

# How managers and line employees perceive the effectiveness of organizational practices aimed at stimulating their green behaviours: Research results from Poland\*

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## Abstract

Evaluating the effectiveness of organizational practices from employees' perspectives (associated with employees' interests) brings valuable information that helps adjust an organisation's actions to employees' needs. However, extant empirical research has mostly focused on managers as the level of analysis. This study fills this gap by examining the differences between managers and line employees working in 199 companies in Poland in their evaluation of the effectiveness of practices aimed at stimulating their green behaviours. This research shows different expectations depending on the position held in the company. In particular, line employees expect to obtain measurable benefits for green behaviour, while ensuring effective communication and creating an optimal infrastructure is vital, especially for the managers. Moreover, the study sheds light on the practices used in a country that has implemented pro-environmental practices for a relatively short time.

**Keywords:** green HRM, perception, managers, line employees, person-organisation fit  
**JEL Codes:** M10, M52, M59

## 1. Introduction

The pro-ecological activities of companies play a crucial role in accelerating sustainable development, not only because of their influence on society and the environment but also because of their transformative and monetary potential (Krause/Droste/Matzdorf 2021). The literature on environmental sustainability identifies various factors that impact employees' green behaviours (Li/Zhao/Ma/Shao/Zhang 2019). Pro-environmental behaviours are generally defined as "recycling, waste management, reducing energy consumption, or any other conscious behaviour that aims to minimise the negative impact of one's actions on the environment" (Lu/Liu/Chen/Long/Yue 2017:166). The most important organisational functions in this area are associated with green human resource management (green HRM) (Renwick/Redman/Maguire 2013). Green HRM is defined as "those human resource management practices aligned with environ-

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mental sustainability goals and which aim at developing employees' abilities, commitment and motivation, and involvement of staff in support of those goals at the firm level" (O'Donohue/Torugsa 2016:4). Green HRM practices are perceived as effective if they positively impact employees' pro-environmental behaviours and thus help organizations to achieve their environmentally-friendly goals (Suharti/Sugiarto 2020). Green HRM, in the narrow sense, covers traditional HRM practices (e.g., recruitment and rewarding). However, some researchers go beyond HR function and include among green HRM policies and practices, e.g., implementation of teamwork, top management support and shaping organizational culture (Piwowar-Sulej 2021). To reconcile different approaches to defining the scope of the green HRM practices, this study uses the term of organizational practices aimed at stimulating employees' green behaviours.

Different types of the analysed policies and practices should be used to manage different types of employees (Snell/Morris 2021). Moreover, different organisational activities are effective to the degree to which they match the needs of the employees, which is emphasised in the person-organisation fit theory (Kristof 1996). These needs and expectations are associated with the construct of employees' interest<sup>1</sup>. Although green HRM policies and practices exist objectively, they must be perceived and interpreted by the employees (López-Fernández/Romero-Fernández/Aust 2018). Moreover, various factors shape the subjective norms, attitudes and needs of individual employees and, consequently, can indirectly influence the behaviour of the organisation (Krause et al. 2021). One of the factors is an individual's position in the company. Hierarchical levels are associated with different capabilities, perspectives, resources and values (Newman/Miao/Hofman/Zhu 2016; Wang/Kim/Rafferty/Sanders 2020). According to Patti et al. (2004), managers and line employees differ from each other, which results from experiences, educational levels and job responsibilities. This diverse background may lead them to view the social and organisational setting differently.

As Wang et al. (2020) stated, there is a potential disparity between managers' and line employees' perceptions of HRM practices, and it is important to explore the line employees' subjective opinions about these practices as a driver for workplace outcomes. Research shows that employees' intuitive perceptions towards organisational activities are based on interactions with workmates and managers, decision-making processes, organizational leadership, and the organization's contribution to their personal and professional growth and development (Jomah 2016).

1 Interest is defined as "something that brings advantages to or affects someone or something" (Cambridge Dictionary 2022).

In previous research, which focused on the issue of encouraging green behaviours in the workplace, the survey questions were addressed mainly to managerial-level personnel (Guerce/Carollo 2016; Zaid/Jaaron/Talib Bon 2018; Shah 2019; Obeidat/Al Bakri/Elbanna 2020; Singh/Giudice/Del/Chierici/Graziano 2020). This approach was based on the assumption that top-level managers are aware of the practices that their organisation implemented. However, their feedback on the possible practices which may be used in their companies was not collected. Gathering employees' opinions about different organizational opportunities reflects actual employee participation, helps avoid the implementation of ineffective practices that do not meet employees' interests and increases the person-organization fit. At this point, it is worth emphasizing that there are also middle-level managers who work with both top managers and line employees on a daily basis. Although they are responsible for creating an effective working environment and facilitating any changes needed in an organization, previous studies have not focussed on their opinions. Therefore, to fill the research gap, the analysis described in this article examined the differences in the perception of the effectiveness of individual practices depending on the respondent's position. In order to achieve it, the survey questions were targeting middle-level managers and line employees to seek recommendations related to organizational practices, which should be used in the case of both analysed groups. Empirically assessing employees' expectations is vital in implementing any change program (Pond/Armenakis/Green 1984).

This article uses literature studies and empirical research conducted via a survey in 2020 among employees working in 199 companies located in Poland. Poland ranks below the average for all European Union countries in various environmental indicators according to Eurostat (2020) data. Only one-third of Poles take action to protect their health in terms of air quality in their place of residence (Polish Ministry of Climate 2019). Due to the very early stage of implementing these practices in this country, it is a timely topic (Bombiak 2019). The scarcity of implementation of the analysed practices in companies operating in Poland (Urbaniak 2017; Bombiak/Marciniuk-Kluska 2018; Bombiak 2019;) justifies focusing not only on practices implemented in a given company but also on practices that can be implemented and – according to respondents' opinions – are worthy undertakings because of their anticipated effectiveness. Moreover, none of the scarce publications which present research conducted in Poland addressed the differences between managers and line employees in their perceptions of the effectiveness of organizational practices in shaping pro-environmental behaviours. As indicated above, there is a need to identify which organizational practices are perceived as more effective (more than others contribute to pro-environmental behaviours) in order to match them to the expectations of employees from different levels of the organisation.

This article contributes to the literature on the subject by: 1) analysing the differences in the perception of the effectiveness of organizational practices aimed at stimulating green behaviours between middle-level managers and line employees, while bearing in mind person-organisation fit theory, 2) providing quantitative results which should become the basis for actions supporting sustainable development under Polish conditions, 3) specifying areas that are perceived differently and attempting to explain them, and 4) formulating further research directions.

This article is organised into six sections. After the introduction, the second section presents the literature review, which provides the foundations for the hypotheses. The third section describes the research methodology. In the fourth section, the authors summarise the results of their empirical research, followed by a discussion. The discussion part (the fifth section) includes both theoretical and practical implications. The article ends with the main conclusions and limitations of the study.

## 2. Literature review and hypothesis development

### 2.1. *Organizational practices aimed at stimulating employees' green behaviours in the context of person-organisation fit*

Various authors have highlighted the importance of different factors in developing the pro-ecological behaviour of employees (Vogt/Nunes 2014; Krause et al. 2021). Generally, these factors can be divided into three groups. The first group covers factors related to personal experiences. The second group includes the activities performed by the organisation. Finally, the third group of factors is related to the individual characteristics of an employee (e.g., demographic and psychological) (Li et al. 2019).

Company policies and practices directed towards employees that promote the sustainable use of business resources and prevent harm arising from environmental concerns constitute green HRM (Zoogah 2011; Arulrajah/Opatha/Nawaratne 2016). Some authors associate green HRM with traditional HRM activities (HR function) such as recruitment and selection, HR appraisal, compensation, training, and development (Zaid et al. 2018; Piwowar-Sulej 2021). Many of them (e.g., Pham et al. (2019), Xie et al. (2020)) stated that HR training is crucial for shaping employees' green behaviours. However, other researchers (e.g., Gholami et al. (2016), Pinzone et al. (2016)) emphasized the value of other traditional HRM activities.

Some scholars, who go beyond the classic elements of HRM, highlight the importance of the implementation of green participation and empowerment (Govindarajulu/Daily 2004; Markey/McIvor/Wright 2016; Tariq/Jan/Ahmad 2016; Marrucci/Daddi/Iraldo 2021) or green HR communication

(Alamelu/Amudha/Priyadharshini/Shreenivasan/Visvanaath 2018). However, internal communication can be treated as a shared responsibility of both internal communication departments and HR departments (Kuuyelleh/Ayentimi/Ali Abadi 2021).

Researchers also examine the impact of green organisational culture, which an employer can shape using other above-mentioned green HRM practices (Yunguo 2009; Masri/Jaaron 2017; Piowar-Sulej 2020). A written mission statement is seen as a tool that may stimulate communication processes within a company, especially the information transfer and converging of relevant information (Dermola-Trunk Šircaa 2018), therefore it should send a pro-environmental signal to employees.

Moreover, specific HRM practices such as, e.g., managerial training or the managers' appraisal system, can be directed towards the development of environmentally-friendly leadership and indirectly – through leaders' activities – influence employees' behaviours (Li/Xue/Li/Chen/Wang 2020). Many practices which stimulate employees' green behaviours – although created and formally introduced by HR departments – are performed not only by these units but also by managers. The latter actively participate in many detailed processes such as, e.g., recruitment and selection or HR appraisal.

The main common objective of organizational practices which stimulate employees' pro-environmental behaviours is to contribute to the achievement of a specific company's environmental goal such as, e.g., reduction of greenhouse gas emissions. This measure can be associated with environmental efficiency, understood as the results obtained by the organization in the area of environmental protection against the negative impact of its economic activity in relation to the expenditure incurred (Urbaniak 2017). However, this does not mean that strictly environmental indicators should measure the effectiveness of the analysed practices. The effectiveness of these practices is firstly associated with the degree to which they enhance employees' pro-environmental behaviours. This is in line with previous studies on the impact of green HRM on environmental performance, which have focused on how employees support the pursuit of negative environmental outcomes, and how stimulative the pro-environmental activities are implemented within the organization (Sriram/Suba 2017, Urbaniak 2017). A detailed overview of organizational practices aimed at shaping employees' pro-environmental behaviours is presented below.

Green recruitment and selection are designed to provide the company with highly qualified employees who show a high degree of environmental awareness (Jackson/Renwick/Jabbour/Muller-Camen 2011). The employees' pro-ecological behaviour should then be assessed periodically (Khan/Rasli/Qureshi 2017). Within the framework of green compensation, both cash and non-cash rewards may be used for employees who demonstrate proactive attitudes, e.g.,

by creating solutions to improve the environmental indicators of the company (Gholami/Rezaei/Saman/Sharif/Zakuan 2016).

Organisations can also encourage employees' interest in environmental protection and support them in combining environmental tasks with other professional responsibilities. This may include allowing employees and workgroups to prioritise various activities that are aligned with the corporate environmental goals and offering training to support employees in internalising the company's environmental values, for example, by providing information on why the organisation has adopted pro-ecological policies and procedures (Hicklenton/Hine/Loi 2019).

Employees should be able to decide about such a business issue as company environmental policy (Govindarajulu/Daily 2004). They should be engaged in developing the company's environmental strategy and defining goals for the team as well as methods for measuring the degree to which they are achieved (Jabbour/Santos/Fonseca/Nagano 2013; Longoni/Golini/Cagliano 2014). Managers play a significant role here. They should provide regular feedback to employees or teams about their role in achieving the environmental goals (Masri/Jaaron 2017), encourage their subordinates to report problems and solutions, and delegate their authority (McCann/Holt 2010; Liao/Zhang 2020; Singh et al. 2020). Therefore, the development of environmentally-friendly leadership in organizations is important.

As indicated in the Introduction, the person-organisation fit theory claims that both personal and organisational values should be considered to understand employees' behavioural intentions (Choi/Jang/Kandampully 2015). Moreover, Ababneh (2021) points out that the association between organisations and their employees exists on the basis of fulfilling the requirements of each party, and employee involvement in environmental initiatives is multi-dimensional and manifests itself through various mechanisms. In particular, the mutual interaction between the analysed organizational practices and specific individual characteristics of the employee increases the person's engagement in eco-friendly initiatives. Enforcing green practices in the workplace may not be sufficient to support employee involvement in pro-environmental behaviour. Only the combination of contextual and individual factors that increase the employees' motivation to engage in the company's environmental initiatives can bring tangible results for the organisation.

All the above-mentioned organizational practices represent organisational values. At this point, it is worth stressing that employees would like to preserve their personal resources and therefore prefer to take care of by their employer's policies and practices (Vihari/Rao 2018). Pro-environmental activities of the organisation may have different effects depending on the extent to which that organisation's environmental values are consistent or inconsistent with the envi-



ronmental values of the employees (Hicklenton et al. 2019). The literature on the subject distinguishes between the green person-organisation fit, i.e., the sub-type of person-organisation fit, which assesses the degree to which the organisation's commitment to environmental protection is consistent with the employees' commitment to this issue (Hicklenton et al. 2019).

## *2.2. The characteristics of respondents who participated in previous studies on practices used for shaping pro-environmental behaviours of employees*

As indicated in the Introduction, the position held in the organisational hierarchy may differentiate a given person's opinions, perspectives and values. The difference is particularly visible between managers and line employees (Elorza/Harris/Aritzeta/Balluerka 2016; Shimizu 2017; Favero/Andersen/Meier/O'Toole/Winter 2018) as well as between HR managers and employees (De Vos/Meganck 2008). The differences are related to employees' knowledge about particular practices, their experience with the use of some practices and their perception of the effectiveness of these practices in the context of their individual needs (Sánchez-Vidal/Cegarra-Leiva/Cegarra-Navarro 2012; Zhu/Cooper/Fan/De Cieri 2013). Additionally, Urbaniak (2017) points out that there are difficulties with the implementation of green HRM related to the change in the perception of the green economy by the managerial staff and employees. While management generally presents a fairly idealized, forward-looking image, frontline employees often have different, fragmented and opposing views.

In previous research on green HRM, surveys were addressed mostly to management-level personnel (Guerci/Carollo 2016; Bombiak/Marciniuk-Kluska 2018; Zaid et al. 2018; Shah 2019; Obeidat et al. 2020; Singh et al. 2020; Ren/Tang/Jackson 2021) or managers, and environmental and safety officers (Saeed/Afsar/Hafeez/Khan/Tahir/Afridi 2019). CEOs and top managers (including HR directors) were the most common respondents in the cited publications. There is also some very limited research carried out among would-be managers (Bhat-tacharyya/Biswas/Moyeen 2020). In a study by Graves and Sarkis (2018) on the role of managers in influencing employee behaviour, the questions were addressed to line employees only. Even if some authors included employees other than managers in their research samples, they did not differentiate between the opinions expressed by these groups (e.g., Pellegrini/Rizzi/Frey 2018; Graves/Sarkis/Gold 2019). Other researchers (Tang/Chen/Jiang/Paillé/Jia 2018; Gilal/Ashraf/Gilal/Gilal/Channa 2019; Piwowar-Sulej, 2022) did not ask for the respondent's job title in the questionnaire. This study fills this gap and examines different perspectives that enable matching organizational practices with the expectations of different groups of employees. It is the first such survey in the area of environmental sustainability that takes into account the differences in

terms of respondents and – according to the authors' knowledge – it is the first such study in the Polish context.

In general, not many management scholars consider or anticipate the differences described above. Usually, the researchers focus on managers' perceptions, thus assuming that managers have the best knowledge about practices that were implemented or may be implemented. Relying solely on top managers' opinions as managerial aspects of respondents' rating is burdened with many biases on the research problem (Favero et al. 2018). Such an approach neglects the perspective of middle-level managers who, i.a., interpret policies framed by top-level managers, allocate resources within their unit, appoint employees to fulfil the activities, motivate their subordinates and report performance up the chain to top-level management. They are close to day-to-day operations and facilitate changes in a company, because they provide valuable information to both line employees and top managers (Zhang/Tsui/Song/ Li/Jia 2008). In turn, line employees are perceived as the company's most important stakeholders (Pignata/Lushington/Sloan/Buchanan 2015; D'Amato/Giangreco/Serati/Sottrici/Macchi 2019). Their role in introducing changes is also emphasised in the literature on green HRM (Sriram/Suba 2017; Lee/Yue 2020). Since middle-level managers are still managers and literature shows the differences in perception between managers and line employees, the following hypothesis was formulated:

*Hypothesis 1: There is a statistically significant difference between the views of middle-level managers and those of line employees on the effectiveness of most green HRM practices.*

Researchers who specialise in general management noted that managers often express more positive opinions about the effectiveness of different organisational practices than line employees do (Sánchez-Vidal et al. 2012; Moradi et al. 2017). According to Krause et al. (2021), the attitude towards the natural environment may differ between managers and other employees. For the managers, the protection of ecosystems depends on the potential benefits that pro-ecological activities may bring to their organisation. The greater the expected effects, such as a positive image of the organisation, the greater company's likelihood of engaging in activities to protect the environment. Line employees may not find much value in such argumentation, so they may have different justifications, perceptions and overall assessments of pro-ecological behaviour. The arguments above lead to the second hypothesis:

*Hypothesis 2: When there are significant differences between middle-level managers and employees, managers perceive the effectiveness of green HRM practices higher than line employees do.*



3. Research methodology

The present analysis is a part of the broader research project whose aim was to identify the level of the use of different organizational practices for developing pro-environmental behaviours in companies located in Poland, to collect employees’ opinions on the effectiveness of a broad range of such practices and barriers of wider implementation of green HRM in companies. The unit of analysis in case of identification of organizational practices was a company, whereas employees were the units of analysis when making comparisons related to their opinions about the effectiveness of the analysed practices (Kumar 2018). As literature in strategic HRM shows, one may distinguish intended and implemented HRM practices measured at organizational level (Khilji/Wang 2006). Identification of intended practices is based on HR specialists’ responses, whereas implemented practices – employees outside HR departments (like in an article about green HRM authored by Piwowar-Sulej (2022)). The other division covers intended, implemented and perceived HRM practices (Piening/Baluch/Ridder 2014). In this study experienced/perceived organizational practices are examined.

The authors used the survey method in the empirical research. When preparing the questionnaire, they based it on the report published by Zibarras et al. (2012) and used both items and scales presented in that report. In particular, this study utilizes items related to green HRM practices (Table 1), which were used by Zibarras et al. (2012) as well as Zibarras and Coan (2015), and the scale for determining the frequency of the use of these practices (always/often, sometimes, or never/rarely) as in the report by Zibarras et al. (2012). At this point it should be stated that Zibarras and Coan (2015) associated all the below listed practices with green HRM, however not all of them are used by HR departments. As presented in the theoretical part of the paper, internal communication may be the responsibility of communication departments. There are also informal practices used by managers.

Table 1. Organizational practices aimed at stimulating employees’ green behaviours analysed in this study (based on Zibarras et al. (2012) as well as Zibarras and Coan (2015))

Symbol	Practice
P1	Creating and communicating environmental concern in organisational vision/mis-sion statement
P2	On-boarding programmes that emphasise environmental protection
P3	Informal encouragement of pro-environmental behaviours by management
P4	Active championing in pro-environmental behaviours by senior management
P5	Setting up green champions/task force/green teams, etc.
P6	Encouraging employees to pro-environmental behaviours via internal cam-paigns/publicity, etc.

P7	The use of performance indicators that include environmental issues
P8	Training courses for developing environmental awareness
P9	Formulating environmental goals for teams/departments
P10	Organising workshops or a knowledge-sharing related to environmental issues forum for the staff
P11	Organising leadership/management training on environmental issues
P12	Applying organisation-based incentives or bonus schemes for pro-environmental behaviours
P13	Applying individual incentives or reward programmes for pro-environmental behaviours
P14	The use of recruitment and selection criteria that recognise attitudes towards environmental issues
P15	Application of team incentives or reward programmes for pro-environmental behaviours
P16	The use of penalties for non-compliance with environmental standards
P17	Taking into account pro-environmental behaviour in the decisions about employees' promotions

Additionally, the respondents were asked to rank the listed practices from the most (1st) to the least (17th) effective in shaping pro-ecological behaviour. They shared their general opinions and feelings about the effectiveness of these practices, not focusing on the assessment of the current practices used by their employers.

The data were collected between March and May 2020. First, a pilot study with 12 employees with a Master's degree was conducted to verify the research instrument (language and technical issues). Then, an online questionnaire was originally addressed to university graduates who work in companies from various industries, with subsequent snowball sampling. The first respondents recruited to the study other respondents who had a similar educational level and job title (line employee or middle-level manager). The researchers wanted the respondents to understand the specific nature of the problems covered by the research, which justifies the use of the snowball sampling method (Naderifar/Goli/Ghaljaie 2017).

A total of 215 questionnaires were collected, 199 of which were correctly filled out (valid). The authors verified the names of companies to exclude multiple surveys from one organisation, which would have reduced the research quality. In this way, a diverse sample group was achieved, which increased the validity of the research (Kirchherr/Charles 2018). Table 2 presents the characteristics of the research sample.

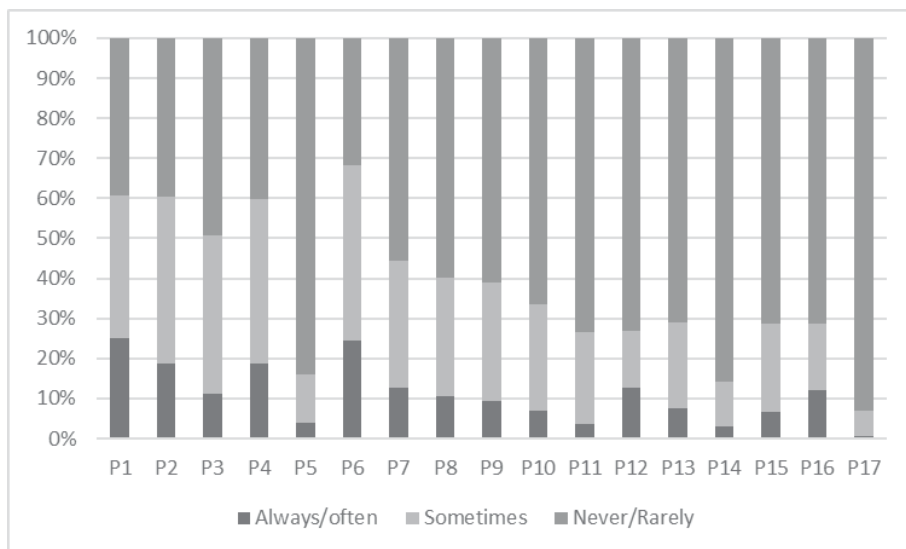
Table 2. Characteristics of the research sample

Criterion	Item	# of representatives in the research sample (N=199)	% of the re-search sam-ple
Company size	Very large (more than 5,000 em- ployees)	41	21 %
	Large (251–5,000 employees)	82	41 %
	Medium-sized (51–249 employ- ees)	34	17 %
Job level	Small (up to 50 employees)	42	21 %
	Line/non-supervisory responsi- bility employee	120	60 %
	Manager/supervisory responsi- bility employee (middle-level manager)	79	40 %
Origin of the com- pany's capital	Polish	88	44 %
	Foreign	111	56 %
Industry	Construction	3	2 %
	Education	7	4 %
	Finance and insurance	8	4 %
	Retail and wholesale sales	18	9 %
	Other services	25	13 %
	ICT	16	8 %
	Manufacturing	102	51 %
	Agriculture	2	1 %
	Government and Public Admin- istration	4	2 %
	Arts, entertainment, and pub- lishing	1	1 %
	Business services (technical or legal)	11	6 %
	Hotel and food service	2	1 %

The statistical analysis was carried out using IBM SPSS software and RStudio development environment. For the purpose of the analysis, the Mann–Whitney U test was used. This test compares two groups for a specific quantitative variable and accurately compares each observation against the medians.

4. Results

Before discussing the respondents’ opinions on the effectiveness of practices for developing pro-environmental behaviour, it is worth looking at how often the analysed practices are used. As indicated in Section 3, the survey questionnaire listed 17 organizational practices. According to the respondents, the frequencies of using the various practices are summarised in Figure 1. The most common answer regarding the majority of the organizational practices was that they are never or rarely used (as results from respondent’s experience).

**Fig. 1. The frequency of green HRM practices usage in the surveyed companies**

When it comes to assessing the effectiveness of different organizational practices aimed at stimulating employees' pro-environmental behaviours, the Mann–Whitney U test was used and its results are presented in Table 3.

**Table 3. Results on the perceived effectiveness of green HRM practices in promoting pro-ecological behaviour**

Sym- bol	Z	P	Job level (L – line position; M – managerial position)	n	$M_{Rank}$	Me
P1	-2.491	0.013	L	119	107.74	11
			M	79	87.09	10
			Total	198		10
P2	-0.873	0.382	L	119	102.39	9
			M	79	95.15	9
			Total	198		9
P3	-1.844	0.065	L	119	105.60	11
			M	79	90.31	8
			Total	198		10
P4	-2.162	0.031	L	119	106.65	9
			M	79	88.73	7
			Total	198		9
P5	-2.915	0.004	L	119	109.13	12
			M	79	84.99	11
			Total	198		12

Sym- bol	Z	P	Job level (L – line position; M – managerial position)	n	M <sub>Rank</sub>	Me
P6	-0.668	0.504	L	119	101.71	10
			M	79	96.17	9
			Total	198		10
P7	-0.790	0.429	L	119	102.11	11
			M	79	95.56	12
			Total	198		12
P8	-1.139	0.255	L	119	103.27	9
			M	79	93.82	8
			Total	198		8
P9	-2.667	0.007	L	119	108.36	10
			M	79	86.16	8
			Total	198		10
P10	-0.968	0.333	L	119	102.70	9
			M	79	94.68	10
			Total	198		10
P11	-0.424	0.671	L	119	100.90	10
			M	79	97.39	11
			Total	198		11
P12	-1.953	0.051	L	119	93.29	2
			M	79	108.86	3
			Total	198		2
P13	-1.114	0.265	L	119	95.89	3
			M	79	104.94	3
			Total	198		3
P14	-1.621	0.105	L	118	92.74	11
			M	77	106.06	14
			Total	195		11
P15		0.016	L	119	91.66	4
			M	79	111.30	5
			Total	198		4
P16	-2.321	0.020	L	119	91.86	5
			M	79	111.01	10
			Total	198		5
P17	-3.612	0.000	L	119	87.58	5
			M	79	117.46	10
			Total	198		5

Z – standardised result of the Mann–Whitney U test

Taking into account the sum of the responses provided by the two groups of respondents, it should be concluded that the application of organisation-based incentives or bonus schemes (median = 2) was considered the most effective practice in encouraging green behaviours. The next type of practices recognised as being effective were individual incentives or reward programmes (median = 3) and team incentives or reward programmes (median = 4). The least effective practice was setting up green champions/green teams and using performance indicators including environmental issues (the median in both cases was 12).

Statistically significant differences in the effectiveness of practices as seen by managers and employees were found in the case of 7 practices, which does not confirm the first hypothesis. In the case of creating and communicating a vision/mission statement ( $Z=-2.491$ ;  $p=0.01$ ), active championing by senior managers ( $Z=-2.162$ ;  $p=0.03$ ), setting up green teams ( $Z=2.915$ ;  $p<0.01$ ) and formulating environmental goals for teams ( $Z=-2.667$ ;  $p<0.01$ ) managers rated these actions as being more effective than line workers did. Statistically significant differences were also found in the perceived effectiveness of team incentives or reward programmes ( $Z=-2.403$ ;  $p=0.02$ ), penalties ( $Z=-2.321$ ;  $p=0.02$ ) and taking into account pro-ecological behaviour in decisions about employee promotions ( $Z=-3.612$ ;  $p<0.001$ ). In these cases, however, the line employees rather than the managers found the practices more effective in motivating pro-ecological behaviours. The above supports the second hypothesis.

## 5. Discussion

The intensive use of natural resources and the consequent environmental degradation have shifted the attention of many academic debates to the increasing role of sustainable development. The pro-environment changes implemented by the companies are perceived as one of the most valuable. Environmental management activities in the organisations can be successfully introduced and strengthened with the support of practices directed towards employees, because the success of all companies' initiatives depends on the employees. However, as indicated in the introduction, companies should use different types of practices to manage different types of employees (Snell/Morris, 2021) and – according to the person-organisation fit theory – these practices are effective if they match the needs of the employees. Therefore, this study adds to the discussion on the match between employees' expectations and companies' practices.

This research shows that most of the analysed practices were never or rarely used in the companies under study. Since this study used the same items and scales as in the report by Zibarras et al. (2012), it is worth mentioning that the results obtained in Poland in 2020 are similar to results obtained in the UK over 18 years ago. There is a lack of further replicative studies which examine the level of implementation of green HRM in UK. However, there is an overall

growth of environmental awareness (Earth Surface, 2022). Therefore, one may hypothesize that the current difference between companies in UK and Poland should be larger.

This finding is also in line with research conducted two years earlier by Bombiak and Marciniuk-Kluska (2018) among young Polish enterprises. This study and research conducted by the cited authors emphasizes the lack of environmental training, which is crucial for developing employees' environmental awareness. The other practices, such as the employees' promotion opportunities, still remain underdeveloped (Piwowar-Sulej, 2022). Polish companies have much to do in terms of shaping employees' pro-environmental behaviour. Moreover, as this study indicates, employers should take into account the differences in subjective perceptions of the effectiveness of particular organizational practices.

At this point, it is worth emphasizing that only a few academic publications devoted to practices for shaping pro-environmental (pro-ecological or green) behaviours in Poland are indexed in the Scopus and Web of Sciences databases. In the article mentioned above, Bombiak and Marciniuk-Kluska (2018) examined young Polish companies and looked at the impact of individual pro-environmental practices on the sustainable development of these companies according to top managers. In turn, Piwowar-Sulej (2022) focused on the issue of green human resource development (as part of green HRM) in large manufacturing companies and its consistency with environmental strategies. There are also studies published in Polish that address the problems of environmental awareness, employees' pro-environmental competencies and behaviours, and green HRM (Kozar 2017; Płatkowska-Prokopczyk 2017; Urbaniak 2017; Goranczewski 2020; Bugdol/Stańczyk 2021). However, they do not address the measurement of organizational practices which stimulate employees' green behaviours.

As far as the general assessment of how effective the analysed practices are concerned, the present results contradict many previous studies. For example, Pinzone et al. (2016) and Gholami et al. (2016) emphasised the importance of HR performance appraisal, whereas for Daily and Huang (2001), Sammalisto and Brorson (2008), Zibarras and Coan (2015), Zientara et al. (2019), Pham et al. (2019) and Xie et al. (2020) the most effective practice was green HR training. The current study also shows that a compensation system can be seen as the most effective tool in shaping eco-friendly behaviours. Milliman and Clair (1996) and Florida and Davidson (2001) highlighted the importance of a compensation system in promoting pro-ecological behaviour. In turn, Gholami et al. (2016) demonstrated that a pay and reward system was ranked second in green HRM systems' hierarchy after HR appraisal. Although this study did not examine the intrinsic motivations of individual respondents, it can be assumed that some of the respondents undertake pro-environmental actions not only to help the environment, but also to reap benefits for themselves.



Although most of the analysed practices are perceived similarly by the two groups of respondents, these results demonstrate that managers rate the effectiveness of communicating the organisation's vision and mission statement, active championing by senior management and setting up green champions/green teams significantly higher. In turn, employees need individual incentives or reward programmes and prefer to have their pro-environmental behaviour factored into decisions about promotions. The latter issues are related to green HR appraisal and decisions made based on the appraisal results. This research yielded results contrary to those obtained by Moradi et al. (2017), who showed that managers' perceptions of the general HR appraisal system were more positive than those of line employees. As for the study presented in this article, one can notice that line employees, more than managers, valued material motivation rather than intangible motivation. This finding supports the outcomes of a study conducted by Wang et al. (2020).

Middle-level managers have closer contact with senior management, so it is not surprising that the support coming from senior management is important to them. Moreover, they engage in direct communication (evaluated as more effective) about the company's vision and mission statement more often (Conte/Siano/Vollero 2017). The managers' opinions also revealed the importance attached to employee participation and teamwork. At the same time, according to Daily's and Huang's study (2001), these organisational practices are two of the four factors (apart from HR training and rewards) that positively stimulate environmental and financial performance. On the other hand, line employees – as the results show – consider a 'carrot-and-stick' motivation to be effective, especially the 'carrot' enticement (team incentives and considering pro-ecological behaviour in decisions about promotions).

Finally, as highlighted in publications on HRM differentiation between managers and non-managers, companies pay more attention to offering company-specific training, career opportunities and job security (Krausert 2017). Differences in the perception of the effectiveness of selected practices may be related to the frequency with which they are used in particular groups of employees and to the quality of the practices themselves. Perhaps green teams organised for managers are more attractive than those organised for line employees, which is why managers have a higher opinion of their efficacy. Therefore, in further research, it is worth discussing the HRM differentiation in the surveyed companies. It would also be essential to examine the rationale behind the respondents' assessments and to analyse the 'values-motivations-intentions' relationship (van Riper/Lum/Kyle/Wallen/Absher/Landon 2020). In this case, it would be worth using a qualitative research approach (e.g., in-depth interviews).

The presented findings also identify practical implications for HR managers. Kim et al. (2019) revealed that if employees' perception of green HRM is

favourable, they show higher commitment to the organisation and engage in environmentally-friendly behaviour. The research presented in this article shows differences in the perception of the effectiveness of individual organisational practices. Taking this into account, emphasis should be placed on adjusting organisational practices to the expectations of their recipients (Hicklenton et al. 2019), e.g., by providing managers with support from senior management and by introducing team incentives/rewards for line employees.

Another approach may also focus on more effective communication of environmental objectives by governments (taking into account the hypothesized difference between companies in UK and in Poland) and organisations. This may contribute to a greater understanding of the need for these policies and greater pro-ecological awareness among the employees. Consequently, this will also translate into higher employee appreciation of other activities, such as creating green teams, participating in workshops, and formulating environmental goals for teams or departments.

## 6. Conclusions

This study addresses emerging topics such as environmental sustainability and employees' green behaviours. It contributes to the current state of knowledge by presenting correlations between an employee's position level and their perception of the effectiveness of organizational practices aimed at stimulating employees' green behaviours. Conducted in Polish companies, this study illustrates how the practices are used and assessed in a non-Western setting. Therefore, it is believed that it broadens the horizons of regional companies and the awareness of the global concern for sustainable development.

This research shows some differences between middle-level managers and line employees in the perception of the effectiveness of the analysed practices. Managers rated the effectiveness of communicating the organisation's green vision and mission statement, active championing by senior management and creating green champions/green teams more highly. Employees reported that they would be most influenced by individual incentives and reward programmes and taking into account pro-ecological behaviour in decisions about promotions.

Although this study has both managerial and theoretical implications, it also has some limitations. As far as the research methodology is concerned, findings gathered from the snowball sampling method are not generalisable (Taherdoost 2016). In order to overcome this limitation, further research should be based on a representative sample of the population. Moreover, this article makes use of research conducted in Poland. Similar research could be carried out in other countries, including the Visegrad Group countries, which are environmentally and culturally similar to Poland (Suwara 2005).

This article partly adopts a research instrument created by other authors and focuses on the set of organizational practices and the general ecological behaviour. Dumont et al. (2017) distinguished in-role green behaviour (routine, officially appraised and rewarded) from extra-role green behaviour (not officially appraised or rewarded). Future research may examine the employees' perception of the effectiveness of different practices in shaping both types of pro-ecological behaviour. Further studies may also cover the perceived impact of companies' environmental management practices such as, e.g., eco-friendly product development, on employees' green behaviours.

Finally, this study focused on respondents' subjective opinions about the effectiveness of the analysed practices in general. However, it may be used as a fundament for conducting comparative studies in a specific company. Such research may focus on practices applied in a given company and employees' experience of these practices as well as use other variables (e.g., respondents' environmental awareness). An interesting issue will also be the extent to which employees' opinions change in case of promotion or degradation.

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