

Green servant leadership and environmental performance: the mediating effect of green human capital management practices and green intellectual capital

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Abstract

Purpose – This paper aims to explore the connections between green servant leadership (GSL), green human capital management (G-HCM) practices, green intellectual capital (GIC) and the environmental performance (EVP) of firms. Specifically, the mediating effect of G-HCM practices between GSL and GIC relationship, as well as the mediating effect of GIC on the G-HCM and EVP relationships were investigated.

Design/methodology/approach – Data were collected through a cross-sectional survey questionnaire from 203 rural banks in Indonesian banking sector. The study used partial least squares structural equation modeling to test the hypotheses.

Findings – The findings indicate that G-HCM practices act as a mediator between GSL and GIC. Furthermore, the research highlights that G-HCM practices, via its impact on GIC, indirectly influences EVP. The results confirm that all direct and indirect effects hypothesized in the study were supported.

Research limitations/implications – Findings are limited to rural banks; cross-industry samples are encouraged in future studies.

Practical implications – GSL and G-HCM practices must be enhanced by managers to improve GIC and EVP.

Social implications – The findings promote sustainable banking practices that contribute to environmental protection and ecological responsibility.

Originality/value – The study makes a meaningful contribution to advancing current theories by suggesting that the connection between G-HCM practices and environment performance is not solely determined by the additive effects of GSL and GIC nor by their interactive effects, but a combination of both.

Keywords Green servant leadership, Environmental performance, Green human capital management practices, Green intellectual capital

Paper type Research paper

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1. Introduction

The existing literature on business sustainability, particularly focusing on ecological utilization, predominantly emphasizes general banks rather than rural banking (Heikkurinen *et al.*, 2019). Rural banking greatly contributes to commercial activities environmentally, yet it has received insufficient attention in academic research (Naidoo and Gasparatos, 2018; Mas *et al.*, 2021). It is becoming common practice for businesses across industries to produce greener processes and products in response to rising stakeholder demands for implementing environmental management measures (Shahzad *et al.*, 2020; Baaha *et al.*, 2020). To address the complex sustainability issues and satisfy the demands of many

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stakeholders, businesses are encouraged to leverage intangible resources (Oprean-stan *et al.*, 2020; Panda and Sangle, 2019). Previous studies have demonstrated that environmental performance (EVP) is significantly affected by personnel at all levels and activities of a business (Hameed and Naeem, 2020; Singh *et al.*, 2022). According to Hayton (2004) and Štaffenová and Kucharčíková, 2024), leadership and human capital management (HCM) are integral in building essential internal competencies and capabilities for human resource management in rural banking. Furthermore, prior studies indicate that corporate culture, self-efficacy and factors influencing employee work motivation also affect the EVP (Camilleri *et al.*, 2023; Blankenship *et al.*, 2021). According to Mansoor *et al.* (2021) and Wei *et al.* (2023), leadership behavior can affect green intellectual capital (GIC) and EVP.

Organizational capabilities are pivotal in developing and sustaining effective environmental management systems (Asiaei *et al.*, 2021; Longoni *et al.*, 2016; Baumgartner and Winter, 2014). However, existing studies have primarily focused on manufacturing or general banking contexts, leaving rural banks largely underexplored. Rural banks face distinctive challenges, including limited resources, lack of employee capability and motivation and underdeveloped environmental governance (Lam *et al.*, 2021). These characteristics raise questions about whether existing theories of green leadership and organizational capabilities fully account for this context. By examining rural banks in Indonesia, this study extends prior theory by testing a dual-mediation model in which green servant leadership (GSL) fosters EVP through green human capital management (G-HCM) and GIC. In doing so, the study contributes to the literature by (1) addressing an under-researched organizational setting, (2) refining the resource-based view (RBV) and the ability–motivation–opportunity (AMO) theory to explain EVP in resource-constrained financial institutions. The RBV posits that firms achieve sustainable performance by leveraging valuable, rare, inimitable and nonsubstitutable internal resources (Barney, 2001), while the AMO theory explains how employee abilities, motivation and opportunities to participate jointly shape organizational outcomes (Appelbaum *et al.*, 2000). Building on these perspectives, AMO explains how leadership attributes such as capabilities, knowledge, skills and motivation operate through ability, motivation and opportunity mechanisms to shape G-HCM, whereas RBV provides the theoretical rationale for viewing these attributes as strategic intangible resources that support sustainable competitive advantage (Munawar *et al.*, 2022). From a dynamic capabilities perspective, organizational performance is driven by the firm's ability to integrate, build and reconfigure internal competencies in response to environmental challenges (Teece *et al.*, 1997). In this study, G-HCM and GIC can be understood as dynamic capabilities that enable rural banks to translate green leadership into sustained EVP. (3) providing empirical evidence that the connection between G-HCM and EVP is not simply additive but emerges from the combined and mediated effects of leadership and intellectual capital.

Executives have a pivotal role in the rural banking environment because of the considerable influence they have over rural banks' performance (Latan *et al.*, 2018; Shahab *et al.*, 2019). Aboramadan *et al.* (2020) and (Tuan, 2019a, 2019b) argue that executives in rural banking need to adopt a GSL approach as well as implement environmentally oriented HCM practices. The aim is to encourage and support the development of internal competencies required for GIC as well as improve EVP (Jirakraisiri *et al.*, 2021; Wang, 2019; Asiaei *et al.*, 2022). This study aims to address two significant questions: (1) Does G-HCM impact GIC? (2) Does GSL contribute to implementing G-HCM practices linked to GIC and EVP? We use the AMO theory (Appelbaum *et al.*, 2000) and the RBV framework (Barney, 2001) as the overarching theoretical foundation.

2. Literature review

2.1 Relationship between green servant leadership and G-HCM (CAP and SAM)

Servant leadership is a leadership approach that prioritizes serving employees by fostering their development, well-being and empowerment to enhance organizational outcomes

(Greenleaf, 1998; Yukl and Gardner, 2019). Building on this perspective, GSL extends servant leadership principles by explicitly integrating environmental values into leadership behaviors. The concept of servant leadership originates from the seminal work of Greenleaf (1998), which emphasizes leaders' moral responsibility to serve, empower and develop followers. In the context of environmental management, this leadership philosophy provides a strong foundation for GSL, where leaders prioritize environmental values while fostering employees' capabilities and motivation. GSL involves "providing direction, empowering and developing individuals to become environmentally conscious citizens, while demonstrating humility, authenticity, interpersonal acceptance and stewardship in relation to employees' pro-environmental contributions" (Tuan, 2019b). Importantly, GSL emphasizes addressing the unique needs of employees by aligning individual development, motivation and empowerment with organizational environmental goals (Tuan, 2019b; Elzek *et al.*, 2024). Elzek *et al.* (2024) further argue that GSL adopts a bottom-up approach that serves employees' green-related interests by providing the resources necessary for engagement in voluntary and creative green initiatives. Empirical evidence indicates that such leadership behavior enhances employee motivation, talent development and workforce productivity, which are critical antecedents of EVP (Tuan, 2019b; Tang *et al.*, 2018).

In addition, G-HCM is the environmental knowledge, skills, attitudes and values accumulated by employees through organizational initiatives (Pontillo *et al.*, 2025). Thus, G-HCM consists of capabilities, skills and motivation. Pangarso *et al.* (2024) and Dumont *et al.* (2016) state that G-HCM practices help them find, train, motivate and retain environmentally conscious employees. To get a strong GSL and improve EVP, it is thought that the role of GSL within organizations is important for making G-HCM policies and practices that work well (Tang *et al.*, 2018). GSL's focus on addressing the unique needs of employees may lead to the development and implementation of G-HCM practices aimed at maintaining motivation and empowerment among their workforce (Elzek *et al.*, 2024). G-HCM practices operationalize these leadership intentions by systematically developing employees' environmental capabilities, as well as their skills and motivation, through recruitment, training, performance management and incentive systems (Dumont *et al.*, 2016; Pangarso *et al.*, 2024). In this study, G-HCM is conceptualized along two key dimensions: capabilities (CAP), referring to employees' environmental knowledge, competencies and abilities and skills and motivation (SAM), reflecting employees' willingness and readiness to apply such competencies in environmental practices (Munawar *et al.*, 2022). Therefore, GSL assumes a crucial role in ensuring the implementation of effective G-HCM practices. This includes hiring and firing, training and development, performance management and evaluation, as well as pay and incentive systems. Therefore, we predict that:

H1. GSL has a positive link to capabilities.

H2. GSL has a positive link to skills and motivation.

2.2 Relationship between G-HCM (CAP and SAM) and GIC

G-HCM is a strategy that can help businesses create and implement eco-friendly plans and procedures (Latan *et al.*, 2018). Roscoe *et al.* (2019) conclude that G-HCM procedures are in line with the purpose of environmental accountability. Renwick *et al.* (2016) state that G-HCM highlights the importance of human resources in reducing pollution and improving an organization's operational procedures. Asiaei *et al.* (2021) define GIC as "the total stock of all kinds of intangible assets, knowledge, capabilities and relationships. about environmental protection or green innovation of both the individual and organization levels within a company" (p. 1587). According to Shahriari and Allameh (2020) and Yong and Fawehinmi (2019), the concept of GIC represents a resource that cannot be defined in financial terms and rather focuses on the ability, skills and experience of human beings, which can generate a competitive edge and enhance growth. The implementation of

G-HCM encompasses various employee traits, including “capabilities, wisdom, knowledge, commitments, skills, attitudes, experiences and creativity” (Munawar *et al.*, 2022, p. 142). Supporting this linkage, Jyoti and Bhau (2015) argue that organizations recruit employees who are active on green initiatives, offer skills and motivation and compensate; such G-HCM practices improve EVP. Accordingly, prior research conceptualizes GIC as a strategic resource derived from the effective deployment of green human capital, which subsequently enhances organizational competitiveness and sustainable growth (Shahriari and Allameh, 2020; Yong and Fawehinmi, 2019). In alignments, the G-HCM capabilities component (CAP) and skills and motivation (SAM) components are projected to influence the GIC.

Thus, we postulate the following hypothesis:

- H3. Capabilities are positively linked to GIC.
- H4. Skills and motivation are positively linked to GIC.

2.3 Green intellectual capital environmental performance relationship

GIC enhances organizational performance by equipping individuals with the necessary knowledge, abilities, skills and competencies. This proficiency enables better performance, which in turn contributes to overall organizational success (Roscoe *et al.*, 2019; Shahriari and Allameh, 2020; Yong and Fawehinmi, 2019). EVP is an organization’s efforts to meet and go beyond what society expects of them when it comes to caring for the environment, going beyond just following the rules and regulations (Chen *et al.*, 2005). Importantly, strong EVP has been shown to contribute to organizational success by enhancing operational efficiency, reputation and long-term competitiveness (Hart, 1995; Roscoe *et al.*, 2019). Consequently, GIC is a factor in enhancing EVP. Consequently, GIC is a factor in enhancing EVP. Based on the provided explanation, we postulate the following hypothesis:

- H5. GIC is positively linked to EVP.

2.4 Mediating effect of G-HCM (CAP and SAM) on the GSL and GIC relationship

An approach to leadership known as “servant leadership” prioritizes the development and well-being of subordinates (Yukl and Gardner, 2019). Moreover, G-HCM emphasizes sustainability and monitors the functioning of organizations and the impact of their systems and processes on employees, typically on a broader level (Lewis *et al.*, 2014). Siddiquei *et al.* (2021) conclude that GSL positively influences EVP by fostering pro-environmental values and behaviors among employees. Building on this foundation, subsequent studies indicate that servant leadership also enhances organizational performance by strengthening intellectual capital and knowledge-based resources (Yu *et al.*, 2024). Elzek *et al.* (2024) state that GIC (capabilities, skill and motivation) moderates the connection between servant leadership and firm performance, particularly in the tourism sector. Servant leaders enhance intellectual capital within organizations and contribute to the success of products and services in the market by using inspirational motivation and intellectual stimulation (Khatri *et al.*, 2023; Khan *et al.*, 2025). Furthermore, to foster intellectual capital, servant leadership allows employees the autonomy to select their tasks and determine the means to accomplish their objectives (Soomro and Soomro, 2024). GSL fully supports “the protection of the natural environment and translates this vision into employees through the enhancement of EVP” (Greenleaf, 1998, p. 5), significantly influencing firms’ G-HCM practices (Renwick *et al.*, 2016; Mansoor *et al.*, 2021). Pangarso *et al.* (2024) proposed that G-HCM mediate the connection between GSL and GIC. Thus, we propose a hypothesis as follows:

- H6. Capabilities mediate the association between GSL and GIC.
- H7. Skills and motivation mediate the association between GSL and GIC.

2.5 Mediating effect of GIC on the G-HCM (CAP and SAM) and EVP relationship

Prior studies (Khatiri *et al.*, 2023; Tran *et al.*, 2022) indicate that G-HCM methods affect GIC and the EVP. GIC represents the accumulation of environmentally related knowledge, capabilities, skills and relational assets embedded at both individual and organizational levels (Asiaei *et al.*, 2021). As a strategic intangible resource, GIC enables organizations to transform employees' green capabilities (CAP) and skills and motivation (SAM) into environmentally responsible behaviors and practices that support superior environmental outcomes (Yong *et al.*, 2019; Shahriari and Allameh, 2020). Firms with well-developed GIC are better positioned to internalize environmental knowledge, foster green innovation and coordinate environmentally sustainable activities, all of which contribute directly to improved EVP (Roscoe *et al.*, 2019; Soomro and Shah, 2019). Empirical evidence further suggests that the impact of G-HCM on EVP is not purely direct but operates through the development of GIC. Specifically, G-HCM capabilities enhance employees' environmental expertise and problem-solving capacity, which become embedded within GIC and facilitate environmentally efficient processes and reduced ecological impact (Asiaei *et al.*, 2021; Noor *et al.*, 2023). Similarly, employees' green skills and motivation strengthen GIC by promoting knowledge sharing, continuous learning and proactive engagement in environmental initiatives, which in turn improve EVP (Teferaa and Hunsake, 2021; Mansoor *et al.*, 2021; Li *et al.*, 2023).

Therefore, we suggest that:

H8. GIC mediates the link between capabilities and EVP.

H9. GIC mediates the link between skills and motivation and EVP.

The research framework is presented in Figure 1, based on a thorough literature analysis of the proposed hypotheses.

3. Methodology

3.1 Sample and procedure

Consistent with preceding researches that used similar data collection and analysis methods, this study used the cross-sectional quantitative survey design (Shoaib *et al.*, 2021; Mahmoud *et al.*, 2025). A total of 203 Indonesian rural banks were contacted, the researchers personally met with the general manager, human resources (HR) manager and operations manager for contextual clarifications. These individuals from different rural banks completed the questionnaire and returned it as reported in Table 1. General managers filled out questionnaires related to GSL and EVP, while HR managers and operations managers completed questionnaires on G-HCM and GIC. All respondents rated the items on a

Figure 1 Research framework

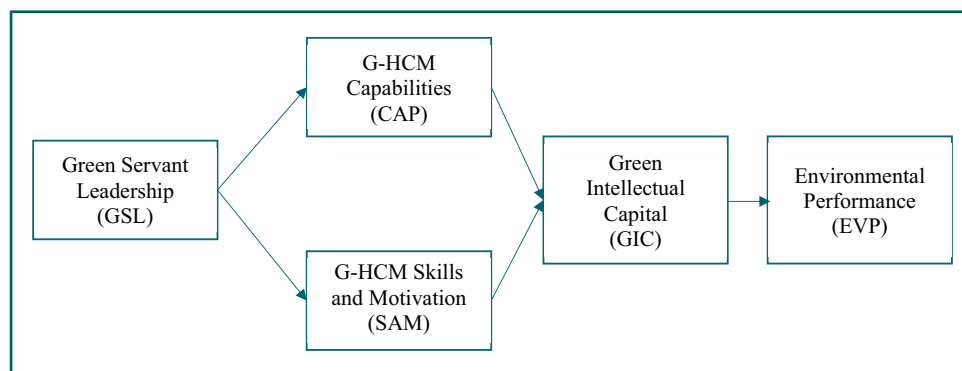


Table 1 Demographic characteristics of respondents

<i>Characteristic</i>	<i>Category</i>	<i>Frequency (n = 203)</i>	<i>%</i>
Gender (general managers)	Male	157	77.30
	Female	46	22.70
Gender (HR managers)	Male	131	64.60
	Female	72	35.40
Gender (operations managers)	Male	173	85.30
	Female	30	14.70
Education (general managers)	Bachelor's degree or higher	177	87.00
	Below bachelor's degree	26	13.00
Education (HR managers)	Bachelor's degree or higher	152	74.87
	Below bachelor's degree	51	25.13
Education (operations managers)	Bachelor's degree or higher	154	76.01
	Below bachelor's degree	49	23.99
Bank size (number of employees)	Fewer than 40 employees	91	44.83
	40 employees or more	112	55.17

Note(s): Each rural bank was represented by three respondents (general manager, HR manager and operations manager)
Source(s): Authors' own work

five-point Likert scale, ranging from “1 (strongly disagree)” to “5 (strongly agree)”. For this study, we used the back-translation method, translating the questionnaire from English to Indonesian and then back to English, following the guidelines of [Brislin \(1986\)](#), as the majority of the respondents were Indonesian speakers. It is important to note that this study is an independent academic investigation into ongoing leadership and management innovation practices, rather than a nationally mandated change management project.

3.2 Measurement of constructs

Based on a five-point Likert scale, the GSL was assessed based on a 12-item scale ([Tuan, 2019a](#)). Sample items include, “My manager emphasizes the importance of contributing to the environmental improvement.” G-HCM was measured using six items adapted from [Singh et al. \(2020\)](#). Sample items for G-HCM capabilities include “Recruiting only those who possess environmental values.” The example for item of skills and motivation includes “Employees should use environmental training in their jobs.” The GIC was measured by the seven-item framework from [Asiaei et al. \(2021\)](#). The sample item includes, “managers in our organization can fully support their employees in achieving the goals of environmental protection.” The scale measures EVP was adapted from a five-item scale, drawing inspiration from [Boiral and Paille \(2012\)](#) and [Singh et al. \(2020\)](#).

4. Results

4.1 Demographic background

In this survey, 203 participants, including general managers, HR managers and operations managers, were involved. There were 77.30% male and 22.70% female among general managers, with about 87% possessing at least bachelor's degree in law, engineering and management respectively. Also, for HR managers, 64.60% of the respondents are males and 35.40% females, while 74.87% have at least a bachelor's degree in management, technology and law. In the same way, of the operational managers, 85.30% were males and 14.70% were females, while 76.01% had bachelor's degrees in management and engineering. Finally, throughout the period, more than 55% of the rural banks had 40 or more employees. [Table 1](#) presents the demographic characteristics of the respondents. The sample consisted of general managers, HR managers and operations managers from 203 rural banks. Overall, the respondents were predominantly male and held at

least a bachelor's degree. More than half of the participating rural banks employed 40 or more employees.

4.2 Measurement model

In partial least squares structural equation modeling (PLS-SEM), the evaluation of the measurement model is a crucial preliminary step prior to assessing the structural relationships among variables. The purpose of the measurement model assessment is to ensure that the latent variables are measured reliably and validly by their observed indicators (Hair *et al.*, 2019).

The PLS measurement model involves the assessment of item and construct reliability, as well as the convergent and discriminant validity of variables (Mahmoud and Mahmoud, 2025; Mahmoud, Umar, *et al.*, 2025; Mahmoud, Ma'aji, *et al.*, 2025). Item reliability result shows that all the items have a sufficient item reliability value above 0.70 (Hair *et al.*, 2017). The threshold of the reliability coefficient used in this study was determined Hair *et al.* (2019) which argues that values > 0.70 are sufficient to portray construct reliability for both the Cronbach's alpha and Composite Reliability techniques. Table 2 displays the Cronbach's alpha and Composite reliability values, which shows that all the values are greater than 0.70 indicating sufficient variable reliability. The variable convergent and discriminant validity were portrayed in Tables 2 and 3. A variable is considered to have convergent validity when the average variance extracted (AVE) is greater than 0.50

Table 2 Convergent validity results

Variables	Item	Loading	Alpha	CR	AVE
Green servant leadership	GSL1	0.722	0.841	0.864	0.699
	GSL2	0.734			
	GLS3	0.855			
	GLS4	0.873			
	GLS5	0.812			
	GLS6	0.712			
	GLS7	0.762			
	GLS8	0.803			
	GLS9	0.765			
	GLS10	0.823			
	GLS11	0.861			
	GLS12	0.792			
Capabilities	CAP1	0.829	0.803	0.861	0.624
	CAP2	0.819			
	CAP3	0.802			
Skills and motivation	SAM1	0.793	0.796	0.782	0.724
	SAM2	0.901			
	SAM3	0.817			
Green intellectual capital	GIC1	0.750	0.817	0.812	0.654
	GIC2	0.788			
	GIC3	0.849			
	GIC4	0.860			
	GIC5	0.768			
	GIC6	0.874			
	GIC7	0.798			
Environmental performance	EVP1	0.849	0.798	0.801	0.723
	EVP2	0.865			
	EVP3	0.765			
	EVP4	0.789			
	EVP5	0.801			

Note(s): AVE = average variance extracted; CR = composite reliability

Source(s): Authors' own work

Table 3 Discriminant validity result

Variables	GSL	CAP	SAM	GIC	EVP
GSL	0.775				
CAP	0.756	0.851			
SAM	0.751	0.801	0.862		
GIC	0.729	0.786	0.761	0.790	
EK	0.567	0.756	0.643	0.701	0.818

Note(s): GSL = green servant leadership; CAP = capabilities; SAM = skills and motivation; GIC = green intellectual capital; EVP = environmental performance

Source(s): Authors' own work

(Hair *et al.*, 2017). All the AVE values in this study are between 0.624 and 0.724 and item loadings range is from 0.782 to 0.864, indicating that each construct demonstrated an impressive level of convergent validity (see Table 2). To ascertain the discriminant validity, Fornell and Larcker (1981) discriminant validity criteria was engaged; which requires that the AVE square root values for each variable must be larger than values within the same line of the correlation matrix to guarantee discriminant validity as portrayed in Table 3.

4.3 Structural model

Table 4 shows the results of the direct and indirect impacts tested using PLS-SEM modeling. According to Table 4, both *H1* [GSL → CAP] and *H2* [GSL → SAM] are supported by the data, with β values of 0.756 and 0.235, respectively, and *t*-values of 18.568 and 4.761, respectively, and *p*-values that are less than or equal to 0.01. GSL positively and significantly impacts G-HCM, including green recruitment and skills and motivation. Furthermore, Table 4 also shows that *H3* [CAP → GIC], *H4* [SAM → GIC], and *H5* [GIC → EVP] are supported with values of ($\beta=0.545$; $t=7.267$, $p \leq 0.01$), ($\beta=0.351$; $t=6.722$, $p \leq 0.01$) and ($\beta=0.568$; $t=9.528$, $p \leq 0.01$). This indicates that GIC is positively and significantly predicted by G-HCM, like capabilities and skills and motivation. This research has not disproved any direct hypothesis. The hypotheses *H6* [GSL → CAP → GIC], *H7* [GSL → SAM → GIC], *H8* [CAP → GIC → EVP] and *H9* [SAM → GIC → EVP] are all supported by β values of (0.412, $t=7.267$, $p \leq 0.01$), (0.211, $t=3.541$, $p \leq 0.01$), (0.320, $t=4.558$, $p \leq 0.01$) and (0.198, $t=3.021$, $p \leq 0.01$), respectively. These findings suggest that GSL positively influences GIC. Table 4 also thus confirmed all four of the study's indirect hypotheses (*H6*, *H7* and *H9*) were accepted.

Table 4 The results of direct and indirect influences

Hypotheses	Relationships	β	t-value	p-value	Discission
<i>H1</i>	GSL → CAP	0.756	18.568	0.000	Accepted
<i>H2</i>	GSL → SAM	0.235	4.761	0.001	Accepted
<i>H3</i>	CAP → GIC	0.545	7.267	0.000	Accepted
<i>H4</i>	SAM → GIC	0.351	6.722	0.000	Accepted
<i>H5</i>	GIC → EVP	0.568	9.528	0.000	Accepted
<i>H6</i>	GSL → CAP → GIC	0.412	4.123	0.000	Accepted
<i>H7</i>	GSL → SAM → GIC	0.211	3.541	0.005	Accepted
<i>H8</i>	CAP → GIC → EVP	0.320	4.558	0.000	Accepted
<i>H9</i>	SAM → GIC → EVP	0.198	3.021	0.002	Accepted

Note(s): GSL = green servant leadership; CAP = capabilities; SAM = skills and motivation; GIC = green intellectual capital; EF = environmental performance

Source(s): Authors' own work

5. Discussion

This study explores the connection between GSL, G-HCM dimensions of capability and skills and motivation, GIC and EVP. In line with the findings of *H1* and *H2* which shows a significant positive impact of GSL on G-HCM (CAP and SAM), a number of studies have shown a consistent result, with the most recent studies focusing on the retail industry (Yuki and Gardner, 2019; Renwick *et al.*, 2016; Mansoor *et al.*, 2021). Our research supplements and expands upon these findings by proving the positive role of GSL in enhancing G-HCM (CAP and SAM) among Indonesian rural banks. Likewise, the result approved the direct positive relationship between G-HCM (CAP and SAM) and GIC as described by *H3* and *H4*. This indicates that employees with G-HCM (CAP and SAM) are more plausible to generate, share and execute green ideas and practices, that strengthens the organization's GIC. *H5* is the last direct hypothesis of the study, which validates the positive link between GIC and EVP. According to this finding, the GIC will increase the EVP. This adds to the existing literature in this field by indicating that GIC has the potential to enhance EVP of rural banks (Pangarso *et al.*, 2024).

In addition, this study lends credence to the idea that G-HCM practices mediate the relationship between GSL and GIC as denoted by *H6* and *H7*. This specifies that green servant leaders, who give priority to environmental values and the development of employees, inspire and execute G-HCM practices like green training, empowerment and motivation (Tan *et al.*, 2020). These practices will consequently improve the environmental capabilities of employees, the sharing of knowledge and innovation which are the essential elements of GIC (Chen, 2008). G-HCM therefore serves as the conduit through which GSL drives the green knowledge assets development within organizations. Prior studies (Elzek *et al.*, 2024; Khatri *et al.*, 2023) find that leadership plays a significant role in shaping G-HCM, which in turn contribute to GIC in firms. Moreover, the study validates the indirect influence of G-HCM practices (CAP and SAM) on EVP through the GIC mediation as presented by *H6* and *H7*. This finding serves as an important knowledge-based asset that could transmute green oriented human resource practices into sustainable results. G-HCM practices therefore nurture environmentally conscious capabilities, skills and motivation among the workforce (Jabbour and Jabbour, 2016) which improve the GIC development to consequently facilitate the EVP (Chen, 2008).

6. Study implications

6.1 Theory implication

The findings have important theoretical and practical ramifications and provide credence to all theories, both direct and indirect. Among the important theoretical ramifications is the mediating effect of GIC on the G-HCM practices (CAP and SAM) and EVP relationship which proves the theoretical support for the RBV, presenting the GIC as an important intangible and strategic resource that transforms G-HCM capabilities, skills and motivations into EVP at the organizational level (Hart, 1995). Preceding empirical studies proved that firms that leverage GIC as a mediating mechanism benefit from increased environmental efficiency and competitive advantage (Del Brío *et al.*, 2007; Pham *et al.*, 2020). Another important theoretical ramification is that very few studies have analyzed the indirect impact of GSL on EVP by including two mediating variables. While there are some previous arguments linking GSL to EVP (Ha *et al.*, 2023), this study delineates the fundamental relationship between two mediating variables and furnishes empirical proof of GSL's impact on EVP. As such, this study presents a comprehensive framework for understanding how GSL influences EVP through mediation processes. Furthermore, by focusing on EVP in the retail business, this study significantly contributes to the existing literature, particularly in the context of the rural banking that face various challenges. While there are a number of studies on G-HCM (Yusoff *et al.*, 2020), most of them tend to view them as crucial elements for sustainable performance (Yusoff *et al.*, 2020; Yong *et al.*, 2019). This study goes beyond

only looking at G-HCM activities through the lens of environmental management; it also helps us better understand how these method works, rather than just increasing EVP, contribute to the growth of GIC.

In practical sense, this study suggests that to increase EVP, rural banks must recruit environmentally conscious employees, and design appropriate selection methods that will ensure the prospective employees' understanding and concern for environmental matters. The study also suggests that managers implement green policies, which include promoting enhanced capabilities, skills and motivation for staff members who do adhere to relevant environmental regulations, in light of the growing emphasis on environmental concerns in rural banks.

6.2 Practical implications

The findings provide several practical insights for rural banks seeking to adopt this leadership approach. Prior research suggests that resistance to green leadership initiatives may stem from limited environmental awareness, entrenched routines or perceptions of increased workload among employees. To mitigate such challenges, managers can emphasize continuous communication, role modeling and incentive alignment to reinforce green values and behaviors.

The development of competencies required for GSL is primarily the responsibility of top management and human resource units, particularly through targeted training, coaching and leadership development programs. By strengthening employees' green-related capabilities, skills and motivation, rural banks can enhance the effectiveness of G-HCM practices and support the diffusion of GSL across organizational levels.

While this study focuses on internal organizational outcomes, prior studies indicate that the diffusion of green leadership practices may also influence external stakeholders, including customers, through improved EVP and organizational reputation. Future research could therefore examine customer perceptions and behavioral responses to GSL initiatives in the rural banking sector.

7. Conclusion

Our study proposes a number of conclusions for the rural banks. This study concludes that GSL plays a central role in enhancing EVP through a sequential mechanism involving G-HCM and GIC. Specifically, the findings demonstrate that GSL strengthens G-HCM capabilities and employees' skills and motivation, which subsequently fosters the development of GIC and, in turn, improve EVP. Rather than operating in isolation, these relationships highlight the importance of leadership-driven human capital practices in translating green-oriented values into tangible environmental outcomes. That is why it is imperative that rural banks educate their staff on environmental practices and initiatives through formal training programs. In addition, making sure employees can put what they have learned in training to use is of the utmost importance. Because of this, bank employees will be able to advance their environmental literacy, which will boost the effectiveness of G-HCM practices and EVP. Moreover, from a practical perspective, managers who want to promote G-HCM practices can learn a lot from this study, which provides strong evidence of the positive impacts of GSL on G-HCM. One important implication is that rural banks should prioritize the selection, development and retention of leaders who exhibit GSL behaviors, as hiring for GSL can significantly enhance G-HCM capabilities, GIC and ultimately EVP. The findings also help managers recognize practices that can encourage the development of GIC among employees to improve EVP. It is important for the rural bank to recruit individuals who are environmentally conscious. To that end, recruiters can design appropriate selection methods, such as conducting tests to assess prospective employees' understanding and concern for environmental issues.

Given the increasing attention to environmental issues in the rural banks, this study recommends that managers adopt green policies, including encouraging improved capabilities, skills and motivation for employees who do comply with applicable environmental policies. Future research is therefore encouraged to adopt qualitative or mixed-method approaches to gain richer insights into how GSL and G-HCM practices are perceived and enacted within organizations.

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