

RESEARCH ARTICLE

WHY EFFECTIVE LEADERSHIP IMPACT ON SUSTAINABLE PERFORMANCE OF HIGHER EDUCATION IN INDONESIA

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ABSTRACT

This paper investigates the impact of effective leadership on sustainable performance of higher education in Indonesia based on main indicators-IKU mediated green human resource management. The collected data from 150 respondents of five universities in Indonesia. Data then analysed with Partial Least Square (PLS-SEM). The findings revealed that effective leadership does not have direct effect on sustainable performance. Effective leadership has significant direct impact on green human resource management. Green human resource management has a significant direct impact on sustainable performance. This depicts that the better the green behaviour of human resource, the better the sustainable performance of higher education. And effective leadership has a significant indirect impact on sustainable performance through green human resource management. This result provides implication that positive changes in leadership effectiveness have an impact on green human resource management in an effort to shape green conduct of human resource. Additionally, leadership effectiveness in implementing policies does not directly improve higher education performance but through changes in attitudes and behaviour of human resources.

KEYWORDS

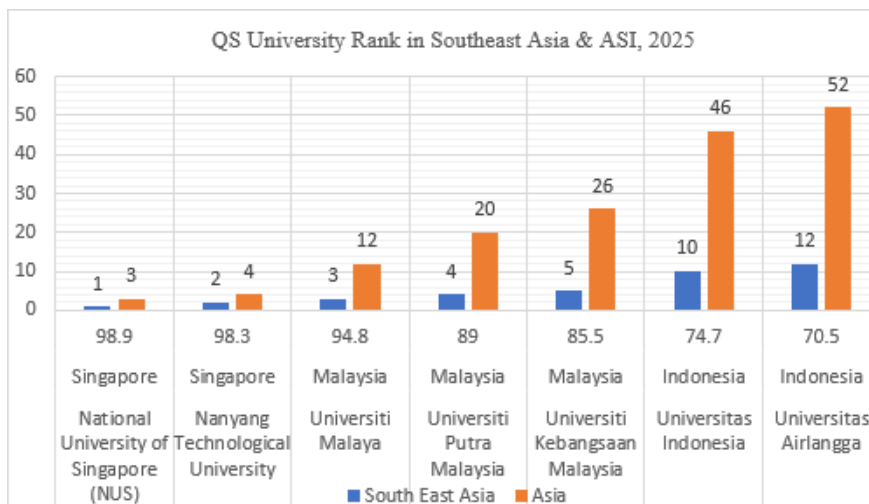
main indicators, IKU, green human resource management, effective leadership, sustainable performance

1. INTRODUCTION

The prominent problem concerning with the higher education graduates in Indonesia is that the graduates are poor job-fit; irrelevant competences to the needs of the job market; insufficient interpersonal competence; lack of work experiences; low creativity and employability. The right option to upgrade the quality of human resource is through education (Tohir, 2020). Higher education has a very strategic role to boost the quality of the


human capital of a nation (Hock-Eam et al., 2016) and human capital as the essential resource in the organisation (Kusi et al., 2021). Besides, improving the quality of human resource is performed based on the ecosystems, facilities and infrastructure, leadership, and industries as users of higher education graduates (Pendidikan et al., 2021).

The following picture describing the ranking of universities in South eastern and Asia in 2025. Assessment criteria consists of citation per paper, citation per department, and academic reputation.



Source: QS University Rank in South Eastern, 2025

Picture 1: University Rank in South Eastern Asia, 2025

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The picture indicates that National University of Singapore and Nanyang Technological University also in Singapore are in the first and the third position in Southeast Asia, while in Asia each occupied the third and the fourth rank. Universiti Malaya with 94.8 points and Universiti Putra Malaysia with 89 points each in the third and the fourth rank in South East Asia, in Asia Universiti Malaya in the twelfth position while Universiti Putra Malaysia in the twentieth rank. Universitas Indonesia get 74.7 points in the tenth rank in South East Asia and the forty-sixth rank in Asia, Universitas Airlangga also in Indonesia occupied the twelfth position with 70.5 point and positioned in the fifty-second in Asia. This description revealed that productivity of colleges in Indonesia still facing hard challenges, specifically in citation of publication and academic reputation.

To address the education issues, Indonesian government is trying to address performance of higher education graduates consistently and sustainably. This intense effort is intended to transform the orientation of national development from natural resources to the quality of human resources or competence-based resource (Pendidikan et al., 2021). It is declared clearly that to be competitive, Indonesian higher education must apply eight standardised main indicators-IKU: (1) graduates should get decent jobs; (2) students gain experiences outside campus; (3) lecturers perform activities outside campus; (4) practitioners teaching on campus; (5) lecturers' works are beneficial to society and industry and receive international recognition; (6) world-class partnership; (7) applying collaborative and participatory teaching method; and (8) using international-standardised curriculum. These eight main indicators are known as *independent learning* and *independent campus*. To support this latest policy, the Indonesian government has issued government regulation number 53 in the year 2023 concerned on national education quality assurance that every university performs education and learning, research and development and community service to boost performance of higher education graduates in a planned and sustainable manner (PER.08/MEN/VII/2010, 2020).

To bring into reality the national education transformation requires strategic role of effective leadership, improving from elementary to higher education (Menteri Pendidikan Kebudayaan Riset dan Teknologi Republik Indonesia, 2022; Asrarudin, 2022). Effectiveness of performing policy is largely determined by the embedded competences of leadership: conceptual competence, technical, and team building (Nguyen et al., 2019). Leadership is basically the practice of transmuting values into activities, abstract ideas into reality, complication into invention, distinctiveness into harmony, and risk into rewards (Chen and Peng, 2017). In other version, effective leadership is changing worker conduct to be more productive and more efficient. Productivity and efficiency is the success of a leader in managing organisational resources. Therefore, Leadership is the key factor in managing organisational resources to achieve its objectives effectively and efficiently. It has essential role in shaping supportive team behaviour and work effectiveness to reach organisational goals (Tran and Vu, 2021). Performing policies and regulations requires creative and innovative leadership characters (Asrarudin, 2023). Hence, the role of the leader has an impact on the organisation's sustainable performance (Nasir et al., 2022). Several previous authors found that there is a linkage between leadership effectiveness and organizational performance (Samad, 2012). It is explained that effective leadership can improve competitive advantage and organisational performance. Leadership has a strategic role and is able to upgrade competitiveness in the academic environment (Mahdi and Almsafir, 2014). This paradigm is line with (Semuel et al., 2017) that the success or failure of the organization largely depends on effectiveness of a leader.

Another important factor that supports policy implementation is green human resource management (GHRM), as argued that GHRM practices are becoming centre of concern for researchers to shape the green behaviour of employees to ensure environmental performance in the organisation by (Meng et al., 2023). GHRM is the practice of human resource department, such as green recruitment, selection, training, performance management, rewards, and involvement, in protecting the environment (Fawehinmi and Abdullahi, 2023). GHRM is identified as human resource management regarding to sustainable usage of organisational resource. Hence, Sustainability has emerged a central issue for industries and organizations in the world (Kanan et al., 2023). Based on the study, there is a significant linkage between green human resource management practices, such as green recruitment, selection, training and development with the sustainable performance of organizations including higher education. This argument is similar with that green conduct of human resource increases the value of organizations including higher education (Yuniarti et al., 2022).

Previous studies found that leadership has significant effect on sustainable performance ((İşcan et al., 2014). Other authors found that effective leadership roles impact significantly on organizational team performance

(Tran and Vu, 2021). This finding is congruent with the study that the ability of leaders to motivate subordinates and facilitate the changes can elevate individual and organisational performance (Andriyanty et al., 2021). Other study revealed that government as the leader has a positive and significant effect on sustainable organisational performance (Khan et al., 2022). This conceptual work is in line with the study that employee conduct has a significant impact on organizational performance by (A. W. Samad et al., 2023).

1.1 Research Gap

This work fills the gap in leadership effectiveness in literature on sustainable performance of higher education in Indonesia. the previous literatures in inconclusive regarding direct impact of effective leadership on green human resource management practices, regarding green recruitment, selection, training and development. Therefore, this manuscript offers conclusive outcomes in this issue. Secondly, the previous study does not measure the moderation of green human resource management on sustainable performance of higher education. This undertaken study is measuring GHRM practices and its impact on colleges sustainable performance in Indonesia.

1.2 Research Objectives

This undertaken study has four objectives: the first objective is to evaluate the direct impact of effective leadership on sustainable performance of higher education; the second objective is to examine the direct effect of effective leadership on human resource management; the third objective is to ascertain the direct impact on sustainable performance; and the fourth objective is to measure the indirect impact of effective leadership on sustainable performance.

1.3 Research Questions

This study attempts to address the following research questions, which will be beneficial for future researchers and industry practitioners:

- Whether effective leadership have direct effect on sustainable performance of higher education in Indonesia?
- Does effective leadership have direct influence on green human resource management?
- Does green human resource management have direct effect on sustainable performance of higher education in Indonesia?
- Does effective leadership have indirect effect on sustainable performance of higher education in Indonesia mediated by green human resource management?

1.4 Significance and contribution of the research

The undertaken work has two novelties: theoretical implication and managerial implication. For instance, it offers novel conceptual framework, which investigates the impact of effective leadership on green human resource management, the association of effective leadership with sustainable performance. In practical implication, leader cannot directly boost organisational performance but through the change of employees' conduct, green behaviour, green recruitment and selection, and green process in producing products. Hence, the significance of this manuscript is the contribution to the management science circular and leadership, impetus for improving sustainable higher education performance of in Indonesia.

2. LITERATURE REVIEW

2.1 Theoretical Underpinning

There are various variables impacting organisational performance, leadership style and innovative conduct have considerable effect on enterprise sustainable performance (Yıldız et al., 2014). The connection of leadership and effectiveness of leadership on business performance has been a catchy point to be investigated since the earliest times of humanity (Ayrancı and Ayrancı, 2015). Sustainability of organisational performance related to environmental management and green human resource management (GHRM) is an approach focusing on green human resource conduct, hiring environmentally committed employees, environmentally friendly work policy, reduce energy use and waste reduction (Montalvo-Falcón et al., 2023). This implies that effective leadership is related to sustainability of organisational performance, effective leadership is connected with green human resource management (GHRM), and GHRM impacting on sustainable enterprise performance.

2.2 Effective Leadership and Sustainable Performance

It is generally agreed that an employee working with a good leader makes him or her feels satisfied and increase his or her productivity (Gulluce et al., 2016). Effective leadership in higher education accentuate all aspects of leadership such as leadership style, collaboration, motivation, training and development, and curriculum management. Leadership plays a very crucial role in forming high-performing teams and improving organizational performance (Alnesr and Ramzani, 2019). Effective leadership is one who implemented eight roles: mentor, innovator, facilitator, broker, monitor, producer, coordinator and director (Melo et al., 2014).

Education sector is currently facing global challenges as a result of advances in information and communication technologies (Hasbullah and Rahman, 2023). Higher education is the central institution that breeds creative and innovative human resource (Hock-Eam et al., 2016). To bring into reality, higher education requires effective leadership to manage its resources effectively and sustainably (Zaman and Andriyanty, 2021). The success of higher education predominantly depends on the effectiveness of the system, values, climate, beliefs, and culture of the college community and leadership style (Ngang et al., 2015). This is in line with the theory argued that leadership has strategic role for organisational productivity and sustainability by (Armstrong, 2016). Likewise opined that the 21st century work challenges require capable and competitive public leadership (Sistare et al., 2015). Based on the argument, this study hypothesised the following:

H₁: Effective leadership has a significant relationship with sustainable performance of higher education in Indonesia

2.3 Effective Leadership and Green Human Resource Management

To address environmental concerns requires green human resource management (Hossain et al., 2022). (Asrarudin et al., 2020). Leadership plays an essential role in managing employee work behaviour, increasing morale and productivity (Mohd Salleh et al., 2020). Familiar argument also identified that the role of an effective leader can facilitate the changes the attitudes and conduct of subordinates to boost productivity and efficiency in the organisation by (Tristante et al., 2023). In different version, desired subordinate behaviour changes requires proactive, imaginative, participative and communicative of a leader (Elyusufi et al., 2022). Leadership is the ability to influence other people in positive ways, motivating, directing and controlling subordinates to achieve organizational performance (S. Wahab et al., 2014). Such competence is embedded capability of a leader.

Organization as environmental ecosystems must be managed effectively and efficiently to achieve its goals. Innovation in scientific and technological drives modern industrialization and plays a vital role in boosting organizational productivity and performance (Yang and Li, 2023). Regarding with global warming, increasing temperatures, and air pollution threaten the sustainability of organisations (Tristante et al., 2023). Hence, an effective leader should apply an approach that focus on optimising human resource conduct change to drive performance and productivity of an organisation (Montalvo-Falcón et al., 2023). Other study argued that climate change concern and environmental sustainability has emphasized the essential needs for “greening” of workplaces and

organisation (Tandon et al., 2023). Based on the study above, then formulated following hypothesis:

H₂: Effective leadership has a significant association with green human resource management

2.4 Green Human Resource Management and Sustainable Performance

Green resource management is an important business strategy where organizations are required to play an active role in creating a green workplace. Higher education plays a strategic role in transforming skilled workforce to be able to compete in the international market (Nadu, n.d.). In the last few decades, environmental sustainability has become a very crucial issue and has been explored by experts in various countries, including Indonesia, even though it is still at normative level rather than national economic system (Maskuroh et al., 2023). It requires policy consistency and sustainability of leadership to turn the green economy platform into part of human behaviour and Indonesia's national economic system (Asad and Samad, 2022).

The effectiveness of policies related to environmental preservation and sustainability is very dependent on the implementation of the leader's role in changing human attitudes and behaviour in the organization. Previous studies revealed that the role of an effective leader is able to shape the collective behaviour of the workforce in the organization, including green behaviour (Kusi et al., 2021). Effective leaders have a significant effect on innovative attitudes and behaviour of employees and impact on organizational competitiveness (Mahdi and Almsafir, 2014). Other research found that leadership influences employee creative behaviour, including employee behaviour towards environmental preservation (Yıldız et al., 2014). Accordingly, the hypothesis can be stated as follow:

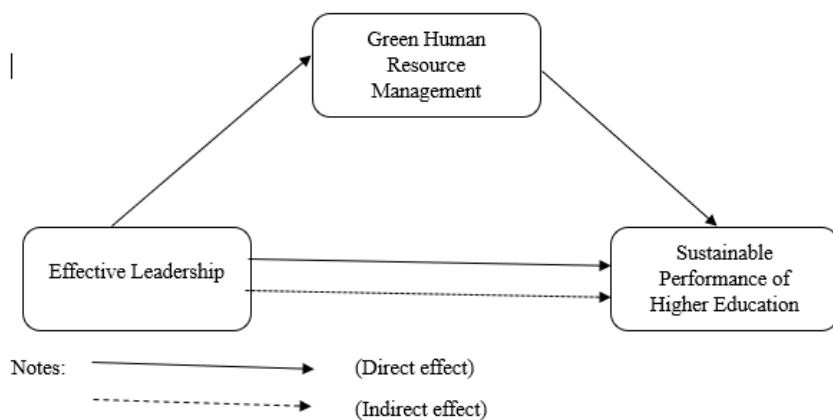
H₃: Green human resource management has a significant effect on sustainable performance

2.5 Green Human Resource Management as Moderating Role of Effective Leadership and Sustainable Performance

Leadership anyway influences and shapes attitudes and behaviour of subordinates to achieve shared goals (Tran and Vu, 2021). Human resources consisting of physical abilities and intellectual skills acquired in education must be managed effectively for the achievement of shared objectives (A. Wahab et al., 2018). Policy makers really determine the sustainability of the organization, including higher education sustainability (Ramayah et al., 2022). Leadership plays a strategic role in ensuring organizational sustainability through the implementation of green human resource management (Kusi et al., 2021). This concept emphasizes that there is an association between leadership effectiveness and sustainable performance through green human resource management. Thus, the hypothesis is formulated as follows:

H₄: Effective Leadership has a significant indirect effect on Sustainable Performance mediated by Green Human Resource Management

Based on the theoretical study presented above, conceptual diagram in this research is as follows:



Source: adapted from theories

Figure 2: Conceptual Diagram

3. RESEARCH METHOD

This research employed a quantitative research approach to examine the relationship of effective leadership with sustainable performance of

higher education in Indonesia mediated green human resource management. The respondents derived from four big state universities in eastern Indonesia and one private college in Jakarta. The sample size of 150 is enough to conduct a study, however by considering of unreachable

population. There are 357 questionnaires were distributed by google form and personal WhatsApp. From 357 respondents, 162 were returned and 12 incomplete questionnaires. The remaining 150 questionnaires were validated and completed. Each questionnaire consists of gender, educational level, and profession. Questionnaires were rated on a 5-Likert scale. The collected data was analysed with SmartPLS version 3.

Sampling technique used in this study is judgment sampling/purposive sampling, non-probability method because the entire population inaccessible (Hannabuss, 1995). The number of accessible samples 150 respondents of lecturers or teachers, students, administrators, government officials, private employees from 5 universities in Indonesia. Data collected by using google form shared to 5 universities: Hasanuddin University, Halu Oleo University, Cendrawasih University, Pattimura University and Institute of Business and Informatics Kosgoro 1957.

3.1 Sample and Data Collection

Table 1: Descriptive Statistics of Respondents			
Category	Subcategory	Frequency	Percentage (%)
Gender	Male	103	68.67
	Female	47	31.33
	Total	150	100
Education Level	Doctoral/PhD	74	49.33
	Magister	25	16.67
	Undergraduate	18	12
	Diploma	12	8
	Students	21	14
	Total	150	100
Profession	Lecturer/Teacher	85	56.67
	Administrator/Technician	15	10
	Students	21	14
	Government officials (not lecturer/teacher)	11	7.33
	Private employee (not lecturer/teacher)	8	5.33
	etc	10	6.67
	Total	150	100

The table demonstrates that the number of respondents who filled out and returned the questionnaire via Google Form was 150 consisting of 103 (68.67%) male and 47 (31.33%) female. Respondents based on the education level with doctoral degree 74 (49.33%) are the highest number while the lowest number of are respondents with diploma 12 (8%). Based on profession, it can be sorted from the highest to the lowest number as follows: lecturers/teachers 85 (56.67%); students 21 (14%); administrative employees 15 (10%); civil servants/not lecturers/teachers 11 (7.33%); private employees/not lecturers/teachers 8 (5.33%); and the last without profession 10 (6.67%).

3.2 Measurement

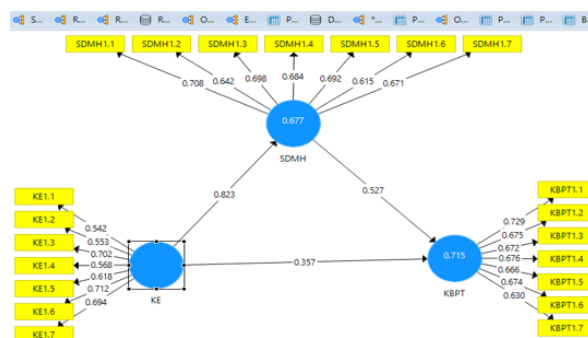
All items were scored with a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Effective Leadership is measured by 7 items adopted from (Melo et al., 2014) and (Mahdi and Almsafir, 2014). Sample of an item is "Leader conveys information to subordinates as it is creating a sense of trust from subordinates"; Green Human Resource Management

is measured by 7 items adopted from (Alaghbari, 2023). Sample of an item "The habit of using public transportation is an employee conduct could reduce carbon emissions"; and Sustainable Performance of higher education in Indonesia measured by 7 items adopted from (Pendidikan et al., 2021). Sample of an item "The quality of higher education graduates increases due to collaboration with foreign universities."

4. DATA ANALYSIS AND DISCUSSION

4.1 Measurement Outer Model

Assessing the indicator loadings is the first step in reflective measurement model. Loading factor more than 0.708 is quite recommended (Hair et al., 2019). Other author loading factor 0.7 is valid, and suggested loading factor 0.5 is acceptable (Lela Nurlaela Wati, 2018; Anderson, 2014). In this manuscript the validated loading factor is 0.6 with AVE value greater than 0.5. indicating that can depict the construct.



Notes: KE = Effective Leadership; SDMH = Green Human Resource Management; KBPT = Sustainable Performance of Higher Education

Figure 3: First Evaluation of Measurement Outer Model

The following table is helpful to read at ease the results of the first evaluation of measurements outer model

Table 2: First Evaluation of Measurement Outer Model			
Construct	Item	Loading Factor	Decision
(KE) Effective Leadership	KE1.1	0.542	Invalid
	KE1.2	0.533	Invalid
	KE1.3	0.702	Valid
	KE1.4	0.568	Invalid
	KE1.5	0.618	Valid
	KE1.6	0.712	Valid
	KE1.7	0.694	Valid
(SDMH) Green Human Resource Management	SDMH1.1	0.708	Valid
	SDMH1.2	0.642	Valid
	SDMH1.3	0.698	Valid
	SDMH1.4	0.684	Valid
	SDMH1.5	0.692	Valid
	SDMH1.6	0.615	Valid
	SDMH1.7	0.671	Valid
(KBPT) Sustainable Performance of Higher Education	KBPT1.1	0.729	Valid
	KBPT1.2	0.675	Valid
	KBPT1.3	0.672	Valid
	KBPT1.4	0.676	Valid
	KBPT1.5	0.666	Valid
	KBPT1.6	0.674	Valid

KE1.1 and KE1.2 (Effective Leadership) are invalid because factor loading were less than 0.6 which must be dropped from the model. All items of SDMH (Green Human Resource Management) valid. KBPT1.6 and KBPT1.7 (Sustainable Performance) have the lowest factor loading and must be

dropped from the model. After all invalid items are dropped, then the second measurement is conducted. Following is the result of the second measurement outer model

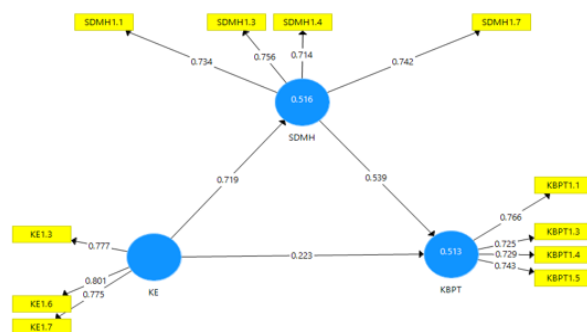


Figure 4: The second analysis of outer model

The result of the second analysis of outer model presented in the following table to make it at ease.

Table 3: The second analysis of outer model			
Construct	Item	Loading Factor	Decision
(KE) Effective Leadership	KE1.3	0.777	Valid
	KE1.6	0.801	Valid
	KE1.7	0.775	Valid

Table 3 (cont): The second analysis of outer model			
(SDMH) Green Human Resource Management	SDMH1.1	0.734	Valid
	SDMH1.3	0.756	Valid
	SDMH1.4	0.714	Valid
	SDMH1.7	0.742	Valid
(KBPT) Sustainable Performance of Higher Education	KBPT1.1	0.766	Valid
	KBPT1.3	0.725	Valid
	KBPT1.4	0.729	Valid
	KBPT1.5	0.743	Valid

The second evaluation of measurement outer loading validated that all items were higher than 0.7 which refers that all indicators of the

constructs are valid.

4.2 Construct Reliability and Validity

Table 4: Convergent Validity				
Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Decision
(KE) Effective Leadership	0.687	0.827	0.615	Supported
(SDMH) Green Human Resource Management	0.720	0.826	0.543	Supported
(KBPT) Sustainable Performance of Higher Education	0.727	0.830	0.550	Supported

According to (Hair et al., 2019) Cronbach's Alpha should be minimum 0.60 to interpret internal consistency of all items and (Nguyen et al., 2019) 0.6 to 0.7 is considered adequate and below 0.5 is unreliable. Composite Reliability cut-off value > 0.60 (Raza and Yousufi, 2023) is acceptable which shows the variable indicators are consistent. The Average Variance Extracted (AVE) value is over 0.5 which demonstrates that all variable indicators are able to explain the construct.

The measurement of construct reliability and validity indicates that the Cronbach's Alpha of KE (Effective Leadership) is 0.687 and the Composite Reliability is 0.827. Thus, the indicators of Effective Leadership have good

internal consistency and are able to measure the construct. The Cronbach's Alpha of Green Human Resource Management (SDMH) is 0.720 and the Composite Reliability value is 0.826. Therefore, the indicators have good internal consistency and are able to measure the construct. The Cronbach's Alpha of KBPT (Sustainable Performance) is 0.727 and the Composite Reliability is 0.830. Hence, Sustainable Performance indicators have good internal consistency and are able to measure the construct. The AVE were greater than 0.5 which revealed that convergent validity for scale measurement is fulfilled.

Fornell-Larcker Criterion Analysis

Table 5: Discriminant Validity			
Constructs	(KBPT) Sustainable Performance of Higher Education	(KE) Effective Leadership	(SDMH) Green Human Resource Management
(KBPT) Sustainable Performance of Higher Education	0.741		
(KE) Effective Leadership	0.610	0.784	
(SDMH) Green Human Resource Management	0.699	0.719	0.737

The discriminant validity or divergent validity value describes the results of testing one construct is not related to other constructs testing results. The discriminant validity value according to Fornell-Lacker Criterion indicates that all constructs are valid if the correlation value is more than

the correlation value of other constructs (Hair et al., 2019). The cross-loading test results refers that all indicators are valid, the loading indicator value is more than the other loading indicator values. The discriminant test result above demonstrates a good discriminant level.

Table 6: Goodness of Fit (GoF)		
Variable	R-Square	R-Square Adjusted
(KBPT) Performance of Higher Education	0.513	0.506
(SDMH) Green Human Resource Management	0.516	

Goodness of Fit Model is measured by using the predictive relevance value

(Q²) (Hair et al., 2019). The Q² is used to estimate the observed value of the

exogenous construct for endogenous construct. If Q² value is higher than 0, the model has good predictive relevance. Following is the formula of Q²:

$$Q^2 = 1 - (1 - R^2_1) (1 - R^2_2)$$

$$Q^2 = 1 - (1 - 0.513) (1 - 0.516)$$

$$Q^2 = 1 - (0.487) (0.484)$$

$$= 1 - 0.235708$$

$$= 0.764292$$

$$= 0.764$$

Predictive relevance value is 0.764, more than 0 suggesting that the model has sufficient predictive relevance, categorised good. Therefore, the model can depict the phenomenon of Sustainable Performance of Higher Education in Indonesia associated with the Effective Leadership and Green Human Resources Management.

4.3 Hypothesis Measurement

Table 7: Hypothesis Measurement

Hypothesis	Path Coefficient	Original Sample	Std. Deviation	T-Statistics	P-Value	Decision
H ₁	KE → KBPT	-0.046	0.081	0.562	0.575	Not Supported
H ₂	KE → SDMH	0.719	0.098	7.367	0.000	Supported
H ₃	SDMH → KBPT	0.225	0.094	2.397	0.018	Supported
H ₄	KE → SDMH → KBPT	0.161	0.066	2.457	0.000	Supported

5. DISCUSSION

5.1 Effective Leadership and Sustainable Performance of Higher Education

Path coefficient of Effective Leadership impact on Sustainable Higher Education Performance is -0.046 with a statistic value of 0.562 < 1.655 at the significance threshold of 0.05%. This finding indicates that Effective Leadership has negative effect on Sustainable Performance of Higher Education. This finding is supported by the study that there is no significant effect of leader role on organizational performance of (S. Wahab et al., 2014). Other authors also found that leadership does not have a significant effect on organizational performance (Gemed and Lee, 2020). This finding confirms that leadership roles do not always have significant impact on performance of an organisation. In fact, the success of an organisation does not directly depend on effectiveness of leadership but strategic role of a leader to facilitate the changes of human resource attitude and conduct (Semuel et al., 2017). One leadership style is not always compatible to all types of organisations (Deschamps et al., 2016). Managing profit-oriented organisation is not the same as managing an educational organisation which based on shaping human character and intelligence-oriented. According to the study transformational leadership is an effective leadership style to managing educational organisations (Rana et al., 2016). This is in line with the study that transformational leadership has a significant impact on the performance of educational institutions of (Mugizi et al., 2019). This finding is in accordance with authors that transformational leadership has a significant effect on the productivity of higher education in Africa (Asmamaw and Semela, 2023).

5.2 Effective Leadership on Green Human Resources Management

Path coefficient) for the influence of Effective Leadership on Green Human Resources Management (GHRM) is 0.719 with statistic value of 7.367 > 1.65 at the significance threshold of 0.05. This measurement revealed that Effective Leadership has significant effect on GHRM. Thus, it can be explained further that the more effective leadership role can improve better attitudes and behaviour of human resource towards nature conservation and eco-friendly (Yang and Li, 2023). This study is supported by research results that effective leadership can impact typical organisational management and driving effectiveness and efficiency (Management et al., 2022). Strategic role of effective leadership impacting management effectiveness and organizational performance (Zada et al., 2023). GHRM should not only be a policy but integrated as an agent of organisational change and human resource conduct (Ahmad et al., 2023). This finding indicates that the effectiveness of human resource management is very dependent on the strategic role of a leader consistently and accountably performing organisational policies. Other authors depicted that an effective leader is one who has professional characteristics: empathy, caring, transparency, communication, adaptability, courage, resilience, decisiveness, consultation and cooperation, and empowerment to bring into reality of policies to achieve organisational objectives (Dzinamarira et al., 2023). This study refers that effective leadership influences the effectiveness of organizational management. As depicted that an effective leader is one who is capable to manage a complex environment, including managing human resources to encourage effective behaviour changes (Nisbett et al., 2015). Their study revealed that effective leadership has significant impact on the success of organizational management. Thus, it is confirmed that leadership effectiveness has significant impact on the success of green human resource management. In this case, better the implementation of effective

leadership roles, the greater the impact on the success of GHRM.

5.3 Green Human Resource Management and on Sustainable Performance

Path coefficient) for GHRM impact on Sustainable Performance of Higher Education is 0.255 with statistic value of 2.397 > 1.655 at the significance threshold of 0.05. The results revealed that GHRM has significant effect on Sustainable Performance of Higher Education. Thus, the better the attitude and behaviour of GHRM towards environmental preservation and eco-friendly the Sustainable Performance of Higher Education will also improve better. The results of other research show that innovative behaviour of subordinates towards eco-friendly can increase productivity and long-term organisational sustainability (Nguyen et al., 2019). This finding is also supported by research results that environmental factors influence ecological behaviour and energy-efficient appliance purchase (Quoquab and Basiruddin, 2023). Strategically, GHRM helps organisation achieve its goals through CRS. The term GHRM was created because management realized that inefficient use of resources by human resource had an impact on the organization regarding the environment (Mustafa et al., 2023). Their study revealed that consistent GHRM implementation can contribute to the organisation's sustainable performance. Other study confirm that GHRM has significant impact on employee commitment and green innovative conduct in the organization (Yang and Li, 2023). GHRM implies that organisation integrate environmental management into HRM practices to increase eco-friendly output. GHRM is a pro-environmental code of conduct or green behaviour initiative developed by managers. As found that GHRM had significant association with the changing employee behaviour and productivity (Tandon et al., 2023). The global impetus of climate change and environmental sustainability initiatives emphasizes the critical need of "greening" workplaces and organisations. The research results confirm that GHRM has a significant effect on the sustainable performance of professional organisation of wineries in Spain of (Montalvo-Falcón et al., 2023). Thus, the results of this research are supported by several previous research and confirm that GHRM has significant effect on sustainable performance of organisations including higher education institutions in Indonesia.

5.4 The Influence of Effective Leadership on Sustainable Performance and GHRM as Moderating Variable

The measurement of the specific indirect effect demonstrates that the path coefficient is 0.161 and statistic value 2.457 > 1.655. This finding can be explained that the mediator variable GHRM plays a positive role in the Sustainable Performance of Higher Education. It means that the more effective leadership, the higher effect on changing the green behaviour of human resource and impacting on Sustainable Performance of Higher Education. This finding supported that the role of a leader has a significant impact on organisational productivity through creativity and innovation of human resources by (Soemartono, 2014). The root of organisational creativity and innovation is the change of human resource attitude and conduct facilitated by the effectiveness of a leader. He depicted that prosperity is largely determined by education and skills of human resource. Strong leader is required to build strategies and policies to be performed to achieve the changes. A leader is seeking to effectively build productive interactions between the dean, faculty, and university council (Mahdi and Almsafir, 2014). Implementation of GHRM requires a leader effectiveness driving the organization's sustainable performance (Dizaj, 2021). The finding of this study revealed that effective leadership can improve organisational performance, including higher education through

the effect of GHRM. Accordingly, it is confirmed that effective leadership has significant effect on sustainable performance of higher education in Indonesia through GHRM as mediator variable.

6. CONCLUSION, RECOMMENDATIONS, LIMITATIONS

The paper examined the association of effective leadership with sustainable performance based on main indicators-IKU of higher education in Indonesia. This study found that effective leadership does not impact directly on sustainable performance of higher education but through GHRM as mediated variable. In other version, sustainable performance of higher education can only increase through the changes of employees' attitude and conduct facilitated by the strategic role of an effective leader performing policies and programs of the organisation. This manuscript also offers theoretical and managerial implication for scientific and academic circular.

Recommendations

Based on the findings of this research, suggested that leadership effectiveness is determined by the consistent execution of the eight elements of effective leadership. However, it does not directly or automatically encourage organisational performance. The leaders should promote the attitudes and behaviour of employees and hand in hand booting the productivity and sustainable performance of the organisation. To achieve this goal, leaders should become role model for all employees. This role model should be consistent and flexible not easily change due to subjective interests.

Limitations

This research provides basic theoretical and concepts of leadership effectivity related to sustainable performance of higher education due to limited respondents and research locus. For future research, respondents and locus can be added to be more representative of all higher education in Indonesia. Additionally, other research variables related to sustainable performance of higher education can be investigated.

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