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Original Article

THE ROLE OF GREEN HUMAN RESOURCE MANAGEMENT IN PROMOTING CIRCULAR ECONOMY PRACTICES: MEDIATING EFFECT OF GREEN ORGANISATIONAL CUTURE – PILOT STUDY

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Abstract: *The circular economy (CE) has today become almost an imperative for companies and countries worldwide due to numerous environmental challenges and the increasing need for sustainable development. However, the transition toward a circular economy business model requires the implementation of various strategies. One of them is the orientation toward green human resource management (GHRM), which focuses on recruiting and employing individuals who are aware of the importance of environmental sustainability and the necessity of sustainable development. The relationship between GHRM and CE orientation could be even strengthened by green organisational culture (GOC). In organisations characterised by this type of OC, management tends to place greater emphasis on GHRM practices aimed at achieving environmental goals. In order to examine the relationship between GHRM practices and companies' orientation toward the CE in the Republic of Serbia, as well as to test whether GOC has a mediating role in this relationship, a pilot study was conducted. Methodologically, the study utilises quantitative data analysed using SPSS, specifically employing the PROCESS macro (Model 4) to evaluate the mediation pathways. Preliminary expectations suggest that GHRM practices positively influence companies' orientation toward the CE, both directly and indirectly through the mediating role of GOC. The contribution of this paper lies in providing both theoretical and practical insights into the importance of GHRM and GOC for companies' orientation toward a CE.*

Key words*: Green human resource management (GHRM); circular economy (CE); green organizational culture (GOC); mediation analysis.*

JEL classification*: M12, Q56*

1. INTRODUCTION

The circular economy (CE) today has increasingly been recognised as an imperative for all companies worldwide due to numerous environmental challenges, the limits of the planetary resources, the extensive use of fossil fuels, the high level of pollution and the growing volume of waste (Bocken, de Pauw, Bakker and van der Grinten, 2016; Ellen MacArthur Foundation, 2013). In such an environment, the linear "take-make-dispose" model, which is based on the consumption of large quantities of energy and resources and in which valuable resources become waste, is becoming increasingly inappropriate (de Aragao, Jugend and Fiorini, 2025; Ellen MacArthur Foundation, 2013). Instead of such a model, in the condition of the urgent need for companies to adopt a CE orientation, alternative approaches that emphasise the rational use of resources, saving energy and

reducing the waste (Stahel, 2016) become almost an imperative.

However, the transition towards CE business models requires certain changes in the policy of the companies. The concept that has great potential to contribute towards companies' orientation towards CE is GHRM (de Aragao et al., 2025). This concept, with its focus on recruiting and employing individuals who are aware of the importance of environmental sustainability and the necessity of sustainable development (Renwick, Redman and Maguire, 2013), can play a key role in advancing sustainability initiatives and create a CE perspective in the companies (de Aragao et al., 2025; Marrucci, Daddi and Iraldo, 2021; Obeidat, Abdala and Al Bakri, 2023; Shah, Ali and Rais, 2024). In other words, green recruiting and job design; green selection; green training and development; green performance management and appraisals; and green compensation and reward systems that have a green orientation can have a significant role in creating the mindset of the companies towards the CE practices (Shah et al., 2024).

The researchers already confirmed a close relationship between GRHM and CE. In the study conducted by Elshaer et al. (2024), it was found that GHRM has a strong positive influence on the adoption of the CE within hospitality organisations. Similarly, Obeidat et al. (2023) found the positive link between GHRM and green empowerment on CE. The positive influence of GHRM on CE or similar concepts was found in other studies as well (Hameed, Khan, Islam, Sheikh and Naeem, 2020; Marrucci et al., 2021).

The positive relationship between GHRM and the CE could be even strengthened by some factors. One of the most influential is green organisational culture (GOC), as the organisational culture in general influences the way of thinking and behaviour in the organisation (Schein, 2010). In many empirical studies that have been conducted so far, the positive role of GOC, which refers to the assumptions, values, symbols, and artefacts of an organisation toward operating in an environmentally sustainable manner (Harris and Crane, 2002), in the relation between GRHM and CE has already been found. For instance, in the study conducted by Fang, Shi, Gao and Li (2022), it was found that GOC has a mediating role in the influence of GHRM on environmental performance (which is related to CE). Furthermore, it was found that GOC strengthens the positive relationship between GHRM and OC, making a key link for the transition of organisations to CE (Al-Swidi, Gelaidan and Saleh, 2024; Elshaer et al., 2024). Additionally, it was found that green culture enhances GHRM to achieve organisational sustainability goals (Maheshwari, Kaur and Renwick, 2024).

When it is about the CE in the Republic of Serbia (RS), the current state can be characterised as an early stage of development since the implementation of circular principles in the companies in RS is limited and predominantly focused on waste management (Vukadinović, 2023). However, in the area of waste management there are also serious problems indicating the low level of CE. According to some investigations, 79% of waste is disposed of in landfills (Kljajić, 2025). Although in the RS there are some positive examples of companies that implement CE principles in their business, the dominant business model applied in most companies is still "take-make-dispose".

Given the urgent need for adoption of CE orientation in the companies in the RS, this paper started from the following research questions: To what extent is GHRM implemented by the companies in the RS? Does it affect practices in the area of CE? And does the GOC have a mediating role in this relationship? Before taking extensive empirical research in order to test the validity and reliability of its methods and instruments, the pilot study was conducted, the results of which will be presented in the second part of the paper.

The paper is structured as follows: After introduction, the second part of the paper provides a theoretical overview of the concepts of CE, GHRM and OC. The third part presents hypothesis development, while the fourth part shows research methodology. The results of the pilot study are showcased in the fifth part of the paper, followed by a discussion and implications, and concluding remarks.

2. LITERATURE REVIEW

2.1. GREEN HUMAN RESOURCE MANAGEMENT

The concept of GHRM is a relatively new direction in the development of human resource management (HRM) whose emergence and dynamic development are influenced by the growing need for the companies to integrate environmental and sustainable principles into their businesses (Amhad, Javed, Sharma and Siddiqui, 2025). Although the initial focus of the theoreticians and practitioners was on the practices such as reducing the waste, saving energy, and minimising the environmental impact of production processes, it has recently been recognised that achieving sustainability goals requires a more comprehensive approach by incorporating the human element into the equation

(Akma, Yasin and Perdhana, 2024). As a consequence, the concept of GRHM has emerged.

GHRM is usually understood as an organised process that integrates environmental and sustainability aspects into essential HRM functions (Renwick et al., 2013; Sultana, Jumman, Paul and Golder, 2026). It is also stated that GHRM contributes to the transformation of general employees into eco-activists through policies, procedures, and practices that benefit employees, society, the environment, and the business (Amaleshwari and Masilaman, 2024). In short, GHRM represents the integration of environmental sustainability and human resource policies towards pro-environmental employee behaviour resulting in sustainability outcomes (Sultana et al., 2026).

Since GHRM was in its essence created by the incorporation of environmental management into conventional HR procedures (Akma et al., 2024), its content consists of all practices of HRM which now become green. Therefore, the GRHM includes green recruitment of candidates, green selection, green training, green employee appraisal and reward, green employee empowerment and participation, etc. (Renwick et al., 2013; Sultana et al., 2026).

When it is about the green job analysis and design, these activities refer to job descriptions that clearly define expectations regarding environmentally responsible employee behaviour as well as include green competencies as a special component in job specifications (Opatha and Arulrajah, 2014). As such, specific activities with the "green" orientation could be listed, including, for example, rational energy and paper consumption, proper waste management, use of environmentally friendly materials and participation in environmental conservation initiatives, etc. (Saifulina, Caraballo-Penela and Ruzo-Sanmartin, 2020).

Green recruitment and green selection are the processes that include environmental criteria in the recruitment messages and communication of an employer's concern about greening through recruitment efforts as well as selection of the applicants who are aware of greening to fill job vacancies (Opatha and Arulrajah, 2014).

The aim of green training and development practices is to develop knowledge and skills about greening as well as to do training needs analyses to identify green training needs of employees (Opatha and Arulrajah, 2014). Thanks to that, the employees will be able to reduce waste, utilise resources and energy efficiently and effectively, and implement other eco-friendly practices.

'Green' performance evaluation refers to evaluating employees' job performance according to green-related criteria as well as including a separate component for progress on greening in the performance feedback interview (Opatha and Arulrajah, 2014).

Green compensation and rewards systems are also part of the GHRM. They include recognising and promoting employees' efforts towards the firm's environmental performance objectives (Haque, 2017).

Having in mind the growing importance of green attitudes and behaviour of employees, the influence of GRHM on many specific organisational variables has been investigated so far. For example, the influence on GHRM has been investigated in the context of green supply chain management (Longoni, Luzzini and Guerci, 2018); environmental, economic and social organisational performance (Yong, Yusliza and Ahmad, 2022); employee attitudes and performance (Hameed et al., 2020); etc. However, there are a growing number of studies that have highlighted the importance of investigating the adoption of the CE from an HRM perspective as well (Sawe, Kumar, Graza-Reyes and Agrawal, 2021).

2.2. CIRCULAR ECONOMY

As today's business landscape is characterised by numerous environmental challenges, resource scarcity, and shorter product life cycles resulting in massive waste, the need to transform existing business models has become more important than ever (Ellen MacArthur Foundation, 2013; Geissdoerfer, Savaget, Bocken and Hultink, 2017). Instead of the still dominant linear model "take-produce-dispose", for today's challenges more appropriate are models that reduce waste and promote efficient resource use. These models are developing within the concept of the circular economy (OECD, 2019).

The circular economy is a relatively new concept that arose in the late 20th century, although its theoretical roots could be found even in the 1960s when Kenneth E. Boulding (1966), in his paper, emphasised that the Earth functions as a closed system and has limited resources. However, the concept of CE has started to develop dynamically since the 2010s, particularly under the influence of the Ellen MacArthur Foundation (2013), which systematised this concept and promoted it globally. Consequently, one of the most cited definitions of CE is the one that is provided by the Ellen MacArthur Foundation itself, according to which CE refers to an industrial economy that is restorative by intention, aims to rely on renewable energy, minimises, tracks, and eliminates the use of toxic chemicals, and eradicates waste through

careful design (Ellen MacArthur Foundation, 2013, p. 22).

One of the more comprehensive definitions of CE is also the definition provided by Geissdoerfer et al. (2017), to whom CE is a regenerative system in which resource input and waste, emission, and energy leakage are minimised by slowing, closing, and narrowing material and energy loops which can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling.

The CE is based on three basic principles (Ellen MacArthur Foundation, 2013):

1. *Design out waste and pollution.* Products and processes should be designed in the way that there is no waste created.

2. *Keep products and materials in use.* The life of products should be extended through reuse, repair, recycling and remanufacturing.

3. *Regenerate natural systems.* Resources should be returned to natural flows and protect ecosystems.

The main premise of the CE principle is that manufacturers or retailers should, wherever it is possible, act as service providers who sell the use of products, not their one-way consumption (Ellen MacArthur Foundation, 2013).

In addition to its ecological dimension, which is the most important, CE also represents an economic strategy that enables value creation through innovation, new business models and more efficient resource use (Bocken et al., 2016; Geissdoerfer et al., 2017). It also has a significant social dimension, as it represents a tool for achieving the sustainable goals. In that line Geissdoerfer et al. (2017) noted that CE can be viewed as an operationalisation of the concept of sustainable development, as it enables its application in concrete business practices.

2.3. GREEN ORGANISATIONAL CULTURE

Since climate change, technological advancements, increased industrial activity, etc., have made it imperative for organisations to reconsider and transform their activities and processes towards environmental responsibility, the organisations should try to transform their culture by reinforcing green practices and green values (Aggarwal and Agarwala, 2023). In other words, to the transformation of organisational culture to a GOC (Aggarwal and Agarwala, 2023).

Organisational culture in general is a form of culture that develops within an organisation and that significantly influences the way its members think, behave, and communicate with each other (Schein, 2010). It encompasses multiple interconnected components, such as values and beliefs that guide decision-making and define priorities in the organisation and norms and rules of symbols, rituals, and organisational stories that enable the continuous transmission of desired patterns of behaviour (Schein, 2010).

Recently, in the context of increasingly growing environmental problems the whole world is facing, a special type of organisational culture has been developing – one that encourages environmental awareness, innovation and social responsibility towards the environment (Aggarwal and Agarwala, 2023). In other words, when OC starts to contain the assumptions, values, symbols, and artefacts that reflect the desire or need to operate in an environmentally sustainable manner, it becomes GOC (Harris and Crane, 2002). It can be defined as the values and beliefs that guide different practices in the organisation towards becoming environmentally friendly (Afum, Agyabeng-Mensah and Owusu, 2020). In such a culture employee at all levels understand the importance of environmental goals and recognise their own contribution to their achievement.

Harris and Crane (2002) identified three basic dimensions of GOC, such as degree, diffusion and depth. '*Degree* of cultural greening' refers to the extent to which managers feel that green values and sensibilities are manifested in organisational creations and artefacts. *Diffusion* of cultural greening refers to how widely managers believed these feelings and behaviours are exhibited throughout the organisation, while the *depth* of cultural greening refers to how deeply managers valued green initiatives (Harris and Crane, 2002, p. 222).

In the literature, GOC is most often investigated in connection with concepts such as GHRM (Dumont, Shen and Deng, 2017; Maheshwari et al., 2024), employee behaviour (Dumont et al., 2017), environmental performance (Fang et al., 2022), CE (Velazquez, 2026), green innovation (Chandra, Arafah and Basri, 2021), etc. It is usually seen as a key mechanism that connects sustainability strategies with specific employee behaviour and organisational sustainable outcomes (Aggarwall and Agarwala, 2023).

3. HYPOTHESIS DEVELOPMENT

Having in mind today's significant challenges in the area of sustainable environmental challenges, an increasing number of authors recognise GHRM as an important factor of environmentally responsible behaviour of employees, as well as the organisations as a whole. Through practices such as green recruitment, green selection, green training, green evaluation and rewarding of

employees (Renwick et al., 2013), such employee pools as well as behaviours of employees towards environmentally responsible business models and CE could be created.

Numerous studies have already confirmed the positive impact of GRHM on the orientation of companies towards the CE. For example, in an extensive meta-study realised by de Aragao et al. (2025), it is concluded that GHRM practices can contribute to the implementation of CE orientation, where green training practices have been identified as the most influencing. This practice is further followed by other green HR practices. Further, in the empirical study conducted by Marrucci et al. (2021), it was found that GHRM practices, including green recruitment and employee engagement, have a positive impact on the performance of the CE. Furthermore, in the study conducted by Obeidat et al. (2023), the positive impact of GRHM on CE is also found. Shah et al. (2024) also found that GHRM is essential for enhancing environmental performance in the context of a CE.

Based on the above, the following hypothesis will be tested:

H1: Perceived GHRM practices in the companies in RS have a significant and positive impact on their orientation towards a perceived CE.

Previous studies have shown that GHRM practices can have a positive impact on the implementation of CE practices. However, such practices may have a strong influence from already existing cultures in organisations in which there are strong values and norms toward environmentally responsible operations (Elshaer et al., 2024; Roscoe, Subramanian, Jabbour and Chong, 2019).

In many empirical studies conducted so far it was found that GOC has a mediating role between GRHM and CE, or related outcomes such as environmental performance or sustainable development; that is, it was shown that GOC transfers the effects of GHRM to these outcomes. Thus, in a study conducted by Ababneh (2021), it was determined that GOC has a mediating role between GRHM and environmental performance. Furthermore, a study conducted by Ingsih, Riyanto and Pamungkas (2025) also confirmed the mediating role of GOC between GHRM and organisational performances. Roscoe et al. (2019) found that enablers of GOC (leadership emphasis, message credibility, peer involvement, and employee empowerment) positively mediate the relationship between GHRM practices and environmental performance. Further, Fang et al. (2022) found that green culture and green innovation positively mediate the relationship between GHRM and environmental performance in a sustainable manner. Dumont et al. (2017) found that green climate, a similar concept to GOC, mediates GRHM and in-role green behaviour of employees, closely connected with CE orientation.

Based on the above text, the following hypothesis will be tested:

H2: Perceived GOC in the companies in the RS mediates the relationship between perceived GHRM and perceived CE.

4. RESEARCH METHODOLOGY

Data collection and sample: Empirical data were obtained through a survey administered to a pilot sample of respondents. The questionnaire was distributed during the 2025 using Google Forms. A snowball sampling approach was employed, whereby university professors invited its acquittances to disseminate the survey to their acquittances. In total, the study gathered 64 valid responses. Given the small pilot sample and individual-level perceptual data, the findings should be treated as preliminary evidence of perceived relationships among the constructs, rather than as objective company-level conclusions.

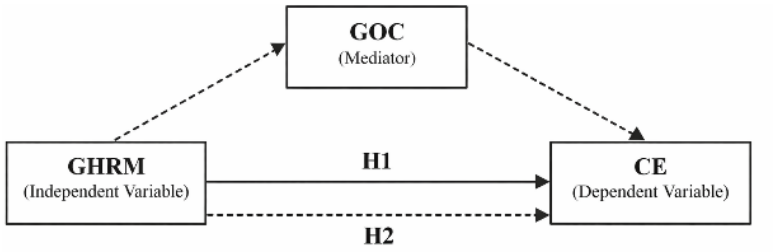
Measurements: The questionnaire used in this study was structured in two sections. The first section captured respondents' demographic characteristics, including age and gender. The second section, measured GHRM, GOC and CE. The measurement instruments were adapted from previously validated scales. GHRM, treated as an independent variable in the research model, was operationalised using questionnaire of Masri and Ayham (2017). Participants indicated on the 5-point Lickert scale (from 1-not at all to 5-to a very large extend) whether their organization applies GHRM practices such as green recruitment, selection, training, performance appraisal and compensations. GHRM was measured through item such as "Providing environmental training to the organizational members to increase environmental awareness". GOC was assessed using, also, the questionnaire of Masri and Ayham (2017) with five items. GOC was measured through items reflecting green organisational values and awareness, for example: "Top management actively support environmental practices". Finally, CE as a dependent variable in this model was measured by a questionnaire applied in Obeidat et al. (2023) study with 8 items assessed on 5-point Lickert scale from 1-totally disagree to 5-totally agree. CE orientation was measured through items related to circular economy practices, for example "The institution

promotes improvement of productivity and efficiency of work processes".

Research analysis: Following data collection, variables were computed. Statistical analysis was performed using IBM SPSS Statistics (v23), along with the PROCESS macro. Initial analysis involved descriptive statistics to summarise the data.

Since the study is based on a small pilot sample, full construct validation through confirmatory factor analysis was not conducted. However, the use of established scales and satisfactory Cronbach's alpha coefficients provides initial support for measurement reliability. In addition, a mediation analysis was performed, where GHRM served as the independent variable, GOC was specified as mediator, and CE was treated as the dependent variable (Picture 1).

Picture 1. Research model



Source: Auth*ors*

Prior to conducting the mediation analysis, key assumptions were tested, including linearity, homoscedasticity, normality of residuals, multicollinearity, and autocorrelation.

5. RESULTS

Data for this study were gathered through an online survey administered to employees during the 2025. The final sample included 64 participants. Table 1 presents their characteristics.

Table 1. Sample

Characteristics	Group	N	%
Gender	Male	32	50.0
	Female	32	50.0
Age	< 25	8	12.5
	26-35	46	71.9
	36-45	8	12.5
	56-65	2	3.1
Total		64	100.0

Source: *Authors' calculation.*

The sample is predominantly composed of respondents aged 26–35 (71.9%), with substantially smaller proportions in the younger (12.5% under 25) and older age groups (12.5% aged 36–45 and 3.1% aged 56–65). The gender distribution in the sample is perfectly balanced, with equal representation of male and female respondents (50% each). Cronbach's alpha coefficients, used to assess scale reliability, demonstrate satisfactory internal consistency across all study constructs, as each value is above the recommended 0.6 benchmark (Hair, Black, Babin and Anderson, 2019). Specifically, the coefficients amount to 0.972 for GHRM, 0.916 for GOC, and 0.944 for CE. Following table indicates results of descriptive statistics and correlation analysis (Table 2).

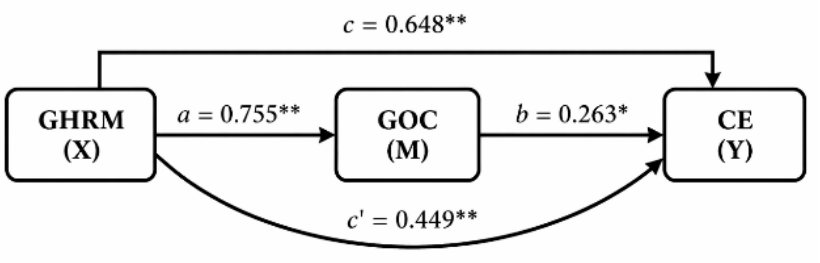
Table 2. Descriptive Statistics and Correlation Analysis

Variable	Mean	SD	1	2	3
1. GHRM	2.222	1.092	1		
2. GOC	2.888	1.140	.723	1	
3. CE	3.243	.996	.711	.658	1

Source: *Authors' calculation.*

The results indicate moderate mean values for GHRM (M = 2.222), GOC (M = 2.888), and CE (M = 3.243), with relatively consistent variability, while the correlations reveal strong positive relationships between GHRM and GOC (r = .723), GHRM and CE (r = .711), and GOC and CE (r = .658), suggesting a substantial degree of association among the constructs. Prior to conducting the mediation analysis, key regression assumptions were systematically evaluated. Further, mediation analysis was performed to assess whether GHRM influences CE and is this relationship mediated by GOC according to the proposed assumptions of Hayes and Rockwood (2017). Bootstrapping with a 95% confidence interval was used to estimate indirect effects. Picture 2 presents obtained results.

Picture 2. Mediation results



Note: * p < .05; ** p < .01. Source: Author*s.*

The mediation analysis reveals a statistically significant indirect effect (ab = 0.1988, 95% CI [0.0311, 0.4111]), alongside a significant direct effect (c′ = 0.4496, 95% CI [0.2335, 0.6657]), indicating partial mediation. The decomposition is internally consistent, and approximately one-third of the total effect is mediated, with all inferences supported by robust and bootstrapped confidence intervals. The findings suggest that GHRM influences CE outcomes both directly and indirectly through enhancing employees' GOC. While GOC explains part of the mechanism (indirect effect ≈ 0.20), a substantial direct pathway remains, indicating that additional mediating mechanisms may also be relevant. Therefore, both hypothesis H1 and H2 are confirmed.

6. DISCUSSION AND IMPLICATIONS

This study examined whether perceived GHRM predicts perceived CE outcomes directly and indirectly through perceived GOC. The findings reveal a strong positive association between GHRM and the mediator, a positive association between the mediator and CE when GHRM is held constant, a substantial total effect of GHRM on CE, and a still-significant direct effect after the mediator is entered into the model. The bootstrapped indirect effect is also positive and statistically significant, indicating that the mediator transmits part of the influence of GHRM on CE. Taken together, the results support the argument that GHRM contributes to circular economy outcomes through a partial mediation structure rather than through a fully mediated one. In substantive terms, GHRM appears to shape CE both by affecting organizational processes directly and by strengthening an internal green orientation that helps translate environmental intentions into implementation (Fang et al. 2022; Harris and Crane, 2002; Renwick et al., 2013; Roscoe et al. 2019).

The significant direct effect is theoretically important because it suggests that GHRM is not only symbolic but it also functions as a concrete managerial system that equips organizations for circular transition. Prior GHRM scholarship conceptualizes green HR practices as environmentally oriented recruitment, training, appraisal, rewards, and participation mechanisms that create the employee abilities, motivation, and opportunities required for environmental action (Renwick et al., 2013). In a CE setting, these practices can reasonably be expected to improve eco-skills, resource-conscious routines, cross-functional coordination, and employee willingness to support reuse, reduction, recycling, and process redesign (Ellen MacArthur Foundation, 2013; Roscoe et al. 2019). The persistence of a strong c′ path after introducing the mediator therefore implies that GHRM can influence CE even before the organization fully internalizes a shared green orientation. This is an important contribution because it shows that the HR architecture itself can be a direct enabler of circularity, not merely a background condition.

At the same time, the significant indirect effect adds an essential explanatory layer by showing that the effect of GHRM is not exhausted by formal HR systems alone. The mediation result suggests that an internal green orientation, conceptualized as GOC, helps convert HR practices into circular outcomes. This interpretation is highly consistent with prior literature arguing that environmental sustainability depends on more than formal systems and technical controls, it also requires green values, credible communication, peer reinforcement, and employee buy-in (Harris and Crane, 2002; Roscoe et al. 2019). Empirical studies likewise report that green culture mediates the relationship between GHRM and environmental performance, and that GHRM helps cultivate sustainable norms and innovation-supportive environments that improve ecological outcomes (Fang et al. 2022; Roscoe et al. 2019). In that sense, the current findings strengthen the argument that HR practices matter partly because they alter the social and normative context in which employees interpret environmental priorities.

The findings also align well with prior CE-oriented empirical work. Research on environmentally certified organizations shows that GHRM contributes positively to circular economy implementation as well as broader organizational performance (Roscoe et al. (2019). Service-sector evidence similarly indicates positive links among GHRM, CE, and sustainable performance (Obeidat et al. 2023). More recent hotel-sector evidence reports that GHRM supports CE adoption and that GOC reinforces that relationship (Elshaer et al. 2024). The present pilot study is therefore broadly consistent with the direction of the existing literature, but it adds value in two ways. First, it explicitly decomposes the total effect into direct and indirect components, thereby showing how much of the relationship is transmitted through the focal mediator. Second, it offers early evidence from the Serbian context, where circular economy transition remains institutionally important and managerially underdeveloped. The result is not that this study overturns prior work, rather, it confirms and localizes it.

The fact that the mediation is partial rather than full is not a weakness of the model. On the contrary, it is theoretically informative. Only about one-third of the total effect is mediated, which means GOC explains a meaningful portion of the GHRM - CE relationship but not all of it. This residual direct effect suggests that other mechanisms are also likely to matter. In line with GHRM research has already pointed to several plausible channels, including green empowerment, green innovation, psychological green climate, and employee engagement. CE-oriented work also indicates that organizational outcomes may emerge through multiple linked pathways rather than through a single intervening variable (Fang et al. 2022; Obeidat et al. 2023). Accordingly, the present model should be interpreted as identifying one important pathway rather than claiming closure over the full causal architecture.

Since this is a pilot study, the safest interpretation is that the results provide preliminary but theory-consistent evidence for the proposed mechanism. Even with that caution, the present findings make a useful contribution. They indicate that circular economy transition is not simply an operational or technological matter, but a people-management issue in which green HR systems and a green internal orientation jointly shape CE outcomes (Ellen MacArthur Foundation, 2013; Renwick et al., 2013; Roscoe et al. 2019).

For practice, the model implies that managers should not treat perceived CE as a purely operational, engineering, or waste-management initiative. The direct effect suggests that firms can move CE outcomes by redesigning the HR system itself. Green job descriptions, green recruitment criteria, green training, CE-relevant appraisal indicators, and reward systems tied to environmental objectives are likely to matter because they build capability and reinforce environmental priorities (Renwick et al., 2013; Roscoe et al. 2019). The mediated effect adds a second managerial lesson. HR practices will be more effective when accompanied by visible leadership emphasis, credible internal messaging, peer reinforcement, and employee empowerment so that green priorities become socially embedded rather than formally announced (Fang et al. 2022; Roscoe et al. 2019). For policymakers, the implication is similar. CE policy should not rely only on regulation of waste and materials flows. Policy packages should also support managerial capability building through training subsidies, workforce-skilling initiatives, certification support, and practical guidance for circular business-model adoption, because the transition to circularity depends partly on organizational routines and human capabilities, not only on technical compliance (Ellen MacArthur Foundation, 2013; Obeidat et al. 2023).

For theory, the results support a dual-path interpretation of the perceived GHRM–CE relationship. One route is capability-based. GHRM equips organizations with green skills, routines, and implementation capacity. The second is normative or internalization-based. Perceived GHRM affects CE partly because it creates a greener internal orientation that supports environmental action. This is why the coexistence of significant direct and indirect effects is theoretically stronger than a simple bivariate result. It suggests that perceived GHRM has both structural and socio-cognitive consequences. At the same time, the persistence of a sizable direct effect argues against a one-mediator closure and favours broader, multilevel theorizing in future work, combining culture or commitment with empowerment, green innovation, psychological climate, and cross-functional deployment (Fang et al. 2022; Renwick et al., 2013; Roscoe et al. 2019).

CONCLUSION

This study provides preliminary empirical evidence on the role of perceived GHRM in fostering perceived CE orientation, highlighting the mediating role of GOC. The findings confirm that GHRM exerts both a direct and an indirect positive effect on CE, with GOC partially transmitting this relationship. This supports the view that circular transition is not solely a technical or operational challenge, but also a human-centric and organisational process in which HR systems and cultural mechanisms jointly shape sustainability outcomes.

Despite these contributions, several limitations should be acknowledged. First, the study is based on a pilot sample (N = 64) and snowball sampling approach, which limits statistical power, particularly for indirect-effect estimation, despite the significance of bootstrapped intervals. Second, the use of snowball sampling constrains the generalisability of findings. Third, the cross-sectional and single-source design restricts causal inference and raises the possibility of common-method bias.

Overall, this study should be understood as a pilot investigation that offers preliminary evidence on the relationships among perceived GHRM practices, perceived GOC, and perceived CE orientation. Due to the small sample size, snowball sampling, and single-source perceptual data, the findings cannot be generalised to all companies in Serbia. Building on these limitations, future research should proceed in four main directions. It should validate the model using larger and more diverse samples across sectors and contexts employ longitudinal or time-lagged designs to strengthen causal interpretation, examine multiple mediating mechanisms such as green innovation, empowerment, psychological climate, and employee engagement to capture the broader causal architecture, and improve measurement by integrating perceptual data with objective CE indicators, including waste reduction, resource recovery, and circular process implementation.

Overall, this study contributes to the growing literature by positioning GHRM as a dual-path driver of circular economy outcomes, both as a capability-building mechanism and as a catalyst for internal cultural transformation, while providing context-specific insights relevant for economies in early stages of circular transition, such as Serbia.

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