

## Green human resource management and green supply Chain Management on Sustainable performance of nickel mining companies in Indonesia

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### ABSTRACT

#### Article history:

Received July 5, 2022

Received in revised format

August 26, 2022

Accepted October 14 2022

Available online

October 14 2022

#### Keywords:

Green Human Resource

Management

Green Supply Chain Management

Sustainable Performance

Nickel Mining Companies

Islamic Economics

The green economy with Islamic perspective is the primary discussion point in this study since it is seen as a potential solution to the current economic and environmental concerns. This study aims to analyze the Sustainability Performance of a nickel mine in North Maluku using Islamic economic perspective. A total of 80 mining workers in North Maluku were respondents in the study who were selected using the convenience sampling method. The results of data processing using structural equation modeling show that five of the six proposed hypotheses are empirically proven, the findings in this study indicate that the Sustainability Performance of nickel mining companies in North Maluku can be achieved through the practice of Green Human Resource Management which forms Health, Safety, Environmental Culture, and Green Supply Chain Management practices. The managerial implication of the findings in this study is that mining companies in North Maluku pay attention to recruitment supervision, training, and impose a system of rewards and punishments for workers related to safe work behavior and environmental preservation. In addition, the company also reports holding regular meetings with workers to socialize company policies related to work safety and environmental preservation. Finally, a license to carry out ISO certification to support the implementation of a supply chain that is environmentally sound and to have and carry out environmental program audits and support environmental-related regulations.

## 1. Introduction

The green economy paradigm is a strategic issue that is widely discussed and has even become the theme of the United Nations Environment Program (UNEP) commemorating World Environment Day (Merino-Saum et al., 2020). Although the implementation has not yet been seen, the green economy movement itself has been carried out in various countries. The United Nations Conference on Sustainable Development's RIO+20 has also turned its attention to the green economy (Georgeson et al., 2017). If this green economy movement can be implemented seriously, it is not impossible that the green economy approach will be able to answer interdependence. Between the economy and the ecosystem as well as the negative impact of economic activity on climate change and global warming. The concept of a green economy, which was initiated by UNEP, seems to be tasked with eradicating the myth that has been developing, namely the tradeoff between the economy and

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the environment. (Loiseau et al., 2016) states that a green economy is needed because the economic system adopted so far is full of injustice and inequality (indicators of inequalities). Although now the green economy has become the mainstream of economic thought. The development of the green economy in many countries including Indonesia is still at the normative level or does not yet have a significant proportion in the national economic system (Swainson & Mahanty, 2018)

Meanwhile, Islam lays down basic values in the aspects of divinity and humanity through the Shari'a, in order to find various solutions to the various problems that develop in society (Qureshi & Hussain, 2020). Islam's ethical principles suggest that, in theory, people must be kind to one another and to society as a whole. alongside his fellow humans, the environment, and God as His creator. If people have improved these three areas, they have essentially improved their own lot in life. Therefore, to be able to do good to all, humans in addition to being given free will, should also pay attention to the oneness of God (*tawhid*), the principle of balance (*tawazun*), and justice (*qist*) (Pryor, 1985). In addition to the responsibility that will be given before God. These are what Naqvi (2016) calls the axioms of ethics which include unity (*tawhid*), balance (equilibrium), free will, and responsibility. Although each of these axioms has been described in various ways in human history, a far-reaching consequence has developed in our time of its cumulative significance for the socio-economic perspective of Islam. In order for a company (business) to maintain a balance between ethics, business and the environment, it is necessary to have certain rules that contain provisions on how to manage and use natural resources for their production materials properly and not to over-exploit them. In this case, the company needs to work together with customers (consumers-stakeholders), suppliers and other business actors to carry out environmentally sound business practices. Companies must strive to implement ethical and legal values in business practices and are responsible for protecting the environment for universal human safety, comfort, and welfare (Hashim et al., 2015).

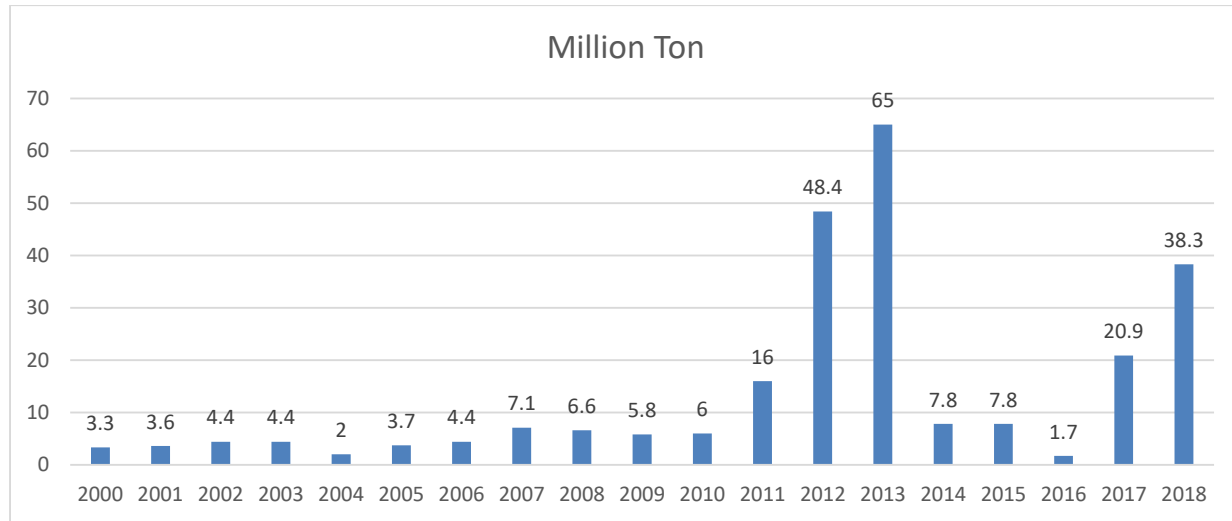
Economic growth is an important factor in economic development that increases national income and becomes an indicator of a country's development (Prasetyo et al., 2022). In Indonesia, the government is seeking various ways to be able to increase economic growth in various regions, especially in the eastern region (Prasetyo et al., 2022). Economic growth in the eastern region of Indonesia is dominated by the mining sector and the economy in north Maluku province has managed to record growth amid an unfavorable global situation. This situation is due to the improvement in the nickel price of the world commodity which has resulted in nickel mining being successful in attracting investors and expanding (Fahlevi, 2020). Nickel mining is the main pillar of the economy in north Maluku province. The nickel value that continues to improve makes this mine continue to grow and increase the regional budget and employment. Although the nickel mining industry plays a vital role in the economy, mining activities have many negative impacts on the environment that are detrimental to local communities. Some of the most troubling is the ecological crises that have damaged marine ecosystems, such as in obi island, Halmahera regency (department of marine affairs and fisheries, north Maluku province, 2020). The phenomenon of declining quality of natural resources, the occurrence of massive environmental damage, pollution, flooding, and the increasing extent of critical land, is evidence of the impact of economic development that is not in line with nature and environmental conservation. If viewed from the point of view of Islam, maintaining nature (environment) in order to stay awake is a must for every human being. Humans as caliphs (representatives of God) on earth are supposed to preserve and develop nature (earth) which is the dwelling place of mankind.

The increasing activity of mining activities from year to year raises concern for the environment related to pollutants with mineral extraction, transportation, and processing (Moktadir et al., 2020). The environmental impacts of the mining industry production process include the emission of toxic materials, water and soil pollution, and the formation of dust, vibration, and noise. Likewise, outbound practices contribute to environmental degradation through greenhouse gas emissions and dust production (Jemai et al., 2020). The mining industry has not been criticized for only causing environmental pollution but also for violating human rights. (Humphreys, 2015) emphasizes that mining activities can disrupt the environment which is the source of livelihood for local people. This has resulted in criticism from various groups related to companies involved in mining activities that do not implement a sustainable strategy (Govindan et al., 2014). Meanwhile, the tradeoff picture that often permeates public awareness about the negative impact of economic development on nature and environmental sustainability should not happen. Given, human awareness of the importance of protecting the environment is actually inseparable from the development of culture (taste, intention and human mindset). The more people understand and enjoy something, the more they will appreciate it. Logically, with an increase in (welfare) economy, humans will understand by themselves and maintain their immunity without human assistance. From the opinion above, it can be seen that in fact the environment and the economy are two things that support each other (symbiose mutualism).

## 2. Nickel mining

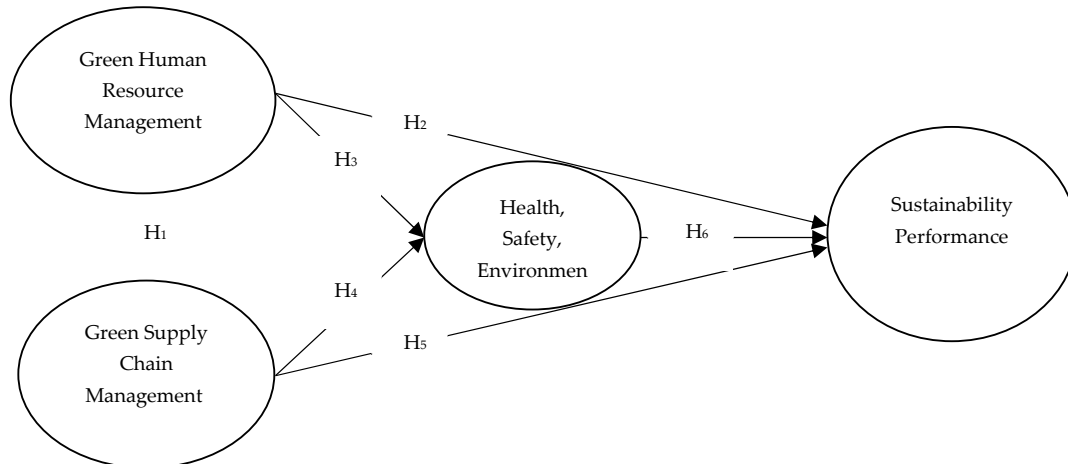
Nickel mining is the backbone of Indonesia's economy, especially in the eastern region, which is the center for nickel production, which has a lot of derivative products. The potential nickel reserves in North Maluku Province reach 60 million

tons with an economic value of \$ 1,740 million and place Indonesia as the world's largest nickel exporter with a percentage of 27%, having an important role in the world nickel market (see Fig. 1).



**Fig. 1.** Nickel Ore Production in Indonesia  
Source: Central Bureau of Statistics, 2020

The literature illustrates that in recent years, mining companies have become more environmentally aware by adopting environmentally friendly production processes (Yu et al., 2020). However, the approach used is limited to one method only, such as the triple bottom line (TBL) method that focuses on what causes environmental issues in the mining sector and is confined to what motivates sustainability activities or initiatives (Alves et al., 2021). Consequently, a number of academics in this area have included significant industrial, socioeconomic, and environmental aspects in their analysis (Aznar-Sánchez et al., 2019). Such limited studies leave ambiguous areas in the literature, necessitating an examination of the links or interrelationships between all economic, social, and environmental factors (Jarvis et al., 2016). In addition, senior managers in a variety of corporate disciplines have prioritized maintaining and conserving natural ecosystem resources when making decisions (Howard-Grenville et al., 2014). Companies today face fiercer competition, which forces managers to always come up with new strategies to maximize crucial resources, such as human resources, which are crucial to the effective implementation of policies, practices, and innovations. sustained effectiveness (Lewicka & Pec, 2018). The efficient use of organizational resources will reduce threats and barriers so that it can remain competitive in the market, which will lead to continuous innovation and performance (Duran et al., 2016). Additionally, human resources are crucial to organizational performance and top management views them as a competitive advantage for their success.



**Fig. 2.** Research Model

The issue of striking a balance between resource usage and economic growth necessitates that businesses engage in environmentally friendly operations that can enhance their economic, social, and environmental performance (Strezov et al., 2017). Companies are adopting environmentally friendly practices on a large scale as a result of the rapid rise in pollution from industrial practices and the depletion of natural resources, which has been sparked by governments, government associations, environmentalists, stakeholders, competitors, customers, employees, and society. The adoption of such

procedures will result in operational improvement, financial gains, an improvement in the company's environmental performance, and a boost to its competitive advantage (Lin et al., 2020). There is very limited research on green economics in managerial studies, especially from an Islamic perspective. The role of Islamic economics can help provide alternatives to the importance of the environment, health, and nature in the Islamic values adopted by the majority of the population in Indonesia. A comprehensive discussion between universal religious values and green economy practices is a research gap that requires empirical evidence in a study because this gap theory is still an unfulfilled research gap. This study aims to analyze the Sustainability Performance of a nickel mine in North Maluku in terms of green human resource management, green supply chain management, and health, safety, environmental culture and Islamic economic perspective (see Fig. 2).

### 3. Method

This study uses a quantitative approach to determine the causal relationship between constructs in the research model. This study uses a research design of hypothesis testing and field research which is based on several considerations, namely (1) real quantitative research design (Sekaran & Bougie, 2016), (2) there is literature that is good enough to support the research topic, (3) the research design allows the researcher to determine the association between latent variables by the research objectives, and (4) previous studies on sustainability performance also used a hypothesis-testing research design and a cross-sectional field study (Saunders et al., 2009). The population in this study were employees of a nickel mining company in North Maluku. The sampling technique used a convenience sampling method. The minimum sample size in this study is 80 nickel mining employees in North Maluku. This number was chosen based on the reason that good sample size for the analysis technique used in this study was 5 times the number of research indicators (Hair et al., 2017). This study uses primary data collected through a survey method. Data in survey research were collected by distributing instruments or questionnaires which included operationalization of the independent and dependent variables. Each aspect is then derived into several questions showing the description of each variable. Each question is given an alternative answer by referring to the Ordinal scale model. Questionnaires were distributed directly to samples at a nickel mine in North Maluku. Using the Partial Least Square (PLS) method, data were analyzed. Because it does not presume that the data must be measured at a specific scale and uses a limited number of samples, PLS is a potent analytical technique. PLS may also be used to verify a theory. PLS can be used to both confirm the theory and clarify whether there is a link between various factors. In prediction-based research, PLS is hence more suited for data analysis.

### 4. Results and discussion

#### 4.1 Respondent characteristics

Respondents in this study were dominated by workers aged 36-45 years with a total of 45 out of 80 respondents, dominated by men as many as 64, in terms of education, it is dominated by employees with a bachelor's degree, based on years of service, respondents was dominated by workers who have worked less than 6 years, which means that most of the nickel mining company workers in North Maluku have a working period that is not too long. based on position level, dominated by a superintendent, which is the lowest level of position for new employees at the nickel mine.

#### 4.2. Evaluation of Measurement Model (Outer Model)

##### 1. Convergent Validity

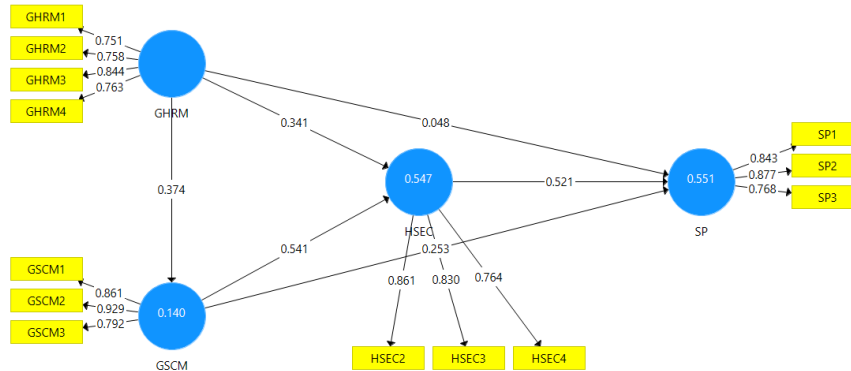
**Table 1**  
Convergent Validity Testing

Variable	Indicators	Loading Factor	Description
GHRM	GHRM1	0.751	Valid
	GHRM2	0.760	Valid
	GHRM3	0.836	Valid
	GHRM4	0.769	Valid
HSEC	HSEC1	0.691	Not Valid
	HSEC2	0.861	Valid
	HSEC3	0.792	Valid
	HSEC4	0.748	Valid
GSCM	GSCM1	0.790	Valid
	GSCM 2	0.881	Valid
	GSCM 3	0.762	Valid
	GSCM 4	0.677	Not Valid
SP	SP1	0.811	Valid
	SP2	0.849	Valid
	SP3	0.798	Valid
	SP4	0.606	Not Valid

In table 1 show HSEC1, GSCM4, and SP4 indicators have a loading factor value < 0.70. Therefore, this indicator was omitted from modeling. The following is the output of the modified model that has been reduced by invalid indicators:

**Table 2**  
Convergent Validity Modification Testing

Variable	Indicators	Loading Factor	Description
GHRM	GHRM1	0.751	Valid
	GHRM2	0.758	Valid
	GHRM3	0.844	Valid
	GHRM4	0.763	Valid
HSEC	HSEC2	0.861	Valid
	HSEC3	0.830	Valid
	HSEC4	0.764	Valid
GSCM	GSCM1	0.861	Valid
	GSCM 2	0.929	Valid
	GSCM 3	0.792	Valid
SP	SP1	0.843	Valid
	SP2	0.877	Valid
	SP3	0.768	Valid



**Fig. 4.** Modified Results of the PLS Algorithm Data Analysis (Source: SmartPLS 3.0 Data Output Results)

**2. Composite reliability and Cronbach’s Alpha**

Cronbach's alpha and composite reliability were used to see the resilience of the questionnaire instrument, in general it was agreed that the minimum value of the two elements was 0.70-0.95 (Sekaran & Bougie, 2016). The results of utilizing SmartPLS 3.0 to test composite reliability data are shown below in Table 3.

**Table 3**  
Composite Reliability Test Results

Variables	Composite Reliability	Reliability
GHRM	0.861	Reliable
GSCM	0.896	Reliable
HSEC	0.859	Reliable
SP	0.869	Reliable

**Table 4**  
Cronbach's Alpha Test Results

Variables	Cronbach’s Alpha	Reliability
GHRM	0.787	Reliable
GSCM	0.827	Reliable
HSEC	0.759	Reliable
SP	0.776	Reliable

**Table 5**  
Average Variance Extracted (AVE)

Variables	AVE
GHRM	0.608
GSCM	0.743
HSEC	0.671
SP	0.690

The outcomes of determining the Cronbach's Alpha value for the four constructs in this study are shown in the table below in Table 4.

**3. Average Variance Extracted (AVE)**

Convergent validity can also be evaluated using the AVE value in Table 5. Having a minimum AVE score of 0.5 denotes convergent validity to a good extent. Latent variables can thus account for more than half of the variance of the indicators on average.

**4. Discriminant Validity**

The results of the Discriminant Validity test are shown in the table 6 below:

**Table 6**  
Discriminant Validity (Fornell-Larcker) Test Results

Variables	GHRM	GSCM	HSEC	SP
GHRM	0.780			
GSCM	0.439	0.781		
HSEC	0.509	0.747	0.776	
SP	0.445	0.720	0.701	0.772

### 5. Cross Loading

The results of the Cross Loading test are shown in the table 7 below:

**Table 7**  
Cross Loading Test Results

Variables	Indicator	GHRM	GSCM	HSEC	SP
GHRM	GHRM1	0.751	0.270	0.279	0.261
	GHRM2	0.760	0.307	0.301	0.442
	GHRM3	0.836	0.362	0.480	0.393
	GHRM4	0.769	0.408	0.481	0.280
GSCM	GSCM1	0.336	0.790	0.600	0.573
	GSCM 2	0.351	0.881	0.607	0.556
	GSCM 3	0.273	0.762	0.434	0.420
	GSCM 4	0.382	0.677	0.635	0.643
HSEC	HSEC1	0.208	0.481	0.691	0.407
	HSEC2	0.364	0.644	0.861	0.598
	HSEC3	0.570	0.689	0.792	0.640
	HSEC4	0.369	0.451	0.748	0.482
SP	SP1	0.377	0.630	0.645	0.849
	SP2	0.333	0.664	0.645	0.849
	SP3	0.356	0.533	0.451	0.798
	SP4	0.328	0.309	0.329	0.606

#### 4.2. Evaluation of Structural Model (Inner Model)

The degree of endogenous variable variability that exogenous factors can explain is indicated by the R2 value. If there is a significant impact of exogenous latent factors on endogenous latent variables, it can be determined by changes in the value of R<sup>2</sup>. R<sup>2</sup> test results are shown in the table below:

**Table 8**  
Coefficient Determination

Variable	R <sup>2</sup> Adjusted
SP	0.533

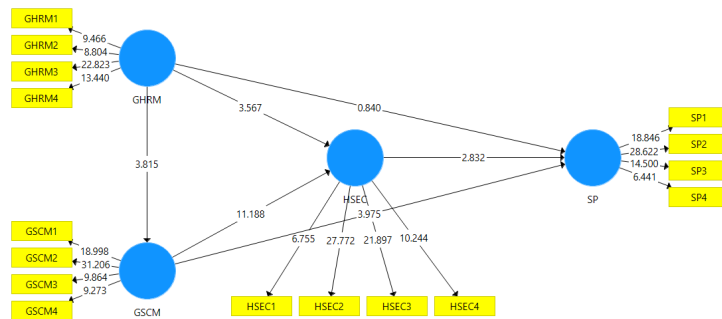
Table 8 presents information on the R<sup>2</sup> value of the Green Human Resource Management, Green Supply Chain Management, and Health Safety Environment Culture variable, which is 0.533. This means that 53.3% of Sustainability Performance in nickel mining companies in North Maluku is influenced by Green Human Resource Management, Green Supply Chain Management, and Health Safety Environment Culture. The rest of 0.467 or 46.7% Sustainability Performance in nickel mining companies in North Maluku is influenced by other factors not examined in this study.

#### Path Coefficients

Path Coefficients testing yielded the results shown in the Table 9 below:

**Table 9**  
Path Coefficients

Hypothesis	Path	Coefficient	t-value	Supported
H <sub>1</sub>	GHRM → GSCM	0.007	2.724**	Yes
H <sub>2</sub>	GHRM → SP	0.667	0.430	No
H <sub>3</sub>	GHRM → HSEC	0.000	5.727***	Yes
H <sub>4</sub>	GSCM → HSEC	0.000	6.407***	Yes
H <sub>5</sub>	GSCM → SP	0.000	2.111**	Yes
H <sub>6</sub>	HSEC → SP	0.008	4.410***	Yes



**Fig. 5.** Test Results of Path Coefficients

The value of the t-value is required to be  $> 1,960$ ,  $> 2,576$ , or  $> 3,291$  and the p-value (coefficient) is required to be  $< 0.005$ . If the t-value is  $> 1,960$  then in writing it is given one star (\*), if the t-value is  $> 2,576$  then it is given two stars (\*\*) in writing, and if the t-value is  $> 3,291$  then in writing it is given three stars (\*\*\*). In this study, there are six hypotheses proposed and the discussion is given next.

## 5. Discussion

### 5.1 The Effect of GHRM on GSCM

Hypothesis test results found that GHRM has a positive and significant effect on GSCM with a t-value of 2.724. The results of this study are in line with research by Zaid et al. (2018) which also found a positive and significant relationship between the variables of GHRM and GSCM in the manufacturing industry in Palestine. In the context of this research, GHRM presents the recruitment process, namely, workers who are selected based on knowledge of environmental insights, a training process where workers are given regular training on environmental insights and workers are satisfied with training on environmental insights provided by the company and workers are given punishment. if it does not meet the applicable environmental standards in the company.

Thus, to improve GSCM in nickel companies in North Maluku, it can be done by increasing recruitment practices that prioritize workers who have good environmental insight because this is in line with the company's environmental values. Likewise with the training process regarding environmental insight, to improve GSCM, companies need to provide training on environmental insight regularly and pay attention to its effectiveness to increase worker satisfaction with this training so that workers try to realize environmental conservation, which is the company's goal, thereby improving GSCM at the company.

### 5.2 The Effect of GHRM on SP

Hypothesis test results found that GHRM has no significant effect on SP with a t-value of 0.430. The results of this study contradict research conducted by Arulrajah et al. (2015) which states that there is an effect of GHRM on SP in mining companies in Sri Lanka. SEM analysis results found that GHRM has no direct effect on SP. This strengthens the role of the HSEC as a mediator that strengthens the relationship between GHRM and SP. Thus, to improve the SP of nickel mining companies in North Maluku, companies need to implement workplace safety and environmental culture through intervening human resource management practices that are environmentally sound. The work safety culture includes the company having regulations on work safety and environmental culture policies, the company communicating work safety and environmental culture to all workers, the leadership provides a good example for working safely, workers doing work safely according to workplace safety procedures. Thus, the SP of nickel mining companies in North Maluku can increase.

### 5.3 The Effect of GHRM on HSEC

Hypothesis test results found that GHRM has a significant positive effect on the HSEC with a t-value of 5,727. The results of this study are in line with research conducted by Mousa and Othman (2020) who found the influence of GHRM on HSEC in Palestinian healthcare companies. From the results of the SEM analysis, the practice of GHRM, which includes recruitment, training, and punishment for not complying with environmental regulatory standards set by the company, can improve the culture of workplace safety and the environment in the North Maluku nickel mining company.

### 5.4 The Effect of GSCM on HSEC

Hypothesis test results found that GSCM has a significant positive effect on the HSEC with a t-value of 6.407. The results of this study are in line with research conducted by Jemai et al. (2020) which states that GSCM has a significant positive effect on the HSEC in mining companies in South Korea. In the context of this research, GSCM presented that nickel companies in North Maluku have ISO 14001 certification, companies are trying to reduce waste generated from the production process, companies have environmental audit programs, and companies support environmental regulations. Thus, nickel mining companies in North Maluku that have implemented GSCM, can improve the HSEC in their companies.

### 5.5 The Effect of GSCM on SP

Hypothesis test results found that GSCM has a significant positive effect on SP with a t-value of 2.111. The results of this study are in line with research conducted by Zaid et al. (2018) who found the influence of GSCM and SP on manufacturing companies in Palestine. The results of SEM analysis show that companies that have implemented GSCM have better SP marked by several indicators including company profits obtained from reducing material and energy consumption, companies commit to waste disposal systems, companies pay attention to worker safety, especially in risky work. and companies reduce the impact of waste disposal on local communities.

### 5.6 Effect of HSEC on SP

Hypothesis test results found that the HSEC has a significant positive effect on SP with a t-value of 4,410. The results of this study are in line with research conducted by Gomes et al. (2014) who found a positive and significant effect between HSEC and SP in mineral mining companies in Brazil. In the context of this research, HSEC presented that nickel mining companies in North Maluku which have regulations on occupational safety and environmental culture policies, convey them to all workers, provide a good example for workers to work safely, and workers do work following work safety and environmental procedures. Nickel mining companies in North Maluku that apply the HSEC properly will have better SP.

### 5.7 Islamic Perspectives

Islam does not view business activities only at the level of worldly life because all activities can have the value of worship if they are based on the rules that have been prescribed by Allah. It is in this dimension that the concept of balance in human life occurs, namely placing worldly and hereafter activities in an inseparable unit. Green Human Resource Management and Green Supply Chain Management are demands that must be implemented by nickel mining companies in Indonesia in upholding the concept of economic balance. If only taking multiple profits was an agreement of economic actors, wouldn't this make supply-demand imbalance, the market could be distorted and so on. Sustainable performance is achieved if our business system is framed with high ethical values. This ethic will throw away the losses and inconveniences between businesspeople and society. More than that, business based on ethics will make the economic system run in a balanced and sustainable manner. The Islamic economic system strongly supports the practice of a green economy, because it contains the enforcement of moral and ethical values in it. One of the implementations of the green economy is the implementation of renewable energy, the green economy is an economic regime that can improve human welfare and social equality, and at the same time reduce environmental risks significantly, because the green economy is an economy that is low in carbon and does not produce emissions and environmental pollution, saving resources, natural resources, and social justice. In addition, the green economy can be used as a model of sustainable economic development by using knowledge of ecological economics.

## 6. Conclusion and recommendation

This study discusses Sustainability Performance to answer the phenomenon of work accidents and environmental damage in nickel mining companies in North Maluku. More specifically, this company seeks to analyze the influence of Green Human Resource Management, Green Supply Chain Management, and Health Safety Environment Culture, on Sustainability Performance. Green Human Resource Management has a positive and significant effect on Green Supply Chain Management. Recruitment, training, and the provision of rewards and punishments can affect the practice of Green Supply Chain Management in nickel mining companies in North Maluku. Green Human Resource Management has no significant effect on Sustainability Performance. Recruitment, training, and the provision of rewards and punishments cannot directly affect the Sustainability Performance of nickel mining companies in Maluku. There must be a Health Safety Environment Culture variable that can strengthen the relationship between the two. Green Human Resource Management has a significant positive effect on the Health Safety Environment Culture. Recruitment, training, and giving rewards and punishments to workers can improve the Health Safety Environment Culture in nickel mining companies in North Maluku. Green Supply Chain Management has a significant positive effect on the Health Safety Environment Culture. Companies that have ISO 14001 certification, companies that seek to reduce waste generated from the production process, companies that have environmental audit programs, and companies that support environmental-related regulations, have a better Health Safety Environment Culture than companies that do not implement Green Supply Chain Management. Green Supply Chain Management has a significant positive effect on Sustainability Performance. Companies that have implemented Green Supply Chain Management have better Sustainability Performance marked by several indicators including company profits obtained from reducing material and energy consumption, companies commit to the waste disposal system, companies pay attention to worker safety, especially in high-risk jobs, and companies reduce the impact of waste disposal on local communities. Health Safety Environment Culture has a significant positive effect on Sustainability Performance. Nickel mining companies in North Maluku that apply the Health Safety Environment Culture properly will have better Sustainability Performance.

Based on the results of research and discussion, the suggestions that can be given to nickel mining companies in North Maluku are as follows: The company pays attention to the employee recruitment process by prioritizing prospective workers who have insight and commitment related to work safety and environmental insight. Companies also need to design training with workers to improve workers' knowledge and skills in the field of work safety and environmental insight and provide them regularly. Companies also need to create an effective reward and punishment system to encourage safe behavior at work and environmental preservation and implement it with high commitment with support from the leadership so that the results are more effective in increasing workers' safe behavior. Companies need to clearly describe policies that contain regulations on work safety and environmental preservation that all employees need to comply with. Companies are also advised to hold regular meetings such as safety talks to disseminate company policies related to work safety and environmental preservation. In addition, companies also need to encourage leaders to be able to provide examples of doing work safely according to procedures. Companies need to carry out certification in the field of ISO to support the implementation of supply chain management that is environmentally sound. In addition, companies also need to reduce waste generated during the nickel mining process and manage this waste properly so as not to pollute the environment. Companies also need to have and run



an environmental audit program and support environmental regulations to realize supply chain management that is environmentally sound. The suggestion for further research is to add other variables which are related to Sustainability Performance. The next researcher can also increase the number of samples or research at different types of companies to see if the model has the same results when tested on different objects.

Departing from the description above, it can be understood that basically Islam emphasizes that humans are willing to explore the natural wealth that lies and is hidden in the earth. The pleasures of wealth need to be explored using various sciences according to their respective specializations, depending on what natural wealth will be extracted and will be used for the welfare of mankind. Hard work cultivating nature is part of worship, therefore in carrying out the production process it is very emphasized that humans pay attention to the halal and haram limits determined by the owners and rulers of this nature. Without exception, it is also emphasized to maintain and preserve nature that has been taken advantage of by humans.

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