

The Role of Green Performance In Human Resources Management, A Study In The General Company For Electronic And Electrical Industries, Baghdad – Iraq

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Abstract:

Purpose: This research aims to identify the role of green performance in human resources management and evaluate its application in the General Company for Electrical and Electronic Industries in Iraq.

Method: This is an applied and sequential exploratory mixed-methods research. The theme analysis method was used in the qualitative part, while the survey method was used in the quantitative part. Snowball sampling was used to select participants in the qualitative part, and stratified random sampling was used in the quantitative part. Semi-structured interviews with (12) people were conducted in the qualitative part, while a researcher-made questionnaire was administered to (450) people in the quantitative part. Atlas software was used for qualitative data analysis, while SPSS (22) and Amos (24) were used for quantitative analysis of the model.

Findings: The qualitative part yielded a general model and four sub-patterns, representing the dimensions of green performance management (determining green performance goals, monitoring and coaching green performance, evaluating green performance, and reviewing green performance). The quantitative part showed acceptable reliability of all hidden variables in the questionnaire (above 0.8).

Conclusion: Implementing the four dimensions of green performance management (determining green performance goals, monitoring and coaching green performance, evaluating green performance, and reviewing green performance) can help foster a green culture and performance in an organization.

Keywords: Human Resources Management, Performance management, Green Performance Management, Electrical and Electronic industries, Iraq.

***Research extracted from the doctoral thesis**

Designing Designing A Green Performance Management Model For Human Resources In The State Company For Electric And Electronic Industries Baghdad-Iraq.

1. Introduction

Human activities have caused significant environmental degradation, leading to habitat loss and destruction¹. Consequently, environmental issues have become more pressing, affecting society and businesses. Companies play a significant role in environmental degradation². As a result, public opinion demands that companies adopt sustainable practices to mitigate their environmental impact³.

The concept of green performance management of human resources is concerned with the role of human resource management in preventing pollution in organizational operations⁴.

Rapid population growth is a key driver of environmental crisis, contributing to various environmental challenges. Despite its central role in environmental issues, population growth has received limited attention in public discourse, media, government programs, and environmental organizations. The lack of focus is attributed to the sensitive, complex, and ethical nature of the issue⁵.

In a rapidly changing economic environment, Iraqi government institutions are continuously striving to minimize product and process

¹ Macalik, J., Sulich, A., (2019). External employer branding of sustainable organizations. In: Skvarciany, V. (Ed.), International Scientific Conference Contemporary Issues in Business, Management and Economics Engineering'2019. Vilnius Gediminas Technical University, pp. 239–250

² Khan, M.A.S., Jianguo, D., Ali, M., Saleem, S., Usman, M., (2019). Interrelations between ethical leadership, green psychological climate, and organizational environmental citizenship behavior: a moderated mediation model. american psychological association Journal. 10 (8).

³ Lamm, E., Tosti-Kharas, J., King, C.E., (2015). Empowering employee sustainability: perceived organizational support toward the environment. Journal of Business Ethics, Springer, Publ. 128 (1), 207–220.

⁴ Motiei, Mohsen; Khani, Amir Mohammad and Bairami, Soraya (1400). The effect of green supply chain and green human resource management on environmental performance: The mediating role of green innovation, Andisheh Amad Scientific Journal, 20, (77), p. 165.

⁵ Alkaher, I., & Carmi, N. (2019). Is population growth an environmental problem? Teachers' perceptions and attitudes towards including it in their teaching. Sustainability, 11(7), 1994

costs, improve performance and quality to compete and thrive in the market¹.

In light of these challenges, the green movement has emerged as a global effort to preserve the environment. Organizations must address the emerging management challenge of protecting natural resources by reducing their negative impact on the environment and increasing sustainable performance².

Ignoring green performance in Iraqi electrical and electronic industries can lead to environmental destruction, as the lack of environmentally friendly policies and procedures can increase pollution, waste, and resource depletion. Organizations that fail to prioritize green performance may struggle to maintain a competitive advantage as consumers demand sustainable products and services. Non-participation of employees in green practices can negatively affect their job satisfaction, leading to demotivation and reduced productivity. Organizations that fail to adopt green practices may face increased costs due to environmental damage, fines, and reputation damage.

Overall, neglecting green performance can result in significant negative consequences for organizations, including environmental destruction, increased costs, reduced employee morale, damage to reputation, and reduced competitiveness.

Ignoring green performance in electrical and electronic industries in Iraq can lead to poor management of environmental risks, resulting in financial losses, reputation damage, and decreased brand loyalty. Lack of employee involvement in green practices can limit innovation and sustainable initiatives within the organization. Failure to prioritize green practices can lead to increased regulatory compliance costs and limited long-term sustainability, hindering the organization's overall success. These challenges emphasize the need for a green performance management model for human resources to ensure sustainable development and environmental protection in Iraq's electrical and electronic industries. This study aims to develop a

¹ Anwar, G., & Abdullah, N. N. (2021). The impact of Human resource management practice on Organizational performance. *International journal of Engineering, Business and Management (IJEEM)*, 5.

² Martins, J. M., Aftab, H., Mata, M. N., Majeed, M. U., Aslam, S., Correia, A. B., & Mata, P. N. (2021). Assessing the impact of green hiring on sustainable performance: mediating role of green performance management and compensation. *International Journal of Environmental Research and Public Health*, 18(11), 5654.

green performance management model for human resources in the Iraqi Electrical and Electronic Industries State Company using a mixed-method approach (qualitative-quantitative). This topic has received limited attention in the research literature, particularly from a mixed-method perspective, making the current study both innovative and significant. Given the limited focus on human resource management and green performance management in a developing country such as Iraq, the findings of this study can contribute to knowledge and practices in the field, paving the way for more sustainable and environmentally-conscious management approaches in various organizations and industries.

Theoretical framework and research background

In the past, organizational success was primarily measured by economic value, but today, organizations must also consider environmental and social factors alongside economic and financial factors. As a result, the concept of "green" has become a strategic imperative in organizations. Green human resource management (GHRM) refers to the effective use of human resources to improve and promote an organization's environmental actions and create greater commitment and awareness of environmental issues among employees¹.

Ultimately, GHRM is essential for fostering commitment and ownership among employees in achieving environmental goals². Green performance management of human resources (GPMHR) is a process for achieving better environmental outcomes within an organization through effective management, understanding, and measurement of performance, with a focus on planned goals, standards, and competencies³.

To achieve their overall green human resources strategy, organizations can implement green performance management (GPM)

¹Tumpa, T. J., Ali, S. M., Rahman, M. H., Paul, S. K., Chowdhury, P., & Khan, S. A. R. (2019). Barriers to green supply chain management: An emerging economy context. *Journal of Cleaner Production*, 236, Article No.117617.pp189.

²Andre', A., de Waal, H. C., (2019), Lessons Learned From Performance Management Systems Implementations, *International Journal of Productivity and Performance Management* ,Vol. 58 No. 4, pp 390-367.

³ Moynihan, D. P., Alexander, K. (2016). Performance management routines that work, an early assessment of the GPRA modernization act. *Public Administration Review*, *Journal Human Resource Management*, 76 (2), 314–323.

as a subsystem of green human resource management¹ (GHRM) . Atkinson's research 2012 used the Deming cycle to design a performance management framework in Northern Ireland's Health Quality Development Organization and Legislation² .

The GPM process involves four interrelated stages: determining green performance goals, monitoring and coaching green performance, evaluating green performance, and reviewing and revising green performance. Determining green performance goals is the first step in the GPM process, and these goals should be aligned with the organization's overall GHRM strategy. Since subsequent stages of the GPM process are based on these goals and plans, careful planning and coordination are essential for the effective implementation of GPM.

Green monitoring and coaching of human resources is a process that creates a psychological contract between managers and employees, resulting in mentorship and guidance³ . Coaching is a key factor in the success of green performance management (GPM) of human resources, and involves regularly observing an employee's green performance and providing feedback⁴. The third stage of the GPM process is the evaluation of green performance, which is an essential aspect of GHRM. An ineffective green performance evaluation system for human resources can lead to various issues that negatively affect both employee and organizational performance and commitment to environmental sustainability⁵ .

Reviewing and revising green performance of human resources is the fourth and one of the most critical stages of green performance

¹ Salamat, Shadi ; Mirspasi, Nasser & Rashadat Jo, Hamideh, (2018), Designing a human resources performance management system in order to improve economic productivity (case study: Eindhoo Bank), Quarterly Journal of Economics and Urban Management, 7, 3, 127.

² Hassanpour, Neda, (2021). Designing the employee performance management model in Isfahan Municipality, Isfahan University, School of Administrative Sciences and Economics, Department of Management, 12-25.

³ Ivancevich, J. (2013), Human Resource Management, 11 th Edition, Irwin Professional Pub, Journal of environmental management, 46: 237 – 264.

⁴ Moynihan, D. P., Alexander, K. (2016). Performance management routines that work, an early assessment of the GPRA modernization act. Public Administration Review, Journal Human Resource Management, 76 (2), 314–323.

⁵ Guo, Y., Kang, H., Shao, B. and Halvorsen, B. (2020), “Organizational politics as a blindfold: Employee work engagement is negatively related to supervisor-rated work outcomes when organizational politics is high”, Personnel Review, 48(3),784-798.

management (GPM) cycle¹. This stage may be the most challenging, but also the most important stage of GPM². If this stage is not conducted effectively, the entire GPM process may fail to add much value to the organization³.

Few domestic and international studies have explored GPM of human resources (⁴, ⁵, ⁶, ⁷, ⁸) The literature review indicates the significance of GHRM and GPM in achieving environmental sustainability. Consequently, this study seeks to answer one central question and two sub-questions:

Main research question:

What is the model of green performance management of human resources in the State Company of Electrical and Electronic Industries of Iraq?

Research sub-questions:

1. *What are the key components of the green performance management system of human resources in the State Company of Iraqi Electrical and Electronic Industries?*

¹ Roscoe, S., Subramanian, N., Jabbour, C. J., & Chong, T. (2019). Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development, *Journal Business Strategy and the Environment*, 12(3):34-49.

² Tweedie, D., Wild, D., Rhodes, C., & Martinov- Bennie, N. (2019). How does performance management affect workers? Beyond human resource management and its critique. *International Journal of Management Reviews*, 21(1), 76-96.

³ Jacobs, G., Belschak, F. D., & Den Hartog, D. N. (2017). (Un) ethical behavior and performance appraisal: the role of affect, support, and organizational justice. *Journal of business ethics*, 121(1), 63-76.

⁴ Jerónimo, H.M., Henriques, P.L., Lacerda, T.C. de, da Silva, F.P., Vieira, P.R., (2020). Going green and sustainable: the influence of green HR practices on the organizational rationale for sustainability " *Journal of Business Research*, Elsevier, 112, 413–421.

⁵ Neto, G.C. de O., Tucci, H.N.P., Correia, J.M.F., da Silva, P.C., da Silva, D., Amorim, M., (2021). Stakeholders' influences on the adoption of cleaner production practices: a survey of the textile industry. *Sustainable Production and Consumption Journal*. *Sustain. Prod. Consump.* 26, 126–145.

⁶ Ozcalici, M., & Bumin, M. (2020). An integrated multi-criteria decision making model with Self-Organizing Maps for the assessment of the performance of publicly traded banks in Borsa Istanbul. *Applied Soft Computing, Journal of Human Resources*, 90, 106-166.

⁷ Pedersen, J.T.S., Manhice, H., (2020). The hidden dynamics of household waste separation: An anthropological analysis of user commitment, barriers, and the gaps between a waste system and its users. *Journal of Cleaner Production*. (242), (1).

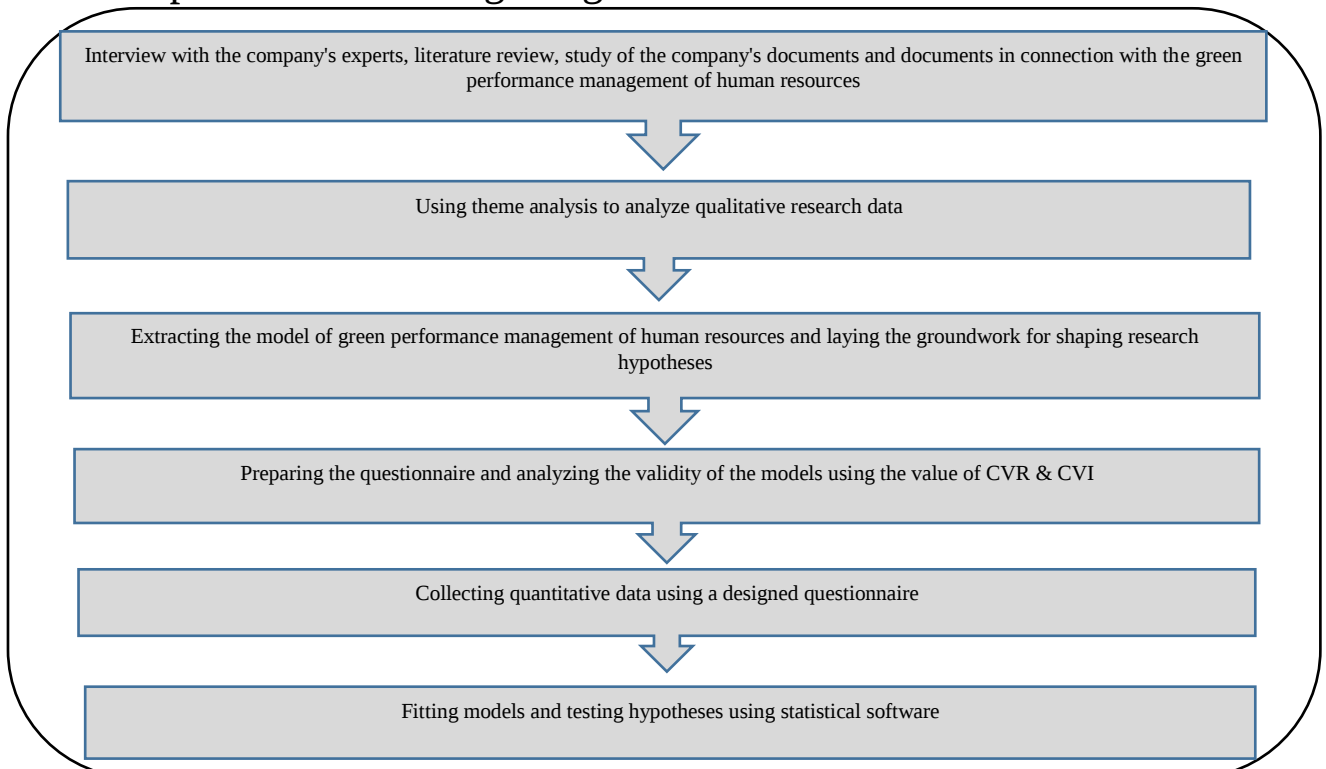
⁸ Rana, G., & Arya, V. (2024). Green human resource management and environmental performance: mediating role of green innovation—a study from an emerging country. *foresight*, 26(1), 35-58.

2. What is the current state of the green performance management system of human resources in the State Company of Iraqi Electrical and Electronic Industries?

These questions aim to identify the critical elements of a GPM system in the target organization and assess its current status, which can inform strategies to improve GHRM and GPM practices in the organization.

Research method

This applied research study is of a mixed-method nature, using a sequential exploratory design, where the qualitative phase is conducted first to extract the primary model through interview data and qualitative data analysis. The quantitative phase then tests the extracted model based on the views of managers, supervisors, and experts in the State Company of Electrical and Electronic Industries of Baghdad - Iraq. To achieve the research objectives, two stages were considered for model development. The first phase involves conducting interviews with experts in the target organization to gather insights and develop the primary GPM model. The second phase involves testing and refining the model using data gathered from managers, supervisors, and experts within the organization. The mixed-method approach allows for the collection of both qualitative and quantitative data, providing a comprehensive understanding of GPM practices in the target organization.



the validity of the qualitative phase of the research. Interview questions were designed after reviewing available sources, and the interview text was approved by the State Electric and Electronic Industries Company of Baghdad-Iraq. The snowball sampling technique was used to select participants, starting with the human resources department in the central building of the State Electric and Electronic Industries Company of Baghdad-Iraq, followed by interviews with other experts. A total of 12 interviews were conducted with expert university professors and managers with extensive knowledge of the Iraqi Electrical and Electronic Industries State Company, until theoretical saturation was reached and no new codes or findings emerged in the 11th and 12th interviews. The demographic characteristics of the interviewees are presented in Table 1, and the duration of each interview was between 40 and 60 minutes in Arabic. The interview questions were:

1. What are the key components of the green performance management (GPM) system of human resources in the State Company of Iraqi Electrical and Electronic Industries?
2. What is the current status of GPM system of human resources in the State Company of Iraqi Electrical and Electronic Industries?
3. How should the green performance of human resources be determined?
4. How should the mentoring (coaching) process for green performance of human resources be carried out?
5. What should be the process for evaluating green performance of human resources?
6. How should the feedback process of the GPM system for human resources be carried out?

The demographic characteristics of the interviewed experts are presented in Table 1. These questions were designed to gather expert insights on the key elements, current status, and implementation of the GPM system in the target organization, which can inform model development and testing in the subsequent phase of the research.

Table (1) demographic characteristics of interviewees

Demographic variables		Frequency	Percentage
Gender	Man	10	83.3
	Woman	2	16.7
	Sum	12	100
Position	Manager	2	16.6
	Expert	5	41.7
	Supervisor	5	41.7
	Sum	12	100
Degree	Master's degree	10	83.3
	Ph.D	2	16.7
	Sum	12	100
Work history	Less than 10 years	2	16.7
	11-15 years	4	33.3
	15-20 years	4	33.3
	Above 20 years	2	16.7
	Sum	12	100

After extracting a qualitative model in the first phase of the research, it was examined and quantitatively tested in the second phase using a researcher-made questionnaire based on the qualitative model. To construct the questionnaire, each dimension of the extracted model was operationally defined (if needed) and questions were designed for each dimension.

After multiple revisions and expert review to ensure the accuracy and reliability of the questions, a 90-item Likert scale questionnaire in Arabic was developed. Cronbach's alpha method was used to assess the questionnaire's internal consistency reliability, and the results indicated sufficient reliability as the composite and Cronbach's alpha of each criterion were higher than 0.7. The target population for the quantitative phase of the research was managers, supervisors, and experts in the State Company of Electrical and Electronic Industries in Baghdad-Iraq. A stratified sampling method was used to select a sample of 450 individuals to complete the questionnaire.

Findings

In the qualitative phase, open, central, and selective coding techniques were used to analyze the data obtained from the interviews. A total of 35 factors were found to be influential in the design of the green performance management (GPM) model of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq.

Table (2) Classification of the themes of the effective factors in the design GPM model of HR in the state-owned company of electrical and electronic industries in the city of Baghdad-Iraq

Component	Main theme	Sub-theme	ID
Determining green performance goals	Green organizational goals (within the organization)	Education and creation of green attitude and thinking	A1
		Improving personal environmental skills	A2
		Creating and strengthening green organizational culture	A3
	Green social goals (outside the organization)	Presenting creative environmental ideas and methods	A4
		Help in creating associations and environmental organizations	A5
		Playing an effective role in environmental sustainability	A6
Green performance monitoring and coaching	Development of green knowledge	Cultivating green skills and talents	A7
		Increasing employees' understanding of green management processes	A8
		Green knowledge transfer	A9
		Creating an attitude in green innovation	A10
		Providing feedback to employees about their green performance level	A11
	Development of green performance	Encouraging green behaviors	A12
		Development of the strengths and green job needs of human resources	A13
		Intensification of environmental concerns in line with green performance	A14
		Green performance evaluation time frame	A15
		short term	A16
Green performance evaluation	Green performance evaluation time frame	long term	A17
		Take green actions	A18
	Green performance evaluation indicators	The quality of green work	A19
		The amount of use of green resources	A20
		The amount of creativity in green challenges	A21
		The amount of individual green cells	A22
		Feedback from customers about the organization's green behavior	A23
		The amount of achieved green goals of the organization	A24
	Green performance strategy	Bringing into existence the fields of playing a green role	A25
		The clarity of the definition of green assessment goals	A26
		Making strategic decisions and developing green plans	A27
		Identification and definition of green evaluation indicators and criteria	A28
		Policy making and green policies	A29
		Operationalizing green creative ideas and methods in the minds of human resources	A30
Revise and review of green performance	Providing feedback on individual green	The incidence of green behaviors	A31
		Attention to the green model of the organization	A32
		Cash payments (rewards, etc.)	A33
	Behaviors Green financial feedback	Non-cash payments (purchase of goods, etc.)	A34
		Providing green non-financial feedback	A35
		Job promotion	A36
			A37



Table 4 shows the reliability indices (Cronbach's alpha and composite reliability) and convergent validity for the green performance management (GPM) model of human resources in the State Company of Electrical and Electronic Industries of Iraq. The combined reliability of all latent variables (dimensions used) exceeds 0.8, indicating favorable reliability and measurability of the structures used. Convergent reliability, as indicated by average variance extracted (AVE), is also high and favorable for all constructs. The AVE values of all constructs are greater than 0.5, indicating that the constructs measure what they are intended to measure. As each construct in the table is represented by only one item, the composite alpha coefficient (AVE) will be equal to one. The reliability

evaluation results are presented in Table 4, which shows acceptable reliability of the data.

Table (4) Cronbach's alpha coefficient of composite reliability and convergent validity of each component of the green performance management model of human resources

Components	Cronbach's alpha	Composite reliability	Convergent validity AVE
The process of determining the green functional goals of human resources	0.82	0.85	0.69
The process of monitoring and coaching the greener performance of human resources	0.86	0.76	0.86
The evaluation process of the green performance of human resources	0.89	0.84	0.79
The process of reviewing and reviewing the greener performance of human resources	0.78	0.88	0.81

In Table 5, Fornell and Larcker's (1981) matrix is presented to examine the divergent validity of the green performance management (GPM) model of human resources in the State Company of Iraqi Electrical and Electronic Industries. As shown in the table, the values of the main diagonal for all constructs are higher than those of the off-diagonal, demonstrating good divergent validity. Furthermore, the standardized factor loadings of all constructs exceed 0.79, and all constructs show significant relationships with their corresponding indicators at a level of 0.5, indicating that the model's measurement section is acceptable.

Table (5) Root mean square comparison matrix (AVE) and correlation coefficient of constructs (divergent validity) in the green performance management model of human resources

Components	The process of determining the greener performance goals of human resources	The process of monitoring and coaching the greener performance of human resources	The process of evaluating the greener performance of human resources	The process of reviewing and reviewing the greener performance of human resources
The process of determining greener performance goals of human resources	0.83	-	-	-
The process of monitoring and coaching the greener performance of human resources	0.77	0.67	-	-

coaching greer human resource performance				
The evaluation process of greer human resource performance	0.86	0.88	0.79	-
The process of reviewing and reviewing greer human resource performance	0.86	0.79	0.83	0.74

To assess the structural model, the coefficient of determination (R²) and predictive relevance (Q²) were used. Table 6 shows that the R² values for all constructs of the green performance management (GPM) model of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq were higher than 0.756, indicating that the structural part of the model is strong. The Q² values for all constructs were greater than 0.789, indicating that the model has favorable predictive power. Overall, the structural part of the GPM model is found to be valid and significant.

Table (6) Values of the coefficient of determination (Q) of the structures of the green performance management model of human resources

Components	coefficient determination	adjusted coefficient determination	(Q ²)
The process of determining the greer functional goals of human resources	0.89	0.78	0.84
The process of monitoring and coaching the green performance of human resources	0.85	0.86	0.78
The evaluation process of the greer performance of human resources	0.89	0.82	0.86
The process of reviewing and reviewing the green performance of human resources	0.76	0.75	0.78

The Goodness of Fit (GOF) index of the considered model for identifying the components of green performance management (GPM) of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq was found to be 0.879, indicating a strong fit between the model and the data. This finding suggests that the GPM model provides a good explanation of the

relationships between the variables in the model and the empirical data collected from the study population. Overall, the GPM model demonstrates a strong predictive power in explaining the components of GPM in the target organization.

Table (7) Fit indices of the model of green human resources performance management

Indicator	Design template
GOF(Goodness Of Fit)	0.87

In this section, the descriptive statistics related to the research variables are presented, including the mean and standard deviation for the design components of the green performance management (GPM) model of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq. As shown in Table 8, the results of the questionnaire revealed that performance evaluation is the most important factor, with an average score of 2.3, while coaching is the least important factor, with an average score of 1.8.

Table (8) Average and standard deviation of design scores for green human resources performance management model

Group	Statistical index	green performance objectives	green monitoring and training	evaluation of green performance	Revise and review of green performance
All	Average	1.95	1.8	2.3	2.22
All	SD	0.24	0.1	0.35	0.81

After the initial investigations, the model of structural equations of green performance management as shown in figure (3) was fitted and confirmed.

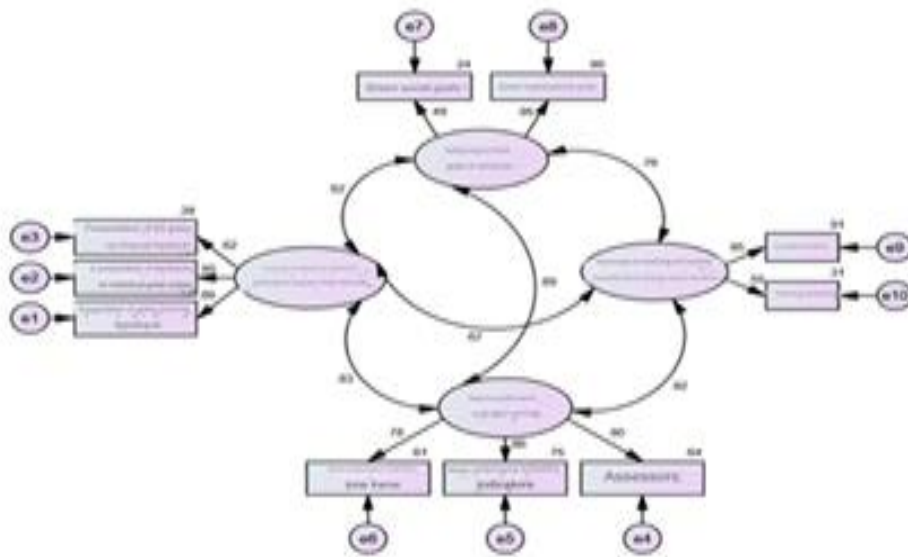


Figure (3) the model of green performance management of human resources in the state-owned company of electrical and electronic industries in Baghdad-Iraq.

Conclusion and recommendations

This research was conducted with multiple goals. In the qualitative phase, a thematic analysis method was used to determine the key components of the green performance management (GPM) system of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq.

The research also aimed to identify the current status of the GPM system of human resources in the target organization. The findings of the research, both qualitative and quantitative, are presented and discussed.

The findings of the quantitative phase were used to construct a general model of GPM of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq, which included four sub-models: setting green performance goals, monitoring and coaching green performance, evaluating green performance, and reviewing and revising green performance.

In the qualitative phase, the thematic analysis of the research data led to the development of four sub-models related to key components of the GPM system of human resources in the State Company of Electrical and Electronic Industries of Baghdad-Iraq, namely, goal

setting, monitoring and coaching, evaluation, and review. These four sub-models were adapted and validated in the quantitative phase using the opinions of the target organization's managers and officials. In the GPM goal setting model, two key themes emerged: internal organizational goals and external social goals.

The interviewees emphasized the importance of addressing not only the internal environmental impacts of the organization but also its external relationships and social responsibilities. By considering both the internal and external dimensions of green performance management, organizations can establish a culture of environmental stewardship and sustainability that empowers employees to contribute to reducing the organization's carbon footprint.

For instance, one interviewee stated, "Green performance management involves more than just mitigating environmental impact. It's about motivating employees to incorporate sustainability in their daily work, providing training, and incorporating environmental factors into performance reviews.

Another interviewee noted, "Organizations must recognize that green performance management is not just about hitting environmental targets; it's about creating a corporate culture where employees feel a sense of responsibility and empowerment to reduce the company's overall carbon footprint".

The findings from the qualitative phase align with the research of (¹, ²) who emphasized the cyclical nature of performance management and the critical role of goal-setting in the process.

The findings suggest that organizations can improve their environmental impact and overall sustainability by considering the interplay between internal performance goals and external social responsibilities. By adopting a holistic approach to green performance management, companies can foster a culture of environmental awareness and accountability that extends beyond the boundaries of the organization.

¹ Sahan, U. M. H., Jaaffar, A. H. H., & Osabohien, R. (2024). Green human resource management, energy saving behavior and environmental performance: A systematic literature review. *International Journal of Energy Sector Management*.

² Shabanpour, A. Taleghani, M. (2019). The relationship between strategic human resource planning and strategic goals of the organization. *Journal of Human Resource Tehran: Proceedings of the International Congress of Engineering Sciences and Sustainable Urban Development*. 24, (9), 178-136.

In summary, the current research emphasizes the need for organizations to develop comprehensive GPM systems that address both internal and external dimensions of sustainability in order to achieve a truly sustainable and successful future.

“The success of effective green performance management lies beyond optimizing internal operations. It's about connecting the dots between an organization's environmental commitments and the actions of individual employees, ultimately impacting the organization's overall carbon footprint and sustainability. Organizations must incentivize, recognize and train employees to comprehend their roles in the larger context of environmental stewardship. This empowers employees to feel accountable for their choices, and understand how their daily decisions can make a significant difference. While setting and implementing goals in line with national or global environmental standards is vital, sustainable development ultimately requires collaboration and a sense of ownership among employees. Every small change an employee makes—from printing less to sourcing more eco-friendly products—contributes to the organization's environmental performance and its standing within the industry and society. This alignment of individual actions with larger organizational and global demands is the cornerstone of green performance management.”

In the monitoring and coaching sub-model of the GPM system of human resources in the State Company of Electrical and Electronic Industries of Iraq, two key themes emerged: development of green knowledge and development of green performance. The findings align with the research of ¹, who emphasized the importance of coaching in performance management. According to ², managers must demonstrate their capability, honesty, and benevolence in order to become successful coaches and help employees reach higher levels

¹ Balzarova, M., Castka, P., Bamber, C. J. and Sharp, J. (2016), “How organizational culture impacts on the implementation of ISO 14001”, *Journal of Manufacturing Technology Management*, Vol. 17 No. 1, pp. 89-103.

² Lin, Z., Gu, H., Gillani, K. Z., & Fahlevi, M. (2024). Impact of Green Work–Life Balance and Green Human Resource Management Practices on Corporate Sustainability Performance and Employee Retention: Mediation of Green Innovation and Organisational Culture. *Sustainability*, 16(15), 6621.

of performance. Furthermore,¹ suggests that continuous feedback is an essential aspect of modern performance management, yet many managers still need to transition from part-time evaluators to full-time coaches.

In the context of the State Company of Electrical and Electronic Industries of Iraq, interviewees emphasized the need for a concerted effort in developing both the knowledge and capabilities of employees, as well as the implementation of sustainable behaviors, in order to effectively embed green practices into the organizational structure."

To effectively promote the development of knowledge related to green practices, comprehensive training programs should be provided to educate employees on environmental best practices, new green technologies, and the latest industry standards and regulations. Employees must understand the rationale behind sustainability initiatives and their role in achieving a more environmentally conscious workplace culture.

Organizations must create opportunities for employees to apply their green knowledge in their day-to-day tasks and practices. This involves setting up systems, processes, and infrastructure that facilitate sustainable choices and actions, such as offering alternative commuting options that are easy and convenient. In this two-fold approach, it is not enough to simply provide knowledge on green practices; organizations must also empower employees to implement these practices in their professional roles. This approach ensures that green practices are deeply integrated into the organization's structure, becoming a fundamental aspect of its culture and operations.

As one interviewee stated, "We need to create an environment where making sustainable choices is the default, not the exception. By providing employees with the tools and support they need, we can make green practices an integral part of how we do business."

To effectively promote the development of knowledge related to green practices, organizations must provide comprehensive training programs that educate employees on environmental best practices, new green technologies, and the latest industry standards and

¹ Pedersen, J.T.S., Manhice, H., (2020). The hidden dynamics of household waste separation: An anthropological analysis of user commitment, barriers, and the gaps between a waste system and its users. *Journal of Cleaner Production*. (242), (1).

regulations. Employees must understand why sustainability is essential, what their role is in achieving it, and how their everyday decisions can impact the organization's environmental performance.

It is not sufficient to simply train employees on green practices; organizations must also establish systems, processes, and infrastructure that facilitate the practical implementation of these practices. This could include, for instance, providing sustainable commuting options or promoting eco-friendly choices in the workplace.

The implementation of green practices should be a two-way street, where employees are equipped with knowledge and empowered to apply this knowledge as champions of sustainability across the organization. This approach ensures that environmental stewardship becomes an integral part of the organization's culture and operations, rather than a marginal activity.

To achieve this, the interviewees stressed the importance of creating an environment where sustainable choices are the norm, not the exception. Providing employees with the necessary tools and support allows them to seamlessly incorporate green practices into their daily work routines, leading to a more environmentally responsible and successful organization.

In summary, the sub-model of monitoring and coaching green performance stresses the significance of developing both knowledge and practice among employees. Organizations must focus on creating a culture that encourages and facilitates sustainable decision-making and actions at all levels, ultimately leading to an environmentally responsible and successful workplace.

In the sub-model of human resources' green performance evaluation in the State Company of Electrical and Electronic Industries of Iraq, three themes were identified: time frame of evaluation, evaluation indicators, and green performance strategy. The quantitative findings supported the sub-model, aligning with ¹, who emphasized the importance of understanding human resources' role in green performance management practices in all organizations. This understanding provides the necessary motivation for employees to achieve the organization's set goals.

¹ Veerasamy, U., Joseph, M. S., & Parayitam, S. (2024). Green human resource management practices and employee green behavior. *Journal of Environmental Planning and Management*, 67(12), 2810-2836.

Similarly, ¹ found that the Asaluyeh petrochemicals were in an unfavorable position regarding green criteria, cost, and customer satisfaction when compared to financial and flexibility criteria, highlighting the criticality of holistic sustainability assessment.

Interviewees pointed out that effective green performance management requires consideration of environmental impacts and sustainability goals across multiple time horizons. In the short term, measurable goals for indicators such as energy consumption, waste reduction, and carbon emissions must be set. However, incorporating sustainability into the company's overall mission and values also necessitates assessing the organization's broader environmental performance relative to industry peers and societal expectations. Specifically, the evaluation of progress towards zero-emissions goals and the establishment of a comprehensive green performance management system that aligns individual actions with the organization's environmental commitments, assessed continuously over short, medium, and long-term time horizons, are essential components of a sustainable organization.

In essence, effective green performance management requires a multifaceted and time-sensitive approach that involves both short-term and long-term planning, assessment, and implementation of green practices, grounded in the broader mission and values of the organization. In summary, the evaluation model emphasizes the importance of a holistic approach to green performance management, taking into account environmental performance indicators across various time horizons, while aligning individual actions with the organization's overarching sustainability goals. This multidimensional approach is key to creating a successful and environmentally responsible workplace. In the review and revision sub-model of the GPM system of human resources in the State Company of Electrical and Electronic Industries of Iraq, three key themes emerged: feedback on individual green behaviors, financial feedback, and non-financial feedback. These findings align with ² and

¹ Azar, Adel; Mahmoudian, Omid and Hashemi, Mehdi (2015). Presenting a method to evaluate the performance of the green supply chain of Assalouye Petrochemicals using the combination of fuzzy method and nonlinear modeling, *Journal of Energy Economics Studies*, 11, (84), pp. 79:39

² Lloyd, C, Harris, M & Andrew, C. (2019), The greening of organizational culture, Management views on the depth, degree and diffusion of change. *Journal of Organizational Change Management*, 15(3): 214 – 234.

¹, highlighting the importance of understanding human resources and their motivations in GPM practices.

Effective GPM extends beyond setting targets and tracking metrics; it requires fostering a culture where employees feel empowered to make sustainable choices daily. Feedback loops, both financial and non-financial, are essential in reinforcing green behaviors. Incorporating green criteria into compensation structures, offering rewards for meeting or exceeding environmental goals, and providing green resources for projects incentivize employees to adopt sustainable practices. However, feedback cannot focus solely on results; it must also recognize the intrinsic and non-financial value of sustainability efforts. Offering green meetings, awards, or certificates, or opportunities for green-oriented professional development, instills a sense of pride and ownership in employees, encouraging them to take an active role in the organization's environmental efforts. Ultimately, this virtuous cycle reinforces green behaviors, leading to better environmental outcomes and a culture of sustainability. As one interviewee stated, "We need to make sustainability an integral part of our organization, where employees feel they are contributing to a larger purpose and are motivated to do their part. Providing feedback and rewards not only reinforces their efforts but also acknowledges the value of their contributions". This comprehensive approach to green performance management emphasizes the importance of fostering an organizational culture that prioritizes sustainability and empowers employees to make a positive impact. In summary, effective green performance management is crucial to achieving the organization's environmental goals and empowering employees to make sustainable choices. One criticism often raised is the lack of a specialized and interconnected approach to managing human resource green performance, making it challenging to obtain reliable findings. This research addresses this gap by providing a specialized approach to designing a human resource green performance management model for the State Company of Electrical and Electronic Industries of Iraq, tailored to its unique characteristics. It is proposed that designing such a model should be a primary task for all organizations, as it

¹ Stefano, G & Fiorentino, R. (2019), An integrated framework to support the process of green management adoption. *Journal Business Process Management*, 20(2): 68 – 89.

provides a framework for establishing and maintaining a culture of sustainability and accountability.

Practical suggestions from implementation of this model include:

Organizational managers in the State Company of Electrical and Electronic Industries of Iraq should consider human resource green performance goals as a key component of the overall GPM system. While setting green performance goals, a balanced approach that accounts for both internal and external organizational requirements must be adopted. Comprehensive and targeted training programs must be developed to equip employees with the skills necessary to address the needs of the environment and contribute to the organization's environmental goals. The second practical suggestion: Given that the process of monitoring and coaching green performance of human resources was found to be a part of human resource green performance management, organizational managers in the Iraqi electrical and electronic industry are advised to establish internal committees that aid in environmental affairs. These committees should focus on promoting the development of green behaviors among employees, thus contributing to the creation of a more sustainable workplace. The third practical suggestion: Based on the research findings, it is recommended that the evaluation period for human resource green performance should be short-term, allowing for frequent monitoring and timely feedback. Organizational managers should assess the green performance of employees while taking into consideration both internal and external environmental issues. The fourth practical suggestion: To ensure continuous improvement in green performance, it is recommended that organizational managers provide regular feedback to employees on their green performance level. Additionally, letters of thanks and appreciation should be awarded to employees who demonstrate high levels of green performance, as recognition is a powerful motivator.

This study had limitations that are worth noting. Firstly, the research was conducted in the State Company of Electrical and Electronic Industries of Baghdad, Iraq, and its findings may not be generalizable to other organizations due to differences in organizational culture, policies, and environmental strategies. The developed model may require modification to suit the unique characteristics of other organizations. Secondly, the study was conducted at a specific point

in time, and generalizing its findings to different time periods should be done with caution.

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دور الاداء الاخضر في ادارة الموارد البشرية دراسة في الشركة العامة للصناعات الالكترونية والكهربائية بغداد – العراق

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مستخلص البحث:

الغرض: يهدف هذا البحث إلى التعرف على دور الاداء الاخضر في ادارة الموارد البشرية وتقييم تطبيقه في الشركة العامة للصناعات الكهربائية والإلكترونية في العراق. **الطريقة:** يعد هذا بحث من البحوث الاستكشافية تطبيقية، ومن البحوث المتسلسلة وذات الاساليب المختلطة. تم استخدام أسلوب تحليل الموضوع في الجزء النوعي منه، بينما تم استخدام أسلوب المسح في الجزء الكمي منه. وتم استخدام عينة الاحالة المتسلسلة (كرة الثلج) لاختيار العينة المستهدفة في الجزء النوعي، حيث تم استخدام العينة العشوائية الطبقية في الجزء الكمي من البحث الحالي. وتم إجراء مقابلات شبه منظمة مع (2) شخصاً في الجزء النوعي، بينما تم تقديم استبيان من اعداد الباحث إلى (450) شخصاً في الجزء الكمي. وقد تم استخدام برنامج Atlas لتحليل البيانات النوعية، بينما تم استخدام برنامج 22SPSS و 24Amos في مرحلة التحليل الكمي للبحث.

النتائج: أظهر الجزء النوعي للبحث عن إنموذج (نمط) كلي وأربعة (أنماط) فرعية تمثل أبعاد إدارة الأداء الأخضر للموارد البشرية (تحديد أهداف الأداء الأخضر، ومراقبة الأداء الأخضر وتطويره، وتقييم الأداء الأخضر، ومراجعة الأداء الأخضر). بينما أظهر الجزء الكمي موثوقية مقبولة لجميع المتغيرات المخفية (غير ظاهرة) في الاستبيان (أعلى من 0.8).

الاستنتاج: بينت الاستنتاجات إن تنفيذ الأبعاد الأربعة لإدارة الأداء الأخضر للموارد البشرية الكامنة في (تحديد أهداف الأداء الأخضر، ومراقبة الأداء الأخضر وتطويره، وتقييم الأداء الأخضر، ومراجعة الأداء الأخضر) يمكن أن يساعد في تعزيز الثقافة والأداء الأخضر للموارد البشرية في المنظمة اتجاه البنية الداخلية والخارجية للعمل.

الكلمات المفتاحية: ادارة الموارد البشرية، إدارة الأداء، إدارة الأداء الأخضر، الصناعات الكهربائية والإلكترونية، العراق.

*بحث مستل من اطروحة الدكتوراه بعنوان:

تصميم نموذج لإدارة أداء الموارد البشرية الخضراء في الشركة العامة للصناعات الكهربائية والإلكترونية في بغداد- العراق.