employees judge their company as socially and environmentally responsible, they are more likely to contribute ideas to and get involved in the implementation of their organization's overall CSR program.

This research suggests that perceived CSR affects the extent to which employees engage in behavior related to their firm's CSR program. Employees' voluntary pro-environmental behavior represents a type of extra-role behavior that is related to CSR activity (Boiral, 2009), so perceived CSR may be a predictor of employees' pro-environmental behavior in the workplace. The fourth proposition is:

*P4. Perceived corporate social responsibility (CSR) has an effect on intention to perform VPBE*

### *3.5 Intention to perform VPBE*

Studies on the relationship between intention and behavior in general provide mixed results. Recent work on ethical decision making supports the view that intention is a strong predictor of behavior (Rabl and Kühlmann, 2008; Zhang *et al.*, 2009). Several meta-analyses (Milne *et al.*,

2000; Armitage and Conner, 2001; Sheeran, 2001) have also found that intentions are reliably associated with behavior (Webb and Sheeran, 2006, even demonstrated a causal relationship). Schwenk and Möser (2009) showed that the correlation between intention and behavior for pro-environmental behavior is above the average for other kinds of behavior. We therefore assumed that intentions are a direct predictor of pro-environmental behavior, and proposed:

*P5. Intention to perform VPBE has an effect on VPBE itself*

### *3.6 Moderating role of habit*

This study focuses on pro-environmental behavior that is frequently performed, so that it becomes a daily, routine behavior. We therefore posit that it eventually ceases to be rational and purposive and instead can be characterized as habitual. Habits limit the predictive power of intention (Limayem *et al.*, 2007), so we propose to integrate this concept into our model of VPBE. There are three major views about the link between habit and intention (Limayem *et al.*, 2007): (1) habit as a predictor of intention; (2) habit as a direct predictor of behavior; and (3) habit as a moderator between intention and behavior. The literature on environmental psychology shows strong support for the third view. Aarts *et al.* (1998, p.1369), for example, found that habit sets “a boundary condition for the applicability of the theories of reasoned or planned behavior in predicting and explaining repeated behaviors”. Empirical research (e.g., Verplanken *et al.*, 1997, 2008) supports the conclusion that habit has a moderating effect on the relationship between intention and behavior. When habits are stronger, the effect of intention on behavior is smaller. The sixth proposition is therefore:

*P6. Habit moderates the relationship between intention to perform VPBE and VPBE itself.*

## **4. Proposed framework for voluntary pro-environmental behavior**

By integrating three theories, this study therefore proposes four main factors that affect voluntary pro-environmental behavior among employees. These factors are attitude, perceived behavioral control, personal moral norms, and perceived corporate social responsibility. We have developed a conceptual framework (Figure 1) for the relationships between the four factors (P1–P4), intention to perform VPBE and VPBE (P5) in the workplace, moderated by habit (P6). The framework suggests that voluntary pro-environmental behavior factors act as antecedents of employees’ intention to perform VPBE, and this, in turn, influences behavior, with this relationship moderated by habit.

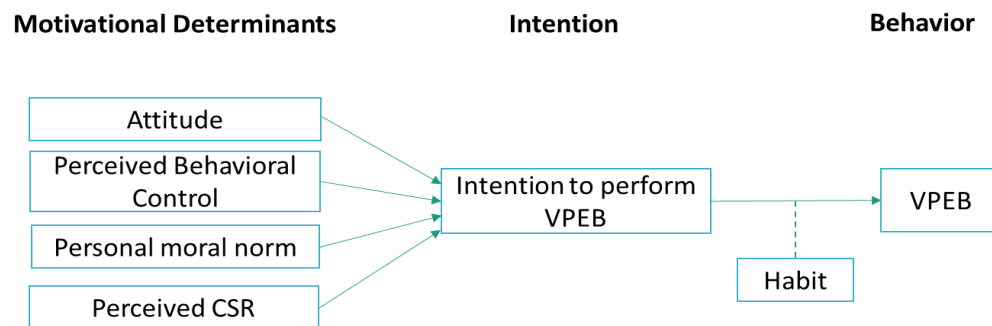


Figure 1. Conceptual framework of VPBE

## 5. Conclusion

We believe that linking VPBE, with precedent factors rooted in environmental psychology, and considering this in the light of the literature on perceived corporate social responsibility (CSR) could be a promising way to provide better insights into corporate greening. Research on habits in the organizational context is scarce. We propose that habitual processes moderate the influence of intentions on VPBE. However, even habits can be modified (Hunecke *et al.*, 2001), for example, by strong changes of situation (e.g., forcing employees to use public transport instead of providing company cars). This is because habits are generated by successfully creating

stable behavioral patterns in stable situations (Klößner and Matthies, 2004). This paper, therefore, proposes a new conceptual model to link important aspects of employees' voluntary pro-environmental behavior in the organizational context. Understanding the determinants of this behavior is important for decision makers to enhance employee engagement in corporate greening programs and raise organizational environmental performance and market competitiveness.

## **6. Practical implications**

This paper raises some fundamental implications for organizations. First, recognition of the importance of voluntary pro-environmental behavior of employees could enable organizations to develop more strategies and policies. Second, it might be promising for organizations to further strengthen their formal corporate greening programs even if they are not targeted toward voluntary behaviors. This could influence external perceived behavioral aspects such as perceived environmental performance and may therefore predict VPBE. Environmental management theories often assume that pro-environmental behavior is guided by reasoned choices, but our model includes the importance of habit, which may have important practical implications for organizations.

## **7. Social implications**

When employees receive recognition for their voluntary pro-environmental efforts in the workplace, this is likely to promote pro-environmental behavior outside the workplace as well. Employees are part of society and whatever they do will affect their colleagues, friends and family, especially if it involves developing habits that can be repeated everywhere, not only in the workplace. By promoting this voluntary behavior, business owners and decision makers can

therefore contribute to society and government environmental indexes and actions. The effect of individual actions can therefore spread across society, saving natural resources and promoting environmental practices.

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