

Tahir, Rubab; Athar, Muhammad Razzaq; Afzal, Aneela

Article

The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Tahir, Rubab; Athar, Muhammad Razzaq; Afzal, Aneela (2020) : The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 7, Iss. 1, pp. 1-15, <https://doi.org/10.1080/23311975.2020.1781996>

This Version is available at:

<https://hdl.handle.net/10419/244870>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate

Rubab Tahir, Muhammad Razzaq Athar & Aneela Afzal |

To cite this article: Rubab Tahir, Muhammad Razzaq Athar & Aneela Afzal | (2020) The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate, Cogent Business & Management, 7:1, 1781996, DOI: [10.1080/23311975.2020.1781996](https://doi.org/10.1080/23311975.2020.1781996)

To link to this article: <https://doi.org/10.1080/23311975.2020.1781996>



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



Published online: 22 Jun 2020.



Submit your article to this journal [↗](#)



Article views: 2348



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 3 View citing articles [↗](#)



Received: 12 April 2020
Accepted: 03 June 2020

*Corresponding author: Rubab Tahir,
University Institute of Management
Sciences, PMAS-Arid Agriculture
University, Rawalpindi, Pakistan
E-mail: rubab_1010@yahoo.com

Reviewing editor:
Maria Palazzo, Università Degli Studi
Di Salerno, Italy

Additional information is available at
the end of the article

MANAGEMENT | RESEARCH ARTICLE

The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate

Rubab Tahir^{1*}, Muhammad Razzaq Athar² and Aneela Afzal²

Abstract: The awareness of environmental issues is rising among employees, customers, investors, and businesses. This study is focused on assessing the outcomes of practicing greenwashing and factors effecting green employee behaviour. A quantitative method was applied by collecting data from agri-inputs industry in Pakistan using survey (N = 520). The data were analysed by partial least square structural equation modelling in SmartPLS. Greenwashing has a negative impact on green employee behaviour with employee value orientation and green psychological climate negatively mediating (partially) this effect. The internal environmental orientation has no significant effect of mediation on the linkage of greenwashing and green employee behaviour. It is a cross-sectional study that might not have captured the constructs (e.g., greenwashing) fully. Besides, data were collected from one province and a single industry. It will help policymakers understand greenwashing effects and devising appropriate psychological strategies. The study emphasized on the holistic approach towards greening of organizations, and is, according to our best knowledge, the first empirical study that explored the impact of greenwashing on green employee behaviour in Pakistan.

ABOUT THE AUTHOR

Rubab Tahir is a full-time PhD scholar of Management Sciences at the University Institute of Management Sciences, Arid Agriculture University Rawalpindi, Pakistan. Her research interests include green organizational culture, greenwashing, and green employee behavior.

PUBLIC INTEREST STATEMENT

Businesses must behave sustainably for sustainable capitalism. Greenwashing is emerging as a mainstream issue with rising environmental consciousness among stakeholders. Companies are adopting greenwashing practices to cope with the increasing pressure of environment protection from consumers and employees. This created a need for this research to investigate the impact of greenwashing on green employee behavior. A research gap is found to address this human resource management puzzle, to study the impact of greenwashing on green employee behavior. Employees of agri-inputs industry were surveyed for data collection. The findings of the study leave businesses with a holistic understanding of greenwashing effects on green employee behavior with empirical evidence on a detailed psychological model. Research findings help businesses behave in a sustainable manner by devising appropriate emotional labor strategies in particular and HR policy in general.

Subjects: Work & Organizational Psychology; Personnel Selection, Assessment, and Human Resource Management; Business, Management and Accounting; Human Resource Management; Administration and Management

Keywords: greenwashing; employee value orientation; green psychological climate; green employee behaviour; agri-inputs industry of Pakistan

1. Introduction

Organizations are seeking ways to address rising environmental consciousness and awareness among stakeholders by making employee behaviours environmentally friendly (Cherian & Jacob, 2012; Yuriev et al., 2019). The focus has recently shifted to adopting innovative environmental and social practices to create unique social capital and sustainable long-term economic value by collaborative efforts across organizational functions (Vos, 2009). The concept of environmental management is gaining popularity, e.g., green innovation (Holzner & Wagner, 2019), green production (Brekke & Nyborg, 2008; Wang et al., 2020), green design (Hong et al., 2019; Kao & Du, 2020), green products (Dost, 2019), and green marketing (Papadas et al., 2019) are now being implemented to cope with the challenge of environmentalism. Consequently, alignment of business goals and environmental goals has now become a common practice as firms, including industry leaders, have recognized the emergence of paradigm of sustainability and has made sustainability central strategy component, e.g., Starbucks and Nike (Sroufe et al., 2010). An increase in consumers' environmental consciousness has forced organizations to adopt environmental laws and environmental trends. Green organizations enjoy several long-term and short-term positive outcomes (Saha & Darnton, 2005) e.g., green innovation (Gürlek & Tuna, 2018), economic gains (Xie et al., 2019), cost savings (Dost, 2019; Gürlek & Tuna, 2019), publicity (Foerstl et al., 2010), and talent acquisition and management (Jabbar & Abid, 2014).

Organizations are facing knowledge gap to have green human capital as a part of green intellectual capital. Green employee behaviour (GEB), defined as the conscious efforts made by employees at workplace to behave in environmentally friendly manner (Derksen & Gartrell, 1993; Hines et al., 1987; Vining & Ebreo, 1992), is integral for green human capital in an organization (Chang & Chen, 2012). The effect of greenwashing practices (the misleading information by organizations to portray an environmentally responsible image to the public with false claims) (Francis et al., 2007) on GEB has unclear findings in the literature (Wright & Nyberg, 2017) and the factors affecting their relationship indirectly (Deshwal, 2015).

There is unclear guidance available for organizations on the required interventions to make their workers' behaviour environmentally friendly and to develop the understanding of the effect of greenwashing practices. The work aims at filling the gap that is identified by researchers, e.g., Wright and Nyberg (2017), Jeswani et al. (2008), Küçükoğlu and Pinar (2015), and Harris and Crane (2002). Literature is reviewed and despite a limited number of empirical studies on the relationship of greenwashing with GEB, the available empirical evidence shows greenwashing (discrepancy between green talk and green walk) (Walker & Wan, 2012) has a negative impact on employees being a stakeholder (Vos, 2009), green trust (Chang & Chen, 2012), and employee engagement (Pontefract, 2016), etc.) Hypotheses were developed by critical review of the literature to examine the relationship between greenwashing and GEB, and a new research framework is developed and validated as no empirical evidence was found that examined such a psychological pattern involving indirect effects of greenwashing on GEB.

The goal of the study is to understand underlying psychological pattern of variables effecting GEB as a result of greenwashing practices. This will help managers achieve sustainable organizational performance via HR policies and strategies. It provides empirical evidence by statistically investigating the linkages using primary data collected through survey from agri-inputs industry.

2. Literature review

2.1. Greenwashing

The evolution of green thinking has a difficult-to-trace history as it has roots in ancient history, literature, and religious practices (Saha & Darnton, 2005). However, the popular and modern environmental movement started in the mid-to-late 1960s by rousing public awareness of high-profile environment-related events (e.g., Rachel Carson's book "Silent Spring"). Greening is a process of becoming environmentally friendly by reducing pollution, improving the efficiency of non-renewable and renewable resources, and conducting activities in environmentally sustainable manner (Gupta, 1995). Greenwashing, in contrast, is misleading information by organizations to portray an environmentally responsible image to the public with false claims (Francis et al., 2007). On a strategical level, greening estimates the environmental footprint and its comparison to benchmark, life cycle evaluation considering environmental declarations of products, and financial assessment. On the implementation stage, greening refers to low cost or no cost projects (including environmental costs), data-centre reengineering, green IT, and renewable energy onsite. On the operational level, greening refers to employee engagement programs, environment-friendly procurement services and strategic pro-environmental communication modes.

Companies that take the first step towards environmental friendliness through differentiation increase their market share (Ramus & Montiel, 2005). Once high-profile organizations follow green practices, small companies start following them as benchmark for pro-environmental policies (Feinstein, 2013; Ramus & Montiel, 2005) due to the fear of bad publicity and threats from external monitoring organizations. However, not all companies follow the same path. Businesses have started to make false green claims and are employing greenwashing practices to achieve green trust (Laufer, 2003). Greenwashing has now become a common practice (Horiuchi et al., 2009; Parguel et al., 2011) leading to customer scepticism (Pomeroy & Johnson, 2009).

As environmental awareness among consumers is increasing, buyers are becoming discerning and seek environmentally friendly products. Savvy marketers have started to capitalize on this rising wave of environmentally conscious buyers by touting greenness of their products (Bradley, 2011). Companies do selective disclosure of positive information for positive environmental image without revealing negative information, i.e., greenwashing (Lyon & Maxwell, 2011). The number of green investors is also on the rise (Ho, 2014) who effect the acceptable, unacceptable, and reformed companies' cost of capital in an economy (Heinkel et al., 2001). If green investors boycott environmentally irresponsible companies, then few investors hold its stock (Heinkel et al., 2001), the larger the shares held by green investors, the more difficult it will be to mark a company as polluter (Vos, 2009). However, investors fall victim of greenwashing practices too (Vos, 2009). Firms need to disclose more information instead of mere greenness claims to be trustworthy (Chen, 2008). The four types of environment-related information that firms need to disclose and share with stakeholders include internal organizational information, organizational information for external use, internal information of products, and external product information (Erlandsson & Tillman, 2009).

2.2. Greenwashing and green employee behaviour

The concept of employee behaviour finds its roots in the work of Elton Mayo (Schrage, 1990) who articulated human psychology and employees' behaviour at work. Green employee behaviour (GEB) is an extension of employee behaviour as organizational theory was broadened with rising green awareness, thus adding the environmental perspective to it (Chen, 2011). GEB is the conscious efforts made by employees to behave in an environment-friendly manner (Derksen & Gartrell, 1993; Hines et al., 1987; Tucker & Speirs, 2003; Vining & Ebreo, 1992). The perspective and attitude of employees towards environment have significant impact on organizations' environmental performance (Küçüköğlu & Pinar, 2015). Organizations with high level of green organizational culture have high organizational commitment and employees are aware of environmental concerns and support it (Mokhtar et al., 2016). The individual, group, and organizational values

motivate employees to engage in organizational greening behaviours, e.g., value creating pro-social extra-role activities along with in-role tasks (Ramus & Killmer, 2007).

Organizations influence employee behaviour by organizational culture that supports pro-environmental communication. Means, frequency, quality of communication and corporate policy also affect employees' environmental initiatives. Employees may have inappropriate beliefs regarding organizational ideas and policies about the environmental initiatives. Therefore, environmental communication can change culture and visibility of environmental infrastructure (Onkila, 2015). Theory of normative conduct categorizes injunctive norms that represents what is approved and descriptive norms represents what is observed (Schneider et al., 2013). Green work climate perceptions of co-workers and organization mediates the relation of perceived pro-environmental policy with GEB (i.e., task-related and non-task related) (Norton et al., 2014). Based on the literature on relationship of greenwashing and green employee behaviour, the following hypothesis is proposed:

H1: Greenwashing is significantly related to green employee behaviour.

2.3. Internal environmental orientation and green employee behaviour

It is important to differentiate the concept of culture, climate, and orientation of an organization. Organizational culture is shared and collectively accepted meanings of organizational operations to achieve objectives and tasks at a given time for a given group (Pettigrew, 1979). Organizational climate is the social, organization, and situational (environmental) influences on (organizational) behaviour (Glick, 1985). Organizational orientation is a philosophy that guides all business activities (Schwartz, 1965) or an overall business consciousness that directs all activities in the firm (Kolter, 1998). It can be observed by internal and external organizational behaviour and organizational structure (Miles & Munilla, 1993). Internal Environmental Orientation (IEO) is the firm's level of commitment for ethical standards and internal values for environment-friendly organizational culture to protect environment (Baker & Sinkula, 2005). Setting environmentally friendly organizational policies and procedures, elaborating sustainability reports, and employee environmental trainings are the common manifestation of IEO (Chan & Ma, 2016). An empirical study (Segarra Oña et al., 2013) found that management concerns, environmental management systems, stakeholder pressure, and economic benefits have positive effect on organizational environmental orientation. However, the environmental proactivity is negatively affected by government regulations and when managers deemed sustainability a problem. A previous research (Salvador & Burciaga, 2019) found that there is a positive relationship between organizational IEO and employee environmentally friendly in-role and extra-role behaviour which means it has already been empirically examined that a direct relation of IEO with GEB exists. However, its indirect effect on the relationship of greenwashing and GEB has not been investigated yet. It is expected that IEO will have indirect effect on the linkage of greenwashing and GEB, the following hypotheses are developed to test the phenomena using Baron and Kenny (1986) mediation process:

H2a: Greenwashing is significantly related to internal environmental orientation.

H2b: Internal environmental orientation is significantly related to green employee behaviour.

H2c: Internal environmental orientation mediates the relationship of greenwashing and green employee behaviour.

2.4. Employee value orientations and green employee behaviour

Environmental concern is the degree to which employees are aware of environmental problems and support efforts to solve them and/or indicate a willingness to contribute to the solution

(Dunlap & Jones, 2002). Similar to value-basis theory for environmental attitudes by Stern and Dietz (1994), Schultz (2000), and Schultz (2001) also argued about particular environmental concerns rooted in the awareness of the future of environmental problems and its consequences on values and valued objects. Schultz (2001) categorized three environmental concerns effecting behaviour-specific attitudes and environmental behaviour: egoistic, altruistic, and biosphere. According to De Groot and Steg (2008), biospheric value is related to underlying person's consideration about earth's environment. The first step is decision-making that will affect the environment. Altruistic value is related to the impact of human decisions on other people in relation to the environment. Egoistic value entails factors involved in decision-making process that might affect self-interest of the individual when environmental interests are at stake.

People with high egoistic concerns keep in view the cost and benefit of pro-environmental behaviour and will exhibit green behaviour, if benefits exceed the cost of green behaviour. Highly altruistic people will make decisions based on the perceived cost and benefits of their pro-environmental behaviour for others (family, community, humanity, etc.). People with high concerns for biosphere will have their decisions based on the perceived costs and benefits of their environmentally friendly behaviour for the whole eco-system and biosphere. This classification was empirically examined on different sets of samples in various studies (Schultz, 2000, 2001; Schultz et al., 2005). The following hypotheses are developed to investigate the relationship and indirect effect of employee value orientation on greenwashing and green employee behaviour according to Baron and Kenny (1986) mediation analysis:

H3a: Greenwashing is significantly related to employee value orientation.

H3b: Employee value orientation is positively related to green employee behaviour.

H3c: Employee value orientation mediates the relationship of greenwashing and green employee behaviour.

2.5. Green psychological climate and green employee behaviour

Green psychological climate (GPC) is the employee's perception of organizational environment-related policies, practices, and processes that are reflected in organizational green values (Dumont et al., 2017). It results from the social interaction of employees that determines organizational values reflected in its policies, practices, and procedures (Kuenzi & Schminke, 2009). Researchers found that green human resource management (GHRM) is significantly related to GEB and shape employee psychological climate (defined as the employee perception of work environment) (Burke et al., 2002; Schneider et al., 2013; P. M. Wright et al., 2001). According to Dumont et al. (2017), GPC is composed of psychological and social processes at workplace by which GHRM influences GEB. Psychological climate embraces employee perceptions of the characteristics of work environment (Burke et al., 2002) and organization (Patterson et al., 2005). Employees analyse organizational policies and form their perceptions of organizational values (Kaya et al., 2010; Nishii et al., 2008).

Employees least engage in green initiatives and green behaviour, if they are not held responsible for equipment used and energy costs (Chou, 2014). Norton et al. (2014) found mediating role of GPC between the perceived presence of organizational green policies and employee behaviour, including pro-active green behaviour and task-related green behaviour. The supplies-values fit theory posits that congruency between personal values and organizational values positively affects employee work behaviour and attitude (Edwards & Shipp, 2007). The core themes of supplies-values fit theory support the research framework examined in this study that GPC will lead to GEB by value congruency of green organizational culture and green EVO (Dumont et al., 2017).

Ones and Dilchert (2012) called for researchers' attention towards the need to examine possible contextual determinants of GEB. Research has demonstrated that organizational climate has a significant effect on the behaviour and attitude of employees and organizational performance (Kuenzi & Schminke, 2009). The facets of GPC (e.g., employees' shared perceptions about policies, practices, and procedures) may be comprehended differently and more specifically for green initiatives and outcomes, for example, most important facets can be waste and water recycling, energy saving.

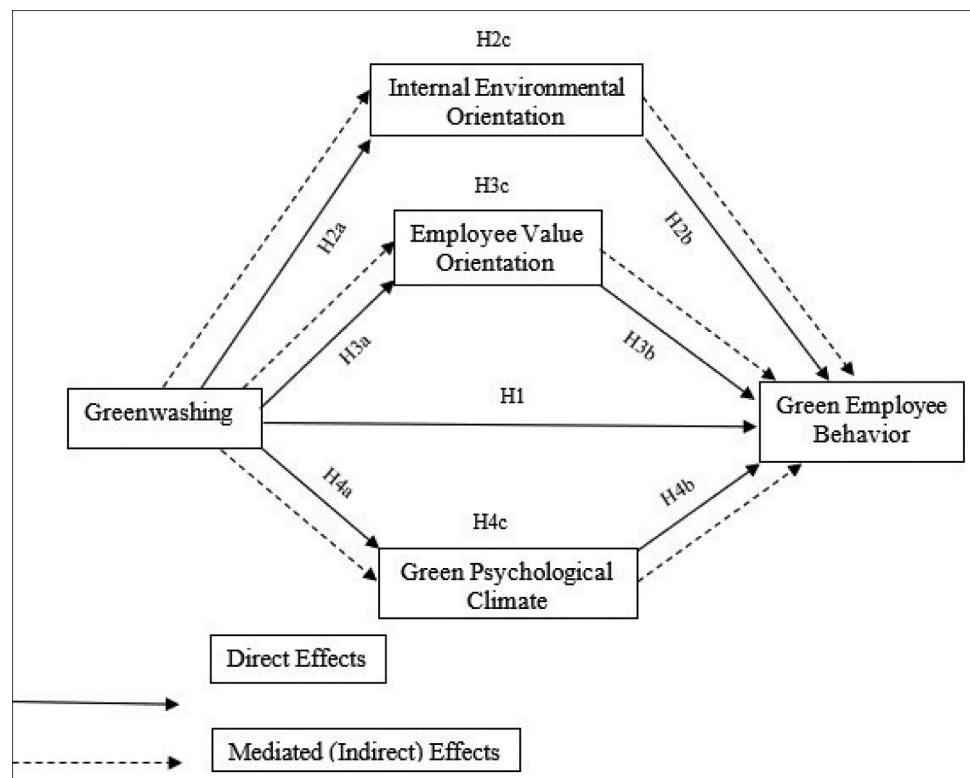
From the lens of theory of normative conduct (TNC), behaviour is attributed to social norms (Cialdini et al., 1990). TNC draws a clear difference between approved and observed descriptive norms. Social norms are developed by work climate perceptions of employees. Perception of work climate reflects value-based schemas of employees that are used for workplace information interpretation (James et al., 2008) including espoused values and behaviour norm (Schneider & Reichers, 1983). Following hypotheses are proposed to examine the relationship and indirect effect (Baron & Kenny, 1986) of employee value orientations on linkage of greenwashing and green employee behaviour (see Figure 1):

H4a: Greenwashing is significantly related to green psychological climate.

H4b: Green psychological climate is significantly related to green employee behaviour.

H4c: Green psychological climate mediates the relationship of green washing and green employee behaviour.

Figure 1. Theoretical model.



3. Methodology

3.1. Population and sample

Agriculture is the largest contributor to the economy of Pakistan. Agri-input companies that heavily contribute to soil pollution were the population of the study. National Agriculture Research Council was contacted to obtain basic information to identify companies in Pakistan. Local insecticides and fertilizer companies located in Punjab province (the most agricultural province) were included in the survey to meet the research objectives of the study. The population of the study was employees (low and mid-level management) of agri-inputs industry of Pakistan. Data were collected personally from 10 companies. Purposive sampling technique was used due to unavailability of sampling frame and lack of resources. Human resource managers of 15 companies were contacted (phone and personal visits) for data collection. Ten companies responded and they were deemed enough. Five pesticide companies and five fertilizer companies were selected to achieve desired sample size.

3.2. Instruments

A self-administered questionnaire consisting of 29 items was used for data collection. We adopted five instruments to measure variables. Constructs and measurement scales used in this study are obtained from pre-existing literature (see Table 1). Questionnaires were distributed to employees through HR managers/administration. The actual sample size of the main study was expected to be 800 using sampling size formula by Fisher, Laing, and Townsend (1983). Descriptive analysis, reliabilities, and data normality were examined by pilot testing. Data were normally distributed and the scale reliabilities (Cronbach's Alpha) were well above 0.80. Out of 800 distributed questionnaires, 520 usable responses were received resulting in a 65% response rate.

Table 1. Instruments and their sources

Scale/Indicator	Code	No. of Items	Source
Greenwashing	GW	5	Chang and Chen (2012)
Internal Environmental Orientation	IEO	4	Banerjee et al. (2003)
Employee Value Orientation	EVO	9	Stern et al. (1993)
Green Psychological Climate	GPC	8	Norton et al. (2014)
Green Employee Behaviour	GEB	3	Bissing-Olson et al. (2013)

The research model was tested by PLS as suitable for the proposed theoretical model. It is variance-based structural equation modelling (SEM) and can test multiple relationships at the same time considering the measurement error in the latent constructs (Hair et al., 2016). It measures reliability and validity of outer measurement model (measures of theoretical constructs) and inner model (estimation of relationship between the constructs) having causal relationships (Castro & Roldán, 2013). SEM was conducted using SPSS version 22 and SmartPLS version 3.

4. Results

Demographic characteristics of respondents show that the majority were males (70.6%) and 98.7% were Muslims. Most respondents were between 30–39 years, i.e., 48.1% and the majority of respondents (i.e., 37.7%) had job experience between 5 and 10 years. Most of the respondents had a Master's degree (48.8%), followed by MPhil and PhD (29.4%), and 21.7% had a Bachelor's degree.

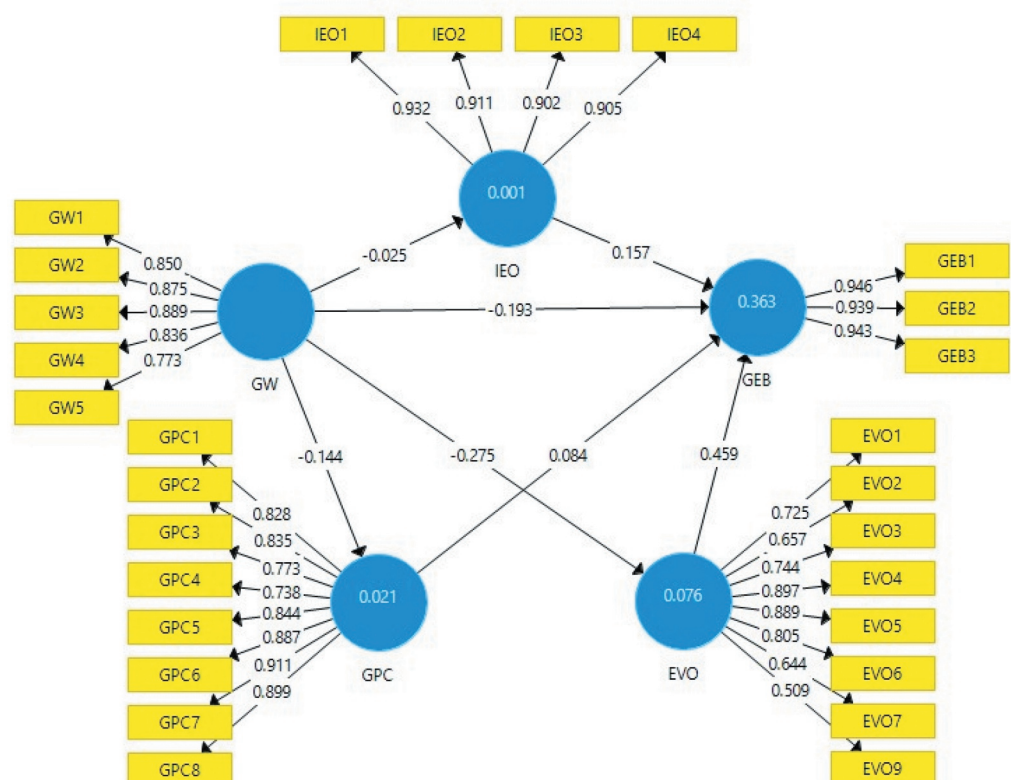
4.1. Measurement model

Measurement loadings were observed to examine individual item reliability. Acceptance criterion of 0.50 was used and all the factors with loadings above 0.50 were accepted (Hair et al., 2016). Only one item from EVO, i.e., EVO8 was removed due to poor reliability (0.296). Reliability was verified by Cronbach alpha. All the scales had Cronbach's alpha above 0.85 depicting internal consistency according to Henseler et al. (2012). The AVE (Average Variance Extracted) was used to examine convergent validity. The AVE was above 0.5 for all the variables and greater than the cross-loadings demonstrating convergent validity (Chin, 1998; Hock & Ringle, 2010). Discriminant validity was demonstrated (see Table 2) by inspecting cross-loadings and Fornell Larcker criteria. Multicollinearity was inspected by analysing Variance Inflation Factor (VIF) that was less than 5 for all the variables indicating no multicollinearity issue (Garson, 2016).

Table 2. Discriminant validity

Constructs	EVO	GEB	GPC	GW	IEO
EVO	0.744				
GEB	0.541	0.943			
GPC	0.079	0.160	0.841		
GW	-0.275	-0.335	-0.144	0.846	
IEO	0.144	0.234	0.072	-0.025	0.913

Figure 2. Path coefficients and R^2 .



Discriminant validity was also verified by Heterotrait–Monotrait Ratio (HTMT) (Henseler et al., 2015), it is found less than 0.85 threshold showing a good discriminant validity.

4.2. Structural model

Bootstrapping with resample setting of 5000 as recommended by Garson (2016) was used for confirmatory purpose. It calculates path coefficients, outer loadings (reflective model), outer weights (formative model), indirect effects, and total effects. The cut-off level of significance was 0.05. All the t-values above 1.96 are significant at 0.05. Figure 2 demonstrates the path coefficients and R^2 . The indirect effect of greenwashing on GEB mediated by internal value orientation, EVO, and GPC altogether had R^2 of 0.363, i.e., 36.3%. Greenwashing directly explained 11.4% variance in the GEB (i.e., direct effects).

The Table 3 demonstrates the hypotheses results for inner model. Hypothesis 1 is accepted as R^2 was 0.114 (Path = -0.193) implying a statistically significant negative relationship. Hypothesis 2a is rejected as there is statistically insignificant relationship and R^2 of 0.008 (Path = -0.025) showing a very weak relationship between greenwashing and IEO. Hypothesis 2b is accepted as R^2 for GEB due to IEO was 0.055 (Path = 0.157) and is statistically significant. Specific indirect effects were observed instead of total indirect effects to determine the specific indirect effect (mediation) caused by each mediator (Ramayah et al., 2018). Hypothesis 2c is rejected though there is an increase in R^2 from direct effect of 11.4 to the indirect effect of 16.5. However, the results of mediation were interpreted by observing the change in P-value. So, no evidence was found to support the mediation effect of IEO on the relationship of greenwashing and GEB. Hypothesis 3a is accepted ($R^2 = 0.084$, Path = -0.275). Hypothesis 3b is also accepted as it is statistically significant ($R^2 = 0.293$, Path = 0.459). Hypothesis 3c is accepted as the results show an increase in R^2 from 11.4 to 33.1. The mediation is partial as the direct and indirect effects are both statistically significant. Hypothesis 4a is accepted ($R^2 = 0.025$, Path = -0.144) and it is statistically significant. Hypothesis 4b is accepted ($R^2 = 0.026$, Path = 0.084). Hypothesis 4c is also accepted. Partial mediation was found as R^2 increased from the direct effect of 11.4 to the indirect effect of 12.7.

Table 3. Inner model results

Path	β	SD	T-value	R^2	Hypothesis Status
Direct Effects					
GW -> GEB	-0.193	0.041	8.196	0.114 **	H1: Supported
GW -> IEO	-0.025	0.046	0.538	0.008 *	H2a: Not Supported
IEO -> GEB	0.157	0.035	4.515	0.055 **	H2b: Supported
GW -> EVO	-0.275	0.046	5.945	0.084 **	H3a: Supported
EVO -> GEB	0.459	0.033	13.853	0.293 **	H3b: Supported
GW -> GPC	-0.144	0.042	3.447	0.025 **	H4a: Supported
GPC -> GEB	0.084	0.039	2.189	0.026 **	H4b: Supported
Indirect Effects					
GW -> IEO -> GEB	0.007	0.524		0.165 *	H2c: Not Supported
GW -> EVO -> GEB	0.022	5.691		0.331 **	H3c: Supported
GW -> GPC -> GEB	0.006	1.956		0.127 **	H4c: Supported

*p > 0.05; **p < 0.05.

5. Discussion

This paper explored the impact of greenwashing practices on green employee behaviour. With a rise in business' awareness of environment, stakeholders are getting serious about greenwashing. Hypotheses were tested using PLS with a sample size of 520. Generally, the hypotheses were accepted.

The first hypothesis aimed at examining the effect of greenwashing on GEB. The results show a negative association between greenwashing and GEB does exist. It supports the findings of Baran and Kiziloglu (2018) that employee behaviour is affected by the factors they perceive suitable and the opinions of others. An individual's behaviour and well-being are affected by the characteristics one sees suitable for oneself and the opinions one perceives others hold about the membership of the firm (King & Lenox, 2000). Hypothesis 2a examined the effect of greenwashing on IEO. There is a negative and insignificant relationship between IEO and greenwashing. This is consistent with previous research, e.g., communicating environmental ethics to employees is important for organization and shows organizational seriousness towards environment (Hawken, 1999; Henriques & Sadorsky, 1999). Hypothesis 2b examined the role of IEO in GEB. Results revealed that they are positively related and IEO has significant direct effect on GEB. This confirms the findings of Salvador and Burciaga (2019) that organizational IEO is positively related to employee green behaviour. Hypothesis 2c examined the mediating effect of IEO on the relationship of greenwashing and GEB. No mediation was found possibly because greenwashing practices and IEO cannot exist together as they are two different orientations.

Hypothesis 3a examined the effect of greenwashing on EVO. There is a negative relationship between greenwashing and EVO. It is as expected as greenwashing affect EVO negatively for being environmentally hazardous, and it casts a negative impact on GEB. Hypothesis 3b inspected the effect of EVO on GEB. Our findings revealed a significant positive relationship that is contrary to the findings of Norton et al. (2017) who found that GPC was not significantly related to next day GEB. Hypothesis 3c examined the mediation effect of GPC on greenwashing and GEB. Partial mediation revealing that greenwashing has significant direct negative effect on GEB was found, and EVO accentuates the negative affect of greenwashing as a mediator. EVO ultimately transfers its negative effect to GEB like a chain effect.

Hypothesis 4a investigated the relationship between greenwashing and GPC. A weak relationship was identified as expected. As argued by Stoknes (2014), the role of psychological climate is affected by environmental communications (including greenwashed information of organizational practices). Hypothesis 4b investigated the relationship between GPC and GEB. Our findings revealed a significant positive relationship that is consistent with the findings of James et al. (2008) who found a positive association between GPC and GEB (Dumont et al., 2017; Norton et al., 2014). Hypothesis 4c proposed that GPC mediates the relationship between greenwashing and GEB. A partial mediation was found implying that greenwashing negatively effects GPC which furthers this negative effect on GEB. Since it is a partial mediation, it means greenwashing has significant direct effect, besides an increase in the intensity of its effect on GEB after introducing the mediation effect of GPC.

5.1. Implications

This study revealed the effect of practicing greenwashing on employees as stakeholders and it turned out that it has a negative impact on GEB by affecting them psychologically (EVO and GPC). Results of linkages in the studied model show negative direct and negative indirect effects of greenwashing practices on GEB via EVO and GPC. These findings have numerous academic and practical implications. Theoretically, it is a valuable addition to the wider and in-depth understanding of the psychological effects and behavioural impact on employees making greenwashing an unacceptable practice, and it emphasizes on the holistic approach towards greening of organizations. Practically, these results will help practitioners and policymakers to understand that mere greenwashing the environmentally hazardous organizational practices negatively effects the green

behaviour of employees through a pattern of psychological processes which can be damaging to the outcomes of organizations as employees are key assets of any organization. The results are helpful for stakeholders in several aspects including understanding of greenwashing and its negative outcomes and effects on psychological factors inside organizations. This study may serve as a guideline for managers for dedicated environmental performance initiatives and investments by improving environmental performance knowledge and GEB. The approach can positively influence green management by integrating psychological variables of employees into GHRM.

5.2. Limitations and future research directions

Despite all the findings, it must be admitted that the paper is not without limitations. It is a cross-sectional study, so it is recommended for future researchers to replicate it in longitudinal time horizon to examine the phenomena in long run. Data were collected from middle- and low-level management; however, future research needs to gather data from top management for triangulation.

The study has opened multiple avenues of future research. The framework can be examined for other industries, cultures, and countries. Findings revealed that greenwashing has a negative causal effect on green employee behaviour; therefore, other such psychological factors can be examined for their causal effects (e.g., emotional labour, employee burnout, employee turnover intention, and employee cynicism). It is also suggested that the role of religious work ethics should be examined as workforce has diverse religious backgrounds in different settings.

6. Conclusion

The objective of the research was to investigate the link between greenwashing and green employee behavior. Following the conceptualization of value-basis theory for environmental attitudes, supplies-values fit theory, and theory of normative conduct, we used internal environmental orientation, employee value orientations, and green psychological climate as mediators. Survey-based methodology and Smart PLS for statistical analysis were used to achieve research objectives. Employee value orientations and green psychological climate were found to have a mediating effect on the relationship of greenwashing and green employee behavior. However, internal environmental orientation has not appeared as a strong mediator between greenwashing and green employee behavior. Results of the study were in agreement with most of the previous researches (Baran & Kiziloglu, 2018; Dumont et al., 2017; James et al., 2008; Norton et al., 2014; Stoknes, 2014). However, contrary to the findings of Norton et al. (2017), we found a significant positive relationship between green psychological climate with green employee behaviour. Moreover, results supported the value-basis theory for environmental attitudes, supplies-values fit theory, and theory of normative conduct.

Funding

The authors received no direct funding for this research.

Author details

Rubab Tahir¹
E-mail: rubab_1010@yahoo.com
ORCID ID: <http://orcid.org/0000-0002-0083-1272>
Muhammad Razzaq Athar²
E-mail: razzaq_athar@yahoo.com
Aneela Afzal²
E-mail: anilaafzal@gmail.com

¹ University Institute of Management Sciences, PMAS-Arid Agriculture University, Rawalpindi, Pakistan.

² Department of Sociology, PMAS-Arid Agriculture University, Rawalpindi, Pakistan.

Citation information

Cite this article as: The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate, Rubab Tahir, Muhammad Razzaq Athar & Aneela Afzal, *Cogent Business & Management* (2020), 7: 1781996.

References

- Baker, W. E., & Sinkula, J. M. (2005). Environmental Marketing Strategy and Firm Performance: Effects on New Product Performance and Market Share. *Journal of the Academy of Marketing Science*, 33(4), 461-475.
- Banerjee, S. B., Iyer, E. S., & Kashyap, R. K. (2003). Corporate environmentalism: Antecedents and influence of industry type. *Journal of Marketing*, 67(2), 106-122. <https://doi.org/10.1509/jmkg.67.2.106.18604>
- Baran, T., & Kiziloglu, M. (2018). Effect of greenwashing advertisements on organizational image. In *Organizational culture and behavioral shifts in the green economy* (pp. 59-77). IGI Global.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bissing-Olson, M. J., Iyer, A., Fielding, K. S., & Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work: The moderating role

- of pro-environmental attitude. *Journal of Organizational Behavior*, 34(2), 156–175. <https://doi.org/10.1002/job.1788>
- Bradley, T. C. (2011). Likelihood of eco-friendly confusion: Greenwashing and the FTC “green guides”. *Landslide*, 4(1), 1–5. <https://www.coatsandbennett.com/wp-content/uploads/sites/152/2019/01/Likelihood-of-Eco-Friendly-Confusion-Greenwashing-and-the-FTC-Green-Guides-by-Timothy-Bradley.pdf>
- Brekke, K. A., & Nyborg, K. (2008). Attracting responsible employees: Green production as labor market screening. *Resource and Energy Economics*, 30(4), 509–526. <https://doi.org/10.1016/j.reseneeco.2008.05.001>
- Burke, M. J., Borucki, C. C., & Kaufman, J. D. (2002). Contemporary perspectives on the study of psychological climate: A commentary. *European Journal of Work and Organizational Psychology*, 11(3), 325–340. <https://doi.org/10.1080/13594320244000210>
- Castro, I., & Roldán, J. L. (2013). A mediation model between dimensions of social capital. *International Business Review*, 22(6), 1034–1050.
- Chan, R. Y. K., & Ma, K. H. Y. (2016). Environmental orientation of exporting SMEs from an emerging economy: Its antecedents and consequences. *Management International Review*, 56(5), 597–632. <https://doi.org/10.1007/s11575-016-0280-0>
- Chang, C.-H., & Chen, Y.-S. (2012). The determinants of green intellectual capital. *Management Decision*, 50(1), 74–94. <https://doi.org/10.1108/00251741211194886>
- Chen, Y.-S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of Business Ethics*, 77(3), 271–286. <https://doi.org/10.1007/s10551-006-9349-1>
- Chen, Y.-S. (2011). Green organizational identity: Sources and consequence. *Management Decision*, 49(3), 384–404. <https://doi.org/10.1108/0025174111120761>
- Cherian, J., & Jacob, J. (2012). A study of green HR practices and its effective implementation in the organization: A review. *International Journal of Business and Management*, 7(21), 25–33. <https://doi.org/10.5539/ijbm.v7n21p25>
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Methodology for business and management. Modern Methods for Business Research* (p. 295–336). Lawrence Erlbaum Associates Publishers. <https://psycnet.apa.org/record/1998-07269-010>
- Chou, C.-J. (2014). Hotels’ environmental policies and employee personal environmental beliefs: Interactions and outcomes. *Tourism Management*, 40, 436–446. <https://doi.org/10.1016/j.tourman.2013.08.001>
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58(6), 1015. <https://doi.org/10.1037/0022-3514.58.6.1015>
- De Groot, J. I. M., & Steg, L. (2008). Value orientations to explain beliefs related to environmental significant behavior: How to measure egoistic, altruistic, and biospheric value orientations. *Environment and Behavior*, 40(3), 330–354. <https://doi.org/10.1177/0013916506297831>
- Derksen, L., & Gartrell, J. (1993). The social context of recycling. *American Sociological Review*, 58(3), 434–442. <https://doi.org/10.2307/2095910>
- Deshwal, P. (2015). Green HRM: An organizational strategy of greening people. *International Journal of Applied Research*, 1(13), 176–181. <http://www.allresearchjournal.com/archives/?year=2015&vol=1&issue=13&part=C&ArticleId=1241>
- Dost, M. (2019). Exploring the effects of the best practices of environmental management on green product development [Paper presentation]. In The academy of management proceedings (Vol. 2019, No. 1, p. 10266). Briarcliff Manor, NY: Academy of Management.
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613–627. <https://doi.org/10.1002/hrm.21792>
- Dunlap, R., & Jones, R. (2002). Environmental concern: Conceptual and measurement issues. In R. Dunlap & W. Michelson (Eds.), *Handbook of environmental sociology* (pp. 482–524). London.
- Edwards, I. R., & Shipp, A. I. (2007). The relationship between person-environment fit and outcomes: An integrative. In C. Ostroff & T. A. Judge (Eds.), *The organizational frontiers series. Perspectives on organizational fit* (pp. 209–258). Lawrence Erlbaum Associates Publishers. <https://psycnet.apa.org/record/2007-15682-007>
- Erlandsson, J., & Tillman, A.-M. (2009). Analysing influencing factors of corporate environmental information collection, management and communication. *Journal of Cleaner Production*, 17(9), 800–810. <https://doi.org/10.1016/j.jclepro.2008.11.021>
- Feinstein, N. (2013). Learning from past mistakes: Future regulation to prevent greenwashing. *Boston College Environmental Affairs Law Review*, 40, 229.
- Fisher, A., Laing, J., & Stoeckel, J. (1983). *Handbook for family planning operations research design*. Population Council.
- Foerstl, K., Reuter, C., Hartmann, E., & Blome, C. (2010). Managing supplier sustainability risks in a dynamically changing environment—Sustainable supplier management in the chemical industry. *Journal of Purchasing and Supply Management*, 16(2), 118–130. <https://doi.org/10.1016/j.pursup.2010.03.011>
- Francis, C., Elmore, R., Ikerd, J., & Duffy, M. (2007). Greening of agriculture: Is it all a greenwash of the globalized economy? *Journal of Crop Improvement*, 19(1–2), 193–220. https://doi.org/10.1300/J411v19n01_10
- Garson, G. D. (2016). *Partial least squares: Regression and structural equation models*. Statistical Associates Publishers.
- Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, 10(3), 601–616. <https://doi.org/10.5465/amr.1985.4279045>
- Gupta, M. C. (1995). Environmental management and its impact on the operations function. *International Journal of Operations & Production Management*, 15(8), 34–51. <https://doi.org/10.1108/01443579510094071>
- Gürlek, M., & Tuna, M. (2018). Reinforcing competitive advantage through green organizational culture and green innovation. *The Service Industries Journal*, 38(7–8), 467–491. <https://doi.org/10.1080/02642069.2017.1402889>
- Gürlek, M., & Tuna, M. (2019). Tourism management perspectives. *Tourism Management*, 31, 195–208. <https://doi.org/10.1016/j.tmp.2019.05.004>
- Hair, J. F., Jr, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Harris, L. C., & Crane, A. (2002). The greening of organizational culture: Management views on the depth, degree and diffusion of change. *Journal of Organizational Change Management*, 15(3), 214–234. <https://doi.org/10.1108/09534810210429273>
- Hawken, P. (1999). A teasing irony. *Reader in Business and the Environment*.

- Heinkel, R., Kraus, A., & Zechner, J. (2001). The effect of green investment on corporate behavior. *Journal of Financial and Quantitative Analysis*, 36(4), 431–449. <https://doi.org/10.2307/2676219>
- Henriques, I., & Sadorsky, P. (1999). The relationship between environmental commitment and managerial perceptions of stakeholder importance. *Academy of Management Journal*, 42(1), 87–99. <https://doi.org/10.5465/256876>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2012). Using partial least squares path modeling in advertising research: Basic concepts and recent issues. In *Handbook of research on international advertising* (pp. 252). Edward Elgar Publishing.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of Environmental Education*, 18(2), 1–8. <https://doi.org/10.1080/00958964.1987.9943482>
- Ho, T. H. (2014). Social purpose corporations: The next targets for greenwashing practices and crowdfunding scams. *Seattle Journal for Social Justice*, 13, 935. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/sjsj13&div=37&id=&page=1504/IJKMS.2010.030789>
- Hock, M., & Ringle, C. M. (2010). Local strategic networks in the software industry: An empirical analysis of the value continuum. *International Journal of Knowledge Management Studies*, 4(2), 132. <https://doi.org/10.1504/IJKMS.2010.030789>
- Holzner, B., & Wagner, M. (2019). Green innovation and profitability: The moderating effect of environmental uncertainty [Paper presentation]. In The academy of management proceedings (Vol. 2019, No. 1, p. 12337). Briarcliff Manor, NY: Academy of Management.
- Hong, Z., Wang, H., & Gong, Y. (2019). Green product design considering functional-product reference. *International Journal of Production Economics*, 210, 155–168. <https://doi.org/10.1016/j.ijpe.2019.01.008>
- Horiuchi, R., Schuchard, R., Shea, L., & Townsend, S. (2009). *Understanding and preventing greenwash: A business guide*. Futerra Sustainability Communications.
- Jabbar, M. H., & Abid, M. (2014). GHRM: Motivating employees towards organizational environmental performance. *MAGNT Research Report*, 2(4), 267–278. https://www.researchgate.net/profile/Muhammad_Abid28/publication/281448584_GHRM_Motivating_Employees_towards_Organizational_Environmental_Performance/links/55e81eac08ae65b638996f2f/GHRM-Motivating-Employees-towards-Organizational-Environmental-Performance.pdf
- James, L. R., Choi, C. C., Ko, C.-H. E., McNeil, P. K., Minton, M. K., Wright, M. A., & Kim, K.-I. (2008). Organizational and psychological climate: A review of theory and research. *European Journal of Work and Organizational Psychology*, 17(1), 5–32. <https://doi.org/10.1080/13594320701662550>
- Jeswani, H. K., Wehrmeyer, W., & Mulugetta, Y. (2008). How warm is the corporate response to climate change? Evidence from Pakistan and the UK. *Business Strategy and the Environment*, 17(1), 46–60. <https://doi.org/10.1002/bse.569>
- Kao, T.-F., & Du, Y.-Z. (2020). A study on the influence of green advertising design and environmental emotion on advertising effect. *Journal of Cleaner Production*, 242, 118294. <https://doi.org/10.1016/j.jclepro.2019.118294>
- Kaya, N., Koc, E., & Topcu, D. (2010). An exploratory analysis of the influence of human resource management activities and organizational climate on job satisfaction in Turkish banks. *The International Journal of Human Resource Management*, 21(11), 2031–2051. <https://doi.org/10.1080/09585192.2010.505104>
- King, A. A., & Lenox, M. J. (2000). Industry self-regulation without sanctions: The chemical industry's responsible care program. *Academy of Management Journal*, 43(4), 698–716. <https://doi.org/10.5465/1556362>
- Kolter, P. J. (1998). *Marketing management: Analysis, planning implementation and control*. Prentice Hall.
- Küçüköğlu, M. T., & Pinar, R. İ. (2015). Go green at work: Environmental organizational culture. https://www.researchgate.net/profile/Muebeyyen_Tepe_Kuecukoglu/publication/283182125_Go_Green_at_Work_Environmental_Organizational_Culture/links/5b29864f4585150c6308857b/Go-Green-at-Work-Environmental-Organizational-Culture.pdf
- Kuenzi, M., & Schminke, M. (2009). Assembling fragments into a lens: A review, critique, and proposed research agenda for the organizational work climate literature. *Journal of Management*, 35(3), 634–717. <https://doi.org/10.1177/0149206308330559>
- Laufer, W. S. (2003). Social accountability and corporate greenwashing. *Journal of Business Ethics*, 43(3), 253–261. <https://doi.org/10.1023/A:1022962719299>
- Lyon, T. P., & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics & Management Strategy*, 20(1), 3–41. <https://doi.org/10.1111/j.1530-9134.2010.00282.x>
- Miles, M. P., & Munilla, L. S. (1993). The eco-orientation: An emerging business philosophy? *Journal of Marketing Theory and Practice*, 1(2), 43–51. www.jstor.org/stable/40469669
- Mokhtar, N. M., Musa, N. D., & Hussin, A. (2016). *The implementation of organizational green culture in higher educational institution* [Paper presentation]. The regional conference on science, technology and social sciences (RCSTSS 2014), Springer, Singapore.
- Nishii, L. H., Lepak, D. P., & Schneider, B. (2008). Employee attributions of the “why” of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology*, 61(3), 503–545. <https://doi.org/10.1111/j.1744-6570.2008.00121.x>
- Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions. *Journal of Environmental Psychology*, 38, 49–54. <https://doi.org/10.1016/j.jenvp.2013.12.008>
- Norton, T. A., Zacher, H., Parker, S. L., & Ashkanasy, N. M. (2017). Bridging the gap between green behavioral intentions and employee green behavior: The role of green psychological climate. *Journal of Organizational Behavior*, 38(7), 996–1015. <https://doi.org/10.1002/job.2178>
- Ones, D. S., & Dilchert, S. (2012). Environmental sustainability at work: A call to action. *Industrial and Organizational Psychology*, 5(4), 444–466. <https://doi.org/10.1111/j.1754-9434.2012.01478.x>
- Onkila, T. (2015). Pride or embarrassment? Employees' emotions and corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 22(4), 222–236. <https://doi.org/10.1002/csr.1340>
- Papadas, K.-K., Avlonitis, G. J., Carrigan, M., & Piha, L. (2019). The interplay of strategic and internal green marketing orientation on competitive advantage.

- Journal of Business Research*, 104, 632–643. <https://doi.org/10.1016/j.jbusres.2018.07.009>
- Parguel, B., Benoît-Moreau, F., & Larceneux, F. (2011). How sustainability ratings might deter 'greenwashing': A closer look at ethical corporate communication. *Journal of Business Ethics*, 102(1), 15. <https://doi.org/10.1007/s10551-011-0901-2>
- Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., Robinson, D. L., & Wallace, A. M. (2005). Validating the organizational climate measure: Links to managerial practices, productivity and innovation. *Journal of Organizational Behavior*, 26(4), 379–408. <https://doi.org/10.1002/job.312>
- Pettigrew, A. M. (1979). On studying organizational cultures Andrew M. Pettigrew. *Administrative Science Quarterly*, 24(4), 4. <https://doi.org/10.2307/2392363>
- Pomeroy, A., & Johnson, L. W. (2009). Advertising corporate social responsibility initiatives to communicate corporate image: Inhibiting scepticism to enhance persuasion. *Corporate Communications: An International Journal*, 14(4), 420–439. <https://doi.org/10.1108/13563280910998763>
- Pontefract, D. (2016). *Faking corporate social responsibility does not fool employees*. New York, NY: Forbes. Retrieved 6 April, 2020, from <https://www.forbes.com/sites/danpontefract/2016/09/24/faking-corporate-social-responsibility-does-not-fool-employees/#59a7477a7994>
- Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). *Partial least squares structural equation modeling (PLS-SEM) using SmartPLS 3.0: An updated and practical guide to statistical analysis*. Pearson.
- Ramus, C. A., & Killmer, A. B. C. (2007). Corporate greening through prosocial extrarole behaviours—a conceptual framework for employee motivation. *Business Strategy and the Environment*, 16(8), 554–570. <https://doi.org/10.1002/bse.504>
- Ramus, C. A., & Montiel, I. (2005). When are corporate environmental policies a form of greenwashing? *Business & Society*, 44(4), 377–414. <https://doi.org/10.1177/0007650305278120>
- Saha, M., & Darnton, G. (2005). Green companies or green conpanies: Are companies really green, or are they pretending to be? *Business and Society Review*, 110(2), 117–157. <https://doi.org/10.1111/j.0045-3609.2005.00007.x>
- Salvador, R. O., & Burciaga, A. (2019). Organizational environmental orientation and employee environmental in-role behaviors: A cross-level study. *Business Ethics: A European Review*, 29(1). <https://doi.org/10.1111/beer.12241>
- Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology*, 64(1), 361–388. <https://doi.org/10.1146/annurev-psych-113011-143809>
- Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. *Personnel Psychology*, 36(1), 19–39. <https://doi.org/10.1111/j.1744-6570.1983.tb00500.x>
- Schrage, M. (1990). *Shared minds: The new technologies of collaboration*. New York: Random House.
- Schultz, P. W. (2000). New environmental theories: Empathizing with nature: The effects of perspective taking on concern for environmental issues. *Journal of Social Issues*, 56(3), 391–406. <https://doi.org/10.1111/0022-4537.00174>
- Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of Environmental Psychology*, 21(4), 327–339. <https://doi.org/10.1006/jevp.2001.0227>
- Schultz, P. W., Gouveia, V. V., Cameron, L. D., Tankha, G., Schmuck, P., & Franěk, M. (2005). Values and their relationship to environmental concern and conservation behavior. *Journal of Cross-Cultural Psychology*, 36(4), 457–475. <https://doi.org/10.1177/0022022105275962>
- Schwartz, G. (1965). *Science in marketing*. Wiley.
- Segarra Oña, M. D. V., Peiró Signes, A., & Mondejar Jimenez, J. (2013). Identifying variables affecting the proactive environmental orientation of firms: An empirical study. *Polish Journal of Environmental Studies*, 22(3), 873–880. <http://hdl.handle.net/10251/60004>
- Sroufe, R., Liebowitz, J., Sivasubramaniam, N., & Donahue, J. F. (2010). Are you a leader or a laggard. HR's role in creating a sustainability culture. *People & Strategy*, 33(1), 34–42. <https://go.gale.com/ps/anonymous?id=GALE%7CA224863663&sid=googleScholar&v=2.1&it=r&linkaccess=fulltext&issn=19464606&p=AONE&sw=w>
- Stern, P. C., & Dietz, T. (1994). The value basis of environmental concern. *Journal of Social Issues*, 50(3), 65–84. <https://doi.org/10.1111/j.1540-4560.1994.tb02420.x>
- Stern, P. C., Dietz, T., & Kalof, L. (1993). Value orientations, gender, and environmental concern. *Environment and Behavior*, 25(5), 322–348. <https://doi.org/10.1177/0013916593255002>
- Stoknes, P. E. (2014). Rethinking climate communications and the “psychological climate paradox”. *Energy Research & Social Science*, 1, 161–170. <https://doi.org/10.1016/j.erss.2014.03.007>
- Tucker, P., & Speirs, D. (2003). Attitudes and behavioural change in household waste management behaviours. *Journal of Environmental Planning and Management*, 46(2), 289–307. <https://doi.org/10.1080/0964056032000070927>
- Vining, J., & Ebreo, A. (1992). Predicting recycling behavior from global and specific environmental attitudes and changes in recycling opportunities 1. *Journal of Applied Social Psychology*, 22(20), 1580–1607. <https://doi.org/10.1111/j.1559-1816.1992.tb01758.x>
- Vos, J. (2009). Actions speak louder than words: Greenwashing in corporate America. *Notre Dame Journal of Law, Ethics & Public Policy*, 23, 673. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/ndlep23&div=30&id=&page=>
- Walker, K., & Wan, F. (2012). The Harm of Symbolic Actions and Green-Washing: Corporate Actions and Communications on Environmental Performance and Their Financial Implications. *Journal of Business Ethics*, 109(2), 227–242.
- Wang, J., Yan, Y., Du, H., & Zhao, R. (2020). The optimal sales format for green products considering downstream investment. *International Journal of Production Research*, 58(4), 1107–1126. <https://doi.org/10.1080/00207543.2019.1612963>
- Wright, C., & Nyberg, D. (2017). An inconvenient truth: How organizations translate climate change into business as usual. *Academy of Management Journal*, 60(5), 1633–1661. <https://doi.org/10.5465/amj.2015.0718>
- Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management*, 27(6), 701–721. <https://doi.org/10.1177/014920630102700607>
- Xie, X., Huo, J., & Zou, H. (2019). Green process innovation, green product innovation, and corporate financial performance: A content analysis method. *Journal of Business Research*, 101, 697–706. <https://doi.org/10.1016/j.jbusres.2019.01.010>
- Yuriev, A., Boiral, O., & Guillaumie, L. (2019). *Where do green workplace behaviors end? The extent of organizational barriers* [Paper presentation]. The academy of management proceedings. Briarcliff Manor, NY: Academy of Management.



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



***Cogent Business & Management* (ISSN:) is published by Cogent OA, part of Taylor & Francis Group.**

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

