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The relative importance of employee green behavior for overall job performance ratings: A policy-capturing study

Clarissa Bohlmann¹ I Jeroen van den Bosch² | Hannes Zacher¹

¹Leipzig University, Institute of Psychology, Leipzig, Germany

² University of Groningen, Department of Psychology, Groningen, The Netherlands

Correspondence

Clarissa Bohlmann, Leipzig University, Institute of Psychology, Neumarkt 9–19, 04109 Leipzig, Germany Email: clarissa.bohlmann@uni-leipzig.de

Abstract

Organizational researchers and practitioners are increasingly interested in the topic of employee pro-environmental or 'green' behavior. In this study, we examine the relative importance of employee green behavior to overall job performance ratings compared with task performance, organizational citizenship behavior and counterproductive work behavior. We used an experimental policy-capturing design, which involves participants rating the job performance of several hypothetical employees who vary in their work behaviors. Thirty-eight managers from the Netherlands each rated 36 scenarios describing employee behaviors (1368 ratings in total). Results showed that employees' task performance contributed most to overall job performance ratings, followed by counterproductive work behavior, organizational citizenship behavior and employee green behavior. More broadly, findings suggest that employee green behavior makes an independent positive contribution to overall job performance ratings, but its influence is weaker than that of other forms of work behavior. Implications for future research and green human resource management are discussed.

KEYWORDS

employee green behavior, job performance, policy-capturing design

1 | INTRODUCTION

Performance appraisal entails the process in which an employee's individual work performance is evaluated over a certain period of time (DeNisi & Smith, 2014). The goal of this study is to examine whether and how employee green behavior (EGB) predicts overall job performance ratings above and beyond more established forms of employee behavior. EGB refers to 'scalable actions and behaviors that employees engage in that are linked with and contribute to or detract from environmental sustainability' (Ones & Dilchert, 2012a, p. 452). Examples of EGB include recycling paper, printing double sided, saving electricity and avoiding waste. Established forms of employee behavior (OCB) and counterproductive work behavior (CWB). According to Rotundo and Sackett (2002), task performance describes 'behaviors that contribute to the production of a good or the provision of a service' (p. 67), OCB describes 'behavior that contributes to the goals

of the organization by contributing to its social and psychological environment' (pp. 68–69) and CWB describes 'voluntary behavior that harms the well-being of the organization' (p. 69). Thus, task performance and OCB represent positive employee contributions, whereas CWB is an undesirable form of employee behavior.

With the current study, we constructively replicate research by Rotundo and Sackett (2002), who investigated whether employees' task performance, OCB and CWB contribute to overall ratings of job performance by supervisors. They found that task performance had a moderate and positive effect, followed by a moderate and negative effect of CWB and a weaker positive effect of OCB on overall job performance ratings. These findings suggest that task performance, OCB and CWB influence overall job performance ratings, but that their unique contributions differ in strength.

Several studies published over the past few years have examined the antecedents of EGB, including individual-level predictors such as personality, affect and motivation, but also contextual predictors, such

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as organizational policies, climate and leadership behavior (e.g. Bissing-Olson, Iyer, Fielding, & Zacher, 2013; Kim, Kim, Han, Jackson, & Ployhart, 2014; Norton, Zacher, & Ashkanasy, 2014). Yet, the impact of this form of employee behavior on overall job performance ratings remains unclear. In terms of scientific contributions, conducting constructive replication studies is important to drive progress in an area of research (Lykken, 2004). While task performance has traditionally been thought of as the only contributing factor to overall performance ratings, new behavioral constructs have been introduced due to the changing nature of work and the broader environment in which organizations operate (Borman & Motowidlo, 1993; Griffin, Neal, & Parker, 2007). For example, sustainability has become an increasingly important strategic goal of many companies, as it may benefit economic performance (Babiak & Trendafilova, 2011). For example, Chiu, Lin, and Wang (2017) found that reducing pollution as an environmental action led to economic benefits, which were in alignment with shareholder and stakeholder interests. Consistently, organizational researchers have begun to focus on EGB as an additional form of employee behavior that may contribute to overall job performance (Norton, Parker, Zacher, & Ashkanasy, 2015; Ones & Dilchert, 2012b). In practical terms, knowing what types of employee behavior are valued and rewarded by managers can help employers establish clear appraisal guidelines that help organizations reach their goals. Moreover, employees can use the results to maximize important career outcomes, such as promotions and pay raises, which often depend on performance appraisal outcomes.

Employee green behavior and green human 1.1 resource management

The topics of environmental sustainability and greening organizations are increasingly discussed in established disciplines such as human resource management (HRM). Companies are adopting new environmental management practices (Jabbour & de Sousa Jabbour, 2016) and recruiters have begun to prefer candidates with environmental motivation and knowledge (Jabbour, Santos, & Nagano, 2010). Next to performance increases (Jabbour, de Sousa Jabbour, Govindan, Teixeira, & de Souza Freitas, 2013), green HRM can help attract highly qualified applicants who are increasingly environmentally conscious (Renwick, Redman, & Maguire, 2013).

In green HRM, practices such as recruiting, selection, performance appraisal and training are aligned with environmental management objectives (Renwick, Redman, & Maguire, 2008). Green HRM is commonly seen as involving all activities related to the development, implementation and maintenance of EGB (Opatha & Arulrajah, 2014). It also encompasses the policies, practices and systems that help to increase EGB and ultimately benefit the individual, organization, environment and broader society (Opatha & Arulrajah, 2014).

Due to the connection between EGB and green HRM as a means to increase EGB, scholars in the fields of work and organizational psychology and organizational behavior have recently started to investigate the intersection between HRM and environmental aspects (Jackson, Renwick, Jabbour, & Muller-Camen, 2011). While researchers have focused on the role of EGB in reaching environmental goals or means of training EGB (Unsworth, Dmitrieva, & Adriasola,

2013), the contribution of EGB to overall job performance ratings is not yet clear. Without knowing the importance of EGB, organizations may risk an under- or overemphasis on EGB in reaching their performance goals. Moreover, when organizations know the importance of EGB for overall job performance, they can help reduce discrepancies between the desire for more EGB and the gains in performance evaluation. Thereby, they could aid a clear communication of expectations to employees. Additionally, by reducing these discrepancies, companies can better reward EGB in performance evaluations. Ultimately, organizations would seem fair and transparent, which relates positively to job satisfaction, organizational commitment and OCB (Colquitt, Conlon, Wesson, Porter, & Ng, 2001).

1.2 | Employee green behavior and overall job performance ratings

Organizations have recently started to include their environmental performance in annual company reports to improve their reputation (Aguinis & Glavas, 2012; Miles & Covin, 2000; Toms, 2002), which can help attract more customers and highly qualified employees. In order to increase their environmental performance, organizations need to change and adapt their product chains, suppliers and corporate activities (Green, Morton, & New, 1998; Melnyk, Sroufe, & Calantone, 2003). Yet, another important part of becoming an environmentally responsible organization is fostering environmentally friendly behavior of employees. That is, by showing EGB, employees can underscore the organization's value of being environmentally responsible. It is therefore important for a firm to add environmental aspects to its overall strategy and to hold management accountable for reaching environmental performance goals (Chinander, 2001).

The responsibility for a company's environmental performance mostly lies with managers and executives (Ramus & Steger, 2000; Renwick et al., 2013). Thus, environmental performance goals are likely to influence supervisors' ratings of the overall job performance of their subordinates (del Brío, Fernández, & Junquera, 2007). In other words, supervisors who are held accountable for corporate environmental sustainability are more likely to observe and evaluate their employees with regard to the level of EGB shown. We therefore first hypothesize that EGB contributes positively to overall job performance ratings.

Hypothesis 1. EGB has a positive influence on overall job performance ratings.

Despite the growing importance of corporate environmental sustainability and responsibility over the past decades, it is unlikely to be the most important goal in most companies. In contrast, it is likely that employees' task performance contributes most to overall job performance ratings, as this is what employees are officially being paid to do (Rotundo & Sackett, 2002). Task performance involves behaviors that contribute to the key functions of organizations, such as the production of goods or the provision of services (Borman & Motowidlo. 1993). Based on the findings of Rotundo and Sackett (2002), it can be assumed that CWB is of similar importance to overall performance ratings, followed by OCB. This order of importance is likely to result from harmful and destructive employee behaviors, such as aggression,

stealing or withdrawal behavior, which are often more consequential to organizational performance than prosocial and pro-organizational behaviors that are not formally required, such as helping colleagues who have been absent, or speaking positively about the organization in public. Furthermore, negative behaviors are often perceived as more influential than positive behaviors (Baumeister, Bratslavsky, Vohs, & Finkenauer, 2001). This suggests that EGB, similarly to OCB (cf. Rotundo & Sackett, 2002) is less likely to contribute to overall job performance ratings than task performance and CWB. Indeed, researchers have suggested that EGB and OCB are similar in that they both entail voluntary contributions (Boiral & Paillé, 2012). However, these behaviors are also distinct in that EGB focuses on behaviors that contribute to the environment, whereas OCB focuses on behaviors that contribute to other people and the organization as a whole.

As environmental performance is a relatively new goal in many organizations (cf. Kim et al., 2014; Renwick et al., 2013) and usually does not directly contribute to or detract from the core operations of companies, EGB is likely to be less influential than the three other forms of employee behavior. Task performance, for example, is likely to directly contribute to an organization's economic performance, as the daily work by its employees often concerns current orders or issues, which are directly related to the organization's profits. Similarly, CWB impedes the gains from successful task performance, and is thus likely to be visible in the short term, as it may hamper organizational performance. The ecological results of EGB are, in contrast to these well-established employee behaviors, intangible and usually only seen in the long term. We therefore expect that EGB has the lowest relative importance for overall job performance ratings.

Hypothesis 2. The relative influence of EGB on overall job performance ratings is weaker than the influences of: (i) task performance; (ii) OCB; and (iii) CWB.

1.3 | The context of the Netherlands

We chose the Netherlands as a research context for this study for two reasons. The first reason is of a practical nature, as the researchers are or were based at a Dutch university. Second, this country has made important contributions to the energy debate. The Dutch energy transition, for example, was a starting point for discussions about possible transitions toward a more sustainable and green environment. As stated by the Dutch government, the desired 40–60% cut in carbon dioxide emissions by 2030 compared with 1990 required a transformation process including technological, economic, socio-cultural and institutional changes (Kern & Smith, 2008). This focus on clean fossils shows how important sustainability and a green footprint are for the Netherlands. Moreover, administrative reforms to increase the efficiency of the water management system as a traditionally strong area of the Netherlands have been implemented without problems since 2015 (Hoppe, Woldendorp, & Bandelow, 2017).

Despite these developments, the Sustainable Governance Index (SGI) places the Netherlands in the middle ranks when it comes to sensitivity toward environmental issues in the general population (Hoppe et al., 2017). The energy transition toward a sustainable economy remains one of the major tasks for the Netherlands in the years to come. With their average rank, the Netherlands may be a good comparison for countries with both high and low sensitivity, and may offer the most generalizable findings. Regarding theoretical generalizability, results based on data collected from a convenience sample in the Netherlands should hold in any Western industrialized

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2 | METHOD

country (Highhouse & Gillespie, 2009).

We used an experimental policy-capturing design (Aguinis & Bradley, 2014; Aiman-Smith, Scullen, & Barr, 2002) to test our hypotheses. Policy-capturing designs attempt to uncover the implicit rules that individuals employ to arrive at certain decisions, such as overall job performance ratings. The research design involves participants being provided with hypothetical scenarios that are manipulated with regard to different factors, such as the extent to which employees engage in different forms of work behavior (e.g. high, medium or low levels of task performance). This systematic variation allows an analysis of which factor is perceived as more important (Aiman-Smith et al., 2002). Specifically, regression coefficients derived from regressing the ratings on the factors, or independent variables, indicate the relative importance of the various cues. In the current study, we used policy capturing to determine the relative weights managers give to each of four types of employee behavior, namely task performance, OCB, CWB and EGB. Consistent with recommendations (Rotundo & Sackett, 2002), we conducted a pilot study to validate our cues before conducting the main study.

2.1 | Pilot study

Based on well-established, reliable and well-validated scales, we developed statements to indicate task performance, OCB and CWB in the scenarios (Aquino, Lewis, & Bradfield, 1999; Griffin et al., 2007; Welbourne, Johnson, & Erez, 1998). To operationalize EGB, we chose three forms of pro-environmental behavior that are frequently mentioned in the organizational literature: printing double-sided, recycling behavior and switching off electronic devices in order to save energy (Norton et al., 2014; Ones & Dilchert, 2012b).

To test whether the statements represent each of the four forms of work behavior well, we recruited 20 employees from various industries (70% female, M_{age} = 25.30 years, SD = 8.48) through our social and professional networks. We first instructed participants to read the definitions of each form of work behavior based on the work of Rotundo and Sackett (2002) and Ones and Dilchert (2012b). This procedure was necessary to reach a common understanding of the behaviors to be assessed. Subsequently, we asked participants to classify the 12 behavioral statements according to the form of work behavior they reflected. Example statements from each work behavior category are shown in Table 1 (note that we used only the descriptor 'always' in the pilot study). Results showed that most participants accurately categorized the statements. Specifically, 95.0%, 93.3%, 98.3% and 98.3% of task performance, OCB, CWB and EGB statements, respectively, were classified correctly. These 4 WILEY Corporate Social Responsibility and BOHLMANN ET AL.

TABLE 1 Types of work behavior and example scenario statements	
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Type of work behavior	Example scenario statement
Task performance	The employee (never/sometimes/always) carries out the core parts of his/her job well.
Organizational citizenship behavior	The employee (never/sometimes/always) does things that help others when it's not part of his/her job.
Counterproductive work behavior	The employee (never/sometimes/always) lies about the number of hours he/she works.
Employee green behavior	The employee (never/sometimes/always) prints double sided.

findings provide evidence for the content validity of our scenario statements, as the selected items align well with the participants' perceptions. Thus, we used the statements in the main study to test our hypotheses.

2.2 | Main study

2.2.1 | Participants and procedure

We invited 110 managers with experience in performance appraisals in the Netherlands to participate in an online survey study, and 38 managers provided complete data (response rate of 35%). Participants were on average 45.66 years old (SD = 10.41) and had 13 years of work experience (SD = 5.56), 23% were female, and job level on a seven-point scale ranging from 1 (entry-level position) to 7 (chief executive officer) was 5.85 (SD = 1.22). Participants worked in manufacturing (26%), service (13%), education (8%), healthcare (3%) or other industries (45%; e.g. trade, oil and gas industry, traffic engineering, service and transportation, marketing, construction, food). We recruited participants by approaching managers either by phone or in person, or by sending an email with information on the study.

2.2.2 | Materials and measures

We adapted the behavioral statements validated in the pilot study to reflect low, medium and high levels of each form of work behavior (for example statements see Table 1). We created scenarios as follows: For each of the four types of work behavior, three statements that varied in level (low, medium and high) existed, resulting in a total of 36 statements. We first created all possible combinations of statements, such that each type of work behavior appeared only once in each scenario, with behavioral statements ordered randomly, to minimize the influence of recency or primacy effects. Next, we presented the same 36 scenarios to all participants, but in a random order to reduce start-up effects (Aiman-Smith et al., 2002). An example scenario is 'The employee sometimes puts recyclable material (e.g. paper, bottles) in the recycling bins. The employee always carries out the core parts of his/her job well. The employee always leaves work early without permission. The employee sometimes does things that help others when it's not part of his/her job'. Participants were asked to rate each scenario on a five-point scale (1, low job performance; 5, high job performance). We included one duplicate scenario to probe the testretest reliability (see Rotundo & Sackett, 2002). The reliability estimate (Cronbach's α) was 0.71, suggesting that the reliability of our scenarios was satisfactory.

2.3 | Statistical analyses

Due to the nested nature of our data (i.e. multiple scenario ratings nested within each participant), we used hierarchical linear modeling (HLM) software to conduct multilevel modeling (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2011). A null model without predictors showed that a significant proportion of variance in overall job performance ratings was due to between-person differences (χ^2 [37] = 578.69, *p* < 0.001). More specifically, the intra-class coefficient (ICC) indicated that 16% of the total variance in job performance ratings was due to between-person differences. These findings justify the use of multilevel modeling analyses in this study.

3 | RESULTS

Table 2 shows the relative influences of task performance, OCB, CWB and EGB on overall job performance ratings. The pseudo- R^2 statistic suggests that the four types of work behavior explained 39% of the variance in overall job performance ratings. Consistent with previous research (Rotundo & Sackett, 2002), we found that task performance, OCB and CWB significantly influenced performance ratings (see Table 2). Hypothesis 1 was supported: EGB had a significant positive effect on overall performance ratings ($\gamma = 0.23$, p < 0.001).

Hypothesis 2 proposed that EGB would have a weaker effect on job performance ratings than task performance, OCB and CWB. The results in Table 2 were in line with this hypothesis. Specifically, the effect of task performance is the largest ($\gamma = 0.71$, p < 0.001), followed by the effects of CWB ($\gamma = -0.42$, p < 0.001), and OCB ($\gamma = 0.31$, p < 0.001). Contrast analyses in HLM showed that there were significant differences between the effects of EGB and task performance (χ^2 [2] = 772.95, p < 0.001), EGB and CWB (χ^2 [2] = 255.35, p < 0.001) and EGB and OCB (χ^2 [2] = 370.25, p < 0.001). Overall, these results support Hypothesis 2.

4 | DISCUSSION

4.1 | Summary and interpretation of findings

In times of stricter environmental regulations and guidelines, as well as customers expecting and valuing sustainable products and services, organizations' environmental performance becomes increasingly important. While part of an organization's environmental footprint comes from its suppliers and product and service chains, the behavior of employees working for the organization is also important for sustainability outcomes. Organizations have recognized this importance **TABLE 2** Results of multilevel analysis predicting overall job performance ratings

	Overall job performance ratings		
Predictor	γ	SE	t
Intercept	2.46	0.08	29.31**
Task performance	0.71	0.03	26.12**
Organizational citizenship behavior (OCB)	0.31	0.03	11.43**
Counterproductive work behavior (CWB)	-0.42	0.03	-16.07**
Employee green behavior (EGB)	0.23	0.03	8.54**
Between-person variance component (τ_{00})		0.25	
Within-person variance component (σ^2)		0.61	
Pseudo-R ²		0.39	

 $N_{between}$ = 38 participants, N_{within} = 1368 ratings. Null model τ_{00} = 0.23, null model σ^2 = 1.19.

**p < 0.01.

of employees in reaching 'green' performance goals, as shown by an increasing focus on green HRM. Due to the increased focus on environmental performance, it is likely that EGB is not only important for the evaluation of an organization by others (e.g. customers), but also matters with regard to overall performance ratings of employees by their supervisors and managers.

The goal of this study was to extend the literature on EGB by examining the extent to which it contributes to managers' overall job performance ratings. In an earlier study, Rotundo and Sackett (2002) showed that supervisors' overall job performance ratings are influenced by employees' task performance, OCB and CWB. We extended their model by including EGB as an additional determinant in our study. Our first hypothesis stated that EGB has a positive influence on overall job performance ratings. This hypothesis was supported, suggesting that the increasing importance of corporate social responsibility and sustainability is impacting both organizational values and the process of performance evaluations.

Based on our second hypothesis, we predicted that the relative influence of EGB on overall job performance ratings is weaker than the influences of: (i) task performance; (ii) OCB; and (iii) CWB. This hypothesis was confirmed as well, suggesting that EGB has an effect that is positive, yet smaller than that of the other types of work behavior. Nevertheless, our findings suggest that managers do value EGB to some extent, which might be due to an increased corporate interest in environmental responsibility and sustainability. The weaker effect of EGB may be explained by the fact that task performance is what an employee gets paid for and is thus the strongest predictor, followed by CWB and OCB, as these behaviors are likely to have more direct consequences for organizations than EGB. EGB may be more important for a company's reputation and environmental performance in the long run. Thus, the contribution of EGB to organizational goals may be less apparent than the effects of task performance, OCB and CWB.

4.2 | Limitations and future research

A potential limitation of our study in terms of internal and external validity is the relatively small sample size. However, the large number

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of ratings at the within-person (or scenario) level provided us with sufficient statistical power to test our hypotheses (Scherbaum & Ferreter, 2009). Moreover, our sample was unique in that all participants were managers with experience in appraising the overall job performance of employees.

Future research with larger samples could test moderators residing at the between-person level. For example, managers with a positive pro-environmental attitude may value EGB more than managers with a less positive pro-environmental attitude. Another important aspect might be the importance of sustainability for an organization (Norton et al., 2014), as well as its public image in regard to environmental sustainability. For example, if an organization is publicly known for its green environmental footprint, EGB might be more important in the performance evaluation process.

Another research area is the investigation of the reasons for the weaker effect of EGB on performance ratings compared with task performance, OCB and CWB. By investigating possible reasons for this result, organizations may gain a better understanding of why EGB has the lowest contribution to overall performance ratings, despite a growing focus on environmental actions and sustainability.

4.3 | Managerial and policy implications

This study has shown that EGB is an important determinant of managers' overall job performance ratings next to task performance, OCB and CWB. Knowing what types of employee behavior are valued by managers can help employers to establish clear performance appraisal guidelines. Thereby, employees know what is expected by their employers, and can tailor their behavior to these guidelines. This procedure would ultimately help organizations reach their goals and contribute to the economy and broader society.

Moreover, employees could use the results to maximize important career outcomes, such as promotions and distributions of benefits, which often depend on performance appraisal outcomes. That is, by knowing what is expected, employees aiming for a promotion can focus on fulfilling these aspects and may be considered for a promotion due to good performance appraisals.

For organizations, the results can help to further refine the developing structures and procedures of green HRM. For example, trying to increase EGB without properly acknowledging it in overall job performance ratings may reduce an employee's motivation to show the desired behavior. Moreover, employees may decide to spend their resources on other tasks, as these may be acknowledged more in overall job performance ratings.

4.4 | Conclusion

In sum, this study adds to the organizational and environmental literatures by showing that EGB is an important contributing factor to overall job performance ratings. However, its impact is smaller than the already established effects of task performance, OCB and CWB. These findings may be especially important for managers and employees aiming to maximize both individual and organizational goal attainment, as they provide the basis for both corporate and individual performance. Future research is now needed to identify the boundary conditions of the effects of EGB on overall job performance ratings.

ORCID

Clarissa Bohlmann D http://orcid.org/0000-0003-0668-7280 Hannes Zacher D http://orcid.org/0000-0001-6336-2947

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