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THE ROLE OF GREEN INTELLECTUAL CAPITAL AND EMPLOYEE INNOVATIVENESS IN ENHANCING JOB AND FINANCIAL PERFORMANCE: INSIGHTS FROM INDONESIA'S STATE-OWNED ENTERPRISES

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ABSTRACT
This study aims to examine the impact of green intellectual capital on job performance and financial performance, with employee innovativeness serving as an intervening variable. Employing a quantitative approach, the research utilizes primary data collected through questionnaires distributed to employees of state-owned enterprises (SOEs) and their subsidiaries in the logistics services sector, ranging from top management to staff levels. The findings reveal that green intellectual capital has a direct and positive influence on employee innovativeness, financial performance, and job performance. However, employee innovativeness does not mediate the relationship between green intellectual capital and either job performance or financial performance. The study underscores the importance of an employee-centric strategy for enhancing workforce performance, innovation, and financial outcomes. Policymakers and corporate leaders are encouraged to prioritize intellectual capital development within their organizations. The results affirm that robust intellectual capital contributes significantly to heightened employee innovativeness, improved job performance, and stronger financial results. Consequently, companies must take proactive steps to cultivate and sustain intellectual capital that drives both organizational and individual success

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1. INTRODUCTION

Technological advancements have significantly influenced how individuals and organizations operate to achieve their objectives. Unfortunately, these advancements often contribute to environmental degradation. Economic activities, indirectly, exacerbate climate change, which poses severe risks to humanity. Issues such as resource depletion, carbon emissions, climate change, and biodiversity loss disrupt ecological balance (Cankaya & Sezen, 2019 in Firmansyah, 2017).

Climate change and environmental destruction have become critical global concerns. The target of achieving net-zero emissions by 2050 has prompted governments and businesses to take action. However, according to Ahdiat (2022), Indonesia's environmental protection efforts remain poor, both globally and within the Asia-Pacific region. The Environmental Performance Index (EPI) 2022 ranks Indonesia 164th out of 180 countries, signaling an urgent need for improvement to balance environmental restoration and profitability.

For the government, State-Owned Enterprises (SOEs or BUMN) serve as essential instruments in achieving sustainability goals. Sustainable performance, often referred to as sustainability performance (SP), reflects an organization's achievements across various dimensions and indicators of sustainability (Schaltegger & Wagner, 2006).

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Commonly used indicators include environmental, social, economic, operational, and financial dimensions, all of which are vital for comprehensive sustainability measurement.

Indonesia's State-Owned Enterprises (SOEs or BUMN) held assets valued at over IDR 9,000 trillion in 2021, equivalent to 53% of the nation's GDP that year (Rafie, 2022). This underscores their critical role as drivers of Indonesia's economy. However, BUMNs are also significant contributors to carbon emissions. In 2022, seven key BUMNs—Pertamina, PLN, Pupuk Indonesia, Semen Indonesia, PTPN, Perhutani, and MIND ID—accounted for 20% of Indonesia's total carbon emissions (Fajrian, 2023). Consequently, implementing policies to reduce environmental degradation while maintaining corporate productivity is imperative.

SOEs are entities where the majority of shares are owned by the state. One of their primary objectives is to serve as agents of development, promoting equitable growth and improving community welfare. Additionally, they are expected to generate profits, part of which contribute to national revenue. With the adoption of the Sustainable Development Goals (SDGs), SOEs are mandated to balance economic, social, and environmental objectives as outlined in Ministerial Regulation No. 2/MBU/3/2023 on Corporate Governance Guidelines and Regulation No. 1/MBU/3/2023 on Special Assignments and Social and Environmental Responsibility Programs.

Despite their potential, some BUMNs have faced significant challenges, including inefficiency and a lack of professionalism, leading to financial losses. As noted by Nainggolan (2020), these inefficiencies highlight the critical need for green intellectual capital. According to the Central Government's financial report, 27 BUMNs incurred losses in 2021, with the number decreasing slightly to 23 in 2022, demonstrating the ongoing need for enhanced management and operational efficiency.

Green Intellectual Capital (GIC) plays a crucial role in ensuring companies remain focused on sustainability by enhancing employee capabilities, transferring technology, and applying best practices to achieve organizational sustainability goals (Firmansyah, 2017). According to Y. S. Chen (2008), GIC encompasses all resources controlled by a company, including intangible assets, knowledge, skills, and other elements tied to environmental protection and eco-friendly innovations at both individual and organizational levels.

Research by Yusliza et al. (2020) demonstrated that GIC positively impacts sustainability performance, including economic, environmental, and social dimensions. Similarly, NR & Yurniwati (2018) found that GIC influences financial performance in Indonesian manufacturing firms, while Soewarno & Tjahjadi (2020) reported a positive relationship between intellectual capital and financial performance in the Indonesian banking sector. However, contrasting findings emerged from Sukirman & Dianawati (2023), who observed no significant effect of GIC on financial performance in Indonesian mining companies. Likewise, Bhatti et al. (2023) recently concluded that GIC does not influence sustainability performance.

Firmansyah (2017) also highlighted that GIC serves as a key driver of innovation, both at individual and organizational levels. Human resources, in particular, are instrumental in fostering innovation. Ali et al. (2021) found that GIC positively affects green innovation in manufacturing firms in Pakistan. Similarly, D. Liu et al. (2022) demonstrated that the three dimensions of GIC—green human capital, green structural capital, and green relational capital—positively influence green innovation. However, Ali et al. (2021) noted a slight divergence, with green relational capital showing no significant impact on green innovation, while green human capital and green structural capital exhibited positive effects.

According to BUMN regulations, organizational performance indicators are broken down and assessed at the individual employee level. Consequently, every employee is assigned specific job performance targets. Research by Zerr & Aaqoulah (2021) revealed that intellectual capital positively influences both individual and organizational performance in Jordanian universities. Similarly, Rahmisyari & Musafir (2023) found that intellectual capital enhances employee productivity at the Bank Mandiri Taspen Gorontalo Branch Office. However, Kartikasari & Sukarno (2023) reported contrasting findings, noting that structural capital, a dimension of intellectual capital, does not impact job performance.

Building on these studies, further exploration is recommended to identify additional variables affecting employee and organizational performance. Sarmawa et al. (2022) and M. Khan et al. (2022) suggest investigating alternative variables related to job performance and employee innovativeness. Moreover, inconsistencies in previous findings and the lack of studies focusing on state-owned enterprises (BUMN) underscore the need for research in this context.

This study addresses these gaps by examining the impact of green intellectual capital (GIC) on job performance and financial performance, with green employee innovativeness as an intervening variable. Unlike previous research, this study emphasizes environmental issues. The questionnaire items are designed to assess respondents' perceptions of intellectual capital, employee innovativeness, financial performance, and job performance, all framed within an environmental context. Measurement indicators align with existing BUMN regulations, ensuring relevance to the study's focus.

This research contributes to the literature by providing empirical evidence on GIC, employee innovativeness, financial performance, and job performance, with BUMN as the object of study. The paper is organized into sections, including the introduction, literature review, research methodology, results and discussion, and conclusions. The findings highlight the importance of enhancing green intellectual capital to improve organizational performance, employee job performance, and innovativeness with an environmental perspective.

2. LITERATURE REVIEW

Literature Review

RBT theory views a company as a collection of assets or good resources, tangible asset, or intangible asset (Firer & Mitchell Williams, 2003). The same thing was also expressed by Fahy & Smithee (1999) which states that company assets that can provide a competitive advantage for the company can be divided into three types, namely tangible assets, intangible assets, and human resource capabilities. According to research by Barney et al. (2021), Resource Based Theory (RBT) stated that intangible resource companies are more likely to contribute to the achievement and sustainability of superior corporate performance when they are combined or integrated.

Job performance is defined as a collection of employee behaviors that have expected value for the organization (positive or negative) (Chernyshenko & Stark, 2005). Based on (Borman & Motowidlo, 1997), Job performance is defined as the effectiveness of the incumbent in carrying out assigned activities either directly by implementing some of the technological processes, or indirectly by providing the required materials or services. Job performance emphasizes the importance of performance for organizational goals. It refers to the required outcomes and behaviors that directly serve the goals of the organization organisasi (Motowidlo & Van Scotter, 1994). In this research, job performance will focus on individual assignment of responsibilities that have been assigned to them based on individual performance indicators. (Lee et al., 1999) measuring assignment performance into efficiency, efficacy, and quality. Measurement (Lee et al., 1999) develops measurements of (Schermerhorn Jr., 1984). (Robbins, 2005) dividing assignment measurements into assignment results, attitudes, and behavior towards assignments. In this research, job performance is linked to the achievement of sustainable performance which is continuously implemented by individual company employees.

Sustainable financial performance is the extent to which a company continuously generates economic value through its operations for company owners (Akhimien & Adekunle, 2023). Sustainable financial performance is also assessed through a company's financial viability, financial profitability, financial solvency, and financial liquidity, which is the extent to which companies generate profits, increase the value of invested capital, and pay off their short-term and long-term obligations at the same time (Ong & Chen, 2013). The more a company can generate sustainable growing revenues, the more the company is free from the risk of bankruptcy or the inability to pay debts and finance future operation (Hourneaux Jr et al., 2018).. From the explanation above, a company's sustainable financial performance can be determined by how efficiently and effectively the company utilizes available and limited resources to produce output, serve customers better, expand its product portfolio, and successfully enter and develop new markets.

Corporate innovation can occur within the workplace or company itself and within the scope of individual company employees. According to (Pot, 2011) workplace innovation is the implementation of combined policies in the fields of work organization, human resource management and technology support. WPI is a social and participatory process that shapes work and working life, combining human, organizational and technological dimensions. Participatory processes simultaneously result in improved organizational performance and improved quality of work life (Eeckelaert et al., 2012).

(Smith et al., 2008) states that innovativeness is the effective management of innovation in a company. In relation to the environment, Employee Innovativeness is linked to sustainability goals, namely innovation that is friendly to the environment (green innovation). Green Innovation (GI) or green innovation is any form of innovation that aims to reduce all negative impacts on the environment by carrying out company activities that enable the use of environmentally friendly natural resources and energy (Sáez-Martínez et al., 2016), (Aboelmaged, 2018), (Rezende et al., 2020).

Y. S. Chen (2008) explains green intellectual capital as all assets owned by the company in the form of intangible assets (intangible asset), knowledge (knowledge), abilities, and other matters related to environmental preservation and green innovation both at the individual and organizational levels. According to Delgado-Verde et al. (2014), green intellectual capital is an intangible asset or knowledge related to environmental management, organizational ideas, and as an intermediary in environmentally friendly product innovation.

Based on the opinion of Y. S. Chen (2008), GIC consists of three components, namely green human capital, green structural capital, and green relationship capital. According to Y. S. Chen (2008), green human capital (GHC) is

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defined as the final presentation of employee knowledge, skills, abilities, experience, behavior, wisdom, creativity, and commitment to environmental protection. This opinion is also followed by Chaudhry et al. (2017), Gogan et al. (2016), Tonay & Murwaningsari (2022). Capital attached to the individual level, not at the organizational level, so that company employees are important assets of the company and if the employee leaves the company, the human capital will disappear (Miller & Wurzburg, 1995), (Roos Ana et al., 2021).

In contrast to GHC, green structural capital (GSC) is attached to the company organization, so that when employees leave the company, the capital will not be lost because it is attached to the company. GSC according to Y. S. Chen (2008) is organizational capability, organizational commitment, knowledge management system, managerial philosophy, organizational culture, corporate image, patents, copyrights, and trademarks towards environmental protection. Next is the third component in the form of green relational capital (GRC). The combination of the two previous components will support the GRC component because this component will provide real value for the company (Supeno, 2018). According to Johnson (1999) and Y.-S. Chen et al. (2006) states that relational capital is a presentation of the relationship between a company and its main stakeholders such as customers, suppliers, and partners. Then according to Y. S. Chen (2008) Green relationship capital is defined as a company's interactive relationship reserves with customers, suppliers, network members and partners for environmental management and green innovation.

Rizvi (2021) states that GIC has a direct relationship with environmental sustainability performance. Khan et al. (2020) stated that human resource management practices produce results intellectual capital will have a direct influence on sustainability performance. Akhimien & Adekunle (2023) states that sustainable performance at the company level is defined as the extent to which a company promotes social welfare, while at the same time generating economic value without damaging the environment in which it operates. Another definition mentions sustainable performance or what is often referred to as sustainability performance (SP) can be interpreted as company performance in all dimensions and for all indicators of company sustainability (Schaltegger & Wagner, 2006). The dimensions that are often used in measuring SP are environmental dimensions, social dimensions, and economic dimensions (Chin et al., 2015), (Hussain et al., 2018), (Yildiz Çankaya & Sezen, 2019), (Firmansyah et al., 2021), (Afum et al., 2020). Rizki et al. (2022) following research from Shahzad, Du, et al. (2020), Inman & Green (2018), and Acquah et al. (2021) which divides the SP variable into 4 dimensions, namely Economic performance (EP), Operational performance (OP), Social performance (SP) and Environmental performance (ENP). Financial sustainable performance (FSP) is the extent to which a company continuously generates economic value through its operations for company owners (Akhimien & Adekunle, 2023).

The wealth of the company and company employees is stored in the company's intellectual property which is used in developing company innovation to achieve SP goals. To prove this, research from Asiaei et al. (2023) found that GHC, GSC, and GRC have a significant and positive influence on environmental sustainability performance through GI. Research from Marco-Lajara et al. (2022) is supported by the opinion of Asiaei et al. (2023) that GI succeeded in mediating GIC in influencing SP positively. Research Mahmood et al. (2023) states that employee innovativeness influences individual job performance and firm's financial performance. Pea-Assounga & Yao (2021) in his research, it was stated that Employee Innovativeness was able to mediate the relationship between internet banking and employee performance or job performance. Osman et al (2015) in their research prove that innovation affects job performance.

Based on the explanation above, the hypothesis built is:

H1: Green Intellectual Capital influences significantly Job Performance
H2: Green Intellectual Capital influences significantly Financial Performance
H3: Green Intellectual Capital influences significantly Employee Innovativeness
H4: Employee Innovativeness influences significantly Job Performance
H5: Employee Innovativeness influences significantly Financial Performance
H6: Employee Innovativeness mediates Green Intellectual Capital on Job Performance
H7: Employee Innovativeness mediates Green Intellectual Capital on Financial Performance

3. METHODS

This research is quantitative research, specifically a causal association approach to examine the influence and relationships between the variables used. Quantitative research includes measuring variables to test the hypotheses that are built. The data collection technique uses purposive sampling. Questionnaires were distributed to employees from top management to employees who are experienced and understand related to company and individual performance indicators. Data was obtained through a questionnaire survey of BUMN/subsidiaries in the field of transportation services or logistics services. From distributing the questionnaire via Google Form, 60 respondents were obtained who had filled it out. Respondents were asked to fill out multiple-choice questions to obtain data, both on the respondent's

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profile and company aspects. Demographic characteristics are gender, age, and educational qualification, while organizational aspects are experienced duration.

Data were analyzed using partial least squares (PLS). The questionnaire was developed from previous research by adapting it to environmental issues and existing provisions in BUMN. The indicators for the GIC variable develop measurements from Y. S. Chen (2008), Huang & Kung (2011), C. Chang & Chen (2012), Firmansyah (2017), Yusliza et al. (2020). Financial performance develops measurement indicators from Ahmad et al. (2019), Ong & Chen 2013). Employee innovativeness and job performance develop measurement indicators from M. Khan et al. (2022).

The framework for this research can be seen in Figure 1 and the Structural Equation Model (SEM) can be seen in Figure 2.

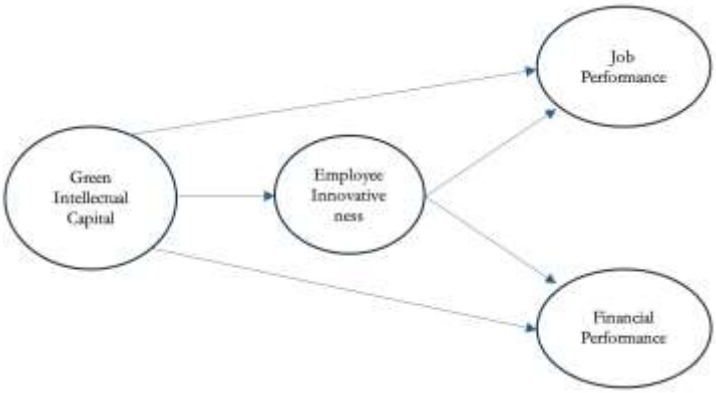

Figure 1. Research Framework

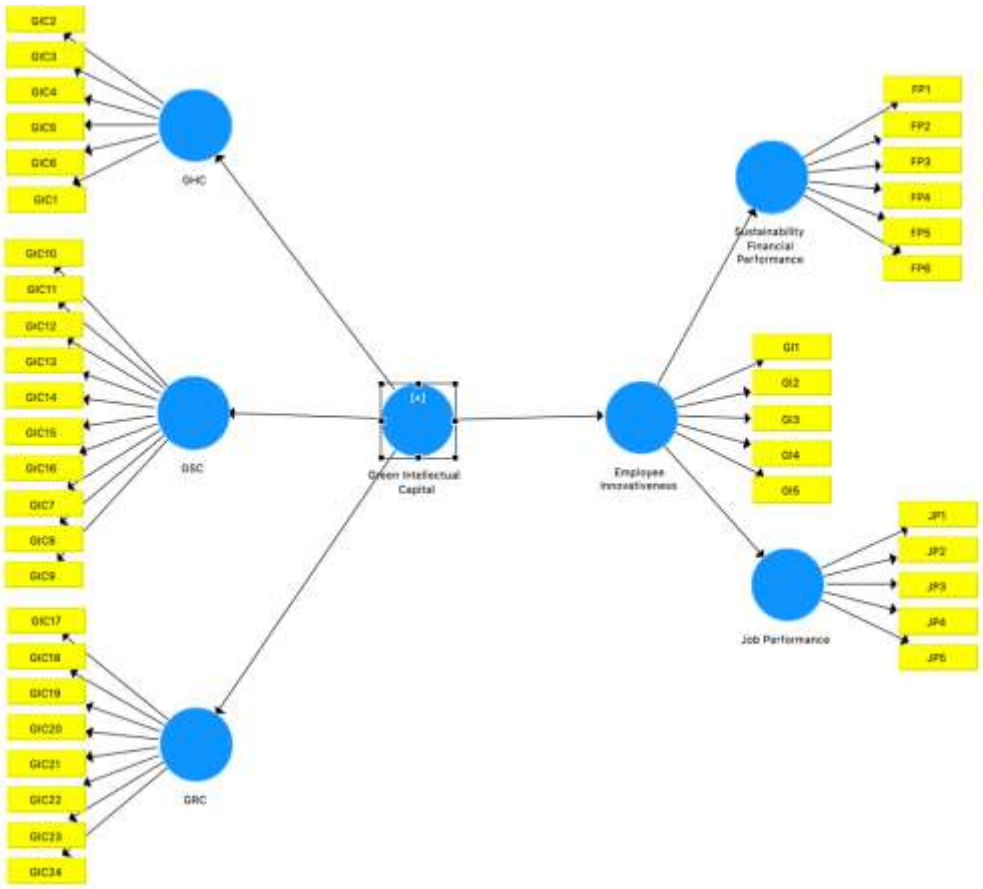

Figure 2. SEM model

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4. RESULTS AND DISCUSSIONS

1. Descriptive statistics

The data obtained from the questionnaire amounted to 60 respondents. Respondents came from BUMN/Subsidiary employees who work in logistics services. Data was obtained in the period 7-14 November 2023. Based on table 1, it can be seen that 83% of respondents were male and 17% were female. Most of the respondents' education was Bachelor's or Diploma IV with a proportion of 37%, followed by Master's/Master's education level at 30%. Furthermore, based on work experience in BUMN/Children, most respondents have more than 15 years of experience (40%) followed by respondents with 2-5 years of work experience (25%). Regarding the respondent's position, 3 respondents (5%) are in top management positions. Half of the respondents are in middle management (50%) followed by 15 staff or 25%.

Tabel 1. Demographic Data

	Frequency	%
Gender:		
Male	50	83%
Female	10	17%
	60	
Education:		
S2/Master	18	30%
Sarjana/Diploma IV	22	37%
Diploma 3	16	27%
STM/SMA/Equivalent	4	7%
	60	
Experience in BUMN/Subsidiary		
2 to 5 years	15	25%
5 to 10 years	10	17%
10 to 15 years	11	18%
Above 15 years old	24	40%
	60	
Position		
Top Management	3	5%
Middle Management	30	50%
Lower Management	12	20%
Staff	15	25%
	60	

2. Measurement Model Assessment

In PLS SEM data analysis, the first test is the outer model test to assess the validity and reliability of the data. To carry out a reliability test, it is done by looking at the outer loading, composite reliability (CR) and Average Variance Extracted (AVE) values. This research model consists of 1st order and 2nd SEM orders. The initial step is to test the reliability and validity of the data on 1st SEM orders. Based on the results of the first outer loading, it was found that there were 2 indicators in the green intellectual capital variable with values below 0.7. Therefore, the GIC 1 and GIC 7 indicators are removed.

After deleting, model 1st order SEM is then tested to see its reliability and validity. Figure 3 shows model corrected 1st order SEM.

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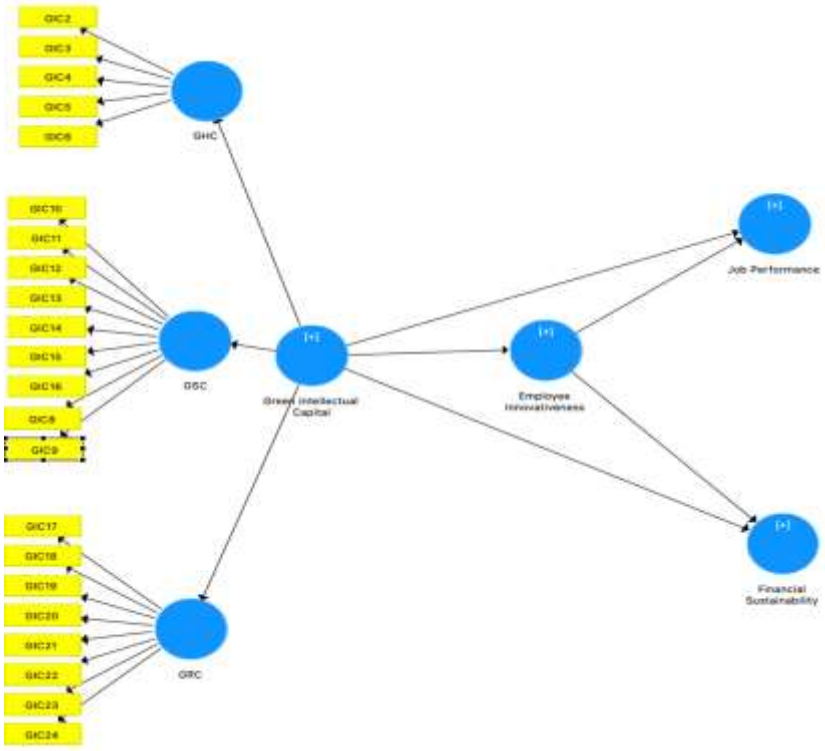

Figure 3. 1st Order SEM

Based on table 2 above, it can be seen that the outer loading value is above 0.7, meaning that all indicators are reliable. After carrying out the outer loading test, the next test is to look at the CR and AVE values.

Table 2. Outer Loading

	Employee Innovativeness	Financial Sustainability	GHC	GRC	GSC	Green Intellectual Capital	Job Performance
FP1		0.854					
FP2		0.862					
FP3		0.796					
FP4		0.851					
FP5		0.843					
FP6		0.868					
GI1	0.922						
GI2	0.901						
GI3	0.867						
GI4	0.875						
GI5	0.851						
GIC10					0.855		
GIC11					0.837		
GIC12					0.889		

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GIC13					0.936		
GIC14					0.867		
GIC15					0.876		
GIC16					0.875		
GIC17				0.895			
GIC18				0.905			
GIC19				0.732			
GIC20				0.917			
GIC21				0.865			
GIC22				0.813			
GIC23				0.850			
GIC24				0.908			
GIC2			0.802				
GIC3			0.806				
GIC4			0.854				
GIC5			0.870				
GIC6			0.894				
GIC8					0.858		
GIC9					0.827		
JP1							0.807
JP2							0.889
JP3							0.918
JP4							0.840
JP5							0.727

Based on table 4, all indicators used are reliable and valid as seen from the CR value above 0.7 and the AVE value above 0.5.

Table 3. Reliability Test

	Composite Reliability	Average Variance Extracted (AVE)
Employee Innovativeness	0,947	0,78
Financial Sustainability	0,938	0,715
GHC	0,926	0,716
GRC	0,959	0,744
GSC	0,965	0,756
Green Intellectual Capital	0,979	0,682
Job Performance	0,922	0,704

After the data and indicators are declared reliable, the next step is to measure validity. The validity of the model is measured using cross loading. Based on the cross-loading test in appendix 1, the loading value of each item

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on the construct is greater than the cross-loading value. This indicates that all valid indicators are used to measure the variables. Furthermore, the discriminant validity value can be seen from the fornell larcker value in table 5.

Table 4. Fornell Larcker

	Employee Innovativeness	FP	GHC	GRC	GSC	GIC	JP
Employee Innovativeness	0,883						
FP	0,585	0,846					
GHC	0,613	0,69	0,846				
GRC	0,74	0,695	0,816	0,863			
GSC	0,717	0,666	0,834	0,931	0,869		
GIC	0,733	0,711	0,899	0,972	0,979	0,826	
JP	0,605	0,825	0,619	0,615	0,583	0,629	0,839

Based on the results of the Fornell-Larcker criterion test in table 5, the square root AVE value for Financial Performance (FP) is 0.846, which is greater than the correlation value of FP with Employee Innovativeness of 0.585, which shows that the discriminant validity value requirements have been met and are acceptable. Then, the square root AVE value in JP is 0.839, which is greater than the employee innovativeness correlation value of 0.605, besides that it is greater than the FP correlation value of 0.825, and so on. This shows that the discriminant validity value requirements have been met and are acceptable.

Because the research model contains dimensions in the green intellectual capital (GIC) variable, the next model test is to test 2nd SEM orders. The GIC variable is measured by the GHC, GSC and GRC indicators. The GHC, GSC, and GRC values are taken from the latent variable values in test 1st order SEM. Model 2nd Order SEM can be seen in Figure 4.

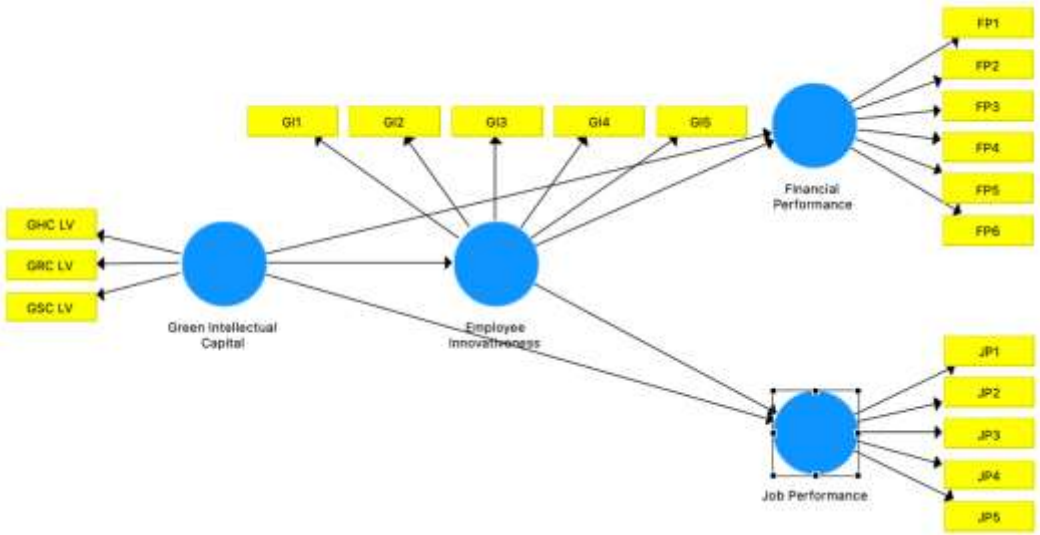

Figure 4. 2nd Order SEM

Same as in 1st order SEM, and the 2nd order will be tested on the outer model. The first test is to test the loading factor. Based on the loading factor values in table 6, it can be seen that all scores are above 0.7. Therefore, all indicators are declared reliable.

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Table 6. Loading Factor 2nd Order SEM

	Employee Innovativeness	Financial Performance	Green Intellectual Capital	Job Performance
FP1		0,88		
FP2		0,874		
FP3		0,825		
FP4		0,834		
FP5		0,814		
GI1	0,921			
GI2	0,901			
GI3	0,867			
GI4	0,874			
GI5	0,851			
GHC LV			0,915	
GRC LV			0,946	
GSC LV			0,934	
JP2				0,862
JP3				0,938
JP4				0,875
JP5				0,752

The next step is to test the AVE and Composite reliability values. Based on table 7, the AVE value is above 0.5 and the CR value is above 0.7. So, it can be said that all variable measures are declared valid and reliable.

Table 7. CR and AVE values on 2nd Order SEM

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Employee Innovativeness	0,93	0,931	0,947	0,781
Financial Performance	0,921	0,93	0,938	0,715
Green Intellectual Capital	0,924	0,925	0,952	0,868
Job Performance	0,893	0,902	0,922	0,704

Then, after carrying out the reliability test, proceed to test discriminant validity. The discriminant test was carried out by looking at the cross-loading value and the Fornell Larcker criteria. Based on the cross-loading test in table 8, it can be seen that the loading value of each item on the construct is greater than the cross-loading value. This indicates that all valid indicators are used to measure the variables.

Table 8. Cross Loading 2nd Order SEM

	Employee Innovativeness	Financial Performance	Green Intellectual Capital	Job Performance
FP1	0,602	0,855	0,728	0,661
FP2	0,357	0,864	0,515	0,653

FP3	0,527	0,799	0,574	0,588
FP4	0,543	0,849	0,66	0,723
FP5	0,421	0,841	0,512	0,767
FP6	0,449	0,865	0,535	0,805
GHC LV	0,631	0,695	0,915	0,637
GI1	0,921	0,483	0,67	0,516
GI2	0,901	0,552	0,626	0,602
GI3	0,867	0,558	0,628	0,502
GI4	0,875	0,442	0,605	0,471
GI5	0,851	0,536	0,66	0,566
GRC LV	0,728	0,658	0,946	0,588
GSC LV	0,66	0,624	0,934	0,563
JP1	0,478	0,694	0,564	0,808
JP2	0,523	0,754	0,56	0,889
JP3	0,579	0,753	0,56	0,917
JP4	0,562	0,691	0,543	0,839
JP5	0,366	0,541	0,45	0,729

Furthermore, the discriminant validity value can be seen from the fornell larcker value in table 9. Based on the results of the fornell-larcker criterion test in table 9, the square root AVE value on Financial Performance (FP) is 0.846 greater than the correlation value of FP with Employee Innovativeness of 0.593 which shows the discriminant validity value requirements have been met and are acceptable. Then, the square root AVE value in JP is 0.86 greater than the employee innovativeness correlation value of 0.599, besides that it is greater than the FP correlation value of 0.779, and so on. This shows that the discriminant validity value requirements have been met and are acceptable.

Table 9. Fornell Larcker Criteria 2nd Order SEM

	Employee Innovativeness	Financial Performance	Green Intellectual Capital	Job Performance
Employee Innovativeness	0,883			
Financial Performance	0,593	0,846		
Green Intellectual Capital	0,723	0,721	0,932	
Job Performance	0,599	0,779	0,617	0,86

After testing the outer model, the next step is to test the inner model. The first test is the model feasibility test. Based on the SRMR value of 0.080, the research model is said to be feasible because it is below the value of 0.1. Furthermore, the R Square value shows a value of 0.530 for financial performance and 0.430 for job performance. The R square value of financial performance shows that the financial performance value can be explained by the variables in the research model by 53% and the rest is explained by other factors. The figure 53% indicates that the model is a medium model. Then for R Square job performance, it indicates that the value of job performance can be explained by the research model by 43% or a weak model.

The final step is to carry out a significance test through the bootstrapping test. The results can be seen in table 10. Based on table 10, H4, H5, H7 are rejected and H1, H2, H3, H6 are accepted.

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Table 10. Significance Test

	Hipotesis	Estimate β	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
Green Intellectual Capital -> Job Performance	H1	0,4266	0,1544	2,7631	0,0059	Terima
Green Intellectual Capital -> Financial Performance	H2	0,5986	0,1639	3,6514	0,0003	Terima
Green Intellectual Capital -> Employee Innovativeness	H3	0,7230	0,0695	10,4010	0,0000	Terima
Employee Innovativeness -> Job Performance	H4	0,2957	0,1789	1,6523	0,0991	Tolak
Employee Innovativeness -> Financial Performance	H5	0,152	0,1905	0,7964	0,4262	Tolak
Green Intellectual Capital -> Employee Innovativeness -> Job Performance	H6	0,214	0,1256	1,7020	0,0894	Tolak
Green Intellectual Capital -> Employee Innovativeness -> Financial Performance	H7	0,11	0,1383	0,7928	0,4282	Tolak

5. DISCUSSION

Based on table 10, this research found that H1, H2, H3 were accepted and H4 and H5 were rejected. Then, the significance test for mediation shows that Employee Innovativeness fails to mediate the relationship between GIC and job performance and GIC with financial performance so that H6 and H7 are rejected.

GIC directly positively influences employee performance as shown by the P-value less than 0.05. These findings are in accordance with research (Mahmood et al., 2023) which states that employee innovativeness influences individual job performance and firm's financial performance. This research provides results that are in line with research (Zerr & Aaqoulah, 2021) who found that intellectual capital has a positive effect on individual performance and also organizational performance and (Rahmisyari & Musafir, 2023) which states that intellectual capital has a positive effect on employee work productivity.

This research also supports that GIC has a positive effect on financial performance in accordance with research (Mahmood et al., 2023) and NR & Yurniwati (2018) found that green intellectual capital influences financial performance in manufacturing companies in Indonesia. This research also shows that GIC has a positive effect on employee innovativeness in accordance with research (Örnek & Ayas, 2015) which states that intellectual capital will facilitate employee behavior to innovate which will ultimately provide the company with a competitive advantage.

This research also found that employee innovativeness failed to prove its effect on job performance and financial performance. This research is not in line with research (Osman et al., 2015) and Mohsin Khan (2021) in his research proves that employee innovativeness influences job performance. The failure to prove this hypothesis may be due to the demographics of the respondents. Of the respondents, 25% are staff and 25% of respondents also have 2-5 years of experience and may not yet clearly understand the innovations that need to be carried out in the company. With staff levels, it is possible that innovation tends to come from the management level. In BUMN/subsidiaries, each company has a Main Performance Indicator (KPI) which is included in the management contract in accordance with BUMN Ministerial Regulation Number 11 of 2020 which was updated by BUMN Ministerial Regulation Number 2 of 2023. The KPI will be cascaded up to the level of individual employees. It is possible that individual respondents failed to meet the innovation targets assigned to them so that the employee innovativeness variable had no effect on job performance and financial performance. It is possible that the failure of this influence was influenced by other factors.

Employee Innovativeness also failed to mediate the relationship between GIC and financial performance and the relationship between GIC and job performance. This failure does not follow from the research results (Pea-Assounga & Yao, 2021) who succeeded in becoming a mediator between internet banking and job performance. GIC can have a positive influence on employee innovativeness, but employee innovativeness fails to have an influence on employee performance and the company's financial performance.

Innovative employee behavior is an important factor for organizational performance and long-term survival (Campo et al., 2014). Innovative work behavior not only produces new ideas but also develops, adopts, and implements new ideas to produce new products, work methods, and improve service quality and even customer satisfaction (Orfila-Sintes & Mattsson, 2009). It is possible that the level of education and work experience has an influence on employee innovativeness. Innovation ideas and the ability to implement these ideas into reality require intellectual capital apart from other factors. This is one of the recommendations for further research to be able to carry out tests by adding other variables.

6. CONCLUSION

This study contributes to the body of literature on green intellectual capital (GIC), employee innovativeness, job performance, and financial performance. It provides empirical evidence by examining the effects of GIC on employee innovativeness, job performance, and financial performance, with a focus on the mediating role of employee innovativeness in state-owned enterprises (BUMN) and their subsidiaries operating in the logistics services sector. The findings reveal that GIC has a positive and direct influence on financial performance, job performance, and employee

innovativeness. The dimensions of GIC—Green Human Capital (GHC), Green Relational Capital (GRC), and Green Structural Capital (GSC)—are validated as reliable and effective measures of GIC. However, the study also shows that employee innovativeness does not significantly impact financial performance or job performance. Furthermore, employee innovativeness fails to mediate the relationship between GIC and both financial and job performance.

7. LIMITATIONS AND FURTHER RESEARCH

This research has several limitations. The use of quantitative methods, particularly self-assessment questionnaires, may result in biased responses. Time constraints also contributed to respondents not completing the questionnaire as expected. Additionally, potential errors in respondent selection represent another limitation. Future studies are encouraged to include a larger number of respondents and involve various types of companies to enhance generalizability. Employing a mixed-methods approach could provide more accurate and comprehensive data to better represent the research variables. Moreover, future research can explore different variables to assess their impact on job performance and financial performance.

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