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Factors Influencing Green Human Capital to Improve Green Performance in Indonesian Start-Up Business

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Abstract: This study gathers empirical evidence on the influence of green human resource management, green training, and the role of government in encouraging green human capital to improve green performance. The author conducted this study using a survey of 91 Start-up businesses in Indonesia as the sample, selected using a purposive sampling method. Data was collected using questionnaires. After collection, the author tested the validity and reliability of the data prior to hypotheses testing. Data analysis for hypothesis testing adopted partial least squares regression. Results indicate that green human capital management, green training, and the role of government significantly affect green human capital. Green human capital in turn significantly affects Green Performance. Green Performance can be successful by increasing awareness of green human capital on the part of Start-up businesses in Indonesia. Using green human capital to improve green performance will require green human resource management, green training, and the participation of the government, which must carry out its assistance with implementation through a sustainable commitment. Green Performance measurement is an issue of concern for sustainability and environmental balance in Start-up businesses in Indonesia.

Keywords: green human capital, green human resource management, green performance, green training, role of government.

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INTRODUCTION

The pandemic condition that started in early 2020 until the final third of 2021 has fundamentally affected the economic condition of the people of a country (Klein & Todesco, 2021). Many sectors or business fields have been affected by the Covid-19 outbreak, including Start-ups. Start-up companies are Start-up companies that use internet technology in part or most of their business processes. The COVID-19 outbreak has forced companies to change traditional management patterns based on internet technology in as many business processes as possible. However, Start-up companies are usually relatively small companies in terms of age and business size. A Start-up is a business that combines ideas, resources, and product creation to solve existing problems (Kim et al., 2018). Therefore, during the COVID-19 pandemic, the performance of Start-up businesses, both financial and non-financial, also experienced a lousy impact (Klein & Todesco, 2021; Shepherd & Patzelt, 2011).

The business performance of Start-up companies is crucial because business performance is related to the business continuity of Start-up companies (Chen et al., 2021). There needs to be leadership on Start-up owners, the right innovation, and attention to HRM to improve their business performance during the pandemic (Muttaqin et al., 2020). Entrepreneurs understand the importance of human capital and manage it as an essential resource for companies (Unger, 2006).

Human resources are very attached to the Start-up business because they relate to innovation and challenges, so reliable and resilient human resources are needed. The "millennial" workforce that dominates Start-up companies is another challenge in encouraging a high culture and work ethic at Start-ups (Nangoy et al., 2020). Frank & Bernanke (2007) explained that human capital is determined by factors of education, experience, training, intelligence, energy, work habits, beliefs, and initiatives that affect the value of the marginal product produced by employees. In some Start-up companies, issues regarding waste management, water systems, waste of energy and environmental resources, and unemployment have become a concern lately (Ramli et al., 2020).

Yadiati et al. (2019), in their research, stated that the industrial revolution has encouraged business processes not only to be efficient in production but also to be oriented towards reducing pollution, resources, and energy. Therefore, a company's business performance is not only measured in profits and revenues and how it impacts the environment (Kola-Olusanya, 2013; Chen & Chang, 2013). Poor business performance will make it difficult for Start-ups to develop, especially during a pandemic. Products that are not following market needs, inappropriate business models, and poor human resource competencies are some of the triggers for Start-up business failures (Danarahmanto & Azis, 2019). Shafeek (2016) says that human resource practices describe organizational capabilities, group knowledge, skills, and abilities. These are all powerful tools to improve organizational performance.

Good human resources (HR) at Start-ups have been recognized to affect performance through human capital (Brixy & Hessels, 2010). Employees and founders of Start-up companies must have knowledge, ideas, and conceptual waste management to create environmentally friendly innovations for the company's sustainability (Diệp & Hartmann, 2016). Achievement of performance pays more attention to sustainability aspects so that green performance becomes a critical performance measurement for Start-ups (Sapukotanage et al., 2018; Kuria & Mose, 2019) by paying attention to achievements, not only financially but also socially and environmentally successful. Green performance refers to environmentally oriented business processes, using resources sparingly, and striving to reduce waste and emissions (Kluczek, 2017). The green performance will be achieved if the inputs and processes are run efficiently, effectively, and oriented towards environmental maintenance (Shirokova et al., 2016). It is where the importance of green human capital in Start-ups is.

Green human capital is part of human resources and intellectual ability that Start-up founders must possess to produce green performance (Bergset & Fichter, 2015). Chen (2007) states that green intellectual capital is all wealth stored in the company, including intangible assets, knowledge, abilities, and other matters related to environmental protection and green innovation at the company and organizational levels. The existence of good green intellectual capital in the Start-up business will encourage companies to gain a competitive advantage (Ahmed et al., 2021).

Several factors can encourage the increase in the number of green human capital in the company, one of which is human resource management. HR management practices are environmentally oriented through Green HR Management (Ma et al., 2021). Green HRM will create a green environment and green culture whose final impact is green performance on the company (Delgado-Verde et al., 2014). Green HRM manages human

resources from recruitment, training and development, and performance appraisal and compensation, with due regard to environmental management (Kuria & Mose, 2019). Green HRM encourages the formation of green HC (Kola-Olusanya, 2013). In Start-up companies, human capital is mostly the owner of the company. One component of Green HRM that usually gets less attention is green training (Lyngen Laderud, 2020).

In HR management, training problems are often a problem for Start-up companies (Choi et al., 2021). The research results (Kuria & Mose, 2019) show that green training has the most significant effect compared to other factors in green HRM. Green knowledge and employee skills come from consistent training (Shoaib et al., 2021). With green training, employees will be motivated to care for the environment (Ashraful et al., 2021). Therefore, green training determines the extent to which company owners and other human capital can innovate to produce environmentally friendly performance. Green training is a variable that needs to be explicitly investigated because training, especially green training for Start-up companies, is still not a priority in producing green HC (Bergset & Fichter, 2015; Schick et al., 2002). The company's scale is included in the SME category so that Start-ups need external support in getting adequate green training for their human resources (Schick et al., 2002).

Government support is a complement that will affect the progress of green human capital Start-up founders in this study. The government's role in encouraging the implementation of green Start-ups can be done through various policies that help Start-ups improve their ability to produce environmentally friendly (Bhardwaj & Ruslim, 2018). However, not all these policies directly affect Start-up business practices. Some policies are made so that people have concern for the environment, nature conservation, and long-term sustainability of the ecosystem (Choi et al., 2021).

The importance of company sustainability, especially Start-up companies, is research on green human capital in producing green performance. Therefore, the urgency and purpose of this study are to determine the factors that influence green performance, especially Green HRM, Green Training, and the role of government in green HC in Start-ups. Based on the background and objectives, research hypotheses can be made: 1) Green HRM has a positive effect on green HC; 2) Green Training has a positive effect on green HC; 3) The role of government has a positive effect on Green HC; 4) Green HC has a positive effect on green performance.

METHODS

This study uses a quantitative approach. The use of this approach aims to determine the causal relationship. The target population in this study is the owners of Start-up businesses in Indonesia. The population group (population frame) in this study amounted to 187 Start-up businesses. The sampling here is confined to specific types of people who can provide the desired information, either because they are the only ones who have it, or they conform to some criteria set by the researcher. In this study, sampling was carried out criterion that the population elements have responded for filling the questionnaire. This method is known as a restricted probability sampling design, better known as purposive sampling. The sample size for the measurement and characteristics of the structural model in this study amounted to 41 respondents to achieve 80% statistical power with a minimum R^2 of 0.25 (Hair et al., 2017). This study uses primary data with a questionnaire as a research instrument to obtain data. The questionnaire was created electronically using a Google form and distributed via contact numbers connected to the WhatsApp application. The measurement of variables in this study can be seen in Table 1.

Table 1 Variable Measurement

Variable	Concept	Indicators	Reference
Green HR Management	Deliberate integration of traditional human resource management techniques with an Organization's environmental objectives	Practices a selection, performance assessment, recruiting, and rewards systems develop employees' green abilities.	(Zhao et al., 2021; Ashraful et al., 2021)
Green Training	A collection of programs that encourage employees to acquire environmental skills and address environmental problems that are crucial to the achievement of environmental goals	Green training programs, such as training and education programs	(Kola-Olusanya, 2013; Ashraful et al., 2021; Benevene et al., 2021)
Role of Government	The government's entrepreneurship support policy is likely to intervene in the relationship. Between the Start-up's innovation capabilities and financial performance	Policy to entrepreneurship culture, innovative Policies and leadership, adequate funding access	(Choi et al., 2021; Lee & Kim, 2019; Wisuttisak, 2021)
Green Human Capital	The employees' Summation of employees' knowledge, skill, attitude, Experience, wisdom, creativities, and commitments about environmental protection or green Innovation	The summation of employees' skills and knowledge of employees regarding sustainability	(Shoaib et al., 2021; NR & Yurniwati, 2018; Benevene et al., 2021)
Green Performance	Meeting the needs of people Today without compromising the ability of future Generations to meet their own needs and triple bottom line	Performance-related to the goal of "triple bottom line" (meet a triple bottom line; the goal of Business, products, or services that have a positive environmental Impact, contribute to the environmental goals of a green economy	(Omar et al., 2017; Arulrajah et al., 2016; Bergset & Fichter, 2015)

This study uses a component or variance-based Structural Equation Modelling (SEM) analysis tool known as Partial Least Square (PLS) to answer the objectives and prove the research hypothesis. The use of PLS-SEM requires the empirical model in this study to evaluate the measurement model consisting of reliability indicators, internal consistency reliability, convergent validity, and discriminant validity. Furthermore, an evaluation of the structural model was conducted to find out and prove the research hypothesis.

RESULTS AND DISCUSSION

The results of distributing questionnaires to 187 respondents showed a response rate of 48%, or 91 respondents filled out the questionnaire. Furthermore, the results of the questionnaire were tested for "indicator reliability," which showed that each indicator had a factor loading value (Figure 1) more significant than the minimum acceptable limit of 0.7 (Chin, 1998). In other words, each indicator can be explained by the variables in this study. Test results for "internal consistency reliability" used composite reliability and Cronbach's alpha (Bagozzi & Yi, 1988; Hair et al., 2017) . The test results show that each construct has a value more excellent (Table 2) than

the minimum limit of 0.7 (Bagozzi & Yi, 1988). In other words, each indicator is consistent in measuring the constructs in this study.

Table 2 Composite Reliability, Cronbach's Alpha, and Average Variance Extracted

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Green HR Management	0.708	0.815	0.596
Green Training	0.811	0.885	0.720
Role of Government	0.854	0.910	0.774
Green Human Capital	0.871	0.921	0.795
Green Performance	0.818	0.880	0.649

Test results for "convergent validity" using average variance extracted (AVE) (Bagozzi & Yi, 1988). The test results show that each construct has a value greater (Table 2) than the minimum limit of 0.5 (Bagozzi & Yi, 1988). In other words, each indicator that measures the construct meets the convergent validity criteria. Tests for "discriminant validity" in this study were not conducted by comparing the AVE roots of each construct with the correlation between the constructs (Fornell & Larcker, 1981). Instead, the test was conducted using the heterotrait-monotrait ratio of correlations (HTMT) as a new approach in testing discriminant validity (Henseler et al., 2015). The criteria used were to compare the $HTMT_{inference}$ with the lower and upper limits (Henseler et al., 2015) at a 95% confidence interval. The test results show that each construct has an HTMT inference value between the lower and upper limits (Table 3) to meet the discriminant validity criteria.

Table 3 The Heterotrait-Monotrait Inference, Lower Bound, and Upper Bound

	$HTMT_{Inference}$	Lower Bound	Upper Bound
Green Human Capital -> Role of Government	0.745	0.593	0.872
Green Performance -> Role of Government	0.794	0.633	0.937
Green Performance -> Green Human Capital	0.831	0.693	0.928
Green Training -> Role of Government	0.834	0.741	0.919
Green Training -> Green Human Capital	0.725	0.560	0.854
Green Training -> Green Performance	0.657	0.488	0.788
Green HR Management -> Role of Government	0.489	0.322	0.662
Green HR Management -> Green Human Capital	0.589	0.443	0.815
Green HR Management -> Green Performance	0.715	0.607	0.875
Green HR Management -> Green Training	0.412	0.285	0.658

The results of the structural model evaluation indicate that hypothesis testing (Table 4) has been carried out to explain the effect of the variables in this study. The measurement results that describe reliability indicators, path coefficients, and R^2 can be seen in Figure 1.

Table 4 Hypothesis Testing

Hypothesis	P Values	Decision
Green HR Management -> Green Human Capital	0.0010	Rejected Ho
Green Training -> Green Human Capital	0.0110	Rejected Ho
Role of Government -> Green Human Capital	0.000	Rejected Ho
Green Human Capital -> Green Performance	0.000	Rejected Ho

In Figure 1, green HRM, green training, and the role of government have an effect on green human capital with an effect variability of 58.8%. Green human capital has an effect on green performance in Start-up businesses with an influence variability of 50.1%.

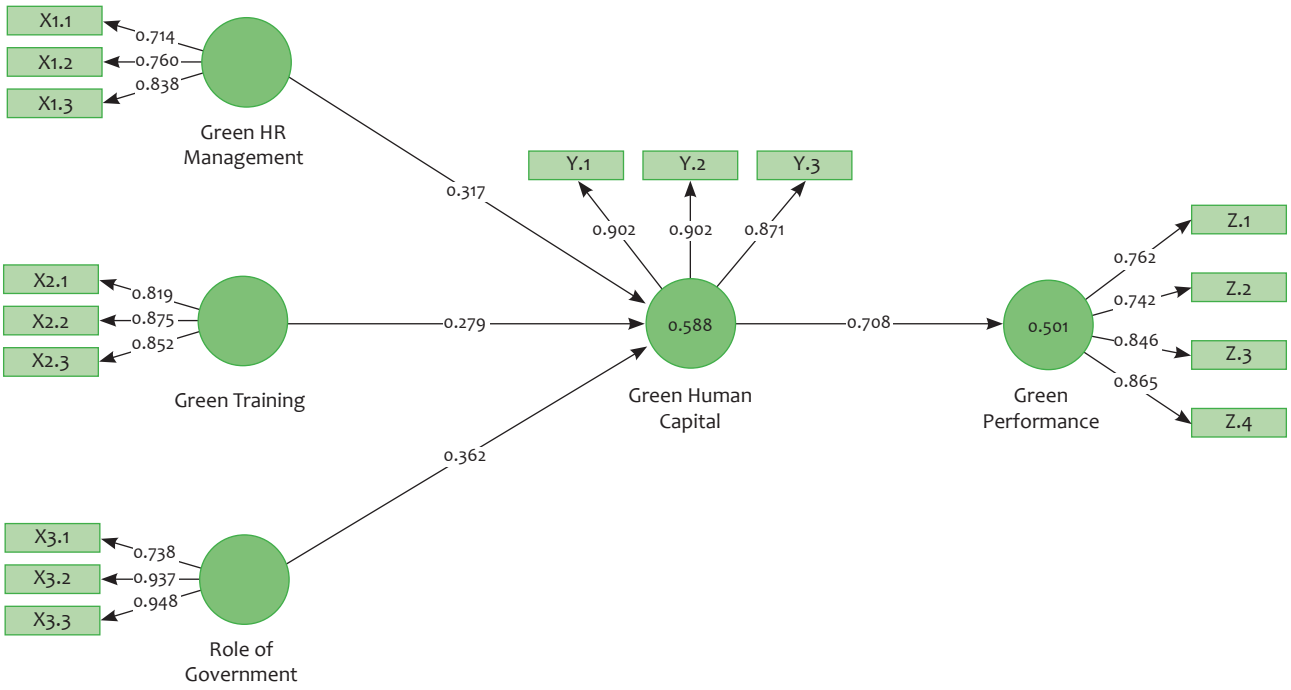

Figure 1 Structural Model Evaluation

Attention to environmental sustainability is increasing post-covid-19 pandemic (Klein & Todesco, 2021). This attention is not only given by large companies but also small and medium-sized companies. Today, with the rapid development of technology, small and medium enterprises can contribute to environmental protection efforts (Chen et al., 2021; Firmansyah, 2017). Communities and entrepreneurs think about environmental sustainability because they believe life sustainability and success require good and balanced environmental support (Makower, 2021; Schick et al., 2002).

Usually, small, and medium-size Start-ups can contribute to preserving the environment (ADB, 2020). Green HC's contribution to Start-ups in protecting the environment can be seen from the increasing green performance. The analysis results show that green human capital greatly influences green performance (Omar et al., 2017). This study results indicate that HC that strives for sustainability in its business and the environment will strive to produce sustainable performance (NR & Yurniwati, 2018; Bergset & Fichter, 2015).

Green human capital in this study proved to be influenced by the role of the government. The government issues policies in various aspects to encourage the growth and development of green HC. The government has been recognized as playing a role in protecting Start-ups as Start-ups (Choi et al., 2021). Many Start-ups fail to show their inability to compete with big companies, so the government's role is significant in maintaining the existence of Start-ups (Wisuttisak, 2021; Lee & Kim, 2019), especially for Start-ups that have a concern for the environment. Human capital in Start-ups is often powerless when faced with the capabilities of large companies in terms of efficiency and R&D (Bergset & Fichter, 2015; Blundel & Hampton, 2021). For large companies, sustainability is an important issue to improve the company's reputation. As with small and medium-sized Start-ups, attention to the environment requires companies to allocate more significant resources (Boar-Boar & Oliveras-Villanueva, 2019). The government plays an essential role in supporting Start-up human capital in paying attention to the green environment. The government can support the growth of green HC by providing stimulus in the form of policies, providing various training, and facilitating Start-ups with the necessary facilities and infrastructure (Wisuttisak, 2021; Choi et al., 2021).

Green HR management and green training have a significant role in green HC. This study results follow what was said by Dabić et al. (2011). The results of this study are significant to note because Start-up companies in Indonesia are often faced with HR management and training problems. In small or medium-sized Start-ups, business owners often manage human resources directly. In some cases, it makes HR who become human capital feel less appreciated and paid attention. Busyness as a business owner often makes them pay less attention to HR management and their ability to improve in managing human capital (Colombo & Grilli, 2005). In this case, improvement of the HR management system and training is often considered as a solution to produce green HC (Almada & Borges, 2018).

Training is one way to improve the competence of green human capital. Green training for both human capital owners and non-owners of the company is equally crucial for green HC. It is supported by research conducted by Ashraful et al. (2021) which shows that green training influences green HC. However, in this study, green training had the lowest effect. The fact that Start-ups are Start-ups, which are usually small or medium in scale, shows that competence will increase green HC if the company provides opportunities to improve it through training. The company's attention to increasing human capital competencies plays an essential role in encouraging green HC because green human capital is one of the key attributes that must be owned by every individual or Start-up business in this era of environmental degradation (Ma et al., 2021) so that it is expected to realize green performance in Start-up companies.

CONCLUSION

As companies that carry out their activities by utilizing internet technology, most Start-ups still have not paid attention to environmental sustainability and balance (Karsten et al., 2020). However, human capital in Start-ups is starting to think about ways to make the company's activities contribute to the environment (green human capital) (Blundel & Hampton, 2021). In this study, the role of the government is the most influential aspect of green HC. Next, the aspect that affects green HC is HR management. The slightest effect on green HC is green training. The results of this study contribute to efforts to improve green performance through green HC. The role of the government, green HRM, and green training on green HC needs to be considered to produce higher green performance. The research sample is only Start-ups in Indonesia, so this sample may not be adequate due to the growing number of Start-ups. Thus, the researcher hopes that the next researcher will

examine a broader scope. In addition, it is necessary to examine in more depth important aspects such as the competence and work ethic of Start-up founders which are an important part of the Start-ups development. Cultural aspects and business climate also need to be investigated further, so that the government support needed for Start-up growth is expected to be clearer (Schick et al., 2002). Further research can also focus on the development of green training and green education, thereby increasing the knowledge of Start-up businessmen about environmental-oriented business sustainability.

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