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The Role Of Digital Leadership And Green Human Capital In Enhancing Superior Performance Through Green Commitment As An Intervening Variable

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Abstract

This study aims to analyze the influence of digital leadership and green human capital on superior performance, with green commitment as a mediating variable. The research employed a quantitative method. The population included all employees of Type D General Hospitals in Bima City, totaling 302 individuals. The sampling technique used was purposive sampling, with a total of 150 employees consisting of civil servants (ASN) and government contract employees (P3K) who were involved in the digitalization process and implementation of environmentally friendly programs. The research instrument was a Likert-scale questionnaire distributed both online and offline to 150 respondents. The collected data were analyzed using PLS-SEM (Partial Least Square–Structural Equation Modeling). The findings show that: (1) digital leadership has a significant effect on organizational green commitment; (2) digital leadership has a significant effect on superior performance; (3) green commitment has a significant effect on superior performance; (4) green human capital has a significant effect on green commitment; and (5) green human capital has a significant effect on superior performance. Furthermore, the mediation model reveals that (6) digital leadership through green commitment has a significant effect on superior performance, whereas (7) green human capital through green commitment has no significant effect on superior performance.

Keyword: Digital_Leadership, Green_Human_Capital, Green Commitment, Excellent Performance

INTRODUCTION

Era Society 5.0 emphasizes synergy between humans and technology in creating a work environment that is both efficient and human-oriented. At the core of this concept

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is the role of humans as creators of new value through the utilization of technological advancements to reduce inequality between individuals and prevent potential economic problems in the future. Human resources become a key factor in organizational success, as more and more organizations realize that the human aspect can be a source of competitive advantage. Every member of the organization needs to have a clear vision and the motivation to go beyond existing capabilities. Therefore, leadership that is able to understand and maximize the benefits of technology is urgently needed. Leadership plays an important role in various fields such as business, education, politics, religion, and social affairs. Thus, the development of quality and the management of human resources must continuously be pursued optimally (Cahyarini, 2021).

Hospitals that implement the green and healthy concept are based on an understanding of the interrelationship between human health and the environment, as well as the application of that understanding through appropriate management and operational strategies (Effendi et al., 2024). A study states that at least 71% of the American public considers environmental factors when shopping (Kim, 2016). Green business practices have now evolved into greening functional areas, one of which is green management (Yong et al., 2019 in Yuni and Muafi, 2020).

In Indonesia, the government implements an assessment program of corporate performance in environmental protection and management through the Company Performance Rating Assessment Program (PROPER), as regulated in Law Number 3 of 2014. This program aims to encourage the improvement of corporate environmental performance so that it complies with the provisions of the applicable laws and regulations.

General health services (PKU) in Bima City are facing challenges arising from changes in culture, systems, and the mindset of human resources toward sustainability, namely Green Human Capital. Green leadership transformation encourages energy efficiency, environmental sustainability, green innovation, an environmentally friendly work culture, and a positive organizational reputation for environmentally conscious service quality. This increasingly raises awareness among public hospital leaders to shift toward green human capital. Organizations need to adopt and integrate the green concept, which is an approach that emphasizes sustainability and environmental preservation. The implementation of this concept requires companies not only to pursue maximum profit, but also to ensure that every operational activity is carried out based on environmentally friendly principles.

Green Human Capital (GHC) is an important component of the three elements of Green Intellectual Capital (GIC), which describes the potential, insight, creativity, concern, and commitment of individuals in the organization toward environmental management (Sihombing, 2021). This human capital element is determined by the quality and quantity of human resources owned, which in turn are able to provide feedback and

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contribute back to the company (Yuniarsih et al., in Purwanto et al., 2021). The main objective of Green Human Capital is to promote the achievement of sustainability through the utilization of intangible assets such as knowledge, skills, talents, creativity, wisdom, experience, as well as the attitudes and dedication of employees.

Digital leadership refers to leaders who are able to utilize information technology to exert their influence and provide direction to their teams in order to achieve shared goals within an organization (Ekawati, 2023; Sulhan et al., 2022). Through information technology, a company's business processes can be carried out more easily, quickly, efficiently, and effectively. According to Cahyarini (2021), the use of technology can strengthen a company's competitive advantage because services to customers can be provided more quickly, online, in real time, and without spatial or temporal limitations. Meanwhile, Purwanto et al. (2021) state that the appropriate application of information technology enables managers to implement the concept of e-leadership.

Mercurio (as cited in Fahira, 2019) explains that organizational commitment consists of three main dimensions: normative commitment, continuance commitment, and affective commitment. Normative commitment refers to a condition in which individuals choose to remain in an organization based on a sense of responsibility and loyalty that arises from their personal values and beliefs. Continuance commitment is related to considerations of the costs and risks that must be borne if an individual leaves the organization. Meanwhile, affective commitment emerges when individuals are involved in an organization because of a sense of affection and emotional attachment to it. Based on the views of Meyer, Stanley, Herscovitch, and Topolnytsky (2002), Mercurio (2015), and Tjahhjono, Palupi, and Yusmara (2015), affective commitment shows the strongest correlation with the positive work behaviors expected by the organization compared with the other two types of commitment.

Performance describes the work results of an employee viewed from the aspects of quality and quantity in carrying out tasks in accordance with the responsibilities given. The level of employee performance is an important element because the higher an individual's performance, the greater their contribution to improving the organization's overall productivity (Jaenab et al., 2025). Meanwhile, Purwanto et al. (2021) state that performance indicators include several aspects: quality, which shows the extent to which the results achieved meet the expected standards; quantity, which relates to the amount of output produced within a certain period of time; timeliness, which assesses the ability to complete tasks according to the predetermined schedule; effectiveness, which measures the degree of goal attainment relative to the resources used; independence, which reflects the ability to operate and make decisions without relying on others; and commitment, which signifies seriousness and loyalty to the tasks and responsibilities carried, as a form of dedication to achieving optimal results.

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Based on the results of the preliminary observations, the performance of Type D hospitals in Bima City has not yet been optimal. The use of digital reporting to improve paper-use efficiency remains limited, and there is a shortage of well-trained and responsive human resources in service units. Patients have to wait too long to obtain services, whether at registration, in the doctor's waiting room, in the laboratory, or at the pharmacy unit. Service standards have not been implemented uniformly, and employees feel psychologically unsafe to express ideas because they are afraid of being criticized, belittled, or not listened to by their superiors. In addition, there is a lack of policies or standard operating procedures (SOPs) related to digital communication and work, as well as low employee participation in supporting environmentally friendly practices (efficient use of electricity and water, and the absence of hospital waste management initiatives). The lack of digitalization implementation in leadership further hinders efficiency, innovation, data-driven decision-making, and the organization's ability to adapt to change.

LITERATURE REVIEW

Digital_Leadership

Digital leadership plays a crucial role in driving organizational transformation resulting from technological disruption and innovation within incumbent companies (Christensen & Bower, 1996; Markides, 2006, in Purwanto et al., 2021). Studies indicate that digital leadership influences, both directly and indirectly, business model innovation as part of the digital transformation process (Berman, 2012; Li, 2018; Prem, 2015). These findings affirm that digital leadership is shaped by global, profound, creative, and resilient characteristics, aligning with the dynamics of Industry 4.0, which requires corporate ecosystems to become more innovative, standardized, reality-based, timely, and service-oriented (Ibrra et al., 2017).

According to Ordway Ted (as cited in Manurung, 2024), leadership is the ability to influence others to achieve common goals. The capacity to influence others in society is closely related to individual behavior. The concept of leadership has evolved to consider the influence of external factors, including technological advancements and constantly changing global trends. In this context, digital leadership has become increasingly important because leaders are not only expected to master conventional managerial skills but also to adapt to technology in order to enhance work efficiency, accelerate communication processes, and strengthen collaboration within teams and organizations.

According to Fisk (2002), digital leadership describes a visionary leader who can motivate the organization, integrate various business ideas into projects, and build networks by creating new opportunities through partnerships, joint ventures, outsourcing, and other forms of collaboration. Meanwhile, according to Zhu (2015) as cited in Rumapea et al. (2024), digital leadership has five main characteristics: (1) the ability to

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think strategically in response to market changes and competitive dynamics; (2) creativity in turning innovative ideas into reality; (3) a strong vision to guide and lead digital transformation within the company; (4) high curiosity in dealing with complex and uncertain ecosystems (VUCA) and the ability to continuously learn; and (5) depth of knowledge that enables leaders to make decisions based on broad understanding, synthetic thinking, and sharp interpretation of complex situations.

Green_Human_Capital (GHC)

Green human capital (GHC) is understood as a set of values, behaviors, qualifications, and skills possessed by employees that play a role in creating added value for the company (Gonzalez-Loureiro & Teixeira, 2011). The human component in green intellectual capital (GIC) emphasizes the capacity and knowledge of employees in implementing practices oriented toward environmental sustainability. According to Chang & Chen (in Pujilestari et al., 2025), GHC is a collection of knowledge, abilities, attitudes, experience, creativity, wisdom, commitment, and various other aspects that support environmentally friendly innovation. This view is in line with Nurmasari & Vinezha (2024), who assert that green human capital is the primary resource that determines organizational sustainability amid rapidly changing business dynamics.

Enhancement of human capital occurs when companies are able to optimize the knowledge possessed by their employees. In general, human capital consists of three categories: (a) competencies, which include skills and knowledge; (b) behaviors, which reflect motivation and the quality of leadership within the organization; and (c) intellectual agility, which describes employees' ability to adapt and innovate.

***Green Commitment* (Komitmen Hijau)**

Green management commitment, according to Kartmagatri (in Abdullah et al., 2024), is a managerial approach that emphasizes an organization's efforts to integrate environmental aspects into every part of its operational activities. Organizations with such commitment consciously engage in environmentally friendly behavior and related actions. The purpose of a green commitment is to reduce the organization's negative impact on the environment and create sustainable business practices.

This includes having formal policies on corporate environmental management and a strong commitment to implementing them. This indicator measures how seriously an organization enforces its established environmental policies (Karmagatri, Mulyani, et al., 2023). Research by Safari et al. (2018) shows that when an organization's commitment to environmental friendliness increases, employees' green behavior also improves (in Fahira, 2019). The indicators of Green Commitment, as stated by Karmagatri, Mulyani, et al. (2023),

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consist of: a. Commitment to the implementation of environmental policies, b. Commitment to employees, and c. Commitment to operational processes.

The concept of green management commitment, according to Kartmagatri (in Abdullah et al., 2024), is a managerial approach that emphasizes an organization's effort to integrate environmental aspects into every part of its operational activities. It involves consciously taking actions such as adopting environmentally friendly behavior and similar practices. The goal of green commitment is to reduce the organization's negative environmental impact and establish sustainable business practices. This includes having formal policies for corporate environmental management and a strong commitment to their implementation. This indicator measures how seriously an organization enforces its established environmental policies (Karmagatri, Mulyani, et al., 2023).

Research by Safari et al. (2018) shows that when environmental commitment within an organization increases, employees' green behavior also improves (as cited in Fahira, 2019). The indicators of Green Commitment, according to Karmagatri, Mulyani, et al. (2023), include:

a. Commitment in implementing environmental policies, b. Commitment in employment practices, and c. Commitment in operational processes.

Excellent Performance

Performance can be defined as a measure of an individual's success in carrying out tasks and the ability to achieve predetermined goals. According to Dubrin, Rumapea, and colleagues (2024), performance reflects the behavior or activities demonstrated by an individual in fulfilling organizational responsibilities. Furthermore, Hartini (2012) stated that performance can be viewed as the work outcomes in the form of products or services produced either individually or collectively, meaning that assessment can be conducted from both personal and organizational perspectives. Meanwhile, Tjahjaningsih (2016) emphasized that performance is closely related to the achievement of organizational goals, encompassing the dimensions of quality, efficiency, and effectiveness of work. Therefore, employee performance plays a crucial role in achieving organizational objectives, although the level of contribution is also significantly influenced by the support and facilities provided by the institution (Putra & Marisa, 2024).

An approach to assessing organizational success can be implemented through Elkington's (1994) theory, which first introduced the *Triple Bottom Line* (TBL) as a sustainability framework used to evaluate company performance across three main dimensions: economic, social, and environmental. This approach underscores the importance of achieving profit, fulfilling social responsibility to the community (people), and maintaining a commitment to environmental preservation (planet) (Zaharia, 2021; Abdullah et al., 2024). Environmental sustainability requires businesses to consider the

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ecological impact of their operations, while economic sustainability focuses on financial success, and social sustainability involves aspects related to the human dimension within business practices (Yong et al., 2020; Apriliyanto, 2023). According to Glavic and Lukman (2008), social responsibility represents a principle that integrates a company's social and environmental performance to achieve human development that is safe, dignified, just, and equitable benefiting both human well-being and environmental preservation. Furthermore, environmental performance is explained as a principle-based effort to reduce the consumption of energy and hazardous resources through improved management, energy-use efficiency, promotion of clean living habits, and advocacy for the use of eco-friendly materials.

Indicators of superior performance within an organization encompass several key aspects as benchmarks of effective and efficient achievement. According to Robbins (2002:260), these indicators include work quality, output quantity, timeliness, effectiveness in utilizing human resources (HR), independence, and work commitment.

Digital Leadership and Performance

Leaders in the digital era are visionaries who can drive transformation, integrate diverse business ideas into strategic projects, and build networks to create new opportunities. Vision-based leadership allows organizations to establish a clear direction, which becomes a critical determinant of future success (Haryanto, 2020, in Rumapea et al., 2024). Effective and efficient achievement can be assessed through several key indicators. Robbins (2002:260) identifies these indicators as work quality, output quantity, timeliness, the effectiveness of human resource (HR) utilization, independence, and job commitment.

Inspirational leadership that fosters responsibility and comprehensive mastery of technological advancements contributes significantly to optimizing employee performance. A competent leader who can motivate the team, provide firm guidance, and utilize technology to enhance work efficiency plays a vital role in directing the team toward collective success. The ability to provide clear direction, cultivate a work atmosphere that encourages innovation, initiative, and collaboration, strengthens team capacity to achieve higher and sustainable goals (Rumapea et al., 2024; Iswanto, 2023, in Rumapea et al., 2024).

According to Fahmi et al. (2020, in Purwanto et al., 2021), research findings indicate that digital leadership plays a crucial role in optimizing performance within Indonesia's pharmaceutical industry. This finding aligns with Quddus et al. (2020, in Purwanto et al.), who emphasize that servant leadership, digital leadership, and ecological leadership significantly influence industrial performance.

Based on the theoretical review and previous studies, the following hypotheses are proposed:

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Hypothesis 1: Digital Leadership has a significant effect on Green Commitment.
Hypothesis 2: Digital Leadership has a significant effect on Superior Performance.

Green human capital (GHC) and superior performance

Research conducted by Kinanti and Murwaningsari (2024), Ramadhani and Amin (2023), as well as Himmah and her colleagues (2024) indicates that green human capital has a positive effect on firm performance. This positive relationship reflects that companies are able to create a competitive advantage and enhance employees' ability to support environmental sustainability in the workplace. These findings are consistent with legitimacy theory, which explains that strong competitiveness and high employee competence contribute to improving firm performance (Pujilestari, 2025). This study also enriches RBV theory through a broad research scope and objective measurement methods. Based on the theoretical foundation and previous empirical findings, the following hypotheses are formulated:

Hypothesis 3: Green human capital (GHC) has a significant effect on superior performance.
Hypothesis 4: Green human capital (GHC) has a significant effect on green commitment

Green Commitment and Superior Performance

According to Moslem et al. (2010), the theoretical foundations of organizational commitment have been extensively examined, and research findings demonstrate that employees' commitment to their organization contributes to improving organizational performance. The study found that employee commitment can provide assurance in various aspects, such as job satisfaction, a sense of dependence on and interest in the organization, enhanced quality of performance, reduced misunderstandings and passive social behavior, lower absenteeism, strengthened solidarity and cooperation between institutions, decreased work stress, the achievement of financial success, as well as increased organizational effectiveness and productivity. Meanwhile, Atmojo (2012) found that transformational leadership style has a significant impact on employees' job satisfaction and organizational commitment. Furthermore, job satisfaction has been proven to make a significant positive contribution to improving employee performance, and organizational commitment also shows a significant influence on the achievement of employee performance (Aviyanti et al., 2024). Referring to the theoretical review and empirical evidence from previous studies, the hypotheses in this research can be formulated as follows:

Hypothesis 5: Green Commitment has a significant effect on superior performance.

Hypothesis 6: Digital Leadership (DL) has a significant effect on performance mediated by Green Commitment.

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Hypothesis 7: Green Human Capital (GHC) has a significant effect on performance mediated by Green Commitment (GC).

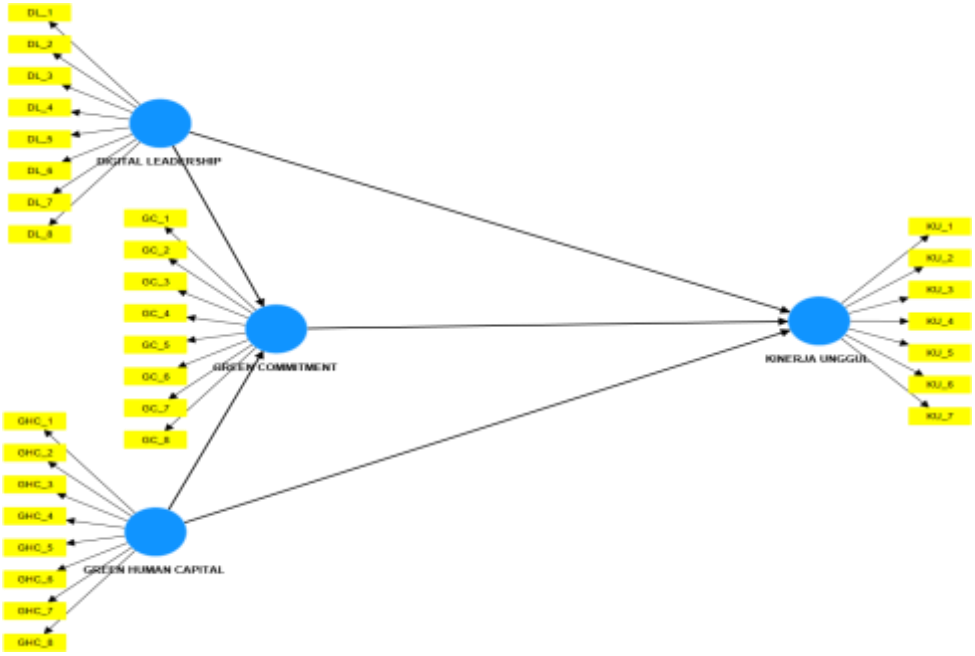


Figure 1. Conceptual Framework

METHOD

The development of this research refers to the findings of studies by Song et al. (2020), Fang et al. (2022), Hao et al. (2020), and Joong et al. (2019) in Pramudita and Gunawan (2022), using a quantitative research approach, which is then presented in narrative form. The population in this study is a case study of employees at a Type D General Hospital in Bima City. The population in this research comprises all employees of the general hospital in Bima City, totaling 302 people, selected using a purposive sampling method, namely by considering specific criteria relevant to the research objectives.

The research sample consists of respondents who are considered capable of representing the main characteristics of the population, namely employees with ASN (State Civil Apparatus) and P3K (Government Employees with Work Agreements) status, with a total of 150 individuals. The instrument used is a questionnaire based on a Likert scale, in which the items are constructed based on relevant theories from previous studies. According to Sugiyono (2018), a questionnaire is a data collection method by providing a written list of statements to respondents to be filled out according to their opinions. The questionnaire was designed using the Google Forms platform and distributed both online and offline via WhatsApp and various other social media. The data

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obtained were analyzed using the PLS-SEM (Partial Least Squares–Structural Equation Modeling) technique. The analysis process followed the stages applied in previous studies by Cahyono (2020), Fahmi (2020), Vizano (2020), and Purwanto et al. (2021).

DISCUSSION

Convergent Validity Test

The convergent validity test aims to assess the extent to which an indicator has a positive relationship with other indicators that measure the same construct. In this study, convergent validity was evaluated using the outer loading value of each indicator and the Average Variance Extracted (AVE). Indicators with an outer loading value below 0.40 were removed from the model because they were considered not to meet the validity criteria (Hair et al., 2011).

An AVE value of 0.50 or higher indicates that the construct is able to explain more than half of the variance of its indicators. However, if the AVE value is less than 0.50, the error variance in the items is greater than the variance that can be explained by the construct. This analytical approach was also used in studies by Cahyono (2020), Fahmi (2020), Vizano (2020), and Purwanto et al. (2021).

Table 1. Outer Loading and AVE of Each Indicator per Variable

Variabel	Indikator	Outer Loading	CA	CR	AVE
Digital Leadership (DL)	DL. 1 DL. 2 DL. 3 DL. 4 DL. 5 DL. 6 DL. 7 DL. 8	0.79 0.75 0.77 0.83 0.80 0.75 0.74 0.82	0.90	0.91	0.60
Green Human Capital (GHC)	GHC. 1 GHC. 2 GHC. 3 GHC. 4 GHC. 5	0.84 0.76 0.88 0.83 0.81 0.78 0.85 0.81	0.91	0.92	0.65

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	GHC. 6 GHC. 7 GHC. 8				
Green Commitment (GC)	GC. 1 GC. 2 GC. 3 GC. 4 GC. 5 GC. 6 GC. 7 GC. 8	0.83 0.84 0.80 0.81 0.82 0.86 0.85 0.81	0.92	0.93	0.68
Kinerja Unggul (KU)	KU. 1 KU. 2 KU. 3 KU. 4 KU. 5 KU. 6 KU. 7	0.78 0.81 0.81 0.83 0.83 0.81 0.81	0.89	0.90	0.62

Source: Processed data, 2026

Table 4 shows that the number of indicators for the green human capital variable is 8 indicators (8 items); the number of indicators for the digital leadership variable is 5 indicators (8 items); the number of indicators for the green commitment variable is 3 indicators (8 items); and the number of indicators for the superior performance variable is 6 indicators (7 items). All indicator loadings for each variable are > 0.5 (Hair et al., 2023). This indicates that good convergent validity has been achieved with respect to the outer loading measures.

Table 2 Discriminant Validity Test

Variabel	DL	GK	GHC	KU
Digital Leadership (DL)	0.780			
Green Commitment (GC)	0.688	0.831		

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Green Human Capital (GHC)	0.669	0.724	0.819	
Kinerja Unggul (KU)	0.778	0.744	0.732	0.811

Source: Processed Data, 2026

Based on the results of the discriminant validity analysis in Table 2, it can be concluded that the model meets the criteria for discriminant validity. This is evident from each construct having a square root value of AVE greater than the correlation of that construct with other latent constructs.

Table 3. Collinearity Statistics (VIF)

Variabel	*Green Commitment*	Kinerja
Digital Leadership (DL)	1.623	1.919
Green Commitment (GC)		2.200
Green Human Capital GHC)	1.623	2.075

Sumber: Data diolah, 2026

Based on the analysis in Table 3, all VIF values for each variable are recorded below 5, so it can be concluded that there is no collinearity problem in this model. In addition, by applying the bootstrapping method, the R-square value and the results of the significance test are obtained, as presented in the following table.

Table 4 R-Square Value of the Model

Variabel	R Square
Green Commitment (GC)	0.546
Kinerja Unggul (KU)	0.634

Source: Processed data, 2026

Structural testing analysis was carried out to determine the R^2 value for each equation, where the R^2 value indicates the extent to which the independent variables are able to explain the variation in the dependent variable.

The findings show that green commitment is simultaneously influenced by digital leadership and green human capital, with an R^2 value of 0.546. This means that 54.6% of the variation in green commitment can be explained by these two variables, while the remaining 45.4% is influenced by other factors that are not within the scope of this study. Furthermore, based on the analysis of the superior employee performance variable, it was found that digital leadership, green human capital, and green commitment jointly

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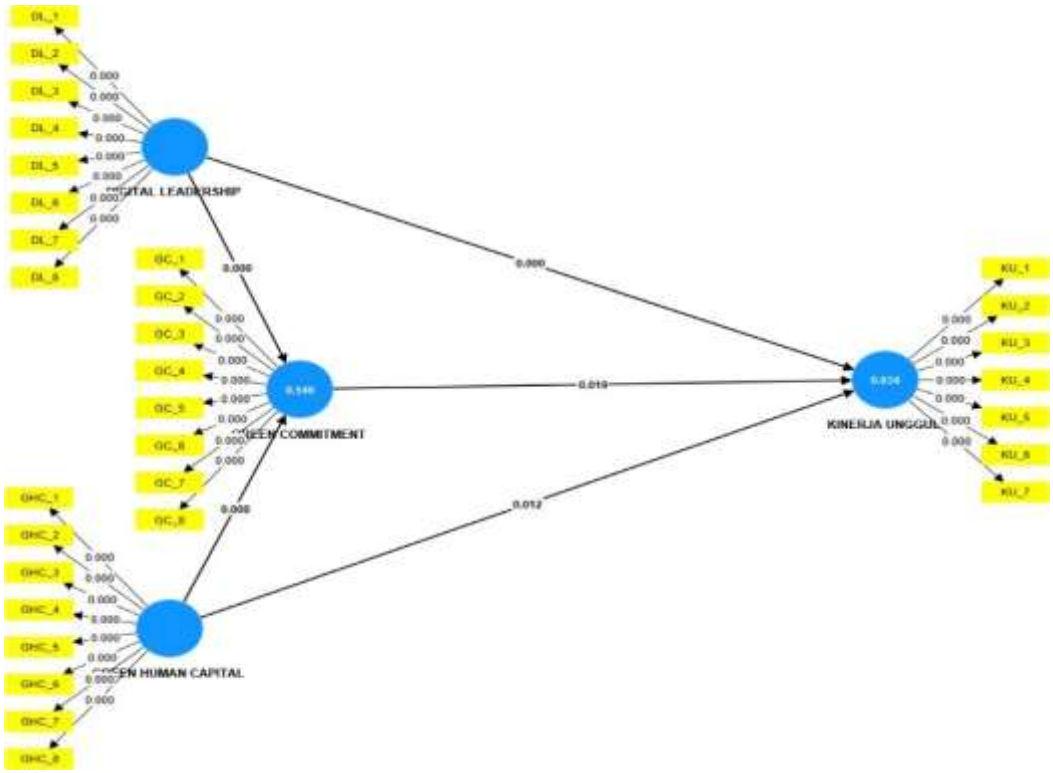
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have an effect, with an R^2 value of 0.634. This indicates that 63.4% of the variation in superior employee performance can be explained by these three variables, while the remaining 36.6% of the variation is attributable to other factors beyond the scope of this research.

The analysis also shows that green commitment is simultaneously influenced by digital leadership and green human capital, with an R^2 value of 0.546. Thus, 54.6% of the variation in green commitment is caused by these two variables, while the remaining 45.4% is influenced by other variables that are not analyzed in this study.

Hypothesis Test Results

The results of the analysis using the SmartPLS method show the path coefficients, t-statistics, and p-values for each relationship between variables as follows.



Gambar 2*: Part diagram T-value*

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Table 5. Hypothesis Testing of the Research Model

Effect of the Variable	Koefisien Jalur	t-Statistik	p-Value	Hypothesis Decision
Digital Leadership → *Green Commitment*	0.367	5.13	<0.001	Accepted (Significant)
Digital Leadership → Kinerja Unggul	0.374	4.28	<0.001	Accepted (Significant)
Green Commitment → Kinerja Unggul	0.274	2.35	0.019	Accepted (Significant)
Green Human Capital → *Green Commitment*	0.453	5.25	<0.001	Accepted (Significant)
Green Human Capital → Kinerja Unggul	0.261	2.51	0.012	Accepted (Significant)
Digital Leadership → *Green Commitment* → Kinerja Unggul	0.100	2.12	0.034	Accepted (Significant)
Green Human Capital → *Green Commitment* → Kinerja Unggul	0.124	1.81	0.070	Rejected (Not significant)

Source: Processed Data, 2026

Based on the data in the table above, it can be seen that out of the six formulated hypotheses, all obtained T-values greater than 1.96. Therefore, the analysis results support all proposed research hypotheses. However, for Hypothesis 7, the T-value was recorded below 1.96, indicating that the data did not provide support for this hypothesis. A detailed explanation of each effect and indirect relationship within the model is described below based on the quantitative analysis results.

Discussion of Each Variable Effect

1. **The first hypothesis is accepted**, indicating that Digital Leadership has a significant effect on Green Commitment (coefficient = 0.367, p < 0.001). This

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means that the better the digital leadership, the higher the organization's environmental commitment.

2. **The second hypothesis is accepted**, showing that Digital Leadership also has a significant effect on Superior Performance (coefficient = 0.374, p < 0.001), which implies that digital leadership capabilities can enhance overall organizational performance.
3. **The third hypothesis is accepted**, meaning that Green Commitment significantly affects Superior Performance (coefficient = 0.274, p = 0.019), proving the importance of environmental commitment for achieving high performance.
4. **The fourth hypothesis is accepted**, showing that Green Human Capital significantly affects Green Commitment (coefficient = 0.453, p < 0.001), suggesting that the quality of "green" human resources strengthens environmental commitment.
5. **The fifth hypothesis is accepted**, indicating that Green Human Capital significantly affects Superior Performance (coefficient = 0.261, p = 0.012), suggesting that investment in environmentally oriented human resources has a positive impact on organizational performance.
6. **The sixth hypothesis is accepted**, showing that Digital Leadership mediated by Green Commitment significantly affects Superior Performance. The indirect (mediated) effect of digital leadership on superior performance through green commitment is 0.100 with a p-value of 0.034. This indicates that part of the influence of digital leadership on superior performance occurs through its ability to enhance green commitment first.
7. **The seventh hypothesis is rejected**, indicating that Green Human Capital mediated by Green Commitment does not have a significant effect on Superior Performance. The indirect effect of green human capital on superior performance through green commitment is 0.124, but with a p-value of 0.069 (not significant at the 5% level). This means that improvements in green human capital that encourage green commitment may influence superior performance, but the effect remains limited and statistically inconsistent. Theoretically, green human capital represents the collective environmental knowledge, skills, and values possessed by human resources that can drive organizations to be more committed to sustainable environmental practices (green commitment).

RESULTS

Digital Leadership on Green Commitment

The research results show that digital leadership has a positive and significant effect with a coefficient of 0.367 and a p-value < 0.001. This means that the higher the

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capacity of digital leadership, the stronger the organization's commitment to environmentally friendly practices. This confirms that leaders' implementation of digital strategies encourages the creation of an environmentally conscious work culture. This finding aligns with previous theories and studies explaining that digital leadership integrates digital skills and cultural values to drive organizational transformation and optimize the use of technological opportunities (Rudito & Sinaga, 2017). Zhu (2015) states that digital leaders are characterized by creativity, vision, and curiosity—traits essential for managing organizations in complex and rapidly changing environments (Sandell, 2013). Digital leadership fosters innovation and integrated collaboration, which strengthens organizational commitment to green practices or green commitment (Purwanto et al., 2021). Similarly, Samuel and Ramli (2024) emphasize that digital leadership positively influences organizational commitment.

Green Human Capital on Superior Performance

The analysis shows that the effect of green human capital on superior performance is significant (coefficient 0.261, p-value 0.012). Organizational performance improves when environmentally friendly skills, knowledge, and values are embedded among all personnel involved. According to Human Capital Theory (Becker, 1964), the knowledge, skills, and competencies of individuals represent strategic assets for an organization. Green human capital—which includes environmental knowledge and behavior—enhances an organization's ability to adapt and innovate toward sustainability, thereby improving overall performance. The Theory of Competitive Advantage (Barney, 1991) asserts that unique and hard-to-imitate assets such as green human capital can serve as sustainable competitive advantages. Environmentally conscious and competent human resources enable organizations to implement green practices that enhance efficiency, reputation, and business performance.

Digital Leadership on Superior Performance

The findings indicate that digital leadership significantly affects superior performance (coefficient 0.374, p-value < 0.001). Leaders who can adapt to technological developments can drive organizational performance improvement in efficiency, innovation, and competitiveness. Conceptually, digital leadership refers to a leader's capacity to optimize digital technology and foster digital innovation to achieve strategic goals effectively (Lin, 2024; Benitez et al., 2022). Competent digital leaders promote digital transformation in structures, culture, and organizational processes, thus improving effectiveness and competitiveness (Ferreira et al., 2019; Artüz & Bayraktar, 2021). Empirical studies by Al-Husban et al. (2021) and Tulungen et al. (2022) confirm the significant positive impact of digital leadership on organizational performance. Digital

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leaders increase productivity through change management, innovation motivation, and appropriate technology application (Wang et al., 2025; Turyadi, 2023). Additionally, digital leadership shapes a digital organizational culture that supports innovative behavior and enhances performance (Okunlola et al., 2024; Artüz et al., 2021).

Green Commitment on Superior Performance

Data analysis reveals that green commitment significantly affects superior performance (coefficient 0.274, p-value 0.019). Organizations committed to environmental issues tend to gain better reputation and operational effectiveness. According to the Resource-Based View (RBV) theory, green commitment represents a strategic resource that provides competitive advantage by enhancing awareness and organizational responsibility toward the environment. This positively impacts organizational performance through operational efficiency and a reputation that supports business sustainability (Barney, 1991). Empirical studies support these findings, such as Hoang (2025), who found that top management's green commitment fosters environmentally oriented employee performance, ultimately enhancing overall business performance. Suryani et al. (2018) also found that environmental commitment improves firms' financial performance through green product innovation, strengthening the argument that environmental commitment reinforces organizational excellence. Employee attitudes and motivation shaped by green-oriented HR management lead to sustained commitment to environmental preservation.

Green Human Capital on Green Commitment

The study reveals that green human capital significantly influences green commitment (coefficient 0.453, p-value < 0.001). Environmentally oriented HR development programs strengthen the organization's commitment to applying green principles throughout its operations. According to Green Human Resource Management (GHRM) theory, the quality and capacity of "green" human resources—including employees' environmental knowledge, skills, attitudes, and behaviors—are key factors in forming and enhancing organizational commitment to environmental issues. Investing in green HR capacity increases environmental awareness and responsibility, making organizations more consistent and effective in implementing sustainable business practices (Renwick et al., 2013; Jackson et al., 2011).

Green Human Capital on Superior Performance

The analysis results show that green human capital has a significant effect on superior performance (coefficient 0.261, p-value 0.012). Organizational performance improves when environmentally conscious skills, knowledge, and values are ingrained

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among all personnel. According to Human Capital Theory, investing in human resources with environmental awareness and skills enhances both individual and organizational capacity to manage sustainability. Thus, green human capital not only improves employee performance in routine tasks but also stimulates green innovation and eco-friendly business practices, which positively impact overall organizational performance (Becker, 1964; Renwick et al., 2013; Yusliza et al., 2019).

Digital Leadership Mediated by Green Commitment on Superior Performance

The research confirms that the indirect (mediated) effect of digital leadership on superior performance through green commitment is 0.100, with a p-value of 0.034. This indicates that part of the influence of digital leadership on superior performance occurs because it first enhances environmental commitment. Theoretically, this can be explained through Transformational Leadership theory, which emphasizes that visionary and tech-adaptive leaders (digital leaders) influence organizational values and culture, including environmental commitment (Bass, 1985; Avolio et al., 2014). Digital leaders promote technologies that support sustainability, thereby enhancing environmental awareness and commitment within the organization (Munir et al., 2023). As green commitment rises, organizations become more oriented toward eco-friendly practices, which in turn improve overall superior performance (Robertson & Barling, 2013; Graves et al., 2013).

Green Human Capital Mediated by Green Commitment on Superior Performance

The results indicate that the indirect effect of green human capital on superior performance through green commitment is 0.124, but with a p-value of 0.069 (not significant at the 5% level). This means that the increase in green human capital leading to green commitment positively impacts superior performance, but the effect remains limited and statistically inconsistent. This concept is supported by Human Capital Theory, which emphasizes that the quality and capability of human resources are strategic organizational assets that enhance performance (Becker, 1964). Moreover, Organizational Commitment Theory suggests that commitment to environmental values can act as an important mediator in achieving superior organizational performance (Meyer & Allen, 1991).

Conclusion

Based on the results of the study, the following findings of direct effects were obtained:

1. Digital Leadership has a significant effect on the organization's Green Commitment.
2. Digital Leadership also has a significant effect on Superior Performance.
3. Green Commitment has a significant effect on Superior Performance.

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4. Green Human Capital has a significant effect on Green Commitment.
5. Green Human Capital has a significant effect on Superior Performance.
6. Meanwhile, for the mediation model, it can be concluded that: 6) Digital Leadership mediated by Green Commitment has a significant effect on Superior Performance and is accepted. The conclusion of the mediation model shows that Digital Leadership influences Superior Performance through the mediating role of Green Commitment. This means that effective Digital Leadership enhances the organization's commitment to environmental sustainability values and practices (Green Commitment), which in turn has a positive impact on improving the organization's superior performance. Green Commitment functions as a mediating variable that links Digital Leadership and organizational performance outcomes. Leaders with strong digital capabilities can foster an environmentally conscious organizational culture, thereby improving organizational performance and ensuring sustainable excellence.
7. Green Human Capital mediated by Green Commitment does not have an effect on Superior Performance. This means that Green Human Capital, which includes environmentally friendly knowledge, skills, and values possessed by human resources, plays a role in enhancing Green Commitment or the organization's commitment to environmental sustainability practices. This commitment then contributes to the overall improvement of the organization's Superior Performance.

Suggestions

Strengthening Green Human Capital through Green Training and Recruitment Programs: Organizations need to develop the environmental competence and awareness of their human resources by implementing green recruitment, green training, and green performance appraisal programs that focus on enhancing environmentally friendly capabilities. This will strengthen Green Human Capital as a strategic organizational asset to face sustainability challenges and improve superior performance.

Both indirect relationships indicate the importance of Green Commitment as a mediator between Digital Leadership and Green Human Capital on Superior Performance. Digital Leadership that supports sustainability encourages effective Green Commitment, thereby improving superior performance. Environmentally friendly HR management through incentives and managerial commitment strengthens the implementation of Green HRM and sustainable performance.

To overcome resistance to change, organizations should enhance communication, provide adequate training, involve employees in the process, support changes with strong leadership, and facilitate the gradual adoption of technology. Future

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research is recommended to add other variables that may influence Superior Performance, such as green innovation, organizational culture, or sustainability orientation, and to test the role of moderating variables, for example environmental uncertainty or technological turbulence. Further, the research objects can be expanded to the manufacturing, service, or public sectors, and the methodology deepened by using mixed methods.

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