**Review Article** 

# Green Leadership for Effective Human Resource Management: The Role of Artificial Intelligence

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#### **ABSTRACT**

**Purpose:** The paper aims to provide an extension of the literature on green leadership and AI by focusing on the nexus between green leadership and Human Resource Management (HRM) with AI mediating/moderating this relationship.

**Design/methodology/approach:** This is a non-empirical review of the literature with the development of a conceptual model which can be empirically tested. Data was obtained from refereed journals, textbooks, and other relevant literature.

**Findings:** The deduction is, that the use of AI by green leader's influences HRM positively. Also, green leadership influences HRM positively by greening various HRM practices. Lastly, the adoption of AI influences the relationship between green leadership and HRM positively. Hence, managers should adopt a green leadership orientation and use AI to influence HRM positively.

**Research limitations/implications:** This research is conceptual, and the proposed model needs to be empirically tested to have a greater validity.

**Practical implications:** The inference is green leaders are more likely to adopt artificial intelligence mechanisms due to their quest for sustainable development. Hence, the outcome informs leaders about the need to integrate AI into the HRM function to ensure organisational sustainability.

Originality: The study provides an extension to the literature on green leadership and artificial intelligence, particularly within the area of human resource management, and proposes a unique model that suggests that the adoption of artificial intelligence by green leaders in organisations results in greening the entire human resource management function and thus emphasizes the unique role artificial intelligence plays in achieving sustainable HRM.

**Keywords:** Green leadership; Artificial intelligence; Human resource management; Recruitment and selection; Compensation management; Performance appraisal and management; Training and development; Employee involvement; Job analysis; Health and safety

#### INTRODUCTION

Artificial Intelligence (AI) has been widely used in advanced economies and has contributed greatly to the socio-economic development of these economies over the last couple of decades. AI conventionally refers to a broad class of technologies that

allow a computer to perform tasks that normally require human cognition. It includes every machine or equipment that uses computational abilities to work and perform like humans. The literature suggests that AI in such economies has made significant contributions in different sectors such as entertainment, construction, engineering, medicine, banking,

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communication, agriculture as well as the corporate business world. According to Bolander, AI greatly influences different parts of society including business circles as it enhances efficiency and effectiveness at work; and as such it is an important tool for organizational leadership particularly in this era where access to resources is a major challenge faced by organizations [1].

AI has become a major concern to academic researchers and practitioners as a result of the significant contributions it makes towards sustainable development, especially in this 21<sup>st</sup> century where organisations strive to develop non-replicable strategies aimed at building and maintaining competitive advantage through the efficient and effective use of resources. To achieve this in business therefore requires leadership that is oriented towards, and interested in sustainability, quality and efficiency; and this makes green leadership pivotal in this regard. Green leaders are flexible, embrace change, more committed to sustainable development and thus, strive to achieve excellence in internal operations and community support.

Due to the significant role AI plays towards sustainable business growth, it has been accepted and implemented as an organisation-wide strategy by organisations in general but more in advanced economies. This introduction and acceptance of artificial intelligence in the corporate business world has been triggered by the "Fourth Industrial Revolution" or "Industry 4.0" and this has given AI some prominence in the organisational behaviour literature in recent times. Despite this prominence and the fact that different functional areas of many organizations have adopted and integrated AI-based tools, AI in HRM is still in a developing revolution. The study therefore contributes to the existing literature on AI and HRM which has received limited academic research effort, by developing a conceptual framework on the relationship of these, which can be empirically tested to contribute more to theory and practice.

HRM is one of the key functional areas in organisations responsible for attracting, nurturing, and supporting employees and ensuring a positive work environment that enables organisations get the best from the employees. From the review of literature, the most dominant HRM activities include recruitment and selection, performance management and appraisal, employee involvement, training and development, compensation, health and safety and job analysis. As earlier mentioned, green leaders are more likely to adopt AI mechanisms in their quest towards sustainable development and organisational growth. With HRM playing a significant role towards organisation success, as well as leadership, the question then is 'Does green leaders influence HRM, and does the use of AI make a difference'? The study thus specifically seeks to find out if green leaders influence these dominant areas of HRM practices and consequently how AI influences these relationships.

The paper proceeds as follows: After this introduction is a brief description of the theoretical underpinning of the paper, and the explanation of the major constructs. The next session describes the relationship between these variables, a discussion, and the limitation as well as future directions are provided. The last section details the conclusion of the paper.

#### LITERATURE REVIEW

#### Theoretical underpinning-artificial intelligence

The use of Artificial Intelligence (AI) is becoming prevalent in the day to day working at the workplace. Artificial intelligence refers to a broad class of technologies that allow a computer to perform tasks that normally require human cognition, including adaptive decision making. It is thus intelligence demonstrated by machine, in contrast to the natural intelligence demonstrated by human beings.

Though scientific research are largely founded on theoretical justifications, AI seems to be an exception; as no consensus has been reached on what constitutes an appropriate theory of AI. In view of this, Wang and Pan, et al. establish that the best model of intelligence is the human brain itself; and as such theories of human intelligence are best suited in providing theoretical justifications for the concept of AI [2,3]. Again, after analyzing the field of AI, Tecuci and Kaplan propose three criteria for adopting appropriate theories: Correctness, concreteness, and compactness [4,5]. Correctness refers to the ability of the theory to possess the knowledge that can be likened to the human brain; concreteness refers to the practical value embedded in the theory, and this is reflected in the guidance it provides to human activities. Compactness refers to the conceptual simplicity of a theory's content. That is, scientific theories guide human behaviors; hence must be as simple as possible since simple mechanisms are easier to use and to

Inferring from these, the paper draws from the Cattel's theory of intelligence to build a theoretical justification for why artificial intelligence should be an essential part in the life of an organization, particularly in the area of human resource management.

#### Cattell's theory of intelligence

Cattel proposed that general intelligence (g) is composed of two types of intelligence-fluid intelligence (gf) and crystalized intelligence (gc) [6]. Fluid intelligence defines the ability for logical thinking and analysis. It involves the ability to analyze information/data and solve new tasks or problems independent of any prior knowledge. It usually helps to analyze a novel problem, perceive the relationships and patterns that underlie the problem and solve it using logic. Crystallized intelligence (gc) on the other hand depends on past learning and experience and thus increases over time depending on the kinds of environmental conditions one is subjected to.

From the perspective of Cattel's theory of intelligence, and the management of human resource by the green leader, the following deduction is made. That is in the area of human resource management, an AI mechanism in the form of a computerized system or a robot could be developed and designed by the green leader that will enable the system to analyze data inputted (gf) to solve HR issues and also configured in a way that enables the system to store and depend on past experience to respond actively to its environmental conditions (gc). This is because all the major activities involved in HRM

involve making appropriate decisions by collecting and analyzing data. In this sense, the decisions made will not only be effective, but consistent and fair, since the decision-making process will be largely facilitated by an AI mechanism. This will make the HRM function very efficient and consequently contribute to organizational. The Cattel's theory of intelligence thus fit the correctness, concreteness and compactness criteria for its adoption.

The next sections discuss green leadership and artificial intelligence and how these influence the HRM functions within an organization.

### Artificial intelligence and employee recruitment and selection

Organisations need well managed human being to perform for its success. Human Resource Management (HRM) refers to the strategic, integrated, and coherent approach to the employment, development and well-being of the people working in organizations. It is about the management of work and people towards desired ends using certain practices such as recruitment, performance management, reward management, compensation, staffing/recruitment and selection, employee training and development, employee involvement, job analysis, health and safety management among others. It is through recruitment and selection that these individuals are brought on board to become part of organisations.

Recruitment is the process of reaching out to, searching for, and attracting a large pool of applicants from which those considered most qualified for the job are chosen. In the traditional approach to recruitment, job applicants are required to manually prepare required documentations, and transport them physically to the organisations for assessments. This process could be challenging and could create a lot of inconveniences for both the organisation and the job applicants. Such inconvenience and challenges associated with recruitment and selection include brain drain, high labour turnover, scarcity of skills and expertise in the labour market, unemployment, costs associated with recruitment lack of human resources planning, and geographical location of jobs. For cost effective strategies, organisations operating in contemporary times and in the midst of stiff competition in the world of business must strive to move away from the traditional recruitment practices to a more advanced method with the help of technology.

The use of AI technologies will help in this movement and address some of these challenges and inconveniences and ensure fairness. AI can be used to improve the application process in recruitment by developing an application procedure that is more user-friendly for a job prospect and that is more likely to comprehend at the initial stages in the recruitment process could help screen the candidates without prejudice. Again, through AI, a digital platform can be created that allows the exchange of information, making it convenient, helps save cost, ensure fairness, and facilitates the entire process. For instance, the Optical Character Recognition (OCR) can be used to identify paper resumes, pictures of job applicants, filter electronic resumes, analyse resumes, combine the characteristics

of resumes and text information, and recommend suitable positions to candidates, especially for some high-end talents. This confirms that the adoption of AI will positively impact recruitment in organisations.

A review of the literature suggests that a lot of businesses, especially in advanced economies, have either integrated or beginning to integrate AI technology into their recruiting process; however, most organisations, especially in the African context are not embracing this mechanism. In fact, Deloitte (2019) in a trends survey of companies in developing countries found that only 6% of the sampled respondents confirmed that they had a technology-based recruitment processes, whilst 81% admitted that their organisation's processes were ordinary. Further research is therefore required to find out the reason.

Selection involves a process where a decision is made as to which job applicants are best suited for the jobs in the organisation and the adoption of AI technology could be helpful in making such decisions. Dutta and Opatha and Arulrajah assert that one of the strategies for identifying potential applicants is interviews [7,8]. In this sense, an AI technology could be designed in the form of a robot, and programed to ask questions to the candidates and corresponding answers recorded into a database during the interview process. This data could be analysed at a later period and possible decisions made on the job applicants. The system allows for face and voice recognition techniques and this prevents others from taking the interview on behalf of the candidate. Also, the use of natural language processing technology eliminates the need for typing, and the conversion from speech to text is done within a relatively short period, which greatly improves the efficiency and accuracy of the recruiter's work. The deduction therefore is, AI is a useful mechanism that helps managers to identify new employees with high potential for success and deploy them appropriately.

#### **DISCUSSION**

#### Proposition 1

Artificial intelligence will positively influence employee recruitment and selection.

Artificial intelligence and compensation management: Another HR function and practices is the management of employees' compensation. Compensation management is defined as a set of strategies and policies aimed at rewarding employees fairly and consistently in accordance with their contributions to the organisation. It involves a dynamic management process which determines, assigns, and adjusts employee compensation levels in a fair manner. It is thus a system used to determine the level of reward each employee deserves in relation to their level of performance. This can be done if leaders have adequate data on employee's performance. The application of AI can assist to facilitate this data collection and ensure fairness in the management of employees' compensation. For instance, the BP neural network system, a technology based on biology, neurology, psychology and statistics which imitates the human brain nervous system, establishes a regular computing model, and integrates multiple neural network nodes is used to design an intelligent decision support system to form a fair salary evaluation system with the input of the big data method.

#### Proposition 2

Artificial intelligence will positively influence compensation management.

Artificial intelligence and performance management: Performance management is another major HR activity. According to Armstrong performance management is the process of identifying, evaluating, and developing employee performance within an organisation and matching performance with the overall goals of the organization [9]. It involves continuously making sure that employees and teams' performance make sense in terms of the company's overall goals. Although there are few challenges with the adoption of AI in the management of employees' performance such as the lack of existing framework to guide managers, employees lack of knowledge on how these systems are running, adverse behaviour by employees because they do not understand how decisions have been made using AI-based system among others, it presents enormous benefits to organisations. For instance, the use of Intelligent Decision Support System (IDSS) can make some scientific appraisal methods, such as the 360-degree performance evaluation, more automatic and as quickly as possible. In using this system, the chosen assessment method and the business objectives are programmed and entered into the DSS at the beginning of the assessment year. Thus, during the year and at the end of the assessment year, the system is used to evaluate the individual's performance targets, records, resignation system, department manager score, employee score, customer score and make comprehensive analysis and evaluation. With the use of AI technology, the decision-makers analyse the achievement of each department and employee, identify the defects in their performance, formulate and implement new indicators, and propose development plans.

#### Proposition 3

Artificial intelligence will positively influence employee performance management.

Artificial intelligence and training and development: Training and developing employees play a significant role in organisation success and as a result, managers must ensure this is well done. George and Scott define training as an organisation's effort to foster learning among its workforce whilst development is an effort that is oriented more towards broadening an individual's skills for future responsibility [10]. Despite this difference, scholars use them interchangeably since both training and development provide the employees with improved skills and abilities for increased performance and responsibilities. In contemporary times, managers are forced to develop learning cultures, that move away from the ordinary training design model based on the traditional gap analysis, where human resource managers use tools such as questionnaires, interviews, job observations, assessments, and job data analysis to identify the need for training; to a technology-based approach using AI. For instance, the visual scanning system is currently used to observe and record the daily learning status of each employee and then retrieve the training events and data of different stimulation levels through data analysis which enables the instructors adjust the speed level according to participants' feedback which help manage the curiosity of employees. Also, companies use voice technology and learning management systems to achieve a fast, convenient, and efficient learning experience as it allows training to be conducted remotely and at participants' place of convenience.

#### Proposition 4

Artificial intelligence will positively influence employee training and development.

Artificial intelligence and employee involvement: Employee involvement, another critical practice by leaders is defined as the degree to which employees participate in the organisation's decision-making process. Involvement is usually concerned with building human capacity, ownership and responsibility that is very essential for building consensus, unity in vision, values and purpose. Due to the significant role involvement plays, it is essential for AI to be integrated into such practices. For instance, the use of computer algorithms gives leaders insight into how their employees feel which helps managers determine how to involve these employees for optimal benefit.

#### Proposition 5

Artificial intelligence will positively influence employee involvement.

Artificial intelligence and job analysis: Job analysis, a major HRM practice refers to a procedure through which leaders determine the duties of an employee as well as the characteristics required of that employees to hire. It refers to a systematic and organized process that helps human resource managers discover nature of jobs within an organisation. It involves the collection and processing of job-related data that helps HR managers reach decisions about the job with the most important decision being about who can perform the job better. The use of AI in performing this task is very significant, in that it helps process large amounts of data to identify patterns, establish relationships to help make decisions. In relation to job analysis however, information pertaining to both prospective employees and the jobs needs to be coded and inputted into the AI tool used, which then analyses the data and establishes a relationship between the job and the candidate who directly fits the job.

#### Proposition 6

Artificial intelligence will positively influence job analysis.

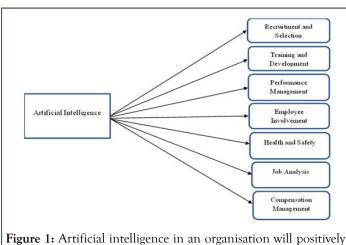
Artificial intelligence and health and safety: Employees' health and safety significantly impacts on the organisation's success. Health and safety refer to a state of complete physical, mental and social wellbeing of persons. The management of employees' health and safety concerns all practical steps put in place to ensure that the workforce and all persons affected by the organisation's business are protected from injuries. Even though

the employee is primarily responsible for their own health and safety, leaders are also concerned, since as part of the organisation's efforts, they are the ones on whose benefits the employees perform work to address issues of employees' health and safety, leaders can adopt AI technologies and interventions to execute the most difficult, complex, and hazardous tasks at work in order to reduce human efforts involved in such tasks. These do not only help reduce the employees' risks of exposure, but also relieves the manager off on health and safety burden imposed by unforeseen injuries sustained by employees at work. The application of technologies such as smoke detectors, fire alarms, etc. in the work environment seek to ensure the safety of employees and all persons in the work environment.

#### Proposition 7

Artificial intelligence will positively influence employees health and safety.

Conceptual model 1: From the above propositions, we conclusively propose that the implementation of artificial intelligence in an organisation will positively influence HRM practices (Figure 1). We therefore conceptualise the following model:



**Figure 1:** Artificial intelligence in an organisation will positively influence HRM practices.

### Green leadership, artificial intelligence and human resource management

Green leadership: Leadership is one of the main factors required to ensure effective HRM in organisation. It is described as individuals' ability to influence persons they relate with for the accomplishments of goals. Current businesses require new leadership styles since the traditional leadership approach is not effective for the management of modern organisations and the environment. One of such modern leadership styles is green leadership defined as the "ability of a leader to determine proenvironmental policies and should be able to influence organisations to support pro-environmental policies". These leaders have substantial influence on environmental policies; environmental responsibility, green mindfulness, and green selfefficacy. Such leaders are therefore not only interested in formulating and implementing pro-environment policies but also in ensuring their subordinates support these proenvironment policies.

According to Lee, et al., the green leader possess three unique characteristics: Openness to change, self-enhancement and ethical and ecomotive behaviour [11]. Openness refers to the extent to which leaders engage with ideas and suggestions from their subordinates and other members of their team in an openminded manner. The openness characteristic of the green leader causes them to be flexible, able to adapt to changing situations and circumstances, accepts suggestions from their followers, cause employees' innovative behaviour build trust and enhance leader effectiveness, examine current situations and make the needed changes to the procedures, processes, and policies to ensure organisational success. Additionally, the green leader's openness to change makes them very effective since it has been suggested that leadership strategies and process change according to current trends. Consequently, with the openness characteristic, the green leader considers existing policies, inspires, and supports his followers to adapt to change based on current trends to achieve desired outcomes.

Self enhancement refers to "the personal desire to see oneself in a positive light". The self-enhancement characteristic of green leaders causes them to see themselves as persons with potentials which boosts their physical, mental, spiritual, social and emotional wellbeing. This makes the leader self-motivated, exaggerate his virtues and minimises his short comings. However, too much of self-enhancement may have a negative impact as it may result in low interpersonal relationship which affects performance negatively.

The third characteristic of green leaders is being ethical and ecomotive. According to Krishnamurthy, ethical behaviour, is about learning what is right or wrong, and then doing the right thing but "the right thing" is not nearly as straightforward as conveyed (p.3) [12]. Green leaders make ethical decisions and have ethical motivations to engage in the greening of businesses. Therefore, this ethical characteristic of such leaders is to do what is right in relation to supporting environmental policies to protect the environment. With the openness to change, self enhancement and ethical characteristics, the green leader is able to formulate ethical and environmentally friendly policies, convince and encourage green behaviour of their subordinates to achieve set targets for mutual benefit.

### Green leadership, Artificial Intelligence (AI) and human resource management practices

Green leadership, AI, and training and development: Green leadership involves a person's ability to convince, persuade and transform others to be involved in pro-environment actions. This transformation can be effective if employees are knowledgeable in what should be done and therefore the need to train such persons. Since green leaders focus on ensuring environmental excellence in the organisation's internal operations, and inspire a shared mission and vision to promote environmental issues, the green leader pays attention to equip their subordinates with the required skills, competencies, capabilities, abilities, and knowledge to ensure the employees help achieve this. The focus on ensuring employees acquire this is described as green training and development. Green training and development is defined as "a type of training related to

relevant environmental topics, which enables all staff to integrate the firm's performance with environmental issues." It is a process where there is continuous education of employees to update their knowledge and skills, needed for sustainable development. When employees acquire these skills, abilities, and competencies, they become more committed to the green leaders' agenda, and this is reflected in their attitude, behaviour, and their interest to pursuing the green values and gaols of the organisation. Such leaders include seminars and workshops in training and development programmes to help employees acquire the needed knowledge, skills, and competencies to put up pro-environmental behaviours, attitudes and be eco-friendly. In view of these, it is argued that green leadership will influence the content of training and development programs and activities in organisations.

For these training and development workshops, seminars and other programmes to be successful, training needs assessment has to be carried out. With the adoption of AI, such as visual scanning system which help observe and record daily learning status of employees, the green leader will be able to recognise what needs the employees have and so design appropriate content bearing in mind the environment. Again, AI will help use different training methods for efficiency to offer training remote. The proposition therefore is the adoption of AI by green leaders will positively affect training and development practices in organisation.

leadership, AI, and employee compensation management: Reward and compensation are the most important HR practices which connects an individual's interest to that of the organization's and therefore the need for its effective management. Compensation management involves the formulation and implementation of policies and strategies aimed at compensating people fairly, equitably, and consistently in accordance with their value to the organization. Compensation management thus, deals with the design, implementation, and maintenance of compensation system to improve organisation, team, and individual performance. This design, implementation and maintenance of the system is influenced significantly by the leader. From the perspective of the social exchange theory, proposed by Blau, individuals who receive any kind of reward tend to reciprocate by improved performance. Therefore, when the green leader, known to be ethical, designs and implements an environmentally friendly policies and system which compensate them fairly, equitably, and consistently based on their values to the organisation, they will reciprocate by being environmentally conscious and put-up eco-friendly behaviour [13]. This confirms the positive relationship between green leaders and employee compensation management.

Research has established that AI impacts on organisation compensation management positively and green leadership impact on employee compensation management. Thus, when the green leader adopts AI, it will help design, implement, and maintain compensation systems, and therefore reward employees in a fair, consistent and equitable manner. The proposition therefore is, AI will influence the relationship

between green leadership and employee compensation management.

Green leadership, AI, and performance management: One contribution a leader is uniquely expected to make is to give others vision and ability to perform which calls for the management of the employees' performance. Performance management refers is a uniquely goal-oriented and continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning their performance with the organization's goals. Employees' performance when well managed by green leaders results in green performance. Green performance refers to an organisation's commitment to preserving the environment by adopting environmental strategies in its operations to achieve organisational goals in a sustainable manner. The literature shows that the use of technology facilitates performance of certain tasks and makes the management of employee performance more efficient and convenient. Therefore, when green leaders adopt AI and other technologies in managing employees' performance, they will be able to use for instance, intelligence decision support system to make scientific appraisal method which is fair and environmentally friendly. The proposition then is the adoption of AI by the green leader will facilitate the management of employees' performance and have a positive effect on the environment.

Green leadership, AI and recruitment and selection: Green leadership involves the mechanisms through which organizations influence or transform followers to achieve its environmental objectives. This influence or transformation becomes possible if the leaders ensure employees support the leaders' vision and values which is best done during recruitment. Recruitment refers to "the art of discovering and procuring potential applicants for actual and anticipated vacancies within the organizations." Recruitment and selection are indispensable functions of HRM, which must be performed well, becasue the employees recruited and selected are the "life blood" of the organisation.

One criterion used in recruiting employees is the extent to which their values align with that of the organisation. This is required and used because clarifying and ensuring individuals and organisations' values align create a win-win outcome for both the employee and the leader/manager. Green leaders value and pursue the green agenda, and substantially influence and support environmental policies, and therefore they ensure the processes, policies and procedures are followed. This they do by recruiting individuals who have similar values and consequently selected, thus practicing green recruitment and selection. Green recruitment refers to the process of hiring individuals with knowledge, skills, approaches, and behaviours that identify with environmental management systems within an organization. Thus, with green recruiting, the green leader too characterised as one interested in the environment, the green leader will adopt and implement green policies, practices and process in recruiting and selecting employees who will have green perspective. The deduction and conclusion is that green leaders will influence the extent of adopting green recruitment and selection in their organisations.

The adoption of technology, including AI can improve recruitment strategies significantly and as a result several routine recruitment and selection activities have been automated to ensure efficiency. For instance, the use of OCR will help make suitable recommendation of candidates for positions. Thus, with the green leader putting in place relevant environmentally friendly policies and inputting it into robots and other technologies, the right individuals who will support the green leader to pursue his green agenda will be recruited and selected. The proposition therefore is that, the adoption of AI by the green leader will enhance the recruitment and selection of employees who fit the green agenda of green organisations.

Green leadership, AI, and employee involvement: While Sofijanova and Zabijakin-Chatleska define employee involvement as the participation of employees in decision making processes and problem solving which result in an increase in autonomy, Kumari and Kumari explain it as the process through which employees are permitted to be part of decision making for improvement of the activities related to their work [14,15]. Involvement therefore depicts opportunity given to employees by their leaders to be part of decision making in an organisation. Employees are known to follow their leaders if they are involved in decision making. Consequently, with green leaders' openness to change and therefore readiness to accept suggestions from their subordinates, they involve their followers in decision making. Since leadership determines the company's response to its environment, and green leaders champion environmental excellence in all operations that go on in the organisation, as they involve their subordinates in decision making, they convince them to also engage in green behaviour and make environmentally friendly decisions, i.e., Green decisions. The deduction then is green leadership will lead to employee involvement [16].

As green leaders pursue their agenda of ensuring employees behaviour are eco-friendly, they adopt technology to involve them. This is because the adoption of AI can enhance the ability of employees to be involved in the day-to-day management and decisions of the organisation. When information is shared, employees become knowledgeable about the issue and help them make informed decision. Information sharing is improved with the use of technology. The proposition therefore is the adoption of AI by green leaders will positively influence their ability to involve employees in all activities.

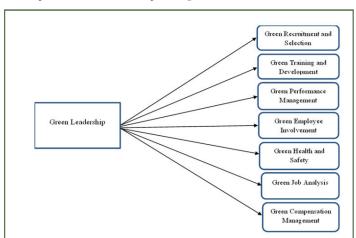
Green leadership, AI, and employee health and safety: One major characteristic of the green leader is being ethical, ecomotive and therefore makes ethical decisions and engage in ethical green business. These policies and decisions on the environment when implemented have a positive effect on employees' health and safety. Because polluted environment affect employees' health and safety negatively, with the green leader supporting the environmental policies and related decisions they formulate and implement environmentally friendly policies which result in employees' good health confirming the positive relationship between green leadership and employees' health and safety at work [17].

The formulation, implementation, and dissemination of information on these environmentally friendly policies are

facilitated through the adoption of AI as these technologies make it easy to have access to information. Therefore, when the green leader adopts environmentally friendly strategies to carry out task, and use AI to help reduce the complexity and difficulty in dissemination of information and implementation of the environmentally friendly policies and therefore reduce the human effort. The proposition therefore is, even though green leadership can help ensure employees' health and safety, the adoption of AI by the leader will enhance this.

Green leadership, AI, and job analysis: Analysing jobs in organisation is one of the responsibilities of leaders. Job analysis involve process of identifying the duties and human requirements for each of the company's jobs. The green leader is characterised as one who is interested in environmental excellence in all the internal operations, offered by the organisation, including job analysis and decision on the competences and skills required to perform a task. As a result, green leaders will ensure job analysis is carried out with the environment in mind so that the duties and job requirements for different jobs in the organisation are identified. This systematic and detailed analysis is facilitated by the adoption of technology. When AI is used in job analysis, detailed information is derived and with this detailed information, the green leader will ensure that the parts of the job which are not eco-friendly will be modified and/or removed. Thus, the adoption of AI will facilitate and help the green leader to carry out a better job analysis and retrieve relevant and important information thereof. The proposition therefore is the adoption of AI will affect and improve job analysis carried out by the green leader [18].

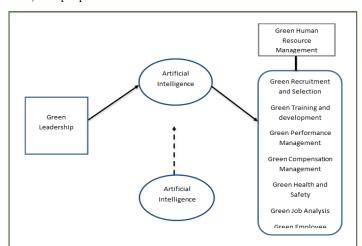
Conceptual model 2: From the review of literature, we further established that green leaders are more likely to influence HRM practices within an organisation which will consequently result in greening HRM practices. Based on this, the following conceptual model is developed (Figure 2)



**Figure 2:** Green leaders are more likely to influence HRM practices within an organisation which will consequently result in greening HRM practices.

**Proposed model:** From the review of the literature, it is established that AI will influence HRM practices. Moreover, green leaders will influence HRM practices. It is based on these that we argue that artificial intelligence moderate and/or

mediate the relationship between green leadership and green human resource management practices (Figure 3). Based on this, we propose the model:



**Figure 3:** The review of the literature, it is established that AI will influence HRM practices, Moreover, green leaders will influence HRM practices

Research design and methodology: The paper seeks to find the relationship between green leadership and human resource management. Artificial intelligence is proposed as a mediating/moderating variable. Literature on human resource management suggests that leaders who exhibit green leader characteristics will influence the management of human resource positively through the implementation of HRM practices [19].

A desk research methodology was used in this study. Through summing, compiling, and synthesizing prior relevant research, different propositions were made, and the conceptual frameworks developed. Numerous databases were used to gather secondary data to help understanding. Various journals, books and other electronic resources in artificial intelligence, human resource management and green leadership were used. The main constructs for the study were used for the search for journal articles. Data was gathered from different electronic major databases like Emerald, Sage, Elsevier, Wiley, Springer, JSTOR among others, using the keywords relevant to our research.

Discussion, managerial and theoretical implications of proposed model: This proposed model is the result of a detailed and extensive review of literature. The model suggests that green leadership influences the management of human resources in an organisation through the various HRM practices. Also, when leaders adopt the green orientation to work, and AI it improves the performance of theses and the various HRM activities. This model can therefore be regarded as unique as it combines AI and green leadership and their effect on HRM through the different HR practices. Thus, the model highlights the moderating/mediating role of AI in the implementation of the different HR practices. Furthermore, the model implies that green leaders can influence recruitment and selection, performance management and appraisal, employee involvement, training and development, compensation, health and safety and job analysis. Additionally, the proposed model suggests that the adoption of AI affect recruitment and selection, performance

management and appraisal, employee involvement, training and development, compensation, health and safety and job analysis [20]

This proposed model underscores the importance of green leadership and AI in responding to the current environmental challenges and the need to manage employee effectively to meet organisational goals in an environmentally friendly manner. Managers and policy makers of organisations must learn and exhibit the green leader characteristics to enhance the implementation of these HRM practices. Moreover, based on the review, it is observed that AI has an indirect relationship with HRM practices, hence managers in organisation should acquire the knowledge and skills to use AI to implement the HR practices in the organisation to achieve set targets. This paper contributes theoretically in a unique way using AI as a moderating and mediating variable and further supports an earlier empirical study that argues for the importance of leadership on HRM particularly in Africa. This implies green leadership through artificial intelligence can greatly help in achieving HRM goals and bring about organisational success in contemporary times.

#### **CONCLUSION**

The study draws attention to the significant role green leaders play in contemporary organisations to help achieve the business' goals without compromising the environment within which the organisation operates. This is because in recent years managers and organisational leaders have realized the significant impact of their environment on business growth and long-term survival; and as such there is the need to develop a leadership mind-set to foster internal business growth through sustainable development strategies. From the review of literature, it was evident that to effectively manage the human resources, seven key HRM activities were identified in the literature (recruitment and selection, training and development, performance management, employee involvement, job analysis, compensation management and health and safety) and these need to be carried out properly for the organisation to strive towards its business goals without compromising the environment. Green leaders are therefore responsible to cause a change in the traditional methods of executing these activities into an approach that is concerned with the interests of both the business as well as the environment using AI to facilitate this.

## LIMITATION AND FUTURE RESEARCH DIRECTION

This research is conceptual in nature and the proposed model will have to be tested empirically to have a greater validity. Extensive research on AI is yet to be carried out in developing country's context and it is therefore recommended that future studies should focus on greening HRM and adopting AI.

#### REFERENCES

 Bolander T. What do we loose when machines take the decisions? J Manag Gov. 2019;23:849-867.

- Wang P. Theories of artificial intelligence–Meta-theoretical considerations. Theoretical Foundations of Artificial General Intelligence, Atlantis Press, Paris, France. 2012;305-323.
- 3. Pan Y, Froese F, Liu N, Hu Y, Ye M. The adoption of artificial intelligence in employee recruitment: The influence of contextual factors. Int J Hum Resour Manag. 2022;33(6):1125-1147.
- 4. Tecuci G. Artificial intelligence. WIREs Computational Statistics. 2012;4 (2):168-180.
- Kapur R. Importance of Recruitment and Selection in Leading to Progression of the Organization. Int J Inform Bus Manage. 2022;14(1):159-170.
- 6. Cattell RB. Abilities: Their structure, growth, and action. Houghton Mifflin Harcourt, Boston, United States. 1971.
- Dutta DS. Greening people: A strategic dimension. ZENITH: Int J Bus Econ Manag Res. 2012;2(2):143-148.
- Opatha HHDNP, Arulrajah AA. Green human resource management: Simplified general reflections. Int Bus Res. 2014;7(8): 101-112.
- Armstrong M, Brown D. Relating competencies to pay: The UK experience. Compensation Benefits Rev. 1998;30(3):28-39.
- Gultom M. Green leadership as a model of effective leadership in hospital management in the new normal era. Bp Int Res Crit Inst J. 2022;5:19900-19910.
- 11. Lee MH, Lin C, Lin CK, Lu WY. Moderating effect of institutional responsiveness on the relationship between green leadership and green competitiveness. Soc Behav Pers: Int J. 2014;42(9):1483-1494.

- 12. Kshetri N. Evolving uses of artificial intelligence in human resource management in emerging economies in the global South: Some preliminary evidence. Manag Res Rev. 2021;44(7):970-990.
- 13. Blau P. Exchange and power exchange in social life. John Wiley and Sons, New York, USA. 1964:352.
- 14. Sofijanova E, Zabijakin-Chatleska V. Employee involvement and organizational performance: Evidence from the manufacturing sector in Republic of Macedonia. Traka J Sci. 2013;11(1):31-36.
- 15. Kumari MK, Kumari VL. Influence of employee involvement and organizational culture on productivity? A theoretical concept. MIJBR-MITS. Int J Bus Res. 2014;5(27):423-431.
- Sithambaram RA, Tajudeen FP. Impact of artificial intelligence in human resource management: A qualitative study in the Malaysian context. Asia Pac J Hum Resour. 2023;61(4):821-844.
- Tursunbayeva A, Renkema M. Artificial intelligence in health-care: Implications for the job design of healthcare professionals. Asia Pac J Hum Resour. 2023;61(4):845-887.
- Vadlamudi S. How artificial intelligence improves agricultural productivity and sustainability: A global thematic analysis. Asia Pac J Energy Environ. 2019;6(2):91-100.
- 19. Buck B, Morrow J. AI, performance management asnd engagement: Keeping your best their best. Strateg HR Rev. 2018;17(5):261-262.
- Ore O, Sposato M. Opportunities and risks of artificial intelligence in recruitment and selection. Int J Organ Anal. 2022;30(6): 1771-1782.